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HUNT'S  
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DECEMBER, 1845.

ART. I.—VALUE AND PROSPECTS OF LIFE IN THE UNITED STATES.\*

PART I.

AN ANALYSIS OF THE VARIOUS UNITED STATES CENSUSES, REGARDING THE AGES OF THE INHABITANTS WITH A VIEW TO ILLUSTRATE THE VALUE AND PROSPECTS OF LIFE IN THE DIFFERENT SECTIONS OF THE UNITED STATES.

THE scarcity, or rather the utter absence of proper statistical data, derived from widely extended mortuary registration, from which to deduce the value of life in the United States, renders it very desirable to develop what information on this subject may latently exist in authoritative documents of any kind. The census will afford, in the opinion of the writer, the only clue that promises light on this subject. The introduction into this country of the institution of life insurance, which has been so long in extensive and successful operation in Great Britain, must be made only on American foundations—on the value of life under American influences. The value of annuities for this country must be calculated on the same foundations. These, and other considerations, render the determination of the value of life of political and mercantile importance, to say nothing of the independent usefulness of such information to individuals personally influenced by regard to health, and love of prolonged existence. It is a matter as interesting to the curious, as worthy of attention from the philosophical mind, to observe in what relative proportion the various periods of life regarding age, are filled by the people of different sections of country, under diversities of climate, and to refer the differences in these proportions to their true causes. It is the opinion of the writer, that these differences are greater than is generally supposed, and are, in a great measure, referrible to climate—greater than generally supposed, because they are not directly perceptible on inspection of the census.

\* This article, now first published, is part of an unpublished essay on "The influence of Climate on Longevity," by John Spare, M. D. of Fairhaven, Massachusetts, which was presented for the consideration of the Boylston Medical Committee, of Harvard University, on the occasion when the prize was awarded to Edward Jarvis, M. D. The essay is that which had for its motto a Latin verse, commencing: "*De spatium vitæ*—," and is one of three, concerning which they, in a published resolve, hoped "their authors may be induced to give the public an opportunity of reading these valuable and interesting essays." It is but justice to that Committee to state here their standing published vote, that they "do not consider themselves as approving the doctrines contained in any of the dissertations to which the premiums may be adjudged"—a vote which more particularly applies to an unsuccessful one, or to a *part* of such an one. This article is rather the appendix of the essay proper, the only part adapted to the Merchants' Magazine.

These differences are not perceptible, among the states, because they have not a population common in number, and it is only when made common by arithmetical processes, that we become aware of any differences. It is to be regretted, that of the six censuses, only the last two have made decennial discriminations of ages through life, with quinquennial discriminations under the age of twenty; and that no two of the preceding ones were made on common assumptions regarding ages; thus is precluded the possibility of making such perfect comparisons of successive censuses as would lead to useful inferences relating to changes in our population with the progress of time. However, such modes of comparison as were possible with this view, the writer has made, and still, with highly satisfactory results—the truth that the average age of our population has, for the last forty years *been increasing*, forces itself upon our notice. This is a *fact* of observation, though existing latently in the censuses, and there are many circumstances to be weighed in referring this fact to its true causes. The evidence, and some considerations will be presented.

The census of the colored population stands on such a footing that it cannot be compared, side by side, with that of the white population, nor even with itself at different dates. Hence, after making the only possible comparisons of the ages of the two people, these considerations will relate only to the *white inhabitants*, when the United States are individually or collectively alluded to.

That the United States might be compared with other countries, the censuses of some European countries have been subjected to the numerical condition that renders this possible. This striking result is presented, that a very much greater proportion of our people are in the early and youthful periods of life, than either in any part of Great Britain, or in Sweden. Is this to be attributed to a greater proportion of deaths in adult life, among us, or to a greater relative proportion of births? There are several indirect modes of determining something in regard to this question, though additional data would be required to establish the precise answer. Yet the fact itself may serve to correct the many erroneous deductions that are frequently made, regarding the salubrity of places, from either the per cent of deaths on all living, that occur annually, or the average age of the deaths; the last of which is the more correct index of salubrity, but must be taken in connexion with the relative proportion of the living in the several periods of life. The average age attained by all who die in England, is thirty-eight years; were the United States equally salubrious, the average age of all who die here must be less, because the actual living are so much younger on an average, and deaths, other things being equal, must take place at ages proportional to the number of the living. The city of Boston had, in 1840, twenty-nine per cent of its white male population between the ages of 20 and 30, which is but a little less than the whole per centage under the age of 15, a circumstance which shows how few of the former were natives of the city. The average per centage of deaths (for ten years) of persons between 20 and 30 was 13 and six tenths, of all the deaths, while less than nine per cent of all the deaths, occur between these ages in New England generally. Massachusetts has a greater per centage of her population between the ages of 20 and 30, than any other state in the Union, (*viz.* 20 per cent,) evidently due to the temporary residence of many unmarried persons from states at the north, brought in by the higher wages they can command in almost every department of labor.



TABLES PRESENTING THE PER CENTAGES OF POPULATION IN THE SEVERAL PERIODS OF LIFE, IN DIFFERENT PLACES.

Ages.	ENGLAND.		WALES.		SCOTLAND.		SWEDEN.		UNITED STATES.		IRELAND.	ALABAMA.	VA.
	1821.	1821.	1821.	1821.	1821.	1821.	1775.	1775.	1840.	1821.	1840.	1840.	1840.
	Males.	Fem.	Males.	Fem.	Males.	Fem.	Males.	Fem.	Males.	Fem.	Persons.	Persons.	Males.
Under 5,.	15.38	14.44	15.14	13.83	14.94	12.94	14.38	13.29	17.53	17.34	14.72	21.04	18.64
5 to 10,.	13.43	12.68	14.07	12.81	13.57	11.77	11.04	10.15	14.13	14.22	13.00	16.41	14.44
10 to 15,.	11.69	10.56	12.10	10.93	12.47	10.57	10.68	9.81	12.12	12.05	11.19	13.31	12.43
15 to 20,.	9.88	9.95	10.09	10.03	10.32	10.48	9.34	8.78	10.43	11.40	10.00	10.18	10.43
20 to 30,.	14.70	16.84	14.33	15.60	14.90	17.69	15.84	16.21	18.24	18.06	15.83	17.01	16.90
30 to 40,.	11.55	12.10	11.09	11.63	10.95	12.04	13.49	13.61	11.95	11.23	11.76	10.29	11.08
40 to 50,.	9.41	9.32	8.71	9.11	8.95	9.38	10.52	10.76	7.40	7.23	9.31	6.56	7.40
50 to 60,.	6.65	6.53	6.46	6.72	6.50	7.11	7.35	8.02	4.34	4.39	6.63	3.18	4.50
60 to 70,.	4.47	4.58	4.74	5.35	4.58	5.02	4.71	5.71	2.40	2.50	4.60	1.57	2.58
70 to 80,.	2.22	2.28	2.44	2.81	2.16	2.25	2.07	2.84	1.10	1.17	2.26	.55	1.21
80 to 90,.	.56	.65	.74	1.04	.58	.65	.50	.74	.30	.34	.62	.11	.33
90 to 100,.	.04	.06	.07	.11	.07	.07	.04	.07	.035	.046	.05	.03	.05
Over 100,.	.0012	.0022	.0009	.005	.004	.006	.04	.07	.006	.004	.003	.01	.006
Over 60,.	7.29	7.57	8.00	9.31	7.39	8.00	7.32	9.36	3.84	4.06	7.54	2.27	4.18

TABLE, etc.—Continued.

MALE & FEM.	MAINE.		NEW HAMPSHIRE.		VERMONT.		MASSACHUSETTS.		RHODE ISLAND.		CONNECTICUT.	
	1830.	1840.	1830.	1840.	1830.	1840.	1830.	1840.	1830.	1840.	1830.	1840.
Ages.												
Under 5,.	16.70	15.73	13.06	12.83	15.04	14.58	13.29	12.67	14.26	12.93	12.88	12.38
5 to 10,.	14.16	14.02	12.82	11.91	13.58	13.13	11.69	11.27	12.21	11.13	12.06	11.40
10 to 15,.	12.45	12.34	12.10	11.49	12.30	11.85	11.27	10.21	11.34	11.06	12.02	11.13
15 to 20,.	11.48	11.14	11.46	10.96	11.26	11.34	11.13	10.59	11.68	11.07	11.22	11.03
20 to 30,.	17.70	16.87	17.09	16.50	17.63	16.32	19.76	20.62	18.83	19.61	18.20	17.66
30 to 40,.	11.04	11.78	11.73	12.35	11.92	12.38	12.20	13.91	11.90	13.20	11.93	12.61
40 to 50,.	7.01	8.00	9.53	9.50	7.65	8.85	8.35	8.67	8.05	8.85	8.57	9.38
50 to 60,.	4.66	4.94	5.12	6.55	5.07	5.40	5.55	5.74	5.32	5.90	5.90	6.63
60 to 70,.	2.97	3.02	4.07	4.30	3.54	3.39	3.86	3.58	3.61	3.55	4.02	4.37
70 to 80,.	1.34	1.63	2.19	2.63	1.52	2.06	2.11	2.03	2.04	1.95	2.29	2.55
80 to 90,.	.43	.46	.72	.87	.45	.63	.71	.67	.67	.69	.72	.81
90 to 100,.	.06	.06	.10	.10	.05	.06	.09	.08	.08	.07	.08	.08
Over 100,.	.001	.003	.004	.003	.002	.007	.001	.003	.00	.002	.003	.004
Over 60,.	4.80	5.17	7.18	7.90	5.56	6.15	6.77	6.36	6.40	6.26	7.21	7.81

Value and Prospects of Life in the United States.

The several states present greater differences among themselves in these relative proportions, than does the country, as a whole, among the countries introduced in the above tables. Compare Alabama, an example of a southern state, with either of the New England states, and this truth is manifest. In the southern states, with one or two exceptions, there are more inhabitants under the age of five years, than between the ages of 20 and 30; so in the western states—while the reverse is true of the middle and New England states. In the United States, these numbers are nearly balanced. In 1830, there were more under five than between 20 and 30, which became reversed in 1840, and in future the majority will remain as in 1840, continuing to increase. The date of equality must have been about 1833.

It is exceedingly instructive to observe what constant and well definable laws, large bodies of people observe in living or in dying, or in undergoing any change. Observe, in the above table, how, in every one of the New England states, in each of the first four quinquennial periods of life, there was a diminution of the per centages of the population, on passing through a period of ten years, from 1830 to 1840—twenty-four of these comparisons and no exception. Now, as the average age of all the living in these states, is between 20 and 30, we must expect to find some reverse of the above in the later periods of life during these ten years. This we do find. In the six decennial periods of life, including all persons between 30 and 90, there are but five exceptions to universal increase in these per centages—here being thirty-six comparisons. Three of these exceptions occur in Massachusetts, and the remaining two in Rhode Island. These being long settled states, are about reaching their maximum proportion of population in the more advanced periods of life, which circumstance alone interrupts the harmony of these beautiful results.

While the above remarks tend to the same end, we may present here all the evidence to be presented, that the average age of all persons who make up the white population of the United States, has been increasing during the present century. An approximate estimate of the average age of this population, as it was in 1830 and in 1840, may be made by supposing all persons in the several periods of life to be concentrated at the centre of each period, one group aged two and a half, the next, seven and a half, and so on, ( $12\frac{1}{2}$ ,  $17\frac{1}{2}$ , 25, 35, 45, and so on, etc.,) and all those over 100 to be 105, a more pure hypothesis—and multiplying these averages by the respective numbers of persons in each period, adding products, and dividing by the whole number of persons. We find it to be for 1830, 21,5717 years, and for 1840, 21,9912 years; now, although these numbers are confessedly too great, their difference,  $\frac{42}{100}$  of a year, is not chargeable with the same, nor even with any, serious objection, for correctness. Here, then, is the increase between the last two censuses. For reasons that have been stated, the same method cannot be used to point out an increase between previous censuses. They made a discrimination of ages that precludes the use of this method. But, since 1800, the per cent of the population, under ten, has diminished, or, what is the same thing, the per cent over ten has increased; the latter was, in 1800, 65,34 for males, 65,94 for females; in 1840, 68,35 for males, 68,55 for females. On comparing the ratio of the number over 45, to that under 10, for the years 1800, 1810, and 1820, (at which years only such comparison is possible,) we find that for every 100 under 10, there were over 45, the num-

ber presented in the following table, at the dates, and in the states mentioned: which states were selected at random, and were the only ones examined under this relation.

	1800.	1810.	1820.		1800.	1810.	1820.
United States, ..	34.3	35.3	36.8	Ohio, .....	20.9	25.7	28.3
Virginia, .....	32.7	36.1	36.8	Maine, .....	29.9	32.2	38.9
Massachusetts, .	49.2	50.7	54.4	N. Hampshire, .	38.3	42.4	51.9
Connecticut, ...	49.9	54.0	59.2	New York, .....	31.8	32.6	36.5
North Carolina, .	29.6	31.2	33.7	Rhode Island, ...	49.1	51.6	50.9
South Carolina, .	27.4	28.5	32.6	Sweden, in 1775, 76.4.			

Thus, by the only possible modes of investigation, (which, by the way, are entitled to the greater credit for their independency, instead of less credit for the absence of continuity or harmony,) do we perceive one and the same inference forcing itself into notice, that the living population of the whole, and every part of the United States, has, during the present century, been becoming an older population, which, however, is far from being necessarily synonymous with the assertion, that, at the present day, we are living under influences tending to increase the length of life. There is need of additional statistics to establish such inference. We need to know whether immigration is tending now, more than formerly, to fill up adult life, rather than infancy. We need to know whether our former larger proportion of youthful life, was owing to this being a younger country than it now is—for we are able to establish, as a truth, that the younger and more rapidly settling parts of the country, have a much greater proportion in early life, than the longer settled parts. Advanced people do not settle new regions. Those at the active and middle periods of life, only, make permanent changes of residence. In the newly settling parts of the United States, where, with little labor, the soil produces abundantly for man, and where fashion and mode of life are liable to be less regarded, it is probable that marriages are much earlier, and births more numerous. It is a law of population, that it increases as the facilities of living increase. It is a proverb, that where a loaf is added, a man is born. Hence we may observe, by the tables that have been presented, that the more recent the settling and growth of any state, the greater the increase of the ratio in advanced life, between any two periods that are compared. Observe Maine and Vermont, in this respect, and, in contrast, observe Massachusetts and Rhode Island, in the table already given.

Were the above evidence sufficient to prove that length of life is increasing in this country, the truth would be in accordance with what is proved to be true throughout most of Christendom, especially several countries in Europe. In France, the average age of one million of persons who died before the French revolution, was, according to Duvillard, 28 years and 10 months. In the *Annuaire*, for 1831, Mathieu gives, as the average age,  $31\frac{1}{2}$  years. In one century, from 1728 to 1828, the average age of persons dying in London, increased four years and nine months. In Geneva, there has been a constant increase of this average age for nearly three hundred years, during which time it has nearly doubled. In 1560, it was 21 years, two months, and 20 days; in 1833, 40 years, eight months, and seven days. The test which statistics generally furnish on this point, is, the per cent of annual deaths among the numbers of the living, which, in most countries, has uniformly diminished within the last century. Coincident with such facts, there has been a gradual improvement in the cir-

cumstances that affect life, such as improved domestic condition—increasing intelligence, out of which grow knowledge of, and regard for, health—vaccination, which has put a period to the extensive ravages of small-pox—and the suppression of intemperance.

The states of Massachusetts, Rhode Island, and Connecticut, cannot be regarded as increasing in population by immigration; they undoubtedly furnish a great number of emigrants to other states, of persons probably in the early and middle periods of adult life, or, beyond all question, of persons beyond the average age of the living, which is about 25 for these states. It is not a little remarkable, that there has been taking place in these states, the increase alluded to, though in a less marked degree, than in the newer states. Between the last two censuses, however, in the first two of these states, the proportion, in advanced life, has diminished. Perhaps they are about reaching their maximum proportion, or have reached it.

But it is not by the construction of tables on the precise principle of the preceding, that the most valuable results are to be educed, illustrative of the influence of the climates of the United States on the continuance of life. The following principle has been adopted, which consists of placing on an equality the number of persons within some one definite period of life, and letting the subsequent periods bear, by per centage, on this. Thus, call the number under five years of age, in every place, 100, the proper proportion between the age of five and 10, is given by per centage on that 100. It is 94 in New Hampshire, and only 77 in Virginia, for white males, in the year 1840. Is not here a difference worthy of important notice, and does it not indicate something concerning the life-preserving, or life-destroying influences of the respective climates on infancy? Are not the numbers, 94 and 77, each the representatives living, in 1840, of 100 who were, at one time, alive five years before, or about that length of time, in each of these states? Again: take 100 white males between the ages of 20 and 30 in each of these states, then a proper proportion between 30 and 40, for New Hampshire, is 75.7: for Virginia, 64.4. Again: take 100 between 70 and 80, in each state, the proper proportion, from 80 to 90, is for New Hampshire, 31.5; for Virginia, 27.9. It would be necessary, in New Hampshire, to take 755 of the male population to include just 100, under the age of five years; in Virginia, 535 male persons will include that number under five years. The intermediate states bear intermediate relations. Thus, the adoption of this mode of analysis is calculated to banish, in part, those difficulties arising from rapid growth of states by immigration, and will enable us to develop some results indicative of the influences of climate, over and above, or directly counter to all influence that could arise from other causes, determining the destruction or prolongation of life. For example, we expect to find in the western states a very small proportion of very advanced lives. The time since their settlement is too short to admit of any natives being centenarians, and of but comparative few of the whole number who have settled there. And the census shows a constant falling away, or want of inhabitants, (as we trace the number from the active to the advanced ages, through the several decennial periods,) far greater in these states, than in others of the same latitude. But just as we examine beyond the age of 90, we find the reverse of this, a greater comparative population appearing; the per cent on this 100 between 80 and 90, and beyond 90, are

given below, for the two groups of states. Were New York and Pennsylvania taken by their two, and Tennessee by its three districts, each district would rank in the same group as the whole state.

	70 to 80.	80 to 90.	Over 90.	
Kentucky,.....	100	27.9	5.21	} Greater.
Tennessee,.....	100	28.1	4.31	
Illinois,.....	100	23.0	4.29	
Missouri,.....	100	22.5	4.07	
Ohio,.....	100	23.9	3.71	
Indiana,.....	100	24.4	3.63	} Less.
Delaware,.....	100	22.7	3.35	
Pennsylvania,.....	100	26.6	3.28	
Massachusetts,.....	100	29.5	3.28	
Vermont,.....	100	28.3	3.09	
New Hampshire,.....	100	31.5	3.05	
Maine,.....	100	25.2	3.03	
New Jersey,.....	100	26.8	3.01	
Connecticut,.....	100	30.7	2.97	
New York,.....	100	27.1	2.96	
Rhode Island,.....	100	33.2	2.31	

To one who is acquainted with the nature of cumulative evidence, it will not appear an extravagant prediction to say, that of men now living between the ages of 70 and 80, a greater proportion will live to exceed 90, in the western, than in the eastern, or middle states. The value of life is greater at this age, and the premiums of insurance, on such lives, should be lower in the western states.

In precisely the same manner as above, let us compare chief cities in the United States, with the states in which they are situated severally. The numbers corresponding to the last column of the above table, are as follows for the nine most populous cities of the United States, and for their several states. Or, for every 100 white males between 70 and 80, there are over 90 :—

In New Orleans,.....	14.90	In Louisiana,.....	10.70
Philadelphia,.....	6.59	Pennsylvania,.....	3.28
Charleston,.....	6.09	South Carolina,.....	5.05
Boston,.....	5.75	Massachusetts,.....	3.28
Baltimore,.....	5.45	Maryland,.....	5.20
Cincinnati,.....	5.42	Ohio,.....	3.71
New York,.....	4.11	} New York,.....	2.96
Brooklyn,.....	6.10		
Albany,.....	3.63		

It will be perceived that the differences are in favor of cities in every instance. The tenth city has not been examined under this relation. As these results are calculated to strike every one with surprise, being precisely contrary to anticipation, founded on knowledge of the general health of cities compared with that of the country; and as, from the laws of evidence, such coincidences could not be expected, under circumstances as favorable for a city, as those of equality with its state, oftener than once in five hundred and twelve allowed opportunities for an undefined and promiscuous vacillation between these proportions, the reader becomes inquisitive for the controlling cause. The weight of evidence in favor of the existence of a controlling cause, under the supposed circumstances of equality of condition between city and state, is equivalent to the improbability that out of a vessel containing nine white, and nine black balls, undistinguishable by touch, intimately mixed, a person should pick, without seeing them, nine of the same color at the nine first trials, taking one at



a time. He would succeed once in 512 (the ninth power of two) experiments.

If aged men seek cities as a place of residence, we can hardly conceive why they should in greater proportion above the age of 90 than between 70 and 80, relatively to the number living in each class. Dr. Richard Price ascertained that the aged were in the habit of retiring from London. (Price on Annuities.) On examining any European analogies, we find that although London and Stockholm, compared with England and Sweden, do not present like results, tables of expectation of life, for certain cities in Europe, show, that expectation of life in them, while it is uniformly less in early and middle life than in country districts, gains upon that of the districts, at advanced ages, and in some cases exceeds it. In Berlin, where it was ascertained, in the latter part of the last century, that one half of all persons born, died before the age of three years, and that expectation of life, at birth, was 18 years, the expectation at 60 was  $12\frac{1}{2}$  years; while in Pais de Vaud, a country district of Switzerland, where one half of the persons born lived to be 41, and the expectation of life at birth was 37 years, the expectation at 60 was but twelve years.

It is, indeed, a well known truth, that the conditions of climate that affect the continuance of human life, favorably or unfavorably at the middle periods of life, become reversed, at the very advanced stage, owing to a change in the susceptibilities of the constitution to the conditions of climate. This is universally true, where the peculiarity in the condition of climate depends especially on the presence or absence of atmospheric impurities and miasms. The most malarious regions in the United States have the greatest number of centenarians. "The proportion of existing centenarians, is no valid indication of national health or longevity," says Mr. Rickman. Sir Francis D'Ivernois asserts, that "an unusual number of centenarians, so far from being an indication of the vitality of the masses, is rather a proof to the contrary." During the time of the improvement in the value of life in Geneva, to which allusion has been made, centenarians, who were not rare in the sixteenth and seventeenth century, have disappeared. During 27 years of this century not one appeared, according to Mallet. The value of life has been improving in London during the last century, and centenarians have become but one third as numerous. New Orleans has more centenarians than any other equally numerous population in the United States, Great Britain, or Sweden, all ages being regarded in a continuous and fairly selected region.

From these considerations, we may learn that we should have reason to regard it as an anomaly, did not the cities of the United States present the result above indicated. Indeed, we may take this result as ground for inferring how unfavorable the cities of the United States are to the long continuance of the majority of human lives. May we try the western states by the same test?

The same peculiarity, common to the western states, and to the chief cities, distinguishes the southern states, as a following table will show. Indeed, the concurrence of testimony shows palpably the truth, that at the age of between 70 and 80, the chance, to males, of living 10 years, is less in the southern and western states, than in the remaining states, or the country as a whole, but the chance of living 20 years is greater; and the chance of living the 20 years is greater in the chief cities, than in the states in which the cities are.

[CONCLUDED IN NEXT NUMBER.]

ART. II.—THE COTTON TRADE.\*

THE operations in cotton, during the past year, have not been disturbed by speculation, nor has anything occurred which much affected the price, except the repeal of the duty in England. Prices have, in consequence, been pretty regular. The unnatural depression in this country at Christmas, was followed by a slight reaction in January; this advance was further promoted by the alteration of the English tariff; and still further by the very rapid increase of consumption in England by the long continuance of low prices.

Before collecting materials by which to form a judgment of the comparative supply and demand, for the next season, it may be well to recall the estimates made a year since, that we may see how much confidence may be placed in such speculations. More or less uncertainty must always belong to every anticipation. But this uncertainty has its limits, so that when prices are unnaturally depressed, or expanded, we may be able to say they are not authorised by the ratio between supply and demand. The speculative advance of 1844, and the extreme depression at the beginning of 1845, were two cases in which a study of the comparative supply and demand, would have pointed out to planters and speculators the course they ought to have pursued. Certainty cannot, indeed, be attained, nor can we approximate very nearly to certainty; but by reviewing the progressive increase of consumption in the various countries of the world, and, by weighing carefully the different reports concerning the crops, we can arrive at a judgment of the wants of the manufacturers, and of the ability of the producers to satisfy these wants, sufficiently correct, to guard us from gross errors, either in buying or selling.

Here is my estimate of last year's crop in the United States—the actual receipts, the amount of error, and the per centage which that error bears to the whole receipts:—

	Estimate.	Receipts.	Error.	Er. per cent.
New Orleans,.....bales	1,000,000	929,000	71,000	8 too much.
Mobile,.....	560,000	517,000	43,000	8 "
Florida,.....	205,000	189,000	16,000	9 "
Georgia,.....	310,000	296,000	14,000	5 "
South Carolina,.....	360,000	426,000	66,000	15 too little.
N. Carolina & Virginia,	25,000	38,000	13,000	34 "
Total,.....	2,460,000	2,395,000	65,000	3 too much.

The very large receipts at Charleston, were caused by the transfer of an unusual amount of the Georgia crop, along the South Carolina railroad, on account of the low state of the Savannah river.

As to the receipts from India, I anticipated a large falling off, on account of the extreme low prices. My estimate was 150,000 bales, although the average of the last three years had been 223,000 bales. The receipts at Liverpool have gone down fully forty per cent at the latest dates, and the imports of the United Kingdom, having amounted to 74,000 bales, in the first six months, will vary very little from the amount I anticipated. For the supply from other parts of the world, as they were small, and

\* For similar reviews of the cotton crops, and trade, from the author of the present article, see Merchants' Magazine, for December, 1843, volume IX., page 516; also, for December, 1844, volume XI., page 517.

nearly stationary, I took the average of the last five years, and though the receipts have fallen off about nine per cent from last year, they will exceed a little my estimate. The supply from all sources I placed at 2,750,000 bales, and the result will not vary from this more than twenty or thirty thousand bales.

The consumption of the United States, I put down at 370,000 bales, and it has reached 389,000. The wants in France, of American cotton, I calculated at 420,000 bales. Our export has only come up to 356,000 but their stock has decreased 40 or 50,000 bales, so that their consumption will come near to my estimate. From other parts of the continent, I have no reports of the stocks, or deliveries to the trade. Our large export has probably increased the stocks, though doubtless a large increase in their consumption has taken place. From our large export it may be fairly presumed their wants have overrun my estimate 20 or 30,000 bales.

The consumption in Great Britain has far exceeded my estimate, although I anticipated a large increase. The long continuance of low prices, and the abolition of the duty on cotton, has given an impulse to the English demand, unexampled in the history of the cotton trade. The consumption, up to the first of July, was 836,946 bales, and as the weekly deliveries, at Liverpool, have increased since that time, the consumption for the whole year cannot fall below 1,680,000 bales—an advance over last year of 280,000, instead of my estimate of 100,000 bales. Bringing together these items, we have the following table of comparison:—

	Estimate.	Results.	Error p. c.
United States crop,.....bales	2,460,000	2,395,000	3
Total supply,.....	2,750,000	2,720,000	1
American consumption,.....	370,000	389,000	5
French “ .....	420,000	400,000	5
English “ .....	1,480,000	1,680,000	12
Total “ .....	2,450,000	2,670,000	8

The principal error being in the English consumption, which has been caused principally by the unforeseen reduction in the English tariff.

Passing now from the review of the past to the consideration of the future, I would first remark, that there must be a large falling off in the receipts at our Atlantic ports. The drought began so early, and continued so long, that the crop has suffered severely. The rains, in October, destroyed a considerable amount of cotton, and were it not that last year had some calamities, as well as this, the decrease would be one-third, or one-half. As it is, I anticipate a falling off of 20 or 25 per cent, in the South Carolina and Georgia receipts. From Florida, proper, the reports of the crop are very good, and, notwithstanding the transfer of some force to the cultivation of tobacco, the receipts at St. Marks will probably exceed those of last year. This will not be the case on the Chatahoochee, which affords the larger part of the Florida receipts, for the drought there has done much damage, especially on the uplands, near Columbus. The deficiency will not, I think, exceed five per cent. From Alabama slight complaints have been heard all the season. The cold weather, in May, kept back the crops, and injured them considerably. The drought has not seriously affected the plant in the south and west. Still a decrease of six or eight per cent in the receipts may be fairly anticipated. From Mississippi, Louisiana, and Arkansas, the reports have been of the most favorable kind. Partial complaints have, indeed, been recently made, but they

are not as numerous as last year. The drought, which troubled the Atlantic region, has hardly been felt in these states. In many places, the seasons have been all that could be wished; the floods, which did such immense damage last year, have not visited them again. The Texas crop is very fine, and no deduction will be, hereafter, made from the New Orleans receipts, on account of Texas being a foreign country. Counting a gain of 50,000 bales from Texas, of 100,000 saved from the floods, and 50,000 from increased production, the excess, at New Orleans, will be 20,000 bales. Bringing together these expectations of the crop, the following will be my estimate for the next season :

	1844.	1845.	1846.
New Orleans,.....bales	832,000	929,000	1,050,500 to 1,250,000
Mobile,.....	468,000	517,000	460,000 to 590,000
Florida,.....	146,000	189,000	170,000 to 190,000
Georgia,.....	256,000	296,000	200,000 to 240,000
South Carolina,.....	305,000	426,000	290,000 to 340,000
N. Carolina and Virginia,....	24,000	38,000	20,000 to 30,000
Total,.....	2,031,000	2,395,000	2,190,000 to 2,570,000
Average,.....			2,380,000

The receipts from India will not much exceed those of the present year. The abolition of the duty in England has been a severe blow to the cultivation of cotton, in all the colonial dependencies of Great Britain. Although the price of American cotton has advanced, in this country, from two to three cents a pound, above the lowest rates in January last, the quotations, in Liverpool, for Surat and Madras, have scarcely varied. These prices discourage, not only production, but shipments. The amount actually produced will be kept back, or sent to China, or otherwise disposed of. As long as the Liverpool price ranges from two and a half to three and a half pence, a long and distant voyage, with all the expenses of port charges and commissions, cannot be borne. The recent advance in prices will stimulate shipments a little, and, allowing for this, the imports from India may reach 170,000 bales for the next season.

The English receipts from Egypt and Brazil, being small, and nearly stationary, the average, for the last five years, will be near the actual result.

Year.	Receipts.	Year.	Receipts.
1841,.....bales	165,000	1844,.....bales	197,000
1842,.....	121,000	1845, about,.....	180,000
1843,.....	165,000	Average,.....	166,000

Collecting these items, we have the supply, from all these sources, for 1846, as follows :—

Crop of the United States,.....bales	2,380,000
English receipts from India,.....	170,000
“ “ other places,.....	170,000
Total supply,.....	2,720,000

Turning our attention now to the wants of the manufacturers, I begin with the United States. Our consumption has moved on pretty regularly. During the last year, the increase has been more rapid than usual, and as new factories have been every where springing up, and there are, as yet, no signs of an accumulation of stock of manufactured goods, the increase will be fully as great as ever. The advance in flour, and in cotton,

will stimulate, rather than lessen our consumption, because our goods are principally sold at home, and the consumers will have more ability to purchase. Here is a table of the United States consumption for several years past :—

Years.	Bales.	Av. for 3 yrs.	Inc. p. c.	Years.	Bales.	Av. for 3 yrs.	Inc. p. c.
1837,	220,000	.....	...	1842, 11m.	268,000	295,000	2.1
1838,	244,000	.....	...	1843,	325,000	305,000	3.4
1839,	276,000	247,000	...	1844,	347,000	321,000	5.2
1840,	295,000	271,000	9.8	1845,	389,000	354,000	10.3
1841,	297,000	289,000	6.9	Average,	.....	.....	6.3

The increase cannot be less than last year, and may be safely estimated at 430,000 bales.

The deliveries, in France, have been nearly stationary for the last five years. Previous to last year, they had, in fact, gone backwards, but the extreme low prices have restored them again to the high point of 1840 :

The deliveries of all kinds, up to the 1st of July, were.....	bales	246,000
“ “ “ “ 1st of September,.....		313,000
“ “ “ for the year, at these rates,.....		480,000
“ “ “ for 1840, were.....		446,000

Here is a table of the consumption of American, which is the only part that we have to consider, since, in the estimate of supply, I have not referred to any import, into France, of Egyptian or Brazilian cotton :—

Years.	Exports of U. S.	Consump. of America.	Stocks of all kinds.
1841,.....bales	348,000	368,000	136,000
1842,.....	398,000	363,000	138,000
1843,.....	346,000	352,000	119,000
1844,.....	283,000	347,000	78,000
1845,.....	356,000	about 400,000	about 60,000
Average,.....	.....	.....	366,000 bales.

The advance in prices will check the French demand, especially as the trade seems already dull, and bring it back to its usual average. I cannot put it higher than 360,000 bales.

The supplies to the continent, besides the imports from Egypt, are made up almost entirely of imports from England and the United States. On account of the great number of ports, there is no way of getting the consumption, but by taking the English and American exports. Of these exports from England, a very small portion goes to France, and is already estimated. But, as the whole English export, to France, is very small, only amounting to 28,000 lbs. in the first six months of 1845, and only averaging 62,000 lbs. for the first six months of the last three years, the American portion of this is too small to be taken into our account. Here is a table which will show pretty nearly the demand from all other countries, but France and England, out of the supplies I have above collected :—

Years.	U. S. Export.	Eng. Export.	St'ks of all kinds.	Appar'nt consum.
1841,.....bales	105,000	116,000	75,000	258,000
1842,.....	131,000	138,000	104,000	240,000
1843,.....	194,000	116,000	147,000	267,000
1844,.....	144,000	150,000	120,000	321,000
1845,.....	285,000	.....	.....	.....

The Liverpool exports to September 26, 1845, were 61,000 bales, and up to September 26, 1844, were 48,000 bales ; so that for the present year the exports, both from the United States and Great Britain, have exceeded



those of 1844, and were, allowing a considerable increase of stocks, the consumption cannot be less than 400,000 bales. Of this amount, some has gone to Mexico, some to China, some to the West Indies, besides the various ports in the north and south of Europe. It would be difficult to anticipate, with any correctness, the wants of so many various countries, but the demand on the continent, for the next year, will exceed that of any former year, on account of the efforts every where made, especially in Germany, to exclude the manufactures of Great Britain. We may, with safety, anticipate, that all these wants will nearly equal those of the present year. The low prices have, doubtless, increased the shipments, and the consumption of the present year, but the wants on the continent have increased rapidly every year, and we cannot put this total demand much below 400,000 bales.

The consumption, in England, is by far the most important of all, and it depends on so many causes, that it is the most difficult of all to estimate. Here is a table of their consumption for several years back :—

			Increase.
Average consumption of 1837 and '38,.....	bales	1,147,000	.....
“ “ 1839 and '40,.....		1,180,000	33,000
“ “ 1841 and '42,.....		1,184,000	4,000
“ “ 1843 and '44,.....		1,404,000	220,000
“ “ 1845, about.....		1,680,000	276,000

This great increase in the English consumption, for 1845, has not arisen, as in 1843, and 1844, from the opening of new markets in the east, or in the colonies of Great Britain, but has been mainly in the home consumption. The exports of twist, for the first six months of 1845, have been nearly the same as in 1844, as appears by the following table :—

Year.	India.	China.	All other places.
1844,.....	10,477,000	2,581,000	41,988,000
1845,.....	7,055,000	1,915,000	45,722,000

The exports of calicoes has risen from two hundred and seventy-seven, to three hundred millions of yards, but of other cotton goods they have been nearly the same as last year. In considering, now, this home demand, the advance in cotton, and the comparative failure of the English harvest will be serious hindrances to any increase in the consumption. But still, as long as there is no glut in the market, the manufacturers will go on producing until they make one. The prices of both mull and water-twist are high, compared with cotton. The mills are fully employed, many of them having engagements for a long time ahead. The anticipated modification of the American tariff, and the projected treaty with Brazil, may increase the demand for exportation. With such prospects, there is but little danger of any falling off in the English demand, and though the consumption of 1845, will very much exceed that of 1844, we may anticipate a still greater demand for 1846. After the immense increase of the present year, it would not be safe to look for a much farther increase, and I will put it as low as 50,000 bales. We are now ready to compare the supply and the demand for the next season :—

Crop of the United States,.....	bales	2,380,000
English import of East India,.....		170,000
“ “ all other kinds,.....		170,000
<b>Total supply,.....</b>		<b>2,720,000</b>

Wants of the United States,.....	bales	430,000
“ Great Britain,.....		1,730,000
Consumption of American in France,.....		360,000
American and English export to other countries,.....		380,000
Total demand,.....		2,900,000
Decrease of stocks,.....		180,000

It would seem, from this summary, that the stocks will probably decrease considerably during the following year, which circumstance has not taken place since 1839, as appears by the following table :—

Years.	Liverpool.	Gr. Britain.	All the ports.	Week's consump.
1837,.....	bales	259,000	380,000	13,000
1838,.....		321,000	460,000	14,000
1839,.....		265,000	412,000	13,000
1840,.....		464,000	672,000	16,000
1841,.....	430,000	550,000	761,000	21,000
1842,.....	457,000	565,000	807,000	22,000
1843,.....	654,000	786,000	1,052,000	26,000
1844,.....	750,000	903,000	1,101,000	26,000
1845, about.....	780,000	940,000	1,150,000	25,000

It would appear, therefore, that there is as much, and probably more reason for an advance in prices, as there was in the winter of 1843, and 1844, but it is to be hoped our merchants have learned something by the unfortunate operations of that season, and that they will not again undertake, by bold speculations, to force up prices beyond their natural limits. The planters have, for several years past, been but poorly remunerated, since prices have been depressed below their natural level by a constantly accumulating stock. But the consumption has, at last, overtaken the supply, and the time has come when fair average prices can be obtained—not the extravagant rates of 1835, and 1836, which would give new life and vigor to the cultivation in India, and bring ruin upon ourselves, but those fair, moderate rates, which ensure a living, though not a fortune to the planter.

### ART. III.—THE SYSTEM OF MUTUAL INSURANCE,

EXAMINED WITH REFERENCE TO THE QUESTION OF INDIVIDUAL LIABILITY.

—“jam proximus ardet  
Ucalegon.”

THE real ultimate loss by the late fire in the first ward of the city of New York, falls, not on the owners of the long rows of warehouses it has laid waste, and the rich stores of merchandise it has burnt up, which will soon be replaced by better buildings and costlier goods, at the expense of the Insurance Companies, but upon these Companies, which it has scorched and consumed. It is among these that the real burning has been. Not to speak of the many Companies which have suffered heavy loss—a loss only not heavy enough to destroy them—five, it is said, the American, Mutual, the Merchants' Mutual, the Old Merchants, the Guardian, and the Manhattan, are forced to wind up their affairs.

Naturally the first thought that follows the first feeling, on this event, is, what safety is there in these companies? How, and how far do they secure from loss?—how, and how far are they a sure source of profit? And, without losing faith in a system, which we have thus seen enabling

our citizens, by opposing to this calamity the broad front of a common and collective liability, to bear up against what would have fallen with crushing weight upon one point, and on the heads of the few immediate sufferers, we still ask, and with an emphasis, does the system of insurance, as now carried on, afford security to the insured, on the one hand, and on the other hand is it safe for the insurer? The mutual companies, from their peculiar, and as applied to fire insurance, novel system, call forth a particular interest. They have gone through the fire for the first time.

It is proposed to look at the main features of the mutual system, the rights and duties it involves, and to inquire, more particularly, what, and how great, is the liability of the insurer.

For the rights and duties of these companies, as of all other institutions in the state, we must look to the three sources from which they flow. We must examine, first, the special provisions of the act of creation; which are controlled by (second) the paramount statute law, as that is itself shaped (thirdly) by the general principles of law.

I. Although, as was said, the mutual system is novel, as applied to fire insurance, and as a system in general vogue, yet we find some trace of it among our early statutes. By the act of March 23, 1798, "The Mutual Insurance Company of the City of New York," was incorporated.\*

The Washington mutual assurance company was incorporated by act, passed March 30th, 1802. This act shows, on the face of it, few of the peculiar features of the mutual system. The only points to be noticed, are: 1st, membership, as contained in the express provision that "all persons, who now are members of the company, or shall, at any time hereafter insure in, or with said company, or be allowed so to do, shall be deemed and taken for members of the said corporation," and 2nd. a management by directors, chosen by members.

This example seems to have found little favor. It was not only not followed, but was itself abandoned. By act of March 18, 1814, it was incorporated as a stock company, and, in a list of the insurance companies, chartered between 1798, and 1830, containing seventy or eighty acts, we find no other mutual companies. The companies formed on this system, up to the present year, about eighty in number, have all been chartered since 1830.

These companies are nearly all formed on one or the other of several models, an examination of which, lets us into the character of them all. The charters of the Jefferson county mutual insurance company, and of the Madison county insurance company, are either copied word for word, or embodied, by a general reference, in fifty other acts, most of which were passed in 1836, and 1837. The United insurance company, chartered in 1840, forms the centre of another group, consisting of the Sun mutual, (1841,) the General mutual, (1841,) Mercantile mutual, (1842,) New York mutual, (1842,) Nautilus, (1843,) Commercial, (1842,) and Rochester mutual, (1844.) The Mutual Safety, and the Householders' mutual, (1843,) stand by themselves as a third class—the former, chartered in 1838, is the oldest of the heavy mutual companies. The Householders, it is believed is not in operation. A fourth is composed of the Atlantic mutual, chartered in 1842, the Alliance, the American, the Astor, the Atlas, the

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\* 3 Revised Statutes, (ed. of '29,) page 502. 21 Sess c. 4, 6. Ib. 505; 25 Sess, c 67. For charter, see L L, 1801-2, page 152.

Croton, the Merchants, the Pelican, in 1843, and the Kings county mutual, in 1845. This classification is made for convenience and accuracy, in our examination, and rests more on verbal differences, and in small details, entirely out of the question, in this view, than on essentials. The companies are all mutual companies. The Mutual Protection, chartered in 1841,\* and the East River Mutual, in 1842†, are both stock and mutual combined. Nor are the Schoharie mutual, the American Manufacturers', the Washington county mutual, or the Saratoga mutual included in these classes.

These companies were the earliest created, and their charters are all more or less peculiar in their provisions.

The points to be kept in view, in reviewing these acts are, first, the legal nature of the acts of creation, and the legal designation, therefore, under which these companies fall; second, the terms of membership, and third, of liability.

The Schoharie mutual insurance company was formed in 1831, by act passed, April 22.‡ It is created "By Act to Incorporate." The associates are "ordained, constituted and declared to be a body corporate and politic." The company come, therefore, by the express terms of its charter, under the legal class and designation of corporations.

The terms of membership are set forth in section first, which includes among the associates "all such persons as shall hereafter have property insured by the said company," and in section third, which provides that "all such persons as shall at any time hereafter insure in, or with said corporation, or be allowed so to do, shall be deemed and taken as members of the said corporation, during the period they shall remain insured by the said corporation, and no longer." Forty directors, by whom the affairs of the corporation are to be conducted, are to be chosen by ballot, by the members from among themselves.

The charter contains no provision for premium notes, or notes in advance bearing interest, or for loans of limited amount, to be obtained by the company, or for liens on the property insured, or for certificates of profit.

The terms and nature of liability, are set forth in section ninth: "The said directors shall always stand and be indemnified, and saved harmless, by the members of the said corporation, in proportion to the amount of property that each and every member may have insured by the said corporation, in and for their giving out and signing policies of insurance, and all other acts, deeds and transactions, done and performed in pursuance of this act; and neither of the said directors shall be answerable for, or charged with the defaults, neglects, or misdeeds of others of them."

This section was amended at the following session, so as to make it provide that the indemnification shall be "at and after the rates of insurance," as well as "in proportion to the amounts of property insured," but not so as to take away the strong feature of personal liability, of the same sort and degree as in partnerships, from which the most liberal construction cannot relieve it.§ The section says, the payments for losses shall be in proportion to rate of insurance and amount insured, thus only fixing the ratio, and not limiting the amount of contribution. Amounts may be relatively greater, as well as relatively less, and a case might be supposed, under this section, where members might be compelled to pay sums far

\* L L. p. 196. † L L. 387. ‡ L L. p. 280. § L L. of 1832, p. 239.

greater than the amounts insured, though assessed, indeed, with reference, and in proportion to those amounts.

The "American Manufacturers' Mutual Assurance Association" was chartered by "Act to Incorporate," passed March 30, 1832.\*

Section first, ordains, constitutes, and declares certain persons named, "and all such other persons as may be hereafter associated with them, according to the provisions" of the act, "a body corporate and politic."

The terms of membership are contained in section three: "All persons, or corporations, owning manufactories, or interested therein as owners, who shall at any time hereafter make insurance with the said corporation, shall be members of the corporation, and so continue until the termination of the insurance."

This charter contains none of the provisions mentioned as omitted in the Schoharie act.

The liability of the members is set forth in section third, which prescribes the mode of becoming members to be, by paying, in addition to the premium, such an amount to the general fund of the corporation, as shall be prescribed by the bye-laws, for the indemnity of the members of the corporation against loss by fire; which general fund, together with the amount of premium received, shall be pledged for the payment of the losses by fire," &c.

Among other things, it is enacted by section seven, "no director or member of the said corporation shall be held personally liable, on the policies or contracts of insurance of said corporation."

The Washington county mutual was chartered, April 22, 1834, by an act containing all the provisions of the Schoharie charter, in almost the same words, with the additional provision, appearing in this charter for the first time, that "every member of said company shall be, and hereby is, bound to pay his proportion of the losses and expenses accruing in and to said company, and all buildings insured by said company, together with the right, title and interest of the assured to the lands on which they stand, shall, and hereby are pledged to said company, and said company shall have a lien thereon against the assured during the continuance of his, her, or their policy; the lien to take effect whenever the said company shall record in the book of mortgages, kept by the county clerk, of the county where the property is insured, a memorandum of the name of the individual insured, and a description of the property; the said lien in no case to exceed the sum of one hundred dollars:" (tenth section.)†

The same remarks, as to liability, and with additional force, are to be made of this, as of the Schoharie charter.

The "Saratoga County Mutual" was chartered by "Act to Incorporate," passed May 5th, 1834.‡ Article first declares the parties named, and all associating in the manner prescribed, "a corporation."

This charter contains the same leading provisions with its predecessors, and also develops many of the main features of the system afterwards, and at present pursued.

Membership is defined in section two. Every person becoming interested by "insuring," and also his heirs, &c., "continuing to be insured," shall be members for and during the term of their policies, and no longer. Members are to elect thirteen "directors."

The third section speaks of persons becoming members "by effecting in urance," and proceeds to determine their liability, by adding, that every

\* L L. p. 129. † L L. p. 182. ‡ L L. p. 530.



such person "shall, before he receives his policy, deposite his promissory note for such sum of money as shall be determined by the directors, a part, not exceeding ten per cent, of which said note shall be immediately paid, for the purpose of discharging the incidental expenses of the institution, and the remainder of said note shall be payable in part, or the whole, at any time when the directors shall deem the same requisite for the payment of losses, or other expenses; and at the expiration of the term of insurance, the said note, or such part of the same as shall remain unpaid, after deducting all losses and expenses accruing during said term, shall be relinquished and given up to the signer thereof." This is the first charter in which an express provision for premium, or rather deposite notes, appears.

Section five contains the same provisions for payment of losses in proportion, for lien on property insured, and for recording the lien, as before detailed.

Section seventh empowers the directors, in case of loss, to settle "the sum to be paid by the several members," "and the sum to be paid by each member shall always be in proportion to the original amount of his deposite note or notes," etc.

Section eighth. "If the whole amount of the deposite notes shall be insufficient to pay the loss occasioned by any one fire, in such case the sufferers insured by said company, shall receive towards making good their respective losses, a proportionate dividend of the whole amount of said notes, according to the sums by them respectively insured; and, in addition thereto, a sum to be assessed on all the members of said company, not exceeding one dollar on every hundred dollars by them respectively insured; and the said members shall never be required to pay for any loss occasioned by fire, at any one time, more than one dollar on each hundred dollars insured in said company, in addition to the amount of his deposite note, nor more than that amount for any such loss after his said note shall have been paid in and expended; but any member, upon payment of the whole of his deposite note, and surrendering his policy, before any subsequent loss or expense has occurred, may be discharged from said company." This section occurs in very many of the subsequent charters, and without limiting the liability of the company to the capital fund, or aggregate of deposite notes, it materially narrows the unlimited, or at least indefinite responsibility of the Schoharie charter. It limits the amount of liability, in any case, to the amount of the note, and one per cent on the sum insured. One loss may swallow up the whole, or successive losses may diminish the deposite note, or, absorbing that, may leave the percentage still liable for further loss; but no number, or extent of losses, can involve a larger liability.

We now come to those groups of charters, each of which it is necessary to look into but one, in order to understand them all.

1st. The Jefferson county mutual insurance company was incorporated March 8, 1836.\* The Madison county mutual was incorporated March 23, in the same year.† The charters of these two companies are the same, excepting names and numbers, and other immaterial points, in so many words. Thirty-one other companies were incorporated the same year, whose charters either embody the one or the other of these acts by an express reference, or copy it word for word.

The legal designation appears as clearly in this charter as in those al-

\* LL of 1836, p. 262. † L L. p. 89.

ready examined. It is an "Act to Incorporate." The persons associating in the manner prescribed "shall be a corporation." (Section 1.) And throughout the act it is so designated.

The terms of membership, in section two, are the same in almost the same words, as in section two of the Saratoga charter, already given; and like provision is made for a board of thirteen directors.

Section fifth. "The directors may determine the rates of insurance, the sum to be insured, and the sum to be deposited for any insurance."

The liability of the members is contained in section sixth, which makes the same provision, in almost the same words, for deposit notes, as section third of the Saratoga charter, but requiring ten per cent down, instead of five; in section eighth, which makes provision for payment of losses, in proportion to amount of deposit note, for a lien unlimited in amount on property insured, and for recording the lien, the same as section five of that charter; in section tenth, which contains the same provisions, in the same words already quoted from section seventh of that charter; and in section eleventh, which provides for liability to the amount of deposit notes, and one per cent on the sum insured, in almost the same words as section eighth of the Saratoga charter. The Jefferson charter, however, adds a provision that the assessment of one per cent, shall be "on the same principles as regulated the amount of their respective deposit notes."

In 1837, thirteen companies were incorporated with this charter—in 1838, two others; in 1839, the Seneca mutual; in 1840, the Tompkins county mutual; in 1841, the Schenectady mutual; in 1842, the Cherry Valley mutual; in 1844, the Western Farmers' mutual, and in 1845, the Farmers' mutual of Erie, and the Farmers' mutual of Sherburne. In the charters of the Western, and the Erie companies, however, there are one or two points of difference. The Western Farmers' charter contains no provision for an assessment of one per cent, in addition to the deposit note; on the other hand it places no limit on the liability of the members, but provides for assessment "in proportion to the original amount of his deposit note, or notes," in the same manner as the Schoharie charter, so that the same remarks, as to unlimited liability under that charter, apply, whatever their weight, to this also. The Erie expressly limits the liability of members to the amount of the deposit notes.

2nd. The earliest of the second class of mutual companies is the United Insurance company, chartered in 1841.\*

Like all the others, this charter is an "Act to Incorporate." In section 2, certain powers, among others, to make marine and fire insurance, and reinsurance are granted "in addition to the general powers and privileges of a corporation, as the same are declared by title 3, chapter 18, part 1 of the Revised Statutes.

Section 3. "The corporate powers of the said company shall be exercised by a board of trustees," thirty-two in number.

Membership is defined in section 6: "every person having taken a policy during the preceding year, directly in his own name, or in the name of his firm, and every person holding in his own name, or in the name of his firm, a certificate of the company not discharged by payment of losses, shall be deemed a member of said company, and entitled to vote in person, or by proxy, at all elections."

The liabilities of the company are, also, in part, set forth in this section.

\* L L. p. 25.

"Every person who shall become a member of this corporation, by effecting insurance therein, shall, the first time he effects insurance, and before he receives his policy, pay the rates that shall be fixed upon and determined by the trustess; and no premium, so paid, shall ever be withdrawn from said company, but shall ever be liable to all the losses and expenses incurred by this company during the continuance of its charter."

Section 9 requires the officers to make an annual estimate of "the profits, and true state of the affairs of the company," for the year, and "to cause a balance to be struck of the affairs of the company, in which they shall charge each member with a proportionate share of the losses of said company, according to the original amount of premium paid by him, but in no case shall such share exceed the amount of such premium. Each member shall be credited with the amount of said premium; and, also, with an equal share of the profits of said company, derived from investments, in proportion to the said amount; and each member shall, thereupon be entitled to a certificate on the books of the said company of the amount remaining to his credit in the said company, such certificate to contain a proviso that the amount named therein is liable for any future loss by said company."

Section 2 provides for the application of the excess of nett profits over \$500,000, to the redeeming of certificates.

The names of the other companies, having this charter, have been already given. Of these, the New York mutual, (1842,) the Commercial insurance, (1842,) and the Nautilus, (by an amendment of its charter, passed April 18, 1843,) and the Rochester mutual, (1844,) have an additional provision that (section 12) the company, for the better security of its dealers, may receive notes for premiums in advance, of persons intending to receive its policies, and may negotiate such notes for the purpose of paying claims, or otherwise, in the course of its business: and on such portions of said notes as may exceed the amount of premiums paid by the respective signers thereof, at the successive periods when the company shall make up its annual statement, as hereinafter provided for; and on new notes, taken in advance thereafter, a compensation to the signers thereof, at a rate to be determined by the trustees, but not exceeding five per cent per annum, may be allowed and paid from time to time, provided the compensation so allowed does not, in any case exceed the nett profits of the company at the time." These four charters also contain a provision that certificates of profits must be to the amount of \$100, in order to entitle membership, (section 6,) allowing a vote for every \$100, under 100 votes; and the certificates shall be issued for shares of premiums earned, alone, and not for profits on investments, which profits are to be paid to the members.

Section 13. Excess of nett profits over \$500,000 may, excess over \$1,000,000 must be applied to redemption of certificates.

The Commercial charter allows the company (section 13) to receive from any person or persons any sum, or sums, to the extent of \$100,000, upon such terms, and for such periods as may be mutually agreed on, and to allow legal interest therefor; and after each dividend statement required hereby to apportion and pay the nett profits thereon, or deduct losses therefrom, *pro rata*, upon the amounts then received, and the premiums subsequently earned and marked off, until the amount received, as aforesaid, shall be refunded, or exhausted in losses."

In case of debts due, (section 14,) the company may withhold certificates, or deduct the sums owing; "but persons insuring, or entitled to certificates, shall not be answerable by reason thereof, or of anything contained herein, except for the payment of their premiums, or other notes given in advance for premiums."

With these material additions, these four companies fall into this class, and these are the only charters of the class that contain provision for any other source of capital fund than the premiums, or rates of insurance, and the profits of business.

The Mutual Protection, and the East River Mutual, already mentioned as both joint stock and mutual companies, may here be referred to.

Section 15, of the Protection charter, provides that no part of "the profits of the business" shall ever be withdrawn, but these profits are to remain, with the capital stock, a fund liable for losses and expenses. But the interest on investments of the stock, and of profits, is to be divided among the stockholders. Insurers are to receive certificates of *pro rata* shares of profits, containing a proviso of future liability, and these certificates they may assign.

By the East River Mutual charter, the balance of profits after allowing seven per cent to the stockholders is to be credited to stockholders and insurers, who thereupon receive certificates of *pro rata* shares, (sections 4, 5, and 6,) but (section 12,) "no person insuring, nor holding a certificate, shall, by virtue thereof, be considered a member of said corporation." The Protection charter contains no such article excluding, nor any article allowing membership to the insurers, and neither limits, nor defines the responsibility of these insurers, who seem to be thus shut out from the operation of the clause of incorporation, and placed in the position of joint dealers without a charter.

3rd. The charter of the Mutual Safety insurance company, is the earliest which contained provision for certificates of profits. Indeed, this charter, may, in its leading provisions, be considered as the model on which most of those, afterwards adopted in the city of New York, were, with considerable additions, formed.

It is an "Act to Incorporate." The parties named, and their associates, in the manner prescribed, are declared a "body politic and corporate."

This manner is prescribed in section 3: "All persons who shall hereafter insure with the said corporation, and also their executors, administrators, and assigns, continuing to be insured in said corporation, as herein after provided, shall thereby become members thereof during the period they shall remain insured, and no longer." The corporate powers are vested in a board of twenty-four trustees.

The liabilities of members are contained in section 7, and section 11.

Section 7 is to the same effect, and in almost the same words as the latter part of section 6, of the United Mutual charter already given, requiring payment of rates fixed by trustees, and making premiums paid, liable for ever.

Section 11 in part corresponds with section 9 of the United Insurance charter, already given. In the clause, however, limiting the amount of loss, there is an addition. It reads: "but in no case shall such share exceed the amount of such premium, and *and the amount of the payment or security given as above mentioned.* Each member shall be credited with the

amount of said premium and note, and also with an equal share of the profits of the said company derived from investments, in proportion to said amount; and each member shall receive a certificate, &c., with proviso of future liability.

What is referred to by "said note," and "payment or security as above mentioned," does not clearly appear, for no note is mentioned in any article of the charter, before, or after, nor any "security" except the "securities" in which the company are allowed to invest, but which cannot be here meant, and the only payment spoken of is the payment of premium rates already provided for. This section can only be interpreted, if such a mode of interpreting a statute be allowable, by supposing a mental reference to a system of deposit notes like that already established in the Jefferson charter, or of notes, as in section 12, of the New York Mutual charter, for premium of amounts larger than the premiums, not however bearing interest merely for the excess, as in that section, but entitling the holder to a full *pro rata* share of the profits on the amount of the note. Such a provision may have been contemplated; no such provision was made in this charter. With it, the charter differs but little from United Mutual and that class; and only the want of it and the ambiguity resulting, place it by itself. Another instance of this mental reference, and incidental enactment, may be found in section 6, of the Rochester Mutual charter. It speaks of "every person holding such certificates," though the first mention of certificates does not occur till section 12.

4th. The "Atlantic Mutual," of New York city, was established by "Act to Incorporate," passed April 11, 1842.

Section 2 gives it power to insure on marine risks, houses and lives, in additions to the "general powers and privileges of a corporation, as the same are declared by the third title of the eighteenth chapter of the first part of the Revised Statutes."

Membership is not expressly provided for, but trustees are to be chosen each year of "voters," who are defined in section 10 and 11, to be, "each person having a policy, or policies, not marked off, made between the 1st of April and 31st of December preceding, in his own or the name of his firm, the premiums on which amount to \$100; each additional \$100 entitling to an additional vote; and each person having in possession a certificate or certificates of earnings to the amount of \$100 in his own or the name of his firm, not discharged by payments, or cancelled by losses, each additional \$100 entitling to an additional vote.

Terms of liability are partly contained in section 12, which makes, in almost the same words as section 12 of the New York Mutual already given, the same provision for the notes in advance for premiums, allowing interest on "such portions as may exceed the amount of premiums paid by the respective signers," and containing no condition that such compensation shall not "in any case exceed the nett profits of the company at the time." That condition would seem to create an interest in the profits and losses of the concern, similar to what has been thought the test of partnership.

Section 13 contains further provisions affecting liability. It requires an annual dividend statement of nett profits, and authorizes the company to issue certificates of dividends of these profits, to insurers, containing a proviso of future liability until redeemed. This redemption is made dis-



cretionary with the trustees, by section 12, in case the nett profits exceed \$500,000 only, but a peremptory duty in case they exceed \$1,000,000.

Section 15, like section 14, of the Commercial charter, reserves a right to withhold certificates in case of debt, and contains the proviso, that persons insuring, or entitled to certificates, shall not be answerable, by reason thereof, or of anything contained herein, except for the payment of their premium, or other notes given in advance for premiums.

Section 18 authorizes the company to loan its funds on land and national, or state stock securities, &c., to make dividends of not more than six per cent per annum, from the accruing interest, among the holders of certificates, "and in cases of losses, to declare a *pro rata* deduction of the amount of the outstanding certificates."

Of the eight other companies established with this charter, seven are in the city, and are among those that do the heaviest business. The Alliance, the Croton, the Pelican and the Atlas, differ from the rest in several points, the most important of which, is section 6 of the Alliance and Atlas, which allows the company to borrow from any person or persons to the extent of \$100,000, for which certificates, bearing interest, of fifty dollars each, are to be issued, to be refunded, or exhausted by losses.\*

This survey, which pretty fully takes in the entire system of mutual insurance in the state, may be summed up in a few general results.

I. These companies are all corporations.

II. These companies are composed of associates, designated in the charters, generally by the term "members," in a number of them by the term "voters." These members are either the insurers only, as in the companies of the 1st and 3rd classes, or insurers, and those who, by virtue of past insurance, or of assignment, have acquired a right to hold certificates, as in those of the 2nd and 4th classes. There is no difference, as in the stock companies, between persons interested as members of the corporation, in the Capital Fund, and persons interested as insurers. Those insuring are *ipso facto*, insurers and corporators.

III. These companies have a capital, or common fund, which consists, not of joint stock, but either,

1st. Of the amount of promissory notes, made by the members, part paid in, the rest liable in case of loss, and also, on these proving insufficient, one per cent, on the amount insured; as in the Jefferson and the fifty companies of its class; or 2nd, of insurance rates paid in, and the profits of past dealings, which remain liable until paid out by the redemption of the certificates for them, as in the United States, and the charters of its class; some of them, however, containing an additional provision allowing promissory notes to be taken from members for amounts larger than the amount of premiums due, bearing interest for the excess, and liable to be exhausted by loss; and one of them, the Commercial, allowing a loan to the extent of \$100,000 liable for losses: or 3rd, this fund consists of rates paid in, of promissory notes, and certificates of profits, the notes entitling to a full *pro rata* share of profits, and the certificate being irredeemable, as in the Mutual Safety charter; or 4th, of rates paid in, of notes of insurers, bearing interest for excess, and liable for losses, and of certificates of profits redeemable and assignable, as in the Atlantic and those of its class; the Atlas and Pelican also containing provision for a loan like that of the Commercial's.

By "Capital Fund," as thus designated, we are to understand the fund

\* LL. 1843, pp. 71, 66, 65.

clearly, and by express provision, set apart for the payment of losses. Whether these charters involve a further liability, deducible either directly from other articles, or indirectly from the application of the principles of statute or general law, is another consideration. With a few exceptions which have been noted, all the charters contain limitations, more or less narrow, more or less explicit, of this liability. In the first class (section 11 of Jefferson charter,) the limitation, as already given at length, is explicit. In the second class, it is less defined. Section 9, indeed, of the United Mutual, says in so many words, that "in no case shall such share [of loss] exceed the amount of premium;" but it goes on to enact that the certificates of profits shall contain a proviso that "the amount named therein is liable for any future loss;" thus involving a broad inconsistency. The Mutual Safety charter contains the same language and the same inconsistency, but it avoids another difficulty in which some of these companies seem involved. The New York Mutual, the Commercial, the Nautilus and the Rochester charters, and all those of the 4th class, contain, as we have seen, a further provision, for "receiving notes for premiums of persons intending to receive policies." What sort of a transaction is designated by "receiving notes," is not clear. It would not seem to be a loan, for there is no mention of re-payment, and the notes are to be negotiated for the payment of losses. Nor yet is it a mere payment of premium, for the article speaks of "such portions of said notes as may exceed the amount of premiums." If, however, these notes are neither for premiums, nor loans, and are liable for losses, how are we to understand the clause, that the share of loss shall not exceed the amount of premium? Where is the principle of connection, the clue which is to bring into harmony the three provisions, that; 1st—loss shall not exceed premium; 2nd—certificates of profits shall be liable for loss; 3rd—premium notes shall be liable for loss? In addition to these, the Commercial charter, and those of the fourth class, contain still another clause (section 14,) limiting liability to premiums and notes. But the Commercial, the Atlas and the Pelican, also contain a new kind of liability in section 13, for which even section 14 does not provide. This article (as we have seen) allows the companies "to receive from any person or persons" sums to the amount of \$100,000, entitled to *pro rata* profit, and liable for losses. The same uncertainty hangs over this operation of "receiving sums," as over that of "receiving notes." It is clearly not for premiums, for the sums are to be received from "any persons," and so from those not corporators; it is clearly not a loan, for the money is liable to be exhausted by losses, and so not repaid. The precise position in which any person or persons "from whom sums are thus received," are placed, standing as they seem to do, under liability, as sharers of profit and loss, but not under the shelter of the charter of incorporation as members, is a hard and weighty point.

In this ambiguity and uncertainty, we must turn to the paramount rules of statute and general law.

II. One clear result we have, to start from. We have seen that these companies are, without exception, corporations. The rules of law, then, to which we must recur, are those touching corporate liability.

The Statutes of the state contain few provisions on this point. The general article of the Revised Statute, is, as we have seen, incorporated by express enactments, in many of the charters, but it contains nothing on

the point of liability. And the only other statute provisions touching this point, are those imposing personal liability on Insurance Companies, among others, in case of fraud.

III. In turning to the general rules of law, we are met at the threshold with the notion, that the very idea and nature of incorporation are incompatible with individual liability. It is sometimes said, that by the very act of incorporation, the law creates a new individual which is to perform the functions of the charter, out of the individuals composing the corporation, and does not look to, or know those individuals as such, who acquire no new powers, and therefore incur no new responsibilities. But this must be qualified. For it is clear that a charter may be made to contain express provision for individual liability. The charter is still a charter of incorporation. The principle of individual liability, therefore, is not incompatible with that of a corporation. This is pretty clear in the English law. Thus the statute 6 Geo. IV, c. 91, expressly authorizes parliament to incorporate partnerships, declaring and providing "that the members of such corporation shall be individually liable." And by a late act of Victoria, Joint Stock Companies for insurance, &c., are to "be considered as incorporated for a variety of purposes, but so as not in any wise to prevent the liability of the shareholders."\* American law probably recognizes the same compatibility of incorporation with individual liability.

In case then of express provision, individual liability is clear. The only other cases supposable are those of express exclusion, and of the absence of any provision for individual liability. And as far as stock corporations are concerned, the rule has been laid down, pretty broadly, that in case of the absence of express provision, equally as in the case of express exclusion, there is no individual liability. Judge Story, in his book on partnership, after classifying partnerships into (1st,) private, composed of two or more, and (2d,) public companies, where a large number of persons are concerned, and the stock is divided into a large number of shares, and adding that the latter are also subdivided into (1) unincorporated companies or associations, and (2) incorporated companies, says; "unincorporated companies and associations, differ in no material respect, as to their general powers, rights, duties, interests and responsibilities, from mere private partnerships, unless otherwise expressly provided for by statute, except that the business thereof is usually carried on by directors or trustees, or other officers, acting for the proprietors or shareholders; and they usually extend to some enterprise, in which the public have an ultimate concern. But incorporated companies, or corporations, are governed strictly, as to their powers, rights, duties, interests and responsibilities, by the terms of their respective charters; and the shareholders or stockholders are not personally or individually liable, in their private capacities, unless expressly so declared by their charters, for the acts, or doings, or contracts of the officers or members of the company, or corporation; whereas in unincorporated companies and associations, the shareholders and stockholders are responsible in their individual capacities, for all acts of the officers and company, or association, in the same manner, and to the same extent as private partners are." If the rule thus broadly laid down as to stock corporations, extends with equal breadth of application to mutual corporations, then all of those companies which have charters like the Jefferson, or what we have called the first class, clearly come under the case of express exclusion of individual liability. On the other

\* 7 & 8 Vic. c. 110. See 3 Stephens' New Commentaries, p. 183.

hand, we have seen that the Schoharie County, the Washington County, and the Western Farmers', seem to come under the case of express provision for individual liability; while the other mutual companies, being, with others, the heaviest companies in the city, containing certainly, no express provision for individual liability, nor on the other hand, any very definite exclusion of it, would fall under the case of the absence of provision for liability, which, if the law of stock corporations applies, equally with express exclusion, shuts out liability.

The only point that remains, then, seems to be, the applicability of this rule. In the case of the Arran Fishing Company, "the doctrine established," says Judge Story, "was this: that there is a clear distinction between the case of a joint-stock company, and that of a company trading without relation to a stock. That in the former case, the managers are liable for the debt which they contract, while each partner is bound to make good his subscription. That there is no ground of further responsibility against the shareholders; neither on their contract, nor on any ground of mandate beyond their share; the very meaning of confining the trade to a joint-stock, being that each shall be liable for what he subscribes, and no further. That in ordinary partnerships, there is a universal mandate and a joint *prepositura*, by which each partner is *institor* of the whole trade to an unlimited extent, each being liable *in solido* for the company debts."\* This distinction can be equally well taken, between joint-stock and mutual companies, and clearly sets forth the greater similarity of the mutual companies to partnerships, or in fact the identity of the two. In what point do they differ? A number of men come together—they wish to enter upon a certain business, the success of which depends, like that of all business, on the calculation of certain chances of profit and loss. The business is that, not indeed of making profit, but what amounts to the same thing, of indemnification for loss. They form a common fund by the contributions, larger or smaller, of each. And if profits are made, they are divided among the members in proportion to these contributions, as in ordinary partnerships. The question is, why, as in ordinary partnerships, should not losses also be divided among the members, proportionally? But no. Unless the losses happen not to exceed a certain amount, there is no distribution, we are told, except to that amount. The object of the business, be it remembered, is to secure the members, each and all the members, from loss. Now, if only so many members suffer loss as to exhaust the fund already paid in or secured, they will all be indemnified. But if any, or even one more than this number suffer loss, that one shall not receive his indemnity, nor indeed any of the rest. Yet the undertaking is to secure all. The dealings indeed, unlike ordinary partnerships, are confined to the members of the concern. Yet any one dealing, thereby becomes a member, and the mutual relation is therefore more intimate, and the obligation more direct: whatever the obligation of the members to dealers, it is still but to fellow-members under another name. It may be said that the connection of the members of mutual insurance companies is too general and too loose, that the number is too large to admit of individual liability. Yet, we must remember, that the greater the number concerned, the smaller the share of individual loss, which, except in the hardly supposable case of all, or nearly all, the insurers losing at the same time, would never be very great. Allowing the rule, therefore, as to joint-stock corporations to stand as it does, is there not a sufficient dif-

\* Story on Part. § 165.

ference between them and the mutual corporations, to prevent an extension of the rule to these companies? In England, joint-stock, as well as mutual companies, have always been liable individually, and the tendency at present is evidently, as we have seen, towards attaching it by express provision to them all, when incorporated.\*

And even allowing that there is no difference in favor of the mutual companies, between them and the joint-stock companies, no greater similarity to a partnership, we might still doubt whether the rule should be extended. For, we would ask, where there are two cases, similar in reason, one of which is decided, but against the right, and the other undecided, shall the wrong precedent overrule the undecided case, or shall that case be decided aright against the precedent?

But allowing all force to the reasons against individual liability of the members who pay premiums, or make notes for premiums, or hold certificates, or of those persons who advance loans, do not those reasons go still further, and make equally strong against any liability, except for the amount of premiums actually earned by the company for insurance? Unless these advances of funds, in the shape of premium notes, are to be considered as joint contributions to a capital in partnership, can they be considered as anything else than loans? But if loans, where is the consideration? Where is the security, or the provision for repayment? These loans are liable "to be exhausted by losses." True, they earn a proportionate share of profits, a sort of interest, but so do all loans on ordinary security, yet the principal is never sacrificed, and the percentage is never considered as so much principal paid back from time to time, but as so much value added by time to the principal. It may be said that shares in joint-stock are equally liable to be eaten up by losses. Still those shares are not in the form of notes; they cannot be negotiated as notes. While here, the parties have adopted all the forms of promissory notes, and if the requisitions, the duties, and obligations attached by the law to that transaction, do not attach to the notes made under these charters, the law, in this respect, must be considered as suspended by act of legislature. Moreover, waiving the want of consideration, the usury laws must also be considered as suspended by these charters, for the enormous interest in the shape of dividends allowed upon these promissory notes, in the case of less privileged promissory notes, would be clearly illegal. On the most favorable supposition, then, these charters are nothing less than an indirect and special repeal of the laws of promissory notes, and the usury laws, in favor of particular parties, unless we adopt, as a more reasonable interpretation of them, that which favors individual liability.

We have deemed it sufficient merely to allude to the position of those persons making loans to these companies, (as provided for in some charters,) entitling to *pro rata* profits, and liable for losses. Not being corporations, they are expressly cut off from the operation of the charter, whatever that may be; as contributors to a joint fund, they share the profits proportionally, and unless the name of partners applies to them, the lawyers must strike out a new name, for that new thing, a partnership without individual liability.

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\* See Stephens' New Com. *ut ante*. Collyer on Part. B. 7, Ch. 1, § 1.



## ART. IV.—MARITIME LAW.—NO. IX.

## PIRACY AND PRIVATEERING.

EVERY person, without a commission, or holding a commission, but not a legal one, from a prince or sovereignty, and of his own and private authority, who roams the sea for the purpose of depredation, is deemed in law a pirate.

Piracy is a depredation on the sea, while robbery is the same thing on land.

The sovereign power of a state alone has the right to make war, and carry on hostilities, and to order and direct the employment of whatever makes a part of the means of warfare. This, however, alone can never give to a privateer the special and necessary authority to pursue, fight, and capture the vessels of an enemy, and all persons who would protect themselves from the character of pirates, must be provided with *letters of marque*, or a commission from the belligerent powers, and for want of such commission, they may be treated and punished as pirates, as well by those against whom they commit violence, as by their own government, and foreign nations.

A commission is essential to characterize a privateer, and to distinguish it from a pirate, and it becomes equally necessary that the commission should be issued to persons, who, by the laws of nations, are capable of acting in the service of the power that grants it, and that the power which grants the commission should possess the ability, by the laws of nations, to issue it.

If due authority is wanting, on the part of the grantor, to give, or the grantee to receive, the parties who make captures, or seizures of property on the ocean, are, by the laws of all nations, held to be pirates, and liable to the pains and penalty of death.

The United States, in 1818, passed an act which is in accordance with the law of nations, prohibiting a citizen of the United States from taking a commission from any foreign prince to prey upon the commerce of a state in amity with the United States. A subject of a neutral government cannot take a commission to cruise against a belligerent power at peace and amity with his own government. The colonial laws of New York and Plymouth, in Massachusetts, before the American Independence, declared it felony to commit hostilities on the high seas, under the flag of a foreign power, upon the citizens of another power at amity with England.\* Regularly no persons but those who are native-born citizens, or those who have become naturalized by the sovereign who grants the letters of marque, can take a commission, for privateering, from a belligerent power to cruise against the commerce of a foreign power, and such persons who take commissions will be regarded as pirates.† Privateering cannot be carried on in ships or bottoms which do not belong to the sovereign who grants the commission. A foreign built ship, which has not been registered or matriculated in the ports of the sovereign who grants the commission, cannot be protected as a privateer when cruising against the property or persons of a belligerent power. A nation may purchase vessels of a foreign people, and along with them arms and such other stores; but the vessel, when

\* 1 Kent's Com., page 100, Note C. † 1 Attorney General's Opinions, 36, 98.

purchased, before they can raise the flag of another nation, must be documented, and sail from the ports of the country whose flag they bear.

The treaty between Great Britain and Tripoli, in 1716, stipulated that no ship, or vessel, of the latter country, should have permission to be delivered up, or go to any other place in enmity with the king of England, to be employed, as a privateer at sea, against the subjects of England. The treaty with Algiers, in 1682, contained the same stipulation.

By the universal practice of all commercial nations, no vessel can sail on the ocean without documents to show her national character. Sir William Scott decided that a bill of sale of a vessel, or the document which accompanies the matriculation, is the proper title to which the maritime courts of all countries look. It is the universal instrument of transfer of ships in the usage of all maritime countries, and in no degree a peculiar title, deed, or conveyance known only to the law of England. It is what the maritime law expects—what the court of admiralty would, in its ordinary practice, always require, and what the English legislature has made absolutely necessary by statute.\* The circuit court of the United States, in the first circuit decided, that a prize-court would decide the ownership of the vessel by the bill of sale.† And, it has been decided that when a vessel sails in a particular character, she cannot change her character in *transitu*. The national character of a vessel cannot be altered between her port of departure and her port of destination. A vessel cannot be purchased in a foreign country, and sail out of port as a neutral ship, and change her character to that of a belligerent cruiser before she has reached her port of destination, and been matriculated in the ports of the country in which she takes her commission as a privateer.‡ When a vessel is purchased in a foreign country, a bill of sale must be produced to give the purchaser a title, and if purchased by an agent, the title will not be valid, unless the letter of procuracy is exhibited.§ The maritime law will permit a nation, and its citizens, to procure vessels to be built or purchased; they can be transferred to the country of the purchaser, if it is done for a lawful and innocent purpose, but should a seller or builder, sell or build, or arm a vessel in a neutral country, to be employed in privateering against the commerce of a country at amity and peace with his own, or aid in the transportation of such vessel to the ports of a belligerent state, he would be guilty of piracy, and liable to punishment by the laws of nations, as well as by the act of Congress, if the act was done in the ports of the United States.¶

By the law and usages of nations, a vessel is deemed to be a hostile, or fraudulent craft, which exhibits, or carries false colors, or false documents and papers on a voyage, and a warrant of arrest and seizure will be issued against any vessel that wears false colors at sea.

By the laws of the United States, the register, or sailing license of a vessel, ought to be on board at sea, to warrant her national character, as well in war as in peace. And when a vessel, enrolled or licensed, shall proceed on a foreign voyage without first surrendering up her enrollment or license, and being duly registered, she shall, with her cargo, be subject to forfeiture.

The laws of England and France require a strict compliance of all

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\* 5 Robinson's Reports, 155. † Robinson: The Sisters.  
 ‡ 2 Gallison's Repts., 287. † 1 Robinson's Repts., 98, 122, 158. § 15 Peters' Reports 664, United States, vs., Morris.

their vessels with their registry laws. By the laws of France, of 1720, no naturalized foreigner could command a French ship, until after having proved himself an actual resident of France during four consecutive years. Though the registry is not a document required by the law of nations, as expressive of a ship's national character, yet official documents, honest and true, will be required to show the national character of privateers, cruising against the commerce of a belligerent nation, or else she will forfeit her protection. It is a principle of the law of nations, recognized in all countries, that a neutral vessel, or power, is not to give aid to one belligerent, or even to relieve their distress, at the expense, or to the prejudice of another power.\* By the alienation of a vessel to a foreigner, the privileges of an American vessel are forfeited, and the vessel is liable to a forfeiture, on an indictment for piracy. In the courts of the United States, the national character of the vessel must be proved by the defendants, and the documents, when regular on their face, are open to proof, and the government may show at all times that they are fraudulent, or simulated, even when a claim is interposed by the representatives of a foreign friendly nation.†

When a vessel is captured, which is cruising as a privateer, she will be obliged to prove, by competent evidence, that she had a legal commission from some government, recognized as lawfully constituted by the laws of nations, and that the ship's papers, documents and *rolle de equipage* is given and granted her by the sovereign whose flag she bears, and that the ship and crew have been recognized by the nation from whom she seeks protection, and to whom the vessel and crew belong, who are the owners of the vessel, where they reside, and where the vessel was armed, equipped and fitted out. And if it appears, on the trial, that the vessel was foreign built, or master and crew were foreigners, in whole or in part, the case will bear a strong presumption that the vessel is a pirate.‡ By the law of nations, the punishment of piracy is the forfeiture of life and goods. The penalty is death, and the judge or jury has no power to mitigate it. By the constitution of the United States, Congress is authorized to define and punish piracies, and felonies committed on the high seas, and offences committed against the law of nations.

The act of Congress, passed April 30, 1790, declared that murder or robbery committed on the high seas, or in any river, harbor, or bay, out of the jurisdiction of any particular state, or any other offence, which, if committed within the body of a county, would, by the laws of the United States, be punishable with death, should be adjudged to be piracy and felony, and punishable with death. And it was further declared that if any captain or mariner should piratically and feloniously run away with any vessel or any goods, or merchandise to the value of fifty dollars, or should yield up any such vessel voluntarily to pirates, or if any seaman should forcibly endeavor to hinder his commander from defending the ship or goods committed to his trust, every such offender should be adjudged a pirate and felon, and be punishable with death.

So the act passed March 3, 1819, declared that if any person on the high seas should commit the crime of piracy, as defined by the law of nations, he should, on conviction, suffer death; and the act passed May 15, 1820,

\* 5 Wheaton, 412, United States vs. Holmes.

† 4 Robinson's Reps., 121.

‡ 15 Peters' Reps.: The Amistad, 513.

declared that if any person upon the high seas, or in any open roadstead, or bay, or river, where the sea ebbs and flows, commits the crime of robbery in, and upon any vessel, or the lading thereof, or the crew, he shall be adjudged a pirate. So, if any person engaged in any piratical enterprise, or belonging to the crew of any piratical vessel, should land, and commit robbery on shore, such an offender shall also be adjudged a pirate.

The Supreme Court of the United States, in the case of Thomas Smith, who stood indicted before the Circuit Court of the United States, in Virginia, on the act of Congress of 1819, decided that the crime of piracy is defined by the law of nations, with reasonable certainty, and that robbery, or forcible depredation on the sea, with an intent to rob or steal, is piracy by the law of nations, and by the act of Congress.\*

The same court, in the case of Klintock, who stood indicted, and found guilty on trial, for a piracy committed on the high seas, in April 1818, on a vessel belonging to persons unknown, decided that all persons who threw off their national character, whether citizens or foreigners, on board of a vessel not belonging to a foreign nation, who is acknowledged as such by other nations, could be punished as pirates by the laws of the United States. The court, in this case, decided that a commission, issued by a brigadier of the Mexican republic, a power of whose existence the court knew nothing officially at the time, did not exempt the prisoner from the charge of piracy.†

Chancellor Kent says, that there can be no doubt of the right of Congress to pass laws punishing pirates, though they be foreigners, and may have committed no particular offence against the United States. It is of no importance, for the purpose of giving jurisdiction, on whom, or where a piratical offence has been committed. A pirate, who is one by the law of nations, may be tried and punished by any country where he may be found. Piracy, under the law of nations, is an offence against all nations, and punishable by all.‡ Pirates are held to be out of the protection of law. All nations and sovereigns have the power and jurisdiction to arrest them, which extends to all parts of the globe. When a vessel rightfully, on the ocean, lays aside her lawful business, and begins, or proceeds on a piratical cruise, she loses her national character, and the protection which the law of nations gives her, the crew, and all persons aiding and abetting them, whether citizens or foreigners, are deemed pirates, and they may be punished under the act of Congress, whether the vessel was a domestic or foreign one before she assumed a piratical character.

By the ancient civil law, all persons, whether public or private, could, without being liable to punishment, kill, or put to death a public robber, or a person who laid in wait to rob either a person, house, or field. The same law still exists in regard to pirates, who are, by the law of nations, deemed to be enemies of the human race, and may be arrested and captured by all persons whether private or public, and by the public or private ships of any nation, in peace, or in war.

Whatever, by the general law of nations, is recognised as a felony, misdemeanor, or an offence, when committed on land, will, when done on the ocean, be held to be felony, piracy, and an offence by the laws of all nations. A felony or piracy committed at sea, is usually inquired into by

\* 5 Wheaton's Reports, 153. † 3 Wheaton's Reports, 144. ‡ 1 Kent, 186.

the admiralty courts of the country, where the offenders are first apprehended and brought. Whenever the subjects of any nation or people commit a robbery at sea, upon the ship and goods of a friendly nation, they are guilty of piracy. So, when a ship is riding at anchor upon the sea, and the ship's crew are on shore, or in their boats, so that no person be found on board, yet, if a pirate boards the ship, and commits a robbery, it is a piracy.

So, if a pirate at sea assaults a ship, and, in the engagement, kills a person in the other ship, by the law of England, all the persons on board of the pirate ship are principals in the murder, although none enter the other ship. By the maritime law, those who give the wound only are held to be principals, and the rest accessories, if the parties can be known.

Acts of piracy on the high seas consist of murder, robbery, larceny, maiming, wounding, throwing a person overboard, drowning, or shooting him in the sea—assaulting and beating the officers and crew of the vessel assailed—boarding a vessel lying alongside of her, maliciously sinking, destroying, or damaging her hull, tackle, apparel, furniture, boats, or rigging—plundering her of her cargo or provisions, armament, or stores—hailing a vessel at sea, and firing blank cartridges, or shotted guns at her, to bring the vessel to—sending armed men on board, demanding and receiving contributions of money, merchandise, provisions, armament, and stores—sinking, capturing, or detaining a vessel on the high seas—committing robberies on board, either of the ship's lading, arms, stores, or provisions, or of the money or property of the officers, passengers, or crew, is piracy by the law of nations, and special enactments of most countries.

So, landing from a vessel at sea, or in a bay, haven, harbor, or port, river or creek, and going on shore, armed with weapons, and committing robberies or thefts, murders, assaults and batteries upon innocent and unoffending persons—pillaging the inhabitants on shore—running away with, sinking, or otherwise destroying a vessel at sea, whether she is a foreign or domestic vessel, or whether the crew and officers have enlisted on board of her or not. So, decoying a vessel into rocks, or quicksands, setting up false lights, destroying those erected by the government, with an intent that vessels shall be wrecked, stranded or foundered—robbing vessels wrecked, or persons cast on shore from wrecks, or while they are in distress at sea—these, and many other acts, constitute piracy.

The late lamented Mr. Justice Story, says, in delivering the opinion of the court, that to constitute piracy, it is not necessary that the act should be done with an intent of private gain, for if a piratical burning or sinking of a ship, or murder of her crew, should take place by freebooters on the sea, it would be as genuine piracy as if the primary object were immediate plunder.

The act would exhibit a piratical and felonious intent, an intent to despoil the owner of his property, and to accomplish it by the murder of the crew, the murder would be adminicular to the robbery. But every hostile attack of one armed vessel upon another, in time of peace, is not necessarily piratical. It may be a mistake, or in necessary self-defence, to a vessel, under a supposed meditated attack by pirates. It may be justifiable or excusable, and then there is no blame; or, it may be under circumstances of manifest default, and then it carries with it the responsibility in damages.\*

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\* 7 Mason's Reports, 121.



The act of Congress, passed April 30, 1790, declared that every person who shall, either upon the land, or the sea, knowingly and willingly aid and assist, procure, command, counsel, or advise any person to do or commit any murder or robbery, or other piracy upon the seas, which shall affect the life of any person, and such person shall thereupon do, or commit any such piracy or robbery, then every person so aiding, assisting, procuring, commanding, counselling, or advising the same, either upon the land or the sea, shall be, and are declared, deemed, and adjudged to be accessory to such piracies before the fact, and every such person being therein convicted shall suffer death.

This act of Congress is in accordance with the ancient civil law, which declared that whoever concealed, or gave refuge to a public robber, knowing him to be such, became liable to the same punishment, as that to which the robber himself was subjected.

So did an aider, abetter and counsellor of the delinquent, before the crime was committed. All persons who gave aid to another by money, persuasion or advice, to commit a crime, in any stage of the proceedings, were, by the civil law, deemed and denounced as offenders, and subjected themselves to the same degree of punishment as the principal felon.

Mere advice or counsel to a delinquent, before or after an offence had been committed, how to avoid punishment, or to defend an accusation, did not expose the party giving the advice, to a denunciation as an offender, but when advice or exhortation about a crime, assumed the nature of a mandate, or command, or request to commit it, the adviser became a principal party to the offence, and was liable to the same punishment in kind and degree.

A consultation was not punished as a crime, unless a crime was thereafter committed, but such consultation was a conspiracy against the state, and the parties were denounced as offenders. So when the consultator persuaded, inflamed, instigated, exhorted, invited, or furnished the means to commit an offence, he was denounced as a principal party, and became liable to the same punishment, as the person who inflicted the blow, whereby death ensued. In some cases the consultor was liable to a milder punishment, according to the nature and aggravation of the offence.\*

The English nation, by the acts of parliament, of 11 and 12 William, passed in 1700, and of 8 George I., passed 1722, have incorporated the principles of the civil law into the statutes of the realm, in regard to piracies, robberies, and felonies committed at sea.

The eighth section of the British act, George I., among other things, declared that if any person or persons, shall in anywise consult, combine, confederate, or correspond with any pirate, felon, or robber on the sea, knowing him to be guilty of any piracy, robbery, or felony, he or they shall, upon conviction thereof, suffer the pains of death, loss of lands, goods and chattles, as pirates, felons, and robbers.

By the statute of George I., chapter 25, it is declared piracy for any master of a ship, or other person, to trade, truck, barter, or exchange, or in any other manner to furnish any pirate, robber, or felon, on the seas, with arms, ammunition, provisions, or stores of any kind, or to fit-out any vessel with a design to trade with such pirate, or to correspond with a pirate, robber, or felon on the sea, or to consult or confederate with a pirate at sea, knowing him to be guilty of piracy, felony, or robbery, and every

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\* Prosperii Farinacii, page 414.

person offending against this statute, is liable to be punished with death as a pirate, felon, and robber, and loss of lands, goods and chattels, and the vessel so fitted out, and the goods and merchandise taken on board, is forfeited, and one part must go to the informer, and the other to the crown.

So, by the same statute, it is declared, that if any person on the high seas, or in any port, haven, or creek, whatsoever, meeting a merchant vessel, shall forcibly board, or enter into the same, and throw overboard, and destroy any part of the goods or merchandise belonging to the vessel, all persons offending shall be guilty of piracy, and punished as such.

By the law of all nations, a capture by a pirate or a privateer, without authority, invests no right of property in the captor. A pirate having no right to make conquests, cannot acquire any lawful property in what they take, for the law does not allow them to deprive the true owner of his property; he always retains possession of it in the eye of the law, although another may have the custody of it; and in whatever manner things taken by a pirate may be recovered, they return again to their former owners, who lose none of their rights by such unjust usurpation. Property, when recovered by the exertions of others, shall be restored to the former owner upon payment of salvage.

The ancient work, called *The Consolato Del Mare*, provided that when an enemy, from fear or other causes, abandoned a ship at sea, and persons, not the owners, obtained possession of the vessel, she should be restored to the original owners upon the payment of salvage; so when third persons, or the master of the vessel, pay ransom for a restoration of the property, they may demand salvage; and the rule is the same where a ship of a friendly power recaptures property before condemnation.

When a capture takes place on the high seas, the vessel retains in judgment of the law, her original character, until a condemnation and sale. If she is a neutral vessel, she retains it until a decree of restoration or condemnation; and where a vessel is captured, and an additional number of men are put on board, or an entire crew of officers and men, for the purpose of employing her as a cruiser, and she is sent on this errand with or without a commission, she will be restored to the original owner, if recaptured, upon the payment of salvage.

So, when a vessel of war is captured, and is thus transmuted into a merchant vessel, or the latter is transmuted into a vessel of war, the change does not defeat the title of the original owner, upon recapture.\*

When a vessel is captured, and released by the crew, salvage is awarded, and the title remains in the original owner. So, when a ship is abandoned by the enemy, after capture, from whatever cause, the property reverts to the owners, without regard to possession of the enemy, on his capture.

When foreign neutral ships are captured, and recaptured by a privateer, or national vessel, or by the crew, or by friends of the enemy, no right in them can be acquired by the recapture beyond a claim for salvage. Remuneration, and the title to the property will be retained by the original owner, upon payment of salvage.

Until sentence of condemnation against a neutral sailing vessel, she loses neither her neutral character, nor her rights. After her capture she may obtain her release; the question of neutrality is always a thing which adheres to the property.

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\* Jacobson, page 131.

When a ship, or a vessel, is under convoy, and loses her protection, either by winds, waves, or any other peril of the sea, and is captured, or when captured when in a fleet under convoy, and is recaptured by the convoy ship, or by a detachment from her, or by a new party, the recapture will entitle the persons who perform the service to a salvage remuneration.

By the law of England, and the United States, it is deemed piracy for a master and crew to run away with a ship and goods committed to their care, and convert them; and so when a master has carried a cargo to the port of destination, and he then takes a bale of merchandise and converts it, this may amount to piracy.

It is piracy to take a ship while the crew is in their boat, or on shore; though if a vessel be in necessity or distress at sea for provisions, and attacks another vessel, and takes out provisions, anchors, sails, rigging, or cables, this is not piracy because necessity required it.

If a Spaniard robs a Frenchman on the high seas, both of their princes then being at amity, and also with the crown of England, and the ship is brought into the ports of the king of England, the Frenchman may proceed to punish the Spaniard criminally, by the law of nations, in the court of admiralty, as a pirate, and seek a restoration of his vessel by a suit civilly, which will be decreed him by the maritime law.\*

The courts of admiralty, in all countries, have jurisdiction of civil suits for the restitution of goods, piratically taken at sea, and sold at land. Such courts will issue their attachments, and monitions, to arrest such goods in whosever hands they may be found, at sea, or on land, and to seize and sell the same, or restore them, in kind, to the original owner or his agents.\*

So, the courts will entertain a suit for restoration, whether the goods are taken by the pirate, under a commission, or without one, because the commission only makes out the capture to be *prima facie* lawful, which otherwise would have been openly a piracy.

Whenever property is retaken out of the power of an enemy, or pirates, or rebels, before it has become theirs according to the established rules of national law, it is a recapture, and when claimed by the original owner, will be restored to him upon payment of a reasonable salvage to the recaptors.

But the property must have incurred danger and risk, or been in the possession of the enemy, or a hostile power, before the recaptors can demand salvage.

So, the danger must be immediate, and in actual existence, and not distant and eventual, or a conflict must be sustained before the claimants for recapture can demand salvage. When a vessel is pursued by the enemy, and runs aground to avoid capture, or strikes on a rock, or shoal in her flight, and the enemy obtains an actual possession of the vessel, which has met with the misfortune, or the property has become so far disabled as to be virtually in the hands and gripe of the enemy, the persons who rescue the property will be entitled to a salvage remuneration.

But when the possession is not absolute, nor in a great degree indefensible, nor have the assistant friends rescued the property from the possession of the enemy, a military salvage will not be due according to the laws of nations, but only a civil salvage.

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\* Jacobson, page 571, 572, and 574. Old English sea laws, page 578. 1 Haggard's Admiralty Reports, 372.

When a capture has once been made, the right of property does not rest in the captors until after an act of condemnation; but, in the mean time, the original owner may claim restitution of his property in the courts of a neutral country. A legal condemnation cannot take place in the courts of a neutral country, of vessels captured by privateers.

When vessels are on the high seas, and pursuing a lawful employment, in times of peace, or war, they are fully justified by the law of nations, when assailed, to repel force by force. The ancient writers tell us, that the law of nations permits each one to defend himself. Whatever is necessary for the preservation of life and property on the ocean, when unlawfully assailed, will be just and legal as a defence against the aggressor. The impulses and instincts of the human mind, strongly endow us with a desire to preserve our lives and property, and to repel all aggression. Homicide, when committed in defence of our persons and property on the ocean, is always excusable, and not the subject of punishment. The masters, just owners of vessels, are, at all times justified by the law of nations, to carry arms and ammunition at sea, to defend their vessels from attacks of enemies or privateers. Indeed, no vessel, whether public or private, in time of peace, has a right to visit and search another vessel, which it meets on the ocean. Each vessel has rights equal to the rights of any other vessel, whether private or public, and no vessel has a right to molest another, when engaged in a lawful enterprise.

The fault is always presumed to be first on the side of the party which makes the invasion, and a party may defend himself by the divine and natural law, as well as by the law of nations.

This doctrine of self-defence, was extended not only to the person assailed, but a friend who was present had the right also to repel by force the assaults of the aggressor.

So, also, a party unlawfully assailed, has not only the right to kill his adversary, in defence of his life and property, on the ocean, but he may, also, when robbed of his property, become, in turn, the assailing party, and, if necessary, may take the life of his adversary, to regain possession of that which has been captured from him.\*

A. N.

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#### ART. V.—ON ELECTRICITY AS THE CAUSE OF STORMS.

THE closet is not always the best place to study the operations of nature's laws. It is not in books, the studios can always obtain the clearest views of natural phenomena. The great book of nature is open to all. To read it with success, requires close observation, not only in one part of the world, for a given season of the year, but under various conditions of climate, earth and seasons, with cold and heat. In early life the writer devoted much attention to the study of the physical sciences, which, combined with great exposure in pursuing a laborious profession, so far undermined his health, as to induce him to abandon both, and adopt different pursuits in more congenial climates. These, with other circumstances, led him to travel and observe the operations of nature, under various latitudes, both in this country and in Europe.

A permanent residence at one place, is unfavorable to the comprehension of the true character of storms in other parts of the world. An inhabitant of England can never fully comprehend the nature and character

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\* Prosperii, Farinacii, page 264.

of an American tornado in our southern and western states. Nor can a resident of the latter fully appreciate, the peculiar nature of storms in other parts of the world. Travel and observation afford the clearest means of arriving at rational views on the subject.

Storms appear under a variety of forms and circumstances, yet, we have every reason for believing that, however varied they may be, they are all excited by one ever existing and ever controlling cause: viz., *electricity*.

On examining the theories relative to the causes of storms advanced by Mr. Redfield and Mr. Espy, with others, it is apparent that they rather attempt to explain the course of the winds or the movements of the atmosphere—the rise and fall of the barometer in connexion therewith, than to show us the cause, the prime mover of these changes. Their explanations rather deal with the effects of a cause, than with the cause itself.

To tell us the air, or wind, during a storm, moves or blows from every point of the compass to the centre of a circle, caused by heat and rarification at the central point, does not reach the real cause of storms. Or as a writer in the *North American Review*, justly expresses it: "There is something wanting." WE AFFIRM THAT THE REAL CAUSE OF ALL STORMS IS ELECTRICITY.

We contend, (which can be proved by experiments,) that the atmosphere is continually operated upon by two grand currents of electricity, moving at right angles towards each other. 1st. That, there is always a current setting from the equator towards the poles, and from the earth towards the frozen heights of the atmosphere above, and from thence in a continuous circle back to the earth's surface, also towards the equator from the poles. 2d. That there is another current passing directly round the earth from east to west.

In some measure to prove the correctness of our statements, if a rod of iron with a sharp point be laid horizontally, pointing due north and south, for a sufficient length of time, it will become magnetized. The same will occur, if the same rod be placed at any angle towards the frozen arch of the atmosphere above, from that of a perpendicular line, to a horizontal level. In this way, common lightning conductors often become tolerable magnets. It is thus manifest that, if these iron rods be placed in the positions we have just described, or laid due east and west, they will become magnets sooner than if placed in any other direction. We know that currents of electricity magnetize iron, and the more quickly, when the iron is so placed as to be in parallelism with its strongest currents.

If a ball of iron be made red hot, and a mass of snow or ice be placed near it, there will be found a current of electricity passing between them, in whatever direction of the compass they may be placed. This current of electricity is evidently sent off from the heated body to that of the colder, returning in a semicircular curve again, from the cold substance to that of the heated iron. A very light piece of down, held between them, will also show a disturbance of the atmosphere in the track of the electrical currents. A delicate magnetic needle will also be effected by this current thus excited. The central portions of the earth are in the condition of increased temperature towards the fixed icy poles of the earth, or the frozen arch, or region of atmosphere which surrounds it above; just as the red hot ball of iron is towards the mass of ice or snow held near it. Between the earth's surface, and every part of the frozen atmospheric arch above, there must be continual electrical currents passing



perpendicularly as well as horizontally and at inclined angles. At right angles to these currents, there is always sitting a current east and west. These currents we have reason to believe never move in straight lines, but forever in curves. Watch the passage of the electrical fluid from the smallest spark of the machine, up to the broad ribbon flash sent forth from the clouds to the earth, and in no instance can the eye perceive that the fluid moves in a direct line.

The lightning of the clouds moving in a zig-zag course, is ascribed by some, to the irregular resistance of the strata of the atmosphere, through which it passes. While this may have some influence, yet, if a spark be passed through a receiver, from which the air has been pumped, the same curvilinear movement will be observed.

To prove the existence of this curved current passing from the earth to the frozen arch above, and vice versa, there is not a clear day in the year, on which you may not "draw down lightning from heaven." It was certainly an interesting fact, which Dr. Franklin showed to mankind, that he could draw down the electric fluid from the clouds charged with it, as they were passing over heads; it is nevertheless a curious fact, that if you on the clearest and brightest day of the year, raise a kite, as Dr. Franklin did, you can succeed in drawing down sufficient electricity to move the gold leaves of an electrometer. The existence of this current can be demonstrated in a less troublesome way. If the base of a lightning conductor be isolated, or cut off in its upright position near its base, so as to prevent its contact with the ground, having a wire attached to its lower end, so that the opposite end of the wire may touch an electrometer, the fluid gathered by the rod in its perpendicular movement will be manifested by a delicate test.

If a much smaller, or lower pointed rod, be attached, in an isolated state, to a wooden pole or post, in an open field, some distance from higher objects, under the same circumstances, it will also effect these least. And it is probable, that if a man stand on an isolated stool, in an open field, and hold erect in his hand, a musket, with a sharp bayonet, or keen-pointed sword, or knife, and a wire be made to pass from his feet, or legs, to the test, will show the passage of a current of electricity.

In each of these experiments, the result will be the same, at whatever angle to the horizon the rod be placed, or the musket, or sword be held, between the perpendicular, and a level, pointing north, east, west, or south. It is in reference to the existence of these currents of electricity, that late attempts have been made to apply it to agricultural purposes, and with striking effects.

From much observation and reflection, we have reason to believe, that when these electrical currents are much obstructed, a corresponding disturbance takes place in the elements of the atmosphere. Whenever one current becomes so powerful, as to be, for the time, the controlling current, the other, which crosses it at right angles, moves in a rapid circle round it. We believe all currents move in parabolic, or elliptical rings. Should the current, north or south, or perpendicular, between the earth and the frozen arch, become at any moment the controlling current, that moving east and west, at right angles to it, would revolve round it, with an intensity proportioned to the force of the controlling current; making a figure, in its movements, like a ring, or hoop of straw, bound round it at right angles by wisps of straw. On the contrary, should the opposite

current become the strongest, it then forces the other to entwine it in a similar manner.\*

When travelling on the high-pressure steamboats of the Mississippi river, I have frequently observed a beautiful illustration of the working of the two currents. When the boat was lying at a wood-yard, or under way, discharging high pressure steam, through the escape pipe, above deck, at every movement of the piston, in the cylinder, and the discharge of steam, the highly condensed steam, in the act of being thrown off, and recondensing into water, would rise up in beautiful rings, which expanded as they rose, in their horizontal position, at the same time showing, by the rapid motion of the vapor, the direction of the electrical currents which formed the rings, and controlled the movements of the vapor. They resembled a circular ring of parallel straws, around which others were entwined, at right angles, in rapid motion. The diameter of the rings, on escaping from the mouth of the pipe, would be only slightly larger than its diameter. The diameter of the ring itself appeared to be about  $1\frac{1}{2}$  to  $2\frac{1}{2}$  inches, which had a circular motion, and close around revolved the other current. This rapid vermicular motion around the rings continued as they rose, expanding as they ascended, till they became invisible in the air, one succeeding another.



In this case, we suppose the current composing the ring to be the strongest, imparted to it by the heated iron. The other, or weather current, is probably derived from heated water, or that of the atmosphere, at the moment of escape, and condensation of the steam. That this remarkable ring, and the motions of its currents, are of an electrical character, can hardly be doubted, when we reflect that the best of electrical machines have, of late, been made of steam boilers; one of which, of great power, is shown in the Polytechnic institution of London. It is found if a boiler be isolated, and its steam be highly rarified, a leaden jar can be heavily charged from its escaping steam, with the electric fluid, while in the act of condensation.†

Imagine similar currents to be brought into violent action by disturbing influences in the atmosphere, and we can at once comprehend the nature of a storm.

On this electrical theory of storms, which assumes, that the air or wind follows the movements of violent electrical currents, and blows in the direction in which they move, both Mr. Espy, and Mr. Redfield, are cor-

\* If a piece of iron, curved like a horse-shoe, or a number of strait iron rods be surrounded with coils of copper wire, and a current of electricity, generated by a galvanic battery, be made to pass through wire, bent a great many times nearly at right angles, to the pieces of iron, they are instantly converted into powerful magnets, which power they lose, or have greatly diminished, immediately the current through the wire is cut off. In this case, the current of electricity passing through the simple iron, when undisturbed, is so much augmented, or disturbed, by the artificial current made to flow around it, as to convert it into a magnet of great attractive force, clearly showing the existence of two currents, and the effects resulting from making one encircle the other.

† It is said, if grease or water be smeared around the inside periphery of the cannon's mouth, that, when it is discharged, similar rings to the steam rings we have described, will be seen twirling away in the smoke; the color of the rings being much whiter than the powder smoke.

In this case, the intense heat of the ignited powder suddenly converts the water of the grease, or the water itself, into steam, which, in the act of re-condensation, exhibits the workings, or motions of the two electrical currents we have named.

rect as to the courses of winds, in a tornado or storm ; for, instead of one wind, there are two : one blowing around the other. One wind blows round in a circle, as contended for by Mr. Redfield, while the other blows, or whirls, immediately around it, or vertically to it and the earth, as contended for by Mr. Espy, leaving the quiet centre, or annulus, alluded to by him.

This ring, or circle, may be of vast extent, or it may be confined, with dreadful force, to the narrow tract of a sweeping tornado, or the diminished compass of a water-spout, of a few feet in diameter. In these latter cases, we are inclined to think, the right angle current, or the vertical currents, passing between the clouds and earth, or water, are much the most powerful. The miniature dry-weather whirlwinds are put in motion by the same description of currents. They are usually seen in clear, dry, still, warm weather, and generally, if not always, occur in a valley, or low grounds. In these cases, opposite hills are differently electrified. A current is probably passing strongly from one to the other, or, from a water-course to a hill, which is acted upon by other currents setting, at right angles, to it, which give rise to the rapid whirling motion of the air, sufficiently strong to carry up, and whirl round leaves, straw and hay. These light substances clearly indicate, by their movements, the two currents alluded to. They are carried both round and upwards. Whatever explains the cause of this miniature whirlwind, explains the cause of the tornado, and of the water-spout. Hence the emphatic and correct expression of "*whirlwind*."

That tornadoes are vitally connected with electrical currents, would appear from the fact, that they seldom pass over large cities, or cross wide water-courses, and are usually dispersed on meeting the sea. We find houses, in cities, are less liable to be struck by lightning, than houses in the country. This can only be accounted for by supposing, that, in the former case, there are more points of attraction, or conductors, by which the fluid escapes, than in the latter. The same circumstance may influence, or cause the dispersion of tornadoes. The water of the sea, and rivers, in arresting their progress, may disperse them, by depriving them of electricity, or by weakening their strongest electrical current. We find such storms, usually, have a direction towards the sea, or some large body of water, or extensive range of mountains arrest them ; so do they attract or arrest electrical currents. We often have northeast storms which never cross the Alleghany mountains. Tornadoes seldom cross mountains, but often blow towards them, and are arrested by them.\*

We were told by a highly intelligent gentleman, who had resided in the East Indies, that whenever the north wind prevailed to the north of the Himalaya mountains, south of the range, the atmosphere would be found in a quiet and calm state ; and, *vice versa*, on the north side of the mountains, when the winds blew from the south. All admit clouds are attracted by mountains, and that it rains more frequently among them than

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\* In the states of Georgia, and the Carolinas, tornadoes usually blow from west south-west, to east northeast, or in a direction from the interior towards the ocean, the greatest point of attraction. In Tennessee, upper part of Mississippi, &c., the direction of the worst tornadoes have a path from southwest to northeast, or move easterly towards the Alleghany mountains, which they never cross. West of the Mississippi river, in Texas, and the distant southwest generally, storms blow with the greatest force from the northwest to the southeast, or in a direction from the interior towards the Gulf of Mexico. The "norther" is well known on the coast of Mexico and Texas. West of the Rocky Mountains, the strongest winds are the westerly, which are arrested by the Rocky Mountains, exercising little or no influence on their eastern slope.

on the plains. How can a cause be found for this, if it is not in the electrical theory we have assumed?

Hail-storms, and the formation of hail-stones—the crystalization of snow, water, and salts—water in the act of freezing, and boiling, with all kinds of crystals, are believed to be caused, controlled, and fashioned by electrical currents: facts, illustrative of which, we have not time to dwell upon\*. In reference to the geometrical formation of crystals, Dr. Wallaston contended, that the molecules, or particles of crystals, were in the form of spheres, and were united by cohesion (electrical attraction) into the forms of crystalized bodies. Now, before crystalization ensues, fluidity is necessary. Supposing the spherodity of the particles of crystals to be true, which is probable, how do they acquire that form, if it is not by electricity, moving in the currents we have pointed out?

Heat and electricity are, forever, intimately united. There never can be a great development of the one without the presence of the other. Combustion arises from the powerful electrical attraction of the positive combustible substance, of coal or wood, for oxygen gas, which is negative. The air is formed of countless millions of atoms of oxygen, and nitrogen gases, united, in the proportion of 22 of the former, to about 78 of the latter, in 100 parts. The air, it is believed, covers, or surrounds the earth to the height of about five miles. Combined with the other materials of the air, is a small portion of carbonic acid, about one per cent. The particles of these gasses move freely about each other. They are condensed, in their bulk, by cold, or expanded by heat and electricity, till they occupy a much larger space. When thus expanded, they admit the circulation of watery vapor among them more freely.

To understand the irregularity and force of electrical currents and attraction, in the production of storms, we must not only know the composition of the air, but that also of watery vapor always combined with it; yet in variable quantities. Also, the condition of the 45 miles of air, as enveloping the globe. We must recollect, that a few miles above us, (not more than four or five,) there is an icy arch of atmosphere, or air, in the temperature of eternal frost. The peaks of mountains which penetrate it, are covered with perpetual snow. This arch is highest beneath the perpendicular rays of the sun, or about the equator, when the sun is on the line, and grows lower, as we approach the poles, till it meets the earth at the point of perpetual snow and ice.† The height of this arch, above the earth, varies at different parallels of latitude, and at the same latitude at different seasons of the year. The elevation of the frozen arch, at different latitudes, beginning at the equator and going towards the north pole, has been reckoned, by philosophers, as follows:—

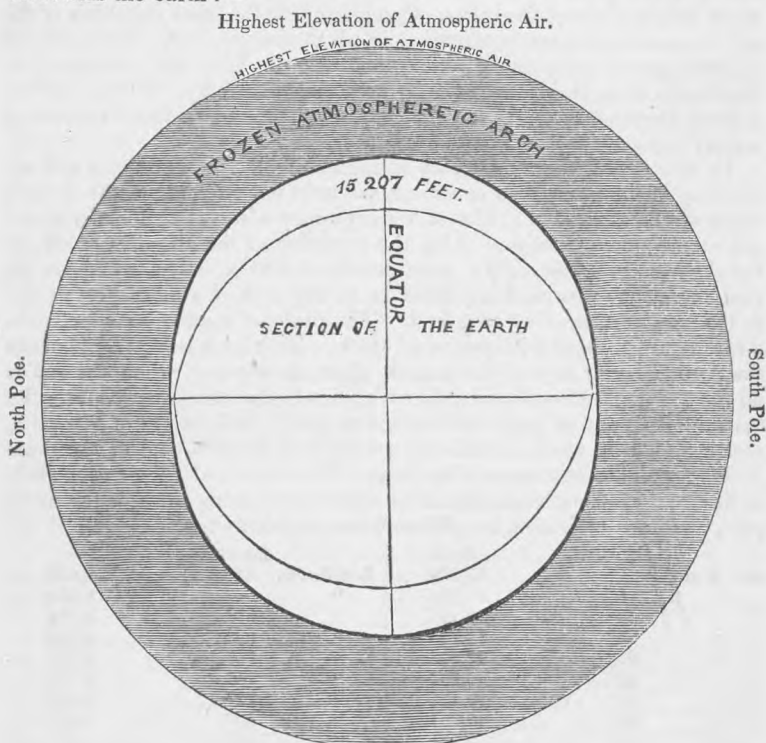
Lat. North,	Equator.	Feet.	Lat. North,	Equator.	Feet.
	0°	15,207	45°		7,670
"	5°	15,095	"	50°	6,334
"	10°	14,764	"	55°	5,034
"	15°	14,220	"	60°	3,818
"	20°	13,478	"	65°	2,722
"	25°	12,557	"	70°	1,778
"	30°	10,474	"	75°	1,016
"	35°	10,287	"	80°	457
"	40°	9,101	"	85°	117

\* Some have considered electricity the cause of all motion.

† Thomas Simpson, Esq., who attempted to reach the northwest passage, by land, found, in high latitudes, the ground frozen the year round a foot or two below the surface, even on the Red River of the north, near Hudson's Bay.

Now, as 5,280 feet is about a mile, it is easy to see, by this estimate, the height of this frozen arch of atmosphere at any given latitude. Supposing the elevation of ground to remain the same, we might travel from the equator due north, or south, till we reached a region of snow and ice, as perpetual as that which caps the highest peaks of the Andes or Alps. Beyond the border of perpetual ice, near the poles, we have reason to believe no storms ever prevail. Captain Parry found almost constant calm, and still weather, even in the latitudes he reached. There is a large surface, around each pole, of eternal congelation, where no storms prevail: where water must have remained solidified, as it were, from the date of its creation, or where solidity is the natural state of water, as granite is with us.

Tornadoes have their extreme northern limits. They are rarely heard of north of the 42d degree of north latitude, and never prevail as high as 50°. They are most frequent late in spring, and early in summer; and in the United States, usually occur between 30° and 40° of north latitude, being in their greatest severity between 30° and 36°. The storms of higher latitudes decrease, as you go north, until probably beyond the 75th or 80th degree, they are never felt, especially with equal severity. We here proceed to give a diagram of the position of the frozen arch which surrounds the earth:—



It admits of demonstration, that hot air is positively electrified, while cold, or icy air, is negatively so, provided it be more or less free of watery



vapor. Hence currents of electricity must continually, or ordinarily, pass from the earth's surface, to every part of the frozen arch, we have described, and back again, thus :

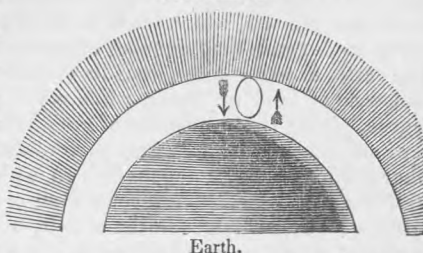
The ascending current must carry with it particles of air, and watery vapor towards the colder region, while the descending current brings down with it vapor, and air of a lower temperature, to occupy its place, often in the form of rain. It is on the same principles that water freezes, and a pot boils. By the same electrical currents, the

complete admixture of gaseous substances take place. On the tops of the highest mountains, the air is found to contain the same proportional of heavy carbonic acid gas, as the deepest valleys.

It was, at one time, supposed that the gases united chemically, but Dr. Dalton showed, if a tall glass tube, or jar, standing upright, nearly filled with carbonic acid, the heaviest known gas, and, afterwards, hydrogen, one of the lightest gases, be poured in upon it, and left quiet for a short time, the carbonic acid would be found at the top of the tube, and the hydrogen at the bottom. There is no way of accounting for this phenomenon, except by supposing it accomplished by the agency of electrical currents, acting on the minute particles of the respective gases. We have reason to believe that, whenever, and wherever, an electrical current is setting in one direction, there is always another current, or a continuation of the same, setting in an opposite direction. So with the air.\*

The height of the icy region, or arch of atmospheric air, greatly varies at different seasons of the year, in the same latitudes. This is caused by the sun's advance in the spring, north of the line, and to his retrocession in the autumn. The highest point of the arch must always be exactly beneath the vertical rays of the sun, and lowest at that point of the extreme north or south, where the rays of the sun most obliquely and feebly penetrate the frozen regions of the poles. The electrical currents are always most active and powerful within the tropics. (It is probable the sun itself is the great source of electricity and light which generates heat near the earth's surface.) It is within the tropics, such as the West India

Frozen Arch.



Earth.

\* Were it not for the agency of electrical currents, we might suppose a heavy gas, like carbonic acid gas, would descend from the higher regions of the atmosphere, and by settling, or accumulating in deep valleys, destroy animal life. But, on the contrary, we find the air, in the lowest positions, to contain no more carbonic acid, than that taken from the tops of the highest mountains. There is only one position in which carbonic acid is found to accumulate, to an undue, and fatal extent; and that is, in cavities which penetrate the earth, such as in old wells, deep cellars, or under-ground sewers. Electrical currents are always dispersed on reaching the general level, or surface of the ground, or water, by the extensive superficial attraction of the same. No one is ever killed by lightning, when placed in a deep cellar, or well, or in the hold of a ship, beneath the surface of the water. Ships never have holes punched in their bottoms by lightning. The safest place for a powder-magazine, is beneath the ground, and on ship-board, beneath the level of the water. Powder, in a deep well, or cellar, would never be ignited by electricity; neither can the air of the same be purified by electrical currents.

islands, where tornadoes prevail with the most fearful destruction, especially about the periods of the equinoxes. The sudden changing of the position of the arch, by elevating it in the northern regions, by the sun's approach in the spring, or its sudden depression towards the earth in autumn, as the sun recedes, which tends to disturb the electrical currents to such extent as to cause the frequency of storms about the time of the equinoxes. The earth, at some points, loses its electricity, as the sun recedes, whether composed of land or water, while other portions acquire it in a higher degree, giving rise to currents of greater intensity. In other words, such portions become, as it were, preternaturally, positively excited, while other portions become negatively; so, with regard to the great frozen arch, which, in such cases, either recedes from, or approaches nearer to the earth's surface. These changes in the activity and force of the currents, give rise to violent winds, or commotions in the atmospheric air. The course of the strongest, and probably the prevailing electrical currents, set from the equator towards the poles, or those vast regions of eternal ice, or congelation. Hence the direction of the needle of the compass towards the poles. As before remarked, probably feebler currents are, also, continually passing from the earth to every part of the frozen atmospheric arch, which are crossed by others, passing, at right angles, from east to west. In winter the former currents become so strong as, no doubt, often suddenly to sink the frozen arch, and bring it in contact with the earth, in a few hours, as is seen in the temperate and northern latitudes of the United States. Thus, we often see the weather, and temperature, after a fine mild day, suddenly change, in a single night, over the whole Union, from New Orleans to the northern lakes, and from the Rocky mountains to the Atlantic ocean, to a freezing temperature. Now, to suppose, what many believe, that these freezing changes are carried over the whole country on the progressive wings of a northwest wind, is absurd. The most violent hurricane only moves at the rate of some sixty miles an hour—a speed far too slow to effect such an extensive and sudden change in temperature. The only plausible mode of accounting for these sudden changes, is, by the vertical descent (often accompanied with strong wind,) of currents of electricity, accompanied with masses of cold air, from the cold or frozen arch, or region, above us. A great variety of meteorological phenomena can be understood by supposing electricity to be the principal agent in their production.\* The barometer is not an unfailling indicator of an approaching storm of wind. It often falls on the approach of rain alone. The sinking of the instrument only indicates an ascending current at the place of observation. This is often witnessed without any increase of temperature, or of heat. On the contrary, it often happens, while it is thus depressed, that the temperature is diminished, instead of being increased.

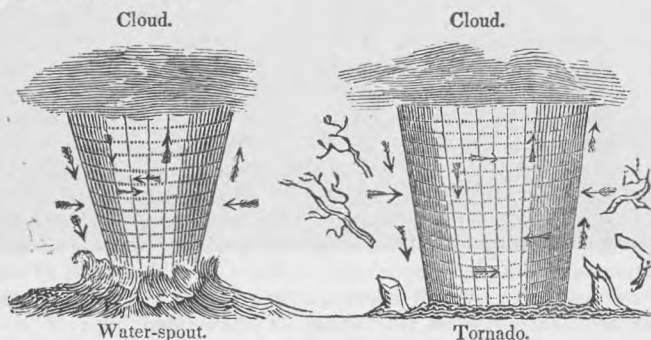
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\* It has always formed a part of popular belief, that the changes of the moon have an influence upon the weather. If the moon effects, by its attraction, the ebb and flow of the tides, it is not unreasonable to suppose its attraction may, to some extent, operate on the atmospheric air, influencing the elevation, or depression, of the frozen arch. We know, during total eclipses, and especially that of the sun, the temperature generally falls. Haze around the moon, is only indicative of humid vapor in the atmosphere, and hence indicates rain. A humid atmosphere is often very clear, and a good conductor of sound, if the weather be calm. Hence, noises being heard at an unusual distance, is justly considered "a sign of falling weather."

To the action of electricity, must we attribute evaporation, and the ascent of watery vapor, mingled with the ascending particles of the atmosphere, to the cold, or condensing regions of air, where they coalesce in the form of clouds; which again imparts the electricity, disengaged by condensation, as in steam, in descending currents to the earth, which passes off silently, or by explosions, according to the temperature, or height of the cloud above the earth, accompanied with rain, &c.

In winter, the clouds usually move so near the earth, that the electricity is reimpacted to it, in a silent and imperceptible manner. By going due north, we reach latitudes where no thunder is ever heard, and the only display of electricity ever witnessed, is that of the aurora borealis, given off in diffused flashes from currents of warmer air, of a higher latitude, to colder and heavier currents, near the surface of the ground. In such regions, a short and fleeting summer is succeeded by an eternal round of freezing weather.

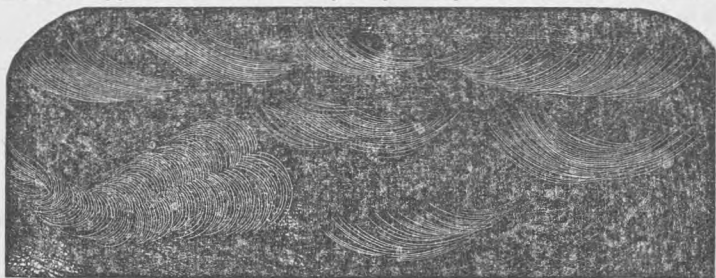
During water-spouts and tornadoes, the latter of which may be termed a kind of water-spout on dry land, the cloud and earth are, comparatively, in close proximity. A rapid and powerful electrical current is passing from the cloud to the earth, and from that to the cloud, while another current, passing at right angles, and horizontally to it, is arrested in its course, and made to whirl round it with great force, as we have seen, in the steam rings, and the dry weather miniature whirlwinds. In the case of tornadoes, or whirlwinds, and water-spouts, we suppose the force of the currents to be exerted thus:—



There are appearances in the heavens, in temperate climates, indicating, a day or two before their approach, either rain, high wind, or both combined. These were first pointed out to us by a fellow-traveller, on the outside of an English stage-coach, on our way from Shrewsbury to Liverpool, and fully verified the sign of "windy weather," in that case. On a clear day, and when the sky is otherwise blue, there may, often, be seen floating, in the high regions of the atmosphere, fine, white, thin, feathery-looking vapors. They are, evidently, far above the ordinary height of rain-clouds, being so elevated as to look stationary; yet if we closely observe their progress, we shall find them moving in some particular direction, with considerable velocity. While they are moving in one direction, the wind, near the earth's surface, is blowing in precisely the opposite course, or very often so. These vapors are called, by sailors, and the common people, "mares' tails," from the resemblance they often bear to the

frizzled tail of a horse. Their appearance is considered a never failing sign of a "change of weather."

There is evidently an electrical current, with warm and light air, setting in the course of these moving vapors, most commonly in the United States, from the southwest to the northeast, while a current of cold air is setting along the earth's surface in an opposite direction. The electrical current rises in warmer regions of air, and when, at a great height, progresses towards the northern, and colder region of the frozen arch, till its vapor, carried along with the air, begins to condense in the form we have described, and becomes visible. As this process goes on above, the under part of the electrical current is setting towards the point where the activity of the ascending current commenced. The force of the under current is first felt at the point towards which the wind blows, near the earth's surface, as justly remarked by Dr. Franklin, and with the same velocity as the ascending current began its movement.\* This is likely kept up till the currents are equalized. When the "mare's tails," or light vapors, are seen moving from north to south, or from northwest to southeast, the wind, the next day, is very apt to blow in the same direction, or, as sometimes happens, directly in the opposite course. Indeed, it is frequently the case, that this current becomes the strongest near the ground, taking the place of it, while the latter becomes the upper current. Blows, therefore, sometimes come in the direction these vapors are moving, and sometimes opposite to them. They may be represented as follows, thus :



In connexion with these appearances, there is a formation of vapor called "mackerel sky," which denotes, with sailors, a change of weather, if not an approaching storm, which may be represented thus :



They also assume a great variety of forms.† This vapor is evidently produced in the same manner, and is subject to the same laws, as that

\* Sometimes they stretch, in their bands, from one side of the horizon to the other, terminating in sharp points, at each end, near a common centre, while spreading out near the middle.

† If the velocity of these vapors were ascertained, they would, probably, in many cases, show the course, as well as the force of the coming storm.

composing the "mares' tails." The sailors have the following for a saying :

"A mackerel sky, and mares' tails,  
Make tall ships take in their sails."

The clouds, which follow the descending current, produce copious showers of rain, while the light vapors, which we have described, can occasionally be seen, apparently far beyond the clouds, which shed the rain. Settled weather cannot be expected while they are seen. Sometimes the ascending or descending currents, accompanied with clouds, are so near together that they can be seen rapidly passing each other, in contrary directions, which never fail to denote a heavy fall of rain. In highly positive electrified clouds, seen in summer, which may always be known by their resemblance to piles of white cotton-wool, electrical currents pass from one cloud to the other, as well as between them and the earth.

At the same season of the year, when a heavy cloud is formed, we sometimes see counter currents of electricity formed in the same cloud and passing from one portion to another. Such clouds are highly charged with electricity, and are frequently accompanied with high wind. Whenever a flash of the electric fluid is given off from such an ærial electrical machine, the vapor it held in suspension is suddenly condensed in the form of a heavy fall of rain; for a moment after each discharge, the rain is seen to fall more freely. Such clouds often look darkly green at the under surface, and as they approach, they seem chased by small patches of clouds which are condensed in the region of air, cooled by the hail, (which such clouds discharge,) or rain in its descent, and is then carried up by the ascending current of electricity. In north-east storms in the United States, for two or three days continuance, we have every reason to believe they are preceded by a strong current of wind blowing in an opposite direction in an elevated region of atmospheric air. The upper current of air, or wind, follows the electrical current, on that of the vast ring, while the north-east wind follows the opposite or returning part of the current, setting towards the south-west, or tropical regions, influenced probably in this case, from its due south-west course, by the attraction of the land. Both electrical currents are much influenced by local circumstances. The trade winds would seem to be more or less controlled by the electrical currents setting east and west. Currents of water also to some extent influence the movements of electrical currents, such as the Gulf Stream, &c.\* The sirocco, monsoon, &c., are all subject to the same electrical laws which apply to storms in other parts of the world. The intervention of oceans, islands and continents all have their influence on electrical currents, and consequently on atmospheric disturbances.

We profess to be no storm or rain king, or to be able to exercise any influence whatever over the elements; we have no infallible means of foretelling their approach, or of giving directions for escape when upon us.

The barometer is the best instrument we possess yet, but it is by no means certain in its indications. It is possible the time may arrive when some instrument may be devised for ascertaining the force of electrical cur-

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\* Thunder storms are always more frequent in the tract of the Gulf Stream, than in any other part of the Northern Atlantic Ocean.



rents, during all stages of weather, or which would probably afford more accurate means of forewarning us of an impending storm than any we have in use. We do not pretend to say all the points we have broached, in this paper, can be fully demonstrated by experiments in the present state of our knowledge. Electricity itself, is yet but little known or understood. Many of our statements and conclusions are founded only on analogy, reasoning from well known and well established philosophical principles. The novelty of our views must challenge the attention and scrutiny of many persons, some of whom, no doubt, are wedded to opinions of an opposite or different character. Such may possibly treat them with indifference or ridicule. These considerations have no weight with us; as we seek neither fame or profit by bringing our theory before the world, offering it for what it is worth. Hoping, as we do, the subject may receive from other persons of more leisure and better qualifications an investigation it deserves, which if not of immediate practical utility, is, notwithstanding, interesting to ingenious inquirers and important to the cause of science.

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ART. VI.—THE MARCH OF OUR REPUBLIC.

IS IT UNFAVORABLE TO PROGRESS AND IMPROVEMENTS?

DURING the last year, the American people have been most deeply agitated on the very important question, as to what influence extent of country may exert upon our government and the progress of our population in general improvement. It is truly a question worthy of freemen, as it embraces the whole range of our future destiny. The annexation of Texas and the occupation of Oregon, have excited investigation and examination into the peculiar character of our institutions for an extended empire. The more the subject is examined, wider and deeper is the conviction taking root that the spreading of our people, and the extension of the number of confederated states does not weaken, but rather gives strength to the American Union.

Like the enduring and increasing strength of the concentric arch, the pressure from without gives firmness and solidity and harmony to all within. The great West, with its increasing greatness and over-shadowing weight, is gradually drawing together the East, and the centre, and the South, with a power that becomes more and more irresistible.

While thus it will be acknowledged, that the strength of the Union will be increased by additional support, a greater and a far higher question arises, and without which, we should deem the extension of our country of secondary importance. And that is, will not that extension promote the improvement and progress of man in its highest sense? Will agriculture advance less rapidly? Will manufactures be less flourishing? Will commerce be less active? And above all, will education and religion be less regarded? Will national corruption and effeminacy take a deeper and more deadly root? These are important questions, and clearly effect the very stratum of all that makes a country or a government desirable to live in, or its people proud of its name.

Though it is not easy to read the future, much may be learned by tracing the map of the past, for we are sure of one thing, what *has been* may

be again—we need not go beyond our own history. As we are a peculiar people, we may truly say, we have a peculiar history. The examples of Rome, Athens, Carthage and England, will not fit our people, for it is undeniable that there has been no government like ours in the world, even with its history stretching through the long and eventful period of four thousand years. What American has forgotten the first settlements of our country? For tens of years it was confined to a narrow strip on the Atlantic. But gradually the settlements spread out wider and wider, until they reached the base of the Alleghany mountains.

So far had our people advanced at the date of the American Revolution; the establishment of independence and democratic institutions gave a new and irresistible energy to the progress of our people. In subduing the heavy forests of Western Pennsylvania, New York, Ohio, Tennessee and Kentucky, the march of emigration was steadily onward. Gradually the wilds of Indiana, Illinois, Missouri, Mississippi, Alabama and Michigan, were alive with the bustle of an enlightened people. The yellow corn, the golden wheat, and fair cotton, was waving over a thousand hills and valleys “never before yet reclaimed to the use of civilized man.”

But progress was still onward; the hardy settler has found new homes in Wisconsin, Iowa, Nebraska and Florida. “Onward, onward,” is now the tramp of thousands, even to the far-distant Oregon.

Here, for the present, let us pause and look back. Our people have advanced fifteen hundred miles from the seaboard, in the space of two hundred and twenty-five years. The first one hundred and fifty years, they advanced only five hundred miles. The next seventy-five years, that march was increased to 1000 miles, showing progress infinitely more rapid, and proving the principle, that the momentum of emigration increases as our nation grows older. We have now nineteen millions of people. Will not the surplus population of that number demand a greater outlet than ten millions would require? Can we not already hear the footsteps of “the coming millions” on the plains of Missouri and the valleys of Oregon.

It was the remark of a brilliant and gifted orator, (Mr. Choate, of Mass.,) in opposition to the annexation of Texas, and which was widely circulated during the Presidential canvass, that the annexation of Texas would so seriously disturb the balance of our country, that we should no longer be the same country; that the United States would be merged, and lose its identity. It will be perceived that this argument opposes *all* extension of our territory, on the broad and unequivocal principle, that we have already got too much territory.

The remark of Buchanan, in the senate chamber, still lingers in our memory. After mapping the progress of the wonderful past, he impressively asked, “what is a century in the lifetime of a nation?” Who can say that not only Oregon and Texas, but all North America will be needed for our population, as it expands into hundred of millions, under the quickening influence of our institutions.

It is well known, that the population increases faster in our country than in any other in the world. It is considered a safe rule to estimate, that we double once in thirty years. Upon this basis, let us form some data. Our population in 1845, is 20,000,000; in 1875, will be 40,000,000; in 1905, will be 80,000,000; in 1940, will be 160,000,000. Suppose, thereafter, we should not double more than once in fifty years, in 1990, we shall have 320,000,000 of people embraced in the United States of

North America, or sixteen times our present population in the course of the next one hundred and forty-five years. These calculations will not seem so extravagant, when we call to mind that since the American revolution, our population has doubled as often as once, in *twenty* years. So long as there is plenty of room to spread, and plenty of land to occupy, so long there is every probability that our population will augment in a rapid ratio. The exceeding cheapness of food in this country invites population with the same unerring law as the sun and the showers rear the seed planted in a genial soil. Though our estimate may exceed any thing in the past history of the world, yet it will be recollected that there are circumstances, and not the least of these is the one thousand millions of acres in the Western domain, which give extraordinary energy to the great law of creation, "increase and multiply."

It is frequently said, that we have land enough even without going West of the Mississippi, for hundreds of millions of people; that the area of New York alone will support 10,000,000 is true. The present population is 2,600,000, not one third of its capacity. Yet, day after day, we see thousands and thousands of emigrants along our canals and railways, wending their way to the far West, not to seek, (for many of them have none now,) but to make a home, by their toil and labor. Remuneration seems better there, and thither they go.

Thus both parties are benefited, those who are left, for they have in their pursuits less ruinous competition, while those who have gone are creating new comforts in the wilderness. This extent of territory is affording thus daily a double blessing to our people. Its influence in increasing population is wonderful. There may be some who believe that the cooping up of a people within certain limits, will increase population, but they forget that great law of our being, which is, that *excessive* poverty checks the multiplication of population. It requires such a people as that of New England, neither very rich nor very poor, to obtain the highest limit of human production. Though she has peopled Ohio, Indiana, Illinois, Michigan and Western New York, with hundreds of thousands of her hardy emigrants, yet few will doubt, that at the same time, she is advancing in population as rapidly as if she had never sent any of her sons to the West. In the mean while she is reaping the *reflected* benefits of that emigration, in the growing trade of that very country which she has peopled, and to whose trade she now looks as the mainstay of her future prosperity. The same is true of the Empire State, though steadily advancing from year to year in population, wealth and educational improvement, until she has become the State of the Union, the pride of her sons, and the admiration of foreigners. She has also been the mother of new States, who look to her with as deep an attachment as even those who live on her soil. Would these wonders have been performed without a vast Western domain? Most assuredly not. This very expansion of our population has given ample room for the full development of the varied energies of man. Thus, new sources of wealth to the nation, of prosperity and comfort to man, have been realized, while the reputation and power of our Republic seems to be spreading over the continent of Europe, Asia and Africa, in proportion as we are advancing to the western sea.

As we have alluded to the favorable influence of extension on the increase of population, it now seems proper to notice its effects on the gen-

eral improvement of society : As the education of the people is the first great step in human progress, what may be its effects on that will be our leading inquiry.

The question resolves itself into this. Does an emigrating population care less about education than a stationary one ? The present condition and astonishing progress of Ohio, which has been filled with nearly two millions of people, in only fifty years, is an object not only of admiration, but of example even to the older states from whence the emigrants have come.

There is a restless activity and free-moving enterprise about the people of new states, which communicates itself to all their pursuits ; "go ahead" is their maxim in every thing. Educational progress must partake in this general movement. As unerring evidence of this pervading feeling, the traveller perceives with surprise, the school-house, the academy, and even the stately college, rising in the wilderness almost as soon as the cabin of the hardy settler. Neither can the influence of the competition of the West upon the East be overlooked.

Does any one doubt that the settlement of western New York has acted most favorably upon the educational and agricultural progress of Eastern New York, and New England ? The action of our progress upon theirs, and theirs upon ours, has been electrical. The one cannot advance a step without its giving a move to the other.

"Press onward" must peculiarly be the motto of an emigrating population. Its recoil is not spent at home, but even reaches the state of their emigration. So long as the United States are embraced within the folds of one confederacy, no matter how far we extend, this action of the new upon the older states must continue.

Some have insisted that the effects of our expansion has materially retarded agricultural progress, but there is no foundation for such a belief. It does not follow because a country is densely settled, that agriculture must be carried to its highest improvement. The present condition of *Ireland* is a clear manifestation that density alone will not bring forth improvement. It has five people to our one, on every square mile, yet it is not so well cultivated as New York. It is rather *the people* than the numbers which gives vitality and action to every thing that renders a state noble or prosperous. It is scarcely to be denied that a few of the enterprising Americans will accomplish far more than the less active European.

It is this remarkable character which gives such a superiority to our people, and which not only springs from the peculiar elasticity of our institutions, but from that constant movement in spreading and emigrating over the vast unoccupied domains of our country. New states, new governments, new sources of wealth, new stimulants to enterprise, new rewards to labor, new objects of personal and political ambition, and new invitations to charity, and religion calling out the highest energies of man, arise from this constant expansion of our republic over a wider, more diversified and ennobling field of action.

Its influence on the character of our people is still more extraordinary. This *action* and *reaction* of the West on the East, and the East on the West, like the waves on the sea, produces that life and that energy which animates the American mind, and which literally makes us so extraordinary a race of people.

The emigration which is daily going on from the towns, villages and hamlets of the Atlantic States to the West, and South-west, seems to us to be the electric wires which will for ever keep our people from stagnating like the lifeless, surgeless masses in Europe, where it is no uncommon thing for the entire population of a district, never having an emigrant going out from among them. Such a state of things soon produces a population fit to be slaves.

We could produce other considerations of a vast unoccupied national domain, as a reserve for the future population of our republic. But the statesmen of the present day are fully awake to its commanding importance. The far-reaching policy of Jefferson, secured to us a domain literally without a parallel in the history of the world. In the annexation of Texas, and the future acquisition of California and Canada, and the possession of Oregon, we shall carry out the views of his master-intellect and his great American heart.

We shall resume this subject, with an allusion to the noble safeguard, the Western domain affords to labor, to resist the weaning encroachment of capital. In Europe, capital has got the complete mastery over labor, so as to dictate such terms as the iron hand of want may prescribe. Here also, its marches are fearfully rapid, but with our vast Western domain, and with the means of access to it, so easy and cheap, even from the farthest East, the laborer can escape from the exactions of capital, and enjoy the fruits of his toil. Regarded in this light, the true American statesman will feel that our national domain will not be too large, even when we peaceably and honorably draw within our republic the unoccupied regions of all North America. c.

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#### ART. VII.—THE CONSULAR SYSTEM.

WE are rejoiced at seeing this subject before the American public, and hope, ere long, that our legislators may be induced to enter, in earnest, upon a thorough reform of our consular system. In the recent work of Mr. Lester,\* our consul at Genoa, "The Artiste, Merchant and Statesman," the subject is discussed with ability, and the views which we lay before the readers of the Magazine are derived principally from his writings. Consuls were known and distinguished officers in the early days of the Roman republic, but their duties were different from those discharged by the consuls of our day. They were connected with the government at home, and exercised, sometimes, legislative, executive and judicial powers. Almost every writer of England and America, says Mr. Lester, "has fallen into a mistake on the origin" of the *Consolato del Mare*. The opinion has commonly prevailed, that the noble code originated with the commercial cities of Spain, and the idea has been often advanced, that Arragon and

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\* This new work of Mr. Lester has added to his already well earned reputation, as a writer and a scholar, and we commend its perusal to every person feeling an interest in American artists and American commerce. His translation of the "Citizen of a Republic" has received, as it deserved, the approbation of its readers. The lessons of wisdom which are there inculcated might be studied with profit by the citizens of this great republic, and they would thereby learn that something was known of republican institutions, and of the duties of republican citizens, in ages gone by. We are much pleased with the *amor patria* which runs through Mr. Lester's books.



Barcelona can date their commercial power and civilization to a more ancient period than Pisa. But such an opinion, however commonly entertained, is controverted by indubitable facts.

"In the year 1130, the Pisans effected the conquest of Amalfi, and bore away with them its most precious treasure—the only copy of the Justinian Pandects in existence. To this cause more than one respectable writer has attributed the origin of the maritime laws of Pisa. But we have documentary and historical proofs that the Pisans had formed a maritime code long before this period, and that the discovery of the Pandects, and the tables of Amalfi, had little to do with the *Leggi Pisane*, or the *Leggi Nauticke*, which were published in Rome in 1075. This code, which was composed of the maritime statutes of the Pisan republic, enacted during successive centuries, gave origin to what was afterwards known as the *Consolato del Mare*.

"In the *Consolato del Mare* we find a clear provision for the appointment of consuls. The first eight chapters are devoted exclusively to the consuls, and their powers and provinces are clearly defined. We learn from the chronicles of Pisa, that wherever her commerce was extended among foreign nations, she was represented by her own consuls. But about the close of the 11th century, she had nearly perfected the modern consular system. More than a hundred years before she had established a magistracy of two consuls at home, who constituted a Supreme Admiralty Court, to take cognizance of all marine cases. Her consular system, which was the soul of her maritime code, was readily adopted by surrounding nations; and, before the Crusades were over, all the commercial powers on the Mediterranean were thus represented in the ports of other nations, with whom they maintained commercial relations."

Such was the rise of the modern consular system, and it may well be questioned whether much advance has been made in it—at least such an advance as is called for by nations having a more extended intercourse with each other, and which have made greater improvements in the art of navigation, and greatly increased the importance of commercial relations. The duties of a consul are varied and important. He must watch over the interests of his country, and his countrymen, and see that both are respected, and that the latter is protected in his journeyings and in his trade. He should make himself acquainted with the history and policy of the nation to which he is sent. "He should make himself perfectly familiar with the agricultural, the mechanical, and the maritime power of the country to which he is sent. All its branches of industry, and all its resources of wealth—how the great system of reciprocal barter and exchange is carried on, and how it may be extended—the defects of commercial treaties, and how they may be remedied—the branches of commerce which are sustained by the essential wants and abundance of the two nations, and have, therefore, a basis for permanent prosperity, and those which depend only upon exaggerated and ephemeral speculation—what new articles of luxury, or convenience may be exchanged—what encouragement given to new fields of industry and adventure—what new improvements in agriculture, in manufactures, in science, and in all the mechanic and liberal arts—how the ingenuity of man in one country may administer to the economy of life in another, and finally, what fruit may be gathered by his country from the experiments of men and governments in past ages." We fear that very few American consuls, tried by such

a test, would be able to stand up and pass their examination; and yet it is no doubt true, that they ought to possess the whole of these qualifications. We have men in abundance who possess the requisite talent and education, but they at the same time may not be disposed to embark in trade and commercial operations, and cannot, therefore, accept of consular situations, even though party spirit should be forgotten, and the question should not be propounded whether they believe party questions a little more, or a little less, than the government standard. The truth is, the consuls of the government should be paid a liberal salary out of the treasury, and then we might expect men of education, of enterprise and talent, to fill the post. They should make returns to our own government of the condition, resources, and commercial, manufacturing and agricultural advantages of the country to which they are sent. They could, in that way, furnish large fountains of useful information, to be annually diffused by the proper officers among the people.

The country pays annually more than five millions of dollars to support an army, and as much more to support a navy to protect her commerce—more than ten millions to support our army and navy, and only about six hundred thousand dollars to conduct all her foreign intercourse—to maintain all her relations, commercial and otherwise. If six hundred thousand dollars should be taken from the expenditures for an army and navy, and appropriated for the support of consuls and commercial agents, there would be less chance of war—less need for armies and navies—and a great increase of useful knowledge, accompanied by an increase of commerce. Great Britain understands her true interests better in this respect. Scarcely a port can be found which is not entered by her ships, and everywhere, in the person of her consuls, and her commercial agents, that gigantic power is present. No important improvement takes place in art or science which is not reported to the government—no new channel of trade is opened—no new article of traffic produced—no discoveries of the riches of the ocean, or the land, which are not communicated for the information of those who occupy the places of power in Downing street. Her ministers have brought directly before them the movements and resources of almost every part of the known world. We would not imitate her example so far as it relates to political action, and interference with the interior policy of foreign states; but we would imitate it so far as relates to information of commercial arrangements, resources and general maritime policy. But she does not expect, while her consuls and agents are thus gathering useful and important intelligence for the government, and making returns upon which commercial and national enterprises may be predicated, that they will depend upon the small, and often entirely inadequate fees of office, for support—that the usefulness of her officers shall be impaired by reason of their inability to maintain a respectable position.

But there is another evil growing out of a want of provision for the support of consuls abroad. In consequence of the insufficiency of fees, in many ports, to support the office, no American citizen will accept it, and the honor of the republic, and the protection of American citizens are entrusted to men alien to us, ignorant of the institutions of the country, and hostile to her prosperity. We should either strike out at once the whole system—have no commercial representative, or else afford adequate compensation for the decent support of American citizens, who alone should

be appointed to places of such trust. How can we expect commercial treaties to be strictly enforced, and the interests of American citizens protected, when they conflict with those of the nation to whom a consul is sent, if that consul, the agent of our government, and the guardian of our citizens, is a stranger to both, and linked by all the ties of birth, association and kindred, with those who are opposed to our government and our people. Instances are cited, by Mr. Lester, where an American consul, who, an Englishman, (if an opportunity had offered, a short time since, when war was threatened between the two countries,) would have violated this trust, and permitted American vessels to have fallen into the hands of our enemies. In time of war, private property is respected generally on the land, but on the seas all distinction between public and private property ceases. How important then is it that we, whose commerce is extended over the whole ocean—whose vessels whiten every sea with their canvass, should have consuls, and commercial agents, who know no other country or birth-place besides our own bright land, and whose chief boast is, *I am an American citizen.*

But we cannot follow out the subject. Great reform is needed. The rights and powers of consuls should be better defined, a liberal compensation paid, and when a consul discharges his duties well, he should not be recalled as soon as he has become familiar with those duties, and acquainted with the character of the people, and the resources and institutions of the country to which he is sent. Perhaps a commercial bureau should be established at Washington, under whose general supervision the whole subject should be placed. We are rejoiced that Mr. Lester has entered upon the discussion of the matter, and we hope that our legislators will read his book, and then go to work in earnest, and make such reforms as are called for by our extended and increasing commerce. We would not create lucrative offices to be filled by political favorites, whose merits or qualifications are that of devoted partisans; but we would provide, out of our abundance, for the decent and independent support of able, educated, American commercial representatives, who, in all lands, and in all circumstances, are competent and willing to stand up for American rights, American citizens, and American institutions. We believe it would be true economy on the part of the government, that it would tend to promote peace, and advance the general welfare.

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#### ART. VIII.—POT AND PEARL ASHES.

TO THE EDITOR OF THE MERCHANTS' MAGAZINE:—

SIR—Pot and Pearl Ashes form so considerable an item in the list of exports from the United States, that a brief treatise upon the manufacture, &c., of these alkaline salts, seems to me not to be inappropriate for such a work as your publication.

The quality of Pot and Pearl Ash are defined by statute. New York, Boston and Montreal are the principal ports for the export of Pot and Pearl Ash, and in each of these ports are offices for the inspection of these alkalines. Inspectors occupy these offices, whose duty it is made to inspect all ashes designed for exportation, and these officers also act as weigh masters, and certify to the quantity of ashes in each barrel, as well as to the grade of quality. The statute regulates the size of the barrel,

directs what kind of timber it shall be made of, and the number of hoops upon each barrel. It also provides that the Inspector shall denominate ashes either "first, second or third sorts," as the case may be, and such as are adulterated shall be branded—*condemned*.

The statute makes no provision for the *quality* of the inspector, whether first, second or third sort, and does not require that he shall have had experience to qualify, skill to instruct, or a knowledge of chemistry to enlighten his mind, and thereby to aid his judgment.

Pot Ash as well as Pearl Ash vary in quality as well as in per cent of free alkali; the value of both depends upon both the quality and quantity per cent of free Alkali. Pot Ash is termed a caustic Alkali, and Pearl Ash a mild Alkali—both are made from the same material; the difference between the two being caused by the different modes of applying heat in the manufacture.

Ashes are oftentimes impure from the want of care in preparing the leys from which the Alkaline Salts are made. This want of care is a loss to both the manufacturer and consumer; for the cost of preparing the bad article is the same as that of the good, the cost of package, transportation, insurance, inspection, &c., the same, and the result, a *loss*.

Ashes are frequently adulterated with sand, lime, salt, &c. Such practices are a great loss to the manufacturer, and oftentimes a loss to the consumer, from the want of skill in the inspector to detect the fraud.

The law does not specify what shall be deemed "first sort" nor what shall be considered "second or third sorts." Ashes vary in the quantity of free Alkali from 30 to 95 per cent, and in the various parcels marked first, second and third sort, by the Inspectors during the year, the variations in quality will be from the highest to the lowest of all the different per cents intermediate, as above stated. Now I ask, which of all these is the inspector to denominate 1st, 2d or 3d sorts? If the first is 95, what is 85, 75, 65, 55, and so on down to 30? The Soda Ash, which has now become an important article of Import, is made in extensive laboratories in England and France, and varies as much in quality as Pot Ash and Pearl Ash. This Alkali is sold by the per cent Alkali that it is found on analysis to contain. This is the proper mode of estimating, and Pot Ash and Pearl Ash should be sold in the same way, instead of the legal designation of quality by 1, 2 or 3.

Soda Ash yielding 30 per cent free Alkali, is not worth one-third as much to the manufacturer, who has to incur the expense of transportation, &c., as that which yields 90 per cent, for the reason that the charges amount to three times as much in one case as the other upon the same quantity of Alkali. The same difference exists with regard to Pot and Pearl Ash, which is *superior* over that which is *inferior*.

Shippers will often pay a higher price for ashes inspected in January than those inspected in December, the month previous. This is a mistake in the purchaser, for the December Ash is worth the most if the January is a re-inspection, for the reason that it has been less exposed to air by overhauling.

The bad manner of hooping Pot Ash barrels, tends much to impair the quality of the Ashes for sale. Sixteen hoops are required by law to be put upon a barrel, and these are put upon the two ends, allowing each hoop to cover an inch of stave, and the stave to be 27 inches long; then there is a space of eleven inches left in the middle, leaving the whole

bilge *wholly unprotected*; if the hoops were divided equally in four parcels, of four hoops each, then there would be three spaces of three and two third inches each, and these would all be protected by the nearness of the hoops. Barrels thus hooped, when piled up in tiers, will not encrust the ashes by opening the joints on the bilge and letting in the air as in the case with bilges without hoops.

I have had great experience in the manufacture of Pot and Pearl Ash; and I have also consumed large quantities of Pot Ash and Soda Ash in the manufacture of Soap, and Pearl Ash in the manufacture of Salt Petre, and therefore profess to be thoroughly conversant with the quality of these Alkaline Salts.

Several years ago I was interested in a large parcel of Pot and Pearl Ash sent to the Boston market for inspection and sale. These ashes were all made and packed under my own supervision, and were inspected by Dr. TOWNSEND, of Boston, an inspector of great experience, and of well deserved celebrity. When Dr. Townsend had opened 100 barrels of these ashes, he sent for me to come to the office; on my arriving there, I found several dealers in Alkalies examining the ashes. Dr. T. remarked to me that he had been twenty years an inspector of Pot and Pearl, and had never before seen ashes equal these in quality, and added that his motive in sending for me was to advise me as to the sale of them for the best price. He suggested to me the sale of the ashes at auction in lots, of from one to five tons, and of the advertising the sale two weeks, and added that I might refer to him for the excellency of the quality. His advice was good; I adopted it, and when the sales were finished, I had the satisfaction of seeing that they brought from 5 to \$15 per ton above the regular market price for first sort ashes. Every barrel of them was sold for home consumption. Here was a demonstration—a convincement—these ashes had come a long way to market, and nothing was in them but the Alkali to incur the expense of freight, &c. I will in another communication, at some future time, endeavor to discuss this subject more fully.

Yours, &c.

E. MERIAM.

#### ART. IX.—PROGRESS OF POPULATION IN BOSTON.\*

INCREASE OF BOSTON FROM 1765 to 1840—TENDENCY TO CENTRALIZATION—ACTIVITY AND ENTERPRISE OF THE BOSTONIANS—ESTIMATED POPULATION OF BOSTON IN 1850—RAIL ROADS THE MEANS OF SUSTAINING THE ACTIVITY AND ENTERPRISE OF BOSTON—THE NUMEROUS ROUTS CENTERING IN BOSTON MAKE THAT CITY THE DEPOT OF COMMERCE IN NEW ENGLAND.

It is an interesting subject of inquiry at this time, especially when there is unusual activity in Boston, what has been the increase of its population for the past few years, and what are its future prospects. Population is a most important element of a community, but not the only one.

The population of Boston, including islands in the harbor, was 18,320 in 1790. For many years before, with the exception of a few years during the revolutionary war, when there was a decrease, it varied very little from the above number.

\* The present paper was originally published in the Mercantile Journal. It has since been revised and corrected for this Magazine by the author, Jesse Checkering, M. D. For an article on the Commerce of Boston, see Merchants' Magazine, Vol. X., No 5, for May, 1844, pages 421 to 434.



It may be here remarked that the population of Boston was 15,520 in 1765, and during the following 25 years, including the period of the revolutionary war, the increase of Boston was only 1,800, or 11.59 per cent; that of the whole state was 134,638, or 55.14 per cent, which is greater than it has been in any period of 30 years since, except from 1810 to 1840, when it was only 1 per cent greater. During the 40 years, from 1790 to 1830, it was only 6 per cent greater.

The increase of Boston from 1790 to 1800, was 6,617 or 36.11 per cent; from 1800 to 1810, 8,850 or 35.48 per cent; from 1810 to 1820, 9,511 or 28.14 per cent; from 1820 to 1830, 18,994 or 41.78 per cent; and from 1830 to 1840, 31,991 or 52.10 per cent. Thus it appears that the increase has been unequal, being the least from 1810 to 1820, and the greatest during the last decennial period, averaging 38.50 per cent in each ten years, and 3.31 per cent per annum during the 50 years.

The increase from 1790 to 1840, was 75,063 or 409.73 per cent. It was over 5 times that of the other parts of the commonwealth. In 1790 the population of Boston was less than a 20th part of that of the whole state; in 1840 more than an 8th part.

This increase shows the tendency to a centralization of the population in Boston during the fifty years. Generally, also, the increase has been greater near Boston than in more remote places.

This tendency to centralization is also shown by the fact that, a circle with Boston as the centre, and with a radius of 35 miles, enclosed about half the population of the state in 1790; but a circle with a radius of 29 miles, embraced about half the population in 1840, thus showing the diameter of the circle to have been contracted about 12 miles in 50 years.

Also the population, embraced by a circle with a radius of 30 miles in 1840, was over 8000 greater than the whole number in the commonwealth in 1790.

It appears further, that a line east and west, carried through Boston, in 1765, and at each of the six epochs of taking the United States' census, divided the population of the state into two very nearly equal parts, one on the north side, and the other on the other side of it.

A line north and south, dividing the population of the state into two equal parts, had its point of intersection with the first line in 1765, near the western limit of Boston. This point is the centre of population, and moved westward until 1790, and continued to move slightly until it attained its maximum in 1800, in Weston, about ten miles from the place where it was in 1765, 35 years before. From the commencement of the present century, this point has moved eastward until 1840, when it stood nearly as far east as it was 75 years before, namely, near the western limits of Boston.

A strong impulse is now given to the activity and enterprise of the citizens of Boston, and the prospect is, that for some years to come, the increase of the population will be as great as it has been during any period since 1790. Its population, according to the United States' census, was 93,383 in 1840. The number now is probably about 115,000. In 1850 the number will probably be at least 142,000.

Among the means calculated to sustain this activity and enterprise of its citizens, none are more obvious than the means of communication, especially by rail-roads, which radiate from Boston as a centre; northeasterly to Portland, the principal commercial place in Maine; north-

erly to Concord, the capital of New Hampshire; westerly to Albany, the capital of New York; southwesterly through Connecticut; southerly to Providence, the capital of Rhode Island; and southeasterly to Plymouth, where the first Pilgrims landed. Branches communicating with these main trunks are constructed for more local purposes, so that the whole territory is overspread with a sort of net work whose iron rods approach within a few miles of every considerable town in the commonwealth. These roads have been constructed at a cost of some 20 millions of dollars, mostly at the expense of individuals, who will not willingly suffer these works to fail of fulfilling their destiny of conveying men and merchandize from and to the city of Boston. The stimulus felt will hardly be less wherever these lines approach to facilitate communication. These works centre in Boston; they originated in Boston; the capital for building them was mostly furnished in Boston; they are chiefly managed in Boston, and by centering in Boston, they make this city the general depot of the commerce of the whole state.

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## MERCANTILE LAW CASES.

### INSURANCE—PARTIAL LOSS.

In the United States Circuit Court—*John Luma v. Atlantic Mutual Insurance Company.*

This was an action of assumpsit, in which the plaintiff sought to recover of the defendants a partial loss on a policy, made by them, March 4, 1844, on the brig *Columbia*, on a voyage from Boston to Savannah. It appeared in evidence, that the brig sailed on this voyage about the 10th of March; that on the 17th of the same month, she experienced a gale and a heavy sea, which blew away the fore top-mast staysail, carried away a great part of the bulwarks, and monkey rail, stove in the cook's galley, and shipped several very heavy seas, which made her labor very hard; that after this she continued the voyage, lying-to in two or three instances, but with generally moderate weather, carrying all sail, till the 27th of March, when she experienced another gale, and shipped a sea, burying the brig all up in a clear sheet of foam, and swept her decks of her jolly-boat, spars, round-house, and two water casks, the fore spencer being also carried away. There was no other loss on the voyage. There were several questions of law, raised by the defendants, growing out of other evidence, and the transactions for a settlement of the loss, a reference of the matter having been made by the plaintiff's agents in Boston, and a decision given by the arbitrator against his claim, by which he refused to abide. But the main question raised, was, whether these two losses could be added together to make an average of five per cent under the policy; and upon this point there was considerable evidence.

Woodbury J. instructed the jury, among other things, that distinct and separate losses on the vessel, could not be added together to make up five per cent, and that the assured could not recover, unless he proved a single loss to that amount; but that it was a question for the jury, whether the losses here were distinct or not; that where one loss was consequent upon another, however remote in time, it was to be taken as part of the antecedent loss, and if both amounted to five per cent, the assured would recover.

The court left to the jury three questions, upon which they were to find specific answers. The only one of these material to the report of the case upon the foregoing facts, was, whether there was any loss consequent upon the cause, amounting to five per cent.

Upon this, the jury found there was such a loss, and assessed the damages at \$230, the amount claimed by the plaintiff being \$394.

## BOOK TRADE—COPY-RIGHT CASE.

In the United States Circuit Court, (Boston,) before Judge Story. *Frederic Emerson vs. Charles Davies, et. al.*

This was a bill in equity to restrain the defendant from selling a book entitled "First Lessons in Arithmetic," which the plaintiff alleged to be a piracy upon a work of his, entitled, "The North American Arithmetic," and for which he had obtained a copy-right. Much evidence was gone into and discussion had as to the plaintiff's claim to originality, and what constitutes originality in a work of this sort. Judge Story held, that new arrangements, methods and combinations of old ideas, and even of scientific facts, ascertainable by every body, would constitute such originality as might properly be the subject of copy-right, and such as the law would protect. It appeared that eighteen out of forty-eight pages of Mr. Emerson's book had been taken bodily by the defendants, with very slight alteration, and the Judge intimated that he would give the defendants the option to have the fact of the piracy tried by a jury, and if they should not elect to go to a jury, that then he should order an injunction as to the eighteen pages in question; and, although this might spoil the sale of the whole work, it was the fault of the defendants themselves to mix up what was theirs with what belonged to another, and they must take the consequences of their own act.

## COMMERCIAL CHRONICLE AND REVIEW.

REVIEW OF THE STATE OF THE MARKETS IN RELATION TO THE CROPS—EXPORTS OF AGRICULTURAL PRODUCE FROM THE UNITED STATES FOR THE LAST FIVE YEARS—ESTIMATES OF BREADSTUFFS—CONSUMPTION OF COTTON IN ENGLAND—EXPORTS OF COTTON GOODS FROM ENGLAND—RICE AND COTTON STATES—INFLUENCE OF THE WHEAT MARKET ON THE COTTON—NUMBER AND ISSUES OF ENGLISH BANKS—BANK OF ENGLAND—IMPORTS OF BREADSTUFFS—AVERAGE PRICES—COTTON MILLS OF LANCASHIRE—NUMBER OF MILLS, SPINDLES, AND SPINNERS, IN MANCHESTER—MOVEMENT OF THE BANKS OF NEW ORLEANS—CONDITION OF THE BANKS OF NEW YORK, 1ST OF NOVEMBER, 1845—AVERAGE PRICE OF GRAIN IN LIVERPOOL AT DIFFERENT PERIODS, ETC., ETC.

The state of the markets is such as was anticipated when the fears in relation to the crops of England ripened into certainty of its failure. Advices received since the date of our last, have greatly affected the flour and grain markets, and advanced the prices to \$7 25 for the former, and \$1 50 for wheat, which rates are, however, not maintained at the close. The export demand for Europe is large, but, as is usually the case, produce is held here above the limit of the orders, to an extent which greatly checks transactions. As the news progresses west, a corresponding rise is felt to the extreme limits of the settlements, and greatly benefits the condition of all sellers of produce. As is usually the case, however, the cotton market becomes depressed from the same causes which creates a demand for our produce, and it has heretofore happened that the losses on the cotton have, to the United States at large, more than counterbalanced the gains upon the breadstuffs. This result will now probably present itself in a modified form, in consequence of the favorable state of all other elements of prosperity throughout the world. The failure of a harvest in England, accompanied, as is the present, with a scarcity in western Europe, is a calamity to the commercial world, inasmuch as that the aggregate wealth of the whole is in consequence less than it otherwise would be; but nevertheless the whole sum of wealth may be diminished, while one country, or one section of a country may become enriched, at the expense of that which more immediately sustains the calamity. Thus, although England is obliged to buy breadstuffs of the United States, and therefore buys her cotton, the United States, at large, may in the result

not be benefited, yet the agricultural sections gain what the planting states lose, and the western business becomes improved while that of the south declines.

In illustration, we will take the actual quantities of each article and their aggregate values, exported for several years, as follows:—

EXPORTS OF AGRICULTURAL PRODUCE FROM THE UNITED STATES.

	1840.	1841.	1842.	1843.	1844.
Beef,.....bbls.	19,681	56,537	48,581	37,812	106,474
Tallow,.....lbs.	273,946	980,027	7,038,092	7,489,582	9,915,366
Pork,.....bbls.	66,281	133,290	180,032	80,310	161,629
Bacon and lard,....lbs.	9,062,244	13,392,171	22,621,238	26,956,284	29,633,331
Butter,.....bbls.	1,177,639	3,785,993	2,055,133	3,408,247	3,251,952
Cheese,.....bbls.	723,217	1,748,471	2,456,607	3,440,144	7,343,145
Stock,.....No.	17,689	17,987	24,024	16,804	18,144
Wheat,.....bush.	1,720,860	868,585	817,958	311,685	558,917
Flour,.....bbls.	1,897,501	1,515,817	1,283,602	841,471	1,438,574
Corn,.....bush.	574,279	535,727	600,308	672,608	825,282
Corn-meal,.....bbls.	206,063	232,284	209,199	174,354	247,882
Rye-meal,.....bbls.	53,218	44,031	34,190	21,770	32,690
Bread,.....bbls.	147,043	143,405	83,194	125,923	159,701
Potatoes,.....bush.	123,549	136,095	194,946	144,991	182,238
Apples,.....bbls.	23,396	25,216	14,239	15,412	22,324
Rice,.....tierces	101,660	101,617	114,617	106,766	134,715
Value,.....dollars	18,593,691	16,737,462	16,472,424	10,919,602	17,388,816
Cotton,.....lbs.	743,941,061	529,204,106	584,717,017	792,297,106	663,633,455
“ value,....dollars	63,870,307	54,330,341	47,593,464	49,119,806	54,063,501

The year 1840, was one of large export; but since then, owing to the modification of the English tariff, United States butter, cheese, tallow, hams, &c., have been supplanting those of the continent in the supply of England. The return for 1843, is for nine months only. The year 1844, was one of a full harvest, notwithstanding which, the exports of United States farm produce increased. Now the present year is very deficient, and if it should produce the usual effect of depressing cotton, and that to the extent of one cent per pound on the whole crop, and the export is 2,000,000 bales, the loss will be \$8,000,000. To produce this effect, an advance in breadstuffs and provisions will be necessary, to a considerable extent, and rice, flour, wheat, cheese, and butter, are already much higher than last year, rice nearly double. Now, if we take the export and value of the leading articles for 1844, and estimate the exports of 1845-6, we shall have results as follows:—

	ESTIMATES, 1844.		ESTIMATES, 1845-46.	
	Quantity.	Value.	Quantity.	Value.
Flour,.....bbls.	1,550,315	\$7,259,888	2,500,000	\$15,000,000
Rice,.....tes.	134,715	2,182,468	134,000	3,813,000
Corn,.....bush.	825,282	404,008	1,200,000	700,000
Butter and cheese,....lbs.	10,595,097	758,829	12,000,000	1,200,000
Total,.....		\$10,605,193		\$21,713,000

This calculation, which is within limits, gives an increase on these articles of \$11,100,000, against a loss on cotton of \$8,000,000; making \$3,100,000 in favor of the United States. An export of 2,500,000 barrels of flour, including wheat, at an average of \$6, will not appear unreasonable, when we reflect that in 1840, which was a year of comparatively good harvest, 2,225,000 barrels flour and wheat were exported at a value of \$11,779,098. England is now dependent on the United States for its supply more than formerly. Rice has advanced considerably under the failure of the India crop and the increased consumption in Holland. Corn, butter, and cheese, have each advanced, and we have not estimated any considerable increase in the quantities export.

ed. All the other articles in the above list must also be favorably affected. The average export value of cotton, in 1844, was nine cents per pound, but that value was by no means realized abroad. Probably, less than eight cents was obtained, or say \$45,000,000 for the crop. If the rise in bread should reduce the consumption in England, 200,000 bales, which would be unparalleled, the price might fall one cent, as above estimated. So large a reduction, however, cannot take place in the English consumption. Official figures give the home consumption of England as follows:—

Years.	Cotton taken for consumption. <i>Lbs.</i>	Wt. of yarn exported. <i>Lbs.</i>	Nett consump. in England. <i>Lbs.</i>	Declared value of cotton goods exported.
1839,.....	320,025,653	246,291,988	73,733,665	£24,551,375
1840,.....	417,772,345	245,411,142	172,361,203	24,668,618
1841,.....	372,873,686	275,872,744	97,000,936	23,499,478
1842,.....	392,842,790	295,034,564	97,908,226	21,662,760
1843,.....	465,393,076	344,831,287	120,561,789	21,674,598
1844,.....	471,708,113	347,461,305	124,246,808	23,440,629

Now if we take the year of the lowest English consumption, 1839, the difference between that and last year is 50,513,143 pounds, or 126,000 bales only. The years 1841-2, were years of unexampled distress in England, and sixty mills in the neighborhood of Manchester were unemployed, in Jan., 1842, and large numbers were working short time. Universal distress prevailed, and money was worth 5 per cent. This was less owing to the home market, than the absolute glut which prevailed in all the foreign markets of export, particularly China, and the great depression in the iron and other trades. This was so excessive, that the iron interest applied for government assistance. None of this distress now exists. Up to this time, all branches of business are in great prosperity, and the foreign markets of export were never more active and healthy; as an indication of which, take cotton exports for a number of years, as follows:—

#### EXPORTS OF COTTON GOODS FROM ENGLAND.

	1841.	1842.	1843.	1844.	1845, 6 mo.
Yarn,.....lbs.	120,580,597	138,509,794	151,809,220	132,832,952	54,692,551
Plain calicoes,.....yds.	372,164,648	368,739,137	524,353,617	572,858,364	300,033,150
Dyed " .....	278,748,275	236,012,641	257,787,304	313,111,455	153,328,502

The increase is 35 per cent, in 1844, over the exports of 1842, or 281,000,000 yards of cloth, equal to 200,000 bales of cotton; and this increase has been—

To India and China, yards plain,.....	146,859,022
Portugal, plain and dyed,.....	15,000,000
Turkey and Levant,.....	44,000,000
France and Belgium,.....	4,500,000
Brazils,.....	34,000,000

The consumption of cotton in France and the Zoll-Verein, has increased 75,000 bales in the last year. Under all these influences, cotton is not likely to sell half a cent per pound less than it would have done had the crop been good. Assuming, however, that such may be the case, yet it must be borne in mind that the large class of farmers will be greatly benefited by the enhanced price of their produce, and the reaction upon the Atlantic must necessarily improve the activity of trade in all its departments. Cotton is usually looked upon as of the greatest importance, inasmuch as that the price which it commands abroad affects, in a very great degree, the state of the exchanges. The export, last year, amounted to 2,083,756 bales, and a difference of one cent per pound, in its value, makes a difference of \$8,000,000 in the amount of bills offering. If, now, we divide the sections of the country according to their separate interests, the result will show a much larger population interested in a rise in farm produce, than influenced by a fall in cotton. For this purpose, the United States census returns will furnish nearly the proportions, although not the actual growth for the present year.



RICE AND COTTON STATES.

	Population.	Lbs. Rice.	Lbs. Cotton.
North Carolina,.....	753,419	2,820,388	51,926,190
South Carolina,.....	594,398	60,590,861	61,710,274
Georgia,.....	691,392	12,384,732	163,392,396
Alabama,.....	590,756	149,019	117,138,823
Mississippi,.....	375,651	777,175	193,401,577
Louisiana,.....	352,411	3,604,534	152,555,368
Florida,.....	54,477	.....	12,110,533
Arkansas,.....	97,574	.....	6,028,642
Total,.....	3,510,078	80,326,729	757,985,807

The whole growth of cotton in that year, according to the census, was 790,479,275 pounds, and was doubtless nearly correct, inasmuch as that the treasury report gave an export of 743,000,000 pounds. A rise of two cents per pound in rice, gives those states an increase of \$1,600,000 of profit, and a loss of one cent per pound in cotton, is equal to \$7,570,000. South Carolina will be the gainer, inasmuch as that although she will lose \$600,000 on cotton, she will gain \$1,200,000 on rice. Now if we turn to those states that sell breadstuffs, we have results as follows:—

	Population.	WHEAT. Bush.	OATS. Bush.	CORN. Bush.
New York,.....	2,423,921	12,286,418	20,675,847	10,972,286
New Jersey,.....	373,206	774,203	3,083,524	4,361,975
Pennsylvania,.....	1,724,033	13,213,077	20,641,819	14,240,022
Virginia,.....	1,239,797	10,109,716	13,451,062	34,577,591
Tennessee,.....	829,210	4,569,692	7,035,678	44,986,188
Kentucky,.....	779,828	4,803,152	7,155,974	39,847,120
Ohio,.....	1,519,468	16,571,661	14,393,103	33,668,144
Indiana,.....	685,866	4,049,375	5,981,605	28,155,887
Illinois,.....	476,183	3,335,393	4,988,008	22,634,211
Michigan,.....	212,267	2,157,108	2,114,051	2,227,039
Total,.....	10,268,878	71,670,775	99,520,671	235,670,463

Here is a population interested in breadstuffs, three times as large as that interested in cotton. The figures being from the census, however, fall far short of the truth, as it now is. The census of Illinois, Indiana, and Michigan, for 1845, show a population nearly double the figures; and Iowa and Wisconsin have at least 200,000 people, and produce more than Illinois did in 1840. As an indication of the progress of production, we may take the growth of flour and wheat, which arrived at New Orleans, and at tide-water on the Hudson, reduced to bushels of wheat in each year:—

	1840.	1845.	
Arrived on the Hudson,.....	9,206,000	12,372,249	3,166,240
“ at New Orleans,.....	2,412,515	2,666,560	254,045
Total,.....	11,618,515	15,038,809	3,420,296

This gives an increase of more than 30 per cent, notwithstanding that 1840 was a year of large export, and that prices were never so low on the seaboard as in 1841. An advance in prices, such as that which has taken place in the last three weeks, and which is equal to thirty cents a bushel, would bring out a much larger quantity. As it is, however, we will take the production at 30 per cent advance on that of 1840. This will give a product as follows:—

		Adv. in prices.	Impr'd value of 3 grains.
Wheat,.....bush.	93,000,000	30 cts.	\$27,900,000
Oats,.....	129,000,000	6 “	7,740,000
Corn,.....	306,000,000	10 “	30,600,000
Total,.....			\$66,240,000

The actual value of flour alone, received at tide-water and at New Orleans, is improved \$5,000,000. The exports to Canada will show an equal advance. The New England states buy about 200,000,000 pounds of cotton, and a decline of one cent would benefit them \$2,000,000. They also buy 600,000 barrels of flour, on which an advance of \$1 25 would be \$750,000. They therefore gain by the hypothetic fall of cotton.

In estimating the effect of a deficient harvest upon the consumption of cotton, we are not to be guided by the effect such a calamity produced in 1836-7, and in 1839, because a situation of things now exists throughout the commercial world widely different from what was then the case. A series of financial measures and wild speculations, commencing in 1833, had been preparing the way for that collapse in the currency and circulation of credits, which was precipitated by the failure of the harvest of 1837. The currency of England, beginning in 1833, underwent a most extensive expansion. The mania for joint stock banks was, under an abundance of money, pushed to an extent nearly equal to that which at the same time raged in the United States. Money was very cheap, and it rolled from London, as a common centre, over the face of the commercial world, causing banks to spring up in the remote west, in Canada, at the north, in the West India islands, under the burning sun of India, and in the wilds of New South Wales. Throughout the whole world the circulation of credits was stimulated to an unusual and dangerous extent, promoting trade, and enhancing the consumption of goods bought without rendering an equivalent. This bubble burst of its own weight, in August, 1836; and when yet there was no alarm on account of the crop, the bank of England shut down the gates of those sluices whence large supplies had been drawn for the United States. Following close upon this, the failure of the harvest of 1837 commenced those difficulties which caused the overwrought trade of former years to react from every quarter of the globe. Up to 1842, these effects were scarcely recovered from. About January of that year, the lowest point was reached, and since then there has been an improvement, notwithstanding that England has continued to buy largely of foreign food. The state of affairs now presents the reverse of all this. All departments of business are exceedingly healthy, the export trade never more prosperous, money is cheap, the currency low, and the quantity of bullion in bank never so great as now. In relation to the currency, we may here compare the number of banks and the amount of their emissions, in England, at different periods, from parliamentary returns, as follows:—

## NUMBER AND ISSUES OF ENGLISH BANKS.

	1833.		1837.		1845.	
	No.	Circulation.	No.	Circulation.	No.	Circulation.
Joint Stock,.....	30	£1,061,607	88	£3,940,748	71	£4,355,485
Private,.....	220	5,667,963	284	6,922,041	199	3,142,226
Bank of England,.....	1	19,110,000	1	18,147,000	1	20,824,066
Total,.....	251	£25,838,970	373	£28,909,789	271	£28,321,677

The creation of these banks from 1833 to 1837, reached, it appears, 122 in number, more particular of joint stock banks, and the country circulation furnished by them nearly quadrupled in amount. This growth of banking facilities was simultaneous with a similar movement in the United States, as well as elsewhere, and formed part of a general and great speculation in joint stock companies of all descriptions. This speculation began in the year 1833, when the bank, having recovered from the effects of the bad harvests of 1830-1, had in its vaults £11,450,480 of bullion, and its loans on commercial paper reached only £919,000. The whole world then presented an appearance of commercial health, and the bank announced its confidence in March, 1832, by offering to lend money at 4 per cent. The facilities thus offered, gave an immediate impe-

tus to trade, which, fostered through several years of good harvests, ran into wild speculation. The progressive movement was as follows:

BANK OF ENGLAND.

	Issues.	Deposits.	Securities.	Bullion.	Country issues.	Rate of int.
March, 1832,	£18,051,710	£8,937,170	£24,333,490	£5,293,150	£10,152,104	4 per cent.
July, 1834,	19,110,000	15,675,000	28,502,000	8,598,000	10,518,682	3½ "
Dec'r, 1834,	18,304,000	12,256,000	26,362,000	6,720,000	10,659,828	4 "
" 1835,	17,321,000	17,729,000	31,048,000	6,667,000	11,134,414	3½ "
April, 1836,	18,063,000	14,751,000	27,927,000	7,801,000	11,447,919	4 "
Dec'r, 1836,	17,361,000	13,330,000	28,971,000	4,545,000	12,011,697	5 "

The bank rate of interest followed the course of exchange, as indicated in the rise or fall of bullion in the vaults; but the general movement was one of great and rapid expansion, involving a great speculation in companies of all descriptions, and in Manchester alone, in 1837, there were 107 joint stock companies, whose joint capital reached an aggregate of £38,000,000. The whole state of affairs, as well in England as throughout the world, was one of great liability with small cash means. We have shown above that in a series of good harvests the bullion of the bank sunk to a small sum, and the rate of interest rose to the limit, which, under the old law was allowed, at the close of 1836. At that time, a singular incident discovered the unsound state of affairs, and showed the necessity of stringent measures on the part of the controllers of the currency. It was the custom for the country banks to send up to London packages of securities of various descriptions for rediscount, or to effect settlement of balances; one such package, belonging to the bank of Manchester, and worth £100,000, was temporarily mislaid; and it is an instance of the perfect interchange of credit between the two countries, that that package contained a quantity of United States bank shares which were cash securities between bank and bank in England. In consequence of this loss, the bank of England was applied to for aid, and an investigation of the affairs of the bank was the consequence. This resulted in the discovery, that in the midst of the wildest speculation all over the kingdom, one of the best banks in Manchester had overdrawn accounts £900,000. Its deposits were £860,000, and circulation £300,000; making £1,160,000 cash obligations, with only £180,000 cash means at its command, of which £100,000 was the lost package, and the accounts of customers had been overdrawn £900,000. This state of affairs was not peculiar to that bank, and where ramifications were so extensive, a failure would have been fatal. The bank of England, therefore, loaned £1,000,000 to sustain that concern, but commenced immediately a rapid curtailment. Such was the state of affairs when the harvest failed. It was, therefore, not the mere rise in bread consequent upon its scarcity, but the prooting of the whole system of credit. The banks of the United States were all prostrated by the blow. Since that time, the purchases of bread have continued large, but the markets have gradually recovered themselves. The imports of breadstuff into England, with the average quarterly prices of wheat, the bullion in the bank, and the rate of interest have been as follows:—

Years.	FOREIGN IMPORT.		COLONIAL IMP.		QUARTERLY AVERAGE.				Bullion.	Int.
	Wheat.	Flour.	Wheat.	Flour.	1st q.	2d q.	3d q.	4th q.		
	Qrs.	Cwt.	Qrs.	Cwt.	s. d.	s. d.	s. d.	s. d.		
1838,	1,044,225	351,495	....	50,330	55 0	62 0	69 0	72 6	£9,362,009	4
1839,	2,778,345	743,245	30	43,800	75 0	61 0	70 6	67 0	2,887,000	5
1840,	2,022,100	1,121,320	4,600	392,100	66 5	68 2	69 4	61 6	3,457,000	6
1841,	2,772,560	632,730	65,726	701,815	62 0	62 11	69 0	63 9	5,031,000	5
1842,	2,759,265	562,135	38,300	548,910	60 4	61 8	58 1	48 11	11,054,000	4
1843,	920,800	98,100	19,630	294,180	48 0	47 2	54 1	51 4	13,933,000	4
1844,	1,068,570	306,000	44,470	774,800	52 4	55 8	52 7	46 2	13,776,000	2½

The period of the highest price of bread, and the greatest drain of bullion, was the last quarter of 1838 and the first three of 1839; and for the first time since the reign of Queen Anne, the rate of money was put up to 6 per cent, the bank then availing itself

of the relaxation of the usury laws, for the first time. The influence was not felt fully in the cotton market, however, until the glut in the foreign markets and the events in China, added the inactivity of the export trade to the depression in the home market. This was felt in its full weight, in 1841-2. The state of the mill interest, in Lancashire, was then as follows:—

## COTTON MILLS OF LANCASHIRE, DECEMBER, 1841.

	No.	Horse Power.	Power at work.	Wh. No. of hands.	Hands work- ing Dec., '41.
Working full time, .	887	30,697	27,980	152,311	142,063
“ short “ .	139	5,801	5,127	30,105	27,764
Idle,.....	138	3,397	.....	16,774	.....
Total,.....	1,164	39,895	33,107	199,190	169,827

This was the lowest point of depression for the cotton trade, and was only reached after four years of bad harvests operating to break down a most extensive trade based upon credit. From that time a new order of things commenced, and efforts to recover a cash trade, by reducing prices, were strenuously made. These were, to render existing machinery more productive; to supersede manual labor by mechanical contrivances; and, where manual labor was still necessary, to get it performed by children and women, instead of adult males. The extent to which this was effected, is seen in the following authentic figures:—

## NUMBER OF MILLS, SPINDLES, AND SPINNERS IN MANCHESTER.

Years.	Fine Mills.	Spindles.	Spinners.	Coarse Mills.	Spindles.	Spinners.
1829,.....	20	732,262	1,081	37	546,466	1,181
1841,.....	20	875,244	589	37	617,229	457
1843,.....	...	.....	549	...	.....	322

Thus the number of spinners, in 1843, was 871, to perform the same work that required 2,262, in 1829. The average wages in 1829, was 45s. or \$11 80, and in 1841, \$7 20, a reduction of one-third in wages. When the 138 mills in Lancashire were idle, at the close of 1841, so depreciated was mill property, that a new mill in the neighborhood of Manchester, which cost £120,000, stopped, June 12, 1840, and was sold at public auction for £36,100. Such was the state of affairs then; now, the reverse is the case; all the mills are employed, and many new ones are in process of erection. The cheap goods are going in increasing quantities to every quarter of the globe, not on credit, but in exchange for values. The China market alone, has been since opened, and takes a quantity equal to half the consumption of England, and the currency of England is in such a position, that it can suffer no collapse. The bank of England may lose £8,000,000 of coin without, under the new law, affecting the currency, and the issues of the country banks are very low.

The movement of the banks of New Orleans, to the 1st of November, 1845, is given in the following official statement of the “Board of Currency:”—

## MOVEMENT OF THE BANKS OF NEW ORLEANS, NOVEMBER 1, 1845.

## Specie Paying.

	Cash Liabilities.	Assets.	TOTAL MOVEMENT AND DEAD WEIGHT.			
			Circulation.	Specie.	Liabilities Ex. of cap.	Assets.
Bk. of Louisiana,	4,004,435	4,737,663	932,183	2,743,790	4,606,434 81	9,571,933 59
Canal Bank. ....	809,219	1,387,680	321,465	408,744	816,767 00	4,818,705 44
City Bank. ....	1,365,397	1,940,217	420,400	531,227	1,694,623 35	3,841,672 70
Lou. State Bank...	1,296,091	1,819,240	308,922	1,026,750	1,296,091 52	3,087,728 69
Merch. & Traders,	2,379,745	2,890,735	546,265	1,386,743	2,379,745 47	4,241,822 66
Union Bank,.....	35,181	499,086	27,660	64,826	602,967 54	8,068,596 30

## Non-Specie Paying.

Citizens' B'k.....	1,197,882	76,448	963,589	9,392	1,205,812 44	8,288,098 97
Consolidated B'k.	783,791	36,909	775,180	36,909	783,791 08	2,110,784 49
TOTAL.....	\$11,781,742	\$13,387,978	\$4,295,665	\$6,208,381	\$13,386,233 21	\$44,029,342 14

We give, below, a summary of the quarterly reports of the banks of the state of New York, up to the 1st of November, 1845, as made to the comptroller of the state. The

report of the Farmers' and Mechanics' Bank of Ogdensburgh, was not made in conformity to the requirements of the law, and therefore could not be accepted and included in the general statement. The amount of notes delivered to that bank is \$249,870, most of which were probably in circulation—making the entire circulation of the banks, on the 1st November, about \$21,625,000.

RESOURCES.		LIABILITIES.	
Loans and discounts,	\$69,164,861	Capital,	\$42,845,428
"    "    to directors,	4,157,716	Profits,	5,018,043
"    "    to brokers,	1,457,858	Bank notes in circulation,	881,404
Real estate,	3,645,684	Reg'd " " "	20,493,965
Bonds and mortgages,	3,181,746	Due treasurer of the state,	631,063
Stocks and promissory notes,	10,962,822	Due commissioners of canal fund,	1,581,330
Due fin. directors oth. than for loans, etc.,	33,298	Due depositors on demand,	31,773,991
brokers " " " " " "	363,278	Due individuals,	759,359
Bank fund,	236,268	Due banks,	12,829,854
Loss and expense account,	425,584	Due treasurer of the U. S.,	3,002,649
Overdrafts,	133,242	Am't due, not under other heads,	584,740
Specie,	8,884,545	Add for cents,	271
Cash items,	5,947,535		
Bills of solvent banks on hand,	2,253,862		
suspended	14,482		
Due from banks and bankers,	9,533,606		
Add for cents,	561		
<b>Total resources,</b>	<b>\$120,401,997</b>	<b>Total liabilities,</b>	<b>\$120,401,997</b>

RELATIVE CONDITION OF THE BANKS OF NEW YORK.

The quarterly reports of the banks of the state of New York, for the year ending the 1st of November, show the following results:—

	Feb. 1.	May 1.	Aug. 1.	Nov. 1.
Loans and discounts,.....	\$70,888,578	\$74,616,060	\$70,179,266	\$74,780,435
Stocks,.....	10,243,043	10,086,904	10,800,606	10,962,822
Specie,.....	6,893,236	8,118,324	8,909,527	8,884,545
Cash items,.....	4,839,886	6,180,852	4,754,884	5,947,585
Bank notes,.....	2,387,008	2,512,474	2,488,117	2,258,862
Due from banks,.....	7,684,850	7,833,713	7,791,489	9,533,625
Capital,.....	43,674,146	43,555,228	43,063,627	42,845,428
Circulation,.....	18,513,403	19,581,543	18,461,410	21,625,239
Deposits,.....	25,976,246	28,425,967	27,636,520	31,773,991
Due to banks,.....	11,501,102	12,965,232	13,962,146	12,829,854
Due canal fund,.....	1,607,572	1,257,358	1,236,240	1,581,330

It will be seen that most of the items indicating confidence, and a prosperous business, have largely increased since the last report, and are larger than at any period during the year. The loans and discounts have increased, since the 1st of August, \$4,601,169, and are higher by \$134,375 than at any former period of the year. The specie is \$1,991,309 more than in February, and \$24,982 less than in August. The cash items have increased \$1,192,700 since the last report. The amount due from banks has increased \$1,742,137. The circulation shows the large increase of \$3,160,829, and the deposits the still larger increase of \$4,037,471.

We give below the average prices of grain, at Liverpool, at the under-mentioned dates :

AVERAGE PRICE OF GRAIN AT LIVERPOOL.

	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.	Flour.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
September 20	52 6	30 9	21 7	32 8	42 10	37 0	0 0
September 27,	53 2	30 2	22 2	33 1	42 5	38 9	0 0
October 4,	56 0	31 1	23 4	33 8	43 1	42 6	0 0
October 11,	57 9	31 3	23 4	34 2	43 1	44 3	0 0
October 18,	58 2	32 0	32 5	34 5	44 5	43 0	0 0
October 25,	59 5	33 0	24 11	34 5	45 5	44 1	0 0
Ag. Av. 6 weeks,	26 2	31 4	23 1	33 9	43 6	41 7	0 0
Duty on Frgn.Pro. 16 0		7 0	5 0	9 6	1 0	1 6	9 7½
Do. on Canadian, 1 0		0 6	0 6	1 0	0 6	0 6	0 7½
Do. other Brit. Col. 3 0		0 6	0 6	1 0	0 6	0 6	1 9½



## COMMERCIAL REGULATIONS.

## THE NEW MEXICAN TARIFF.

THE New Orleans Price Current publishes the following translation of the new Mexican tariff. It is from the *Diario of Mexico*:—

Art. 1. No essential change is made in the mode in which vessels bound to Mexico are to be cleared in foreign ports.

Art. 2. All the ports now open to foreign trade continue the same.

Art. 3. All vessels now permitted to carry goods free of duty, shall continue to possess the same privilege.

Art. 4. The following articles are prohibited: Brandy from cane (taffia) and all other strong liquors not produced from grapes; except gin, rum, and other kinds of spirits mentioned in the list; imported in bottles, jugs, pitchers, and other vessels, containing not more than four pounds of liquid each; starch, with the exceptions mentioned in the list; anniseed not ground; capers; sugar of all kinds; rice; raw cotton, in seed or ginned, (in all cases when cotton wool is permitted to be imported, the extraordinary duties to which it is subject shall be indicated;) indigo; brass and copper of all sizes; arms, of all kinds, muskets, swords, etc., agreeably to the decree of September 22, 1840; sulphur; boots and bootines, with leggins, whether of leather or cloth, for men, women, or children; metal buttons, on which are stamped, inside or outside, the arms of the republic, or of Spain; coffee; wax, manufactured; cast nails of all sizes; copper, in bars or manufactured; cumin; tortoise shell and horn, manufactured; epauletts, of every form and metal; dressed leather, of all qualities and colors; all obscene stamps, pictures, figures; and, in general, all things of that sort, hurtful to religion and morality; curbs, bits, spurs, made in the fashion of the country; galloon of metal, of all kinds and qualities whatever; goat and deer skins, dressed, except such as are manufactured in the country, or employed in machinery; all kinds of coarse cloth; wheat or flour, the importation of which into Yucatan is permitted; cotton cloths, do, thread and twist, of all qualities, numbers and colors; soap, of all kinds; childrens' toys, not applicable to models for instruction or ornament; crockery ware, comprehending all household utensils of clay, vitrified or not, with or without painting; books, pamphlets and manuscripts, which shall be prohibited by the competent authority; receipts, bills of lading, invoices, and permits of the custom-house, printed, engraved, or lithographed; lard; molasses; wood for building, of all kinds, except for ship-building and masts; excepting, also, fine wood for cabinet work, allowed to be imported into Tampico and Matamoras, according to the decree of June 3, 1840, and generally all the woods mentioned in the list; harness and saddles, of all kinds, with their appurtenances; playing-cards, of all kinds, except those used in other countries, and not bearing the figures on Mexican cards; gold leaf, pure or mixed; woollen cloth of coarse qualities; parchment, except for drawing; shot; lead in bars or plates; powder, except for hunting, also petards and crackers for children, and all other articles made of powder; fulminating powder being allowed to be imported in the farm of the revenue; except always powder brought by armed vessels for their own use, according to the decree of July 19, 1834, promulgated by the general administration of the revenue on the 31st of the same month, No. 129; ploughshares of the same form with those used in the country; masks of all kinds—and cloth, painted or printed to imitate them; clothing of all kinds, including sacerdotal vestments and ornaments—except belts of coarse cloth (*vandas du buraton*) with or without fringe; ornamental buttons of all kinds, leather shirts, netting drawers of cotton, wool or silk, gloves, stockings, handkerchiefs, hats, and suspenders; common salt; saltpetre; coat-lining, fine and common; tallow, raw and melted; tobacco of all kinds, and in all forms, cannot be imported, except for the farm of tobacco—tobacco in small quantities may be imported for personal use, according to law; cotton stuffs, plain or figured, brown or white, pure or mixed, not exceeding thirty threads to the gr. inch, Mexican on both sides; cotton, figured in imitation of kersey, brown, pure or mixed, not exceeding thirty threads in the same space; cotton stuffs, plain, colored or striped, pure or mixed; not exceeding twenty-five threads to the same space, of fixed color—by fixed color is signified not only that which suffers no change by the action of water, soap or light, but that which resists these agents sufficiently that it cannot be taken for brown or white cotton, to the prejudice of the article produced in the country; cotton stuffs, plain, colored or striped, pure or mixed, the coloring of which is not fixed, and not exceeding thirty threads to the same space; meats, pickled, dried or salted, and all preparations of pork, minced or cut up, excepting, always, puddings, sausages, smoked

bacon, and sancissons; wheat, and all bread stuffs, except Indian corn, in the cases mentioned by the law of March 29, 1827; shoes and slippers; zarapes, blankets of wool or cotton.

Art. 5. The basis of the tariff for the collection of duties on articles not specified will be 30 per cent ad valorem, as heretofore practised, and the same rule will serve for calculating the duties in the interior, according to the laws now in force. The dues for anchorage and damage, the duties of municipalities and localities, will continue as in times past.

All goods mentioned in the tariff, and liable to measurement by the inch, when they have no fixed vara of breadth, will be subject to the laws respectively applicable to them; but when they exceed a vara in breadth, will be taxed by the square vara.

Art. 6. Duties shall be levied on the articles hereinafter mentioned, to wit: Olive oil, per 100 lb. \$5; gin in bottles or jugs, containing not less than 4 lb, vessel not included, per cwt. \$16; rum and arack, do, \$18; brandy from grapes, without allowance for leakage, \$12; almonds, sweet and bitter, shelled, \$6; do, do, in shells, \$4; saffron, dry or oiled per lb. \$1 50; codfish, and all other salt fish, dry or smoked, per cwt. \$4; cocoa of Guayaquil, Para, or the islands, \$4; do. all other, \$8; cinnamon of all kinds, Cassia, and Canelon, per lb. \$1; raisins, figs, and dry fruits, per lb. \$3; pepper, fine and common, \$8; vinegar, \$3; white wine in casks, without allowance for leakage, \$5; white wine in bottles, without do, \$8; red do in casks do, \$5; do do in bottles, without allowance for breakage.

VARIOUS ARTICLES.—Steel, per cwt. \$2; wax, white or yellow, \$32; spermaceti, manufactured, \$25; do raw, \$12 50; iron of all sorts, in bars, round, square, wrought, platina, mineral, bars, \$1 50; iron, hammered or cast, \$3; paper, no change in the duties; hats, not dressed, \$2; do all others, \$3; tin of all kinds, per 100 lb. \$4 50.

HARDWARE.—Articles of iron above mentioned, are admitted; they were prohibited by the decree of August 14, 1842, except those mentioned in the catalogue of protected articles—the rest are classed as accurately as it was possible to do—and are liable to duty by the quintal, as follows; articles of iron, \$3, to \$10; hardware in general, \$6, to \$40; glass ware and porcelain of all kinds, colors and descriptions; except glass and crystal joined, and other articles named in the catalogue, without allowance for breakage, per cwt. \$6; glass ware of all kinds, without allowance for breakage, \$10.

FURNITURE AND CARRIAGES.—Furniture, new and old of all sorts, and of wood, ornamented, painted, varnished or gilt, per quintal, \$15; chariots of two wheels each, \$25; do four do, \$100; gigs of two wheels, \$60; small carriages with two seats, \$150; do do with four or more seats, \$200; coaches, landaus, and other carriages with two or more seats, \$300; stages or omnibus, with any number of seats, \$100.

In levying the duties on this kind of article, no distinction will be made between new and old, and it is understood that such vehicles may be prevented from running on the public ways, if their wheels are not of the size prescribed by the police.

FLAX, HEMP, TOW, ETC.—Raw flax and hemp, per vara, 7 cents; do, do, in hanks, per lb. 60 cents; twine, flax, hemp, or tow, per 100 lb. \$4; flax clear, or with the seeds, per 100 lb. \$3; cloths of flax, hemp, or tow, white or raw, 36 threads to the quarter inch, Mexican, per vara, 7 cts.; do. with more than 36 threads do. 9 cents; do. painted, plain or striped, 8 cts.; do. white or raw, worked in colors like kersey, 11 cts.; do. worked or plain, 18 cents.

NOTE.—All kinds of cloth, in which there is a mixture of cotton, will be considered as cotton.

WOOL, HAIR-CLOTH, &c.—Carpets and mock velvet, per vara, 75 cts.; cassimere, do., 75 cts.; wool, raw, per 100 lbs., \$4; cloth, fine, per vara, \$1; do. coarse, white or colored, 12½ cts.; do. worked, striped like kerseys, 75 cts.

The cloths mentioned in the list, when mixed with other material than wool, except metal or silk, shall be considered as all wool.

SILKS.—Laces, per lb., \$12; silk, unbleached, in skeins, per lb., \$1; do. do. flocks, \$2; all stuffs made of pure silk, \$3. All goods mixed with silk, shall be charged as follows:—Silk and cotton, \$1 50; do. flax, \$1 80; do. wool, \$2; goods of more than two materials, except metals, as flax, silk, wool, and cotton, \$2; goods of silk, or any other material except metal, shall pay by measure.

COTTON.—Stuffs plain or striped, white or brown, 30 threads to the quarter inch Mexican, per yard, 15 cts.; do. brown, striped like kersey, more than 30 threads to the quarter inch, 15 cts.; except cottonade, plush, velvet, white, per vara, 11 cents; stuffs colored, plain, with printed stripes, more than 26 threads to the quarter inch, 10 cts.; do. do. stamped like kersey, plush, bordered, plain or fringed, 10 cts.; thread cotton, or cotton and wool, including the weight of the paper boxes, &c., per lb., 50 cts.; stockings, men's

and women's, per dozen, \$1 50; do. do. children's, 50 cts.; muslins, plain white, bordered or plain, not more than 30 threads to the quarter inch, per vara, 12½ cts.; muslins, lawns, and other goods of cotton, very thin, white or colored, bordered or plain, with any greater number of threads, 12½ cts.; handkerchiefs, printed, striped, or squared, 26 threads to the quarter inch, 9 cts.; do. white, plain, figured, or colored, more than 30 threads to the quarter inch, 11 cts.; do. white, striped, being a square vara, 14 cts.; do. white, bordered, or plain, same size, 16 cts.; do. white or colored, very thin, same size, no matter how many threads, 12½ cts.; lace, including cartons, boxes, &c., per lb., \$2.

We have no time, says the Diario, to insert the whole list of these articles. The variety, besides, is so great, that it would be difficult to form a correct idea of the duties upon them. We shall, therefore, only say, that in levying the duties, the value at the place of production is taken into consideration, giving as much indulgence as possible when they are employed in our own manufactures, as coloring matter, &c., &c.

### COMMERCIAL REGULATIONS OF MANILLA.

PORT CHARGES—IMPORT DUTIES—EXPORT DUTIES—ENTREPORT DUTIES—PORT AND CUSTOM-HOUSE REGULATIONS—TERMS FOR SALES AND PURCHASES.

**PORT CHARGES**—On foreign vessels, 2 rs. per ton, and one half on such that neither load or unloaded cargo, besides fees amounting from \$5 to \$15, according to the size of vessels. **Monies**—The Spanish dollar divided into 8 rs., and the real into 12 grains, or 20 cents. **Weights**—The pecal equal to 137½ lbs. Spanish, (140 lbs. English) the quintal to 100, and the arroba to 24, these being 2 per cent heavier than the English lb. **Measures**—The cavan, which contains 5,998 cubic inches, and is divided into 25 gantas. The vara, which has 36 inches, and is 8 per cent shorter than the English yard, by which latter cotton and other manufactures are sold by the importers. A corge is 20 pieces.

**IMPORT DUTIES**—Spanish commodities, by Spanish vessels, pay 3 per cent ad valorem, and 8 by foreign. Foreign commodities, by foreign vessels, 14 per cent, and 7 by Spanish; in general, being 8 per cent, under national flag from Singapore, and 9 from China. **Spirits and strong liquors**, produce of Spain, by Spanish vessels, 10 per cent, and 25 by foreign; if they be foreign produce, by Spanish vessels, 30 per cent, and 60 by foreign. **Cider and beer**, produce of Spain, by Spanish vessels, 3 per cent, and 10 by foreign; if they be foreign produce, by Spanish vessels, 20 and 25 by foreign. All Spanish wines, by national vessels, 3 per cent, and 8 by foreign. Foreign wines, by Spanish vessels, 40 per cent and 50 by foreign, except champagne, which pays, by Spanish vessels, 7 per cent and 14 by foreign. Cotton twist, grey, black, blue and purple—knives, or bolos, such as the natives use—ready made clothes, boots, shoes—preserved fruits, confectionary and vinegar, by Spanish vessels, 20 per cent, and 30 by foreign. British and other foreign cotton and silk manufactures, made in imitation of native cloths, chiefly stripes or checks of black, blue and purple colors, Madras and Bengal grey, white and printed cottons, towels, table-napkins, and table-cloths, 15 per cent by Spanish vessels, and 25 by foreign. Biche de mer, rattans, diamonds, tortoise-shell, M. O. P. shell and bird's-nest, 1 per cent by Spanish vessels, and 2 by foreign. Machinery of all sorts for the promotion of the industry of the country, cotton twist of red, rose, yellow, and green colors, gold and silver coined or uncoined, plants, and seeds, free. Tropical productions, similar to those of the Phillippines, also arrack and gunpowder are prohibited. Opium is only admitted to be deposited for re-exportation. Swords, fowling-pieces, muskets, pistols and warlike stores may be deposited for re-export, and cannot be introduced without the special license of government; but cannon and dress swords are admitted.

**EXPORT DUTIES**—Commodities and produce of every description to Spain, by national vessels, pay 1 per cent, and 2 by foreign. Elsewhere 1½ by Spanish vessels, and 3 by foreign. Hemp, by national vessels to whatever destination, 1 per cent, and 2 by foreign. Rice, by Spanish vessels, free, and 4½ per cent by foreign. Manufactured tobacco, and cordage, of Manila hemp, free by all flags. Gold dust, gold in bars, and silver in bars, free.

**ENTREPORT DUTIES**—One per cent ad valorem, at entry, and 1 per cent at the exportation, with one per cent more if the commodities should be kept there more than twelve months, two years being the longest time allowed for it.

**PORT AND CUSTOM-HOUSE REGULATIONS**—Vessels newly arrived are not to communicate with the shore until having been visited by the port captain's boat; and within thirty hours after this visit, a manifest must be presented, stating packages, marks, and numbers,

but the vessel may retain her cargo 40 days in transit, without stating whether for consumption or deposit; and without being obliged to land, or incurring any charge on the same, except gunpowder, pocket-pistols and forbidden arms.

TERMS FOR SALES AND PURCHASES—Sales are generally made, duty paid, at three to five months credit, occasionally at 2½ per cent discount for prompt payment, and exports are bought for cash.

#### BRITISH CUSTOMS—DISCHARGE OF SHIP'S CARGOES.

The inspector General of the coast guard service having called the attention of the commissioners to a proposition, authorising the payment of expenses, etc., to officers in that branch of the revenue, when kept in charge of any goods beyond fourteen days; the board have granted the request, and orders have been issued that the inspectors of the Thames do govern themselves in this matter from the present time accordingly, observing that the parties, owners of the ships, or merchants, are not to be called upon for payment of the expenses, except in cases where there may have been unnecessary delay in the delivery of the cargoes. This order has further been communicated to the collectors and controllers of the revenue at the various out-ports through the United Kingdom, with directions to proceed in the same manner in cases of the kind, so far as they are respectively concerned.

### NAUTICAL INTELLIGENCE.

#### VERGAT FAIRWAY BUOYS.

THE Royal Netherland Minister of Marine, has, under date of May 19, published the following:—That in consequence of alterations which have taken place in the Veergat fairway, the buoys in the fairway between the bank Scotsman, and the shore of Walcheren, have been increased, so that the Veergat, besides the black buoy, No. 1, at the Roompot, (Creampot,) which, at the same time serves as the outer buoy of the Veergat, and the red buoy of the west point of Onrust, (which in reality separates the Veergat, and the Roompot,) has five black and three white buoys, viz:

1. The black buoy No. 1, in 43 palms depth of water. Bearings: the steeple of Middelburg, between the watch-house and hut placed next to it of the east watering.
2. A black buoy No. 2, depth of water 43 palms. Bearings: the mill of our Lady's Polder, between the mill and church steeple of the so-called "cow-mill," below Veere in the trees of the east watering.
3. White buoy No. 1, depth of water 43 palms. Bearings: the mill of our Lady's Polder, in the mill-building; the watch-house of the east watering, in the Hospital of Veere.
4. Black buoy No. 3, depth of water 48 palms. Bearings: the corn-mill just easterly of a small house with a red-tiled roof, below Veere a small house on Kamperland, between two farm-houses.
5. Black buoy No. 4, in 43 palms of water. Bearings: the small steeple of Gapinge, against the fort of Ten Hoak; the small tower of our Lady's Polder just visible about the Downs.
6. White buoy No. 2, depth of water 43 palms. Bearings: the steeple of the hospital at Veere, against the corner of the fort of Ten Hoak.
7. Black buoy No. 5, depth of water 27 palms. Bearings: the cow-mill just free of the east corner of the watch-house of the east watering; a small out-house against the north corner of a greater one on Kamperland.

It is also notified under date of June 30, that the buoys of the West Friesland Seagat are at present as follows:

1. A white and red painted buoy, serving as an outermost buoy, in the depth of water of 100 palms, under the following bearings: a large beacon or scheermonikoog; a small ditto on Engelman's Plate; three white buoys opposite the south shore.

The course from the outer buoy is through the middle of the fairway, as far as the third black, or the so-called buoy before the middle gat S. E., at a depth of water of 100

palms, the water being deepest near the white buoys, and the more shallow near the outermost black buoy.

The stream in this north-west sea-gat runs usually S. E. by E., and the ebb N. W. by W. The depth of water is taken at usual low water, and the bearings according to compass.

### LIGHTS ON THE NORTH COAST OF FRANCE.

HYDROGRAPHIC OFFICE, Admiralty, 2nd July, 1845.

The French government has announced that, on the 13th of August, 1845, the following lights will be established on the north coast of France :

1. FLASHING LIGHT OF ILE VIERGE.—This light will be varied every four minutes, by a red flash, and each flash will be preceded and followed by short eclipses.

The light-house stands 110 yards from the eastern extremity of Vierge Island, and two miles E. N. E. by compass from the outer anchorage of Abervrac'h, in latitude 48, 38, 23 N. longitude, 4, 34, 0 W.

The light is 108 feet above the level of the sea, at high water of spring tides, and may be seen at the distance of 15 miles.

2 and 3.—TWO LIGHTS OF ABERVRAC'H.—The westernmost of these light-houses is placed on Vrac'h Island, which lies to the eastward of the entrance of Abervrac'h, in latitude 48, 36, 57 N., longitude 4 34 30 W. The light will be red, and fixed, and will stand 59 feet above the level of the sea, at high water of spring tides. It will be visible, in fine weather, at the distance of 4 miles.

The easternmost light is also fixed, but bright, and will be placed on the tower of Plouguerneau church, nearly 4 miles S. E. by E., by compass, from the above light on Ile Vrac'h. It will stand 226 feet above the level of the sea at high water at spring tides, and may be seen at the distance of 10 miles.

NOTE.—The red light of Ile Vrac'h is one with Plouguerneau light, will be the leading mark for running into Abervrac'h creek from the sea; but it will pass within 80 yards of a rock called the *Petit Pot de Beurre*, which lies in the outer anchorage of Abervrac'h, and which must be left to the northward. The light-house on Ile Vrac'h, will be painted white, so that the above mark will be equally conspicuous by day.

It is intended to establish two small inner lights, for the purpose of guiding vessels not only into the principal anchorage of Abervrac'h, but up the creeks of Anges, and St. Antoine, which is dry at low water.

It is high water at full, and change in Abervrac'h, at 4 hours and 17 minutes; and ordinary spring tides rise about 25 feet.

### ROCK ON THE EASTERN COAST OF ANGLESEA.

Captain Becker, in a letter to Lieutenant Sarsfield, says, that commander Robinson has found the rock on the eastern coast, off Anglesea, on which the steam-vessel Queen Victoria sunk last June. Bearings from the pinnacle on the Gravel Bank : Cemaes Mill a quarter of a point open east of the beacon, bearing S. E.  $\frac{3}{4}$  S. Kemlyn Mill, touching the eastern end of Kemlyn Farm, bearing S. Highwater mark of Henborth Point in one with Pencaen Beacon, S. W.  $\frac{1}{2}$  S. Captain Becker says : "It is with pleasure I add that the public spirited conduct of the company, in placing a vessel at commander Robinson's service on this occasion, has thus led to the immediate benefit of this discovery."

### SAND BANKS OFF WEXFORD.

These banks lie from the Tuskar N. 16. E 8 $\frac{1}{2}$  miles; from the Blackwater buoy S 31, W 2 $\frac{1}{2}$  miles; from north end of Long Bank, N 87, E 2 $\frac{1}{2}$  miles, and from the new grounds N 25, E 4 $\frac{1}{2}$  miles; where these bearings intersect there is but 15 feet of water. It is (within the 5 fathom line) 1 $\frac{3}{4}$  miles in length, having several shoal spots upon it.

To the southward of the above, about one third the distance towards the new grounds, is another small ridge (175 fathoms in length) having 4 $\frac{1}{2}$  fathoms on it.

The soundings, between Blackwater Bank and the above, are 7, 8, and 6 fathoms, and between it and the Long Bank, 15 to 6 fathoms. Again, to the southward, between it and the narrow ridge of  $\frac{1}{2}$  fathom, there are 7 and 8 fathoms; between this ridge and the new grounds are 15 and 16 fathoms, up to 7 and 5 fathoms.



## COMMERCIAL STATISTICS.

## COMMERCE OF CHARLESTON, SOUTH CAROLINA.

CHARLESTON, the commercial capital of South Carolina, is situated in  $32^{\circ} 46' 33''$  north latitude, and  $79^{\circ} 57' 27''$  west longitude from Greenwich, and  $2^{\circ} 56' 3''$  west longitude from the seat of government, and is about 755 miles S. S. W. of New York. The progress of the population of the city has been small, although steady, compared with the cities of the west, and the northern Atlantic cities. In 1790, it was 16,359, and according to the last census, (1840,) it had increased to 29,251, of which nearly one half, 14,000, were slaves. If, however, we add 11,876, the population of St. Philip's parish, north of the city, which, although not within its chartered limits, is virtually a part of the city, we have a population of 41,137.

The trade of Charleston is extensive, comprising that of nearly the whole of the state, and including much of that of North Carolina and Georgia. Its tonnage in 1840, amounted to 29,250. The harbour is spacious and convenient, but obstructed by a bar at its mouth, across which are four principal channels. The north channel has a depth of water at high tide of about fourteen feet, and at low water of about nine feet. The middle channel, called the Overall, has a depth at high water of about twelve feet, and at low water of seven feet; but the bar here has a considerable breadth across, which renders the passage less convenient. The ship channel, at the south, has a depth of seventeen feet of water at high tide, and of ten feet at low tide, and is now chiefly used for large vessels. It lies E. by S. from the light-house. South of this is Lawford's channel, which, at high water, has a depth of ten feet, and at low water of six feet. After entering the harbour, the channel, which is deep, passes very near the S. end of Sullivan's island. Here Fort Moultrie is situated. The harbour is also defended by Castle Pinkney, on an island in the harbour, two miles E. of the city; and by Fort Johnson, on the S. side of the harbour, nearly opposite. A fort is also erecting on a sand-bar, opposite to Fort Moultrie, called Fort Sumter. It stands close upon the channel; and, when completed, will be most efficient in the defence of the city. In an isolated part of the suburbs, about two miles from the city, the state has erected nine fire-proof magazines for the safe keeping of the public powder, and as the depositories for that of the merchants. They are disposed in three ranges, and are built of brick, in a circular form, with conical roofs. The centre buildings, designed exclusively for the public powder, is the largest, and will contain 4,000 kegs. The roof is bomb-proof. The other buildings will each contain 1,000 kegs.

Charleston contained, in 1840, 27 foreign commercial, and 34 commission houses engaged in foreign trade, with a capital of \$3,564,750; 428 retail stores, with a capital of \$3,317,450; seven lumber-yards, with a capital of \$50,000; three grist-mills and four saw-mills, manufactured articles to the amount of \$225,000, employing a capital of \$334,000. Vessels were built to the amount of \$60,000. Eight printing-offices, five binderies, four daily, three weekly, and two semi-weekly newspapers, and four periodicals, employed a capital of \$120,000. Eighty-four brick and stone, and twenty-six wooden houses were erected, at an expense of \$927,700. The total amount of capital employed in manufactures, was \$770,500. The exports of Charleston, in 1840, were over ten millions of dollars.

Charleston possesses great facilities for trade with the interior. A canal 22 miles long connects the west branch of Cooper river with Santee river; and this river, together with the Congaree, its principal branch, has been so improved as to extend the navigation to Columbia. But its most important communication with the interior, is by means of the South Carolina railroad, extending 136 miles from Charleston to Hamburg, on Savannah

river, opposite to Augusta, Georgia. A branch of it extends 62 miles, from Branchville to Columbia. Three lines of packets connect Charleston with the city of New York. One of these consists of six ships, one of which sails from each port every five days. Another consists of eight brigs, one of which sails every fourth day. There is another line, which consists of six brigs. Numerous steam-boats ply to Savannah, Beaufort, Georgetown, Columbia, St. Augustine, and other places. The carrying trade is extensively in the hands of the northern states, and of Great Britain.

The following table, compiled from the custom-house returns, exhibits the import and export trade of Charleston, for the last twenty-two years:—

IMPORTS AND EXPORTS AT CHARLESTON, S. C., IN EACH YEAR, FROM 1841 TO 1845.

Years.	Imports.	Exports.
1821,.....	\$3,007,114	\$7,200,511
1822,.....	2,883,586	7,260,320
1823,.....	2,670,705	6,898,814
1824,.....	2,166,185	8,034,082
Total,.....	\$10,727,589	\$29,393,727
Average,.....	2,681,897	7,348,432
Imports, two-fifths of exports in value.		
1825,.....	\$1,892,297	\$11,056,742
1826,.....	1,534,483	7,554,036
1827,.....	1,434,106	8,322,561
1828,.....	1,242,048	6,550,712
1829,.....	1,139,618	8,175,586
1830,.....	1,054,619	7,627,031
1831,.....	1,238,163	6,575,202
1832,.....	1,213,725	7,752,731
Total,.....	\$10,749,059	\$63,614,601
Average,.....	1,343,632	7,951,825
Imports, one-sixth of exports in value.		
1833,.....	\$1,517,705	\$8,434,325
1834,.....	1,787,267	11,207,208
1835,.....	1,891,805	11,338,016
1836,.....	2,806,361	13,684,376
1837,.....	2,510,860	11,220,161
1838,.....	2,318,791	11,042,070
1839,.....	3,086,077	10,385,426
1840,.....	2,058,870	10,036,789
1841,.....	1,557,431	8,043,284
1842,.....	1,359,465	7,525,723
Total,.....	\$20,894,632	\$102,917,358
Average,.....	2,089,463	10,291,736
Imports, one-fifth of exports in value.		
1843,.....	\$1,294,709	\$7,760,809
1844,.....	1,131,515	7,433,282
1845,.....	822,602	8,635,896
Total,.....	\$3,248,826	\$23,829,987
Average,.....	1,082,942	7,943,329
Imports, one-seventh of exports in value.		

The averages under the various tariffs, show as follows:—

4 years, 1821 to 1824,.....	\$2,681,897	\$7,348,432
8 " 1825 to 1832,.....	1,343,632	7,951,825
10 " 1833 to 1842,.....	2,089,463	10,291,736
3 " 1843 to 1845,.....	1,082,942	7,943,329

Our sources of information in regard to Charleston, are rather meagre, and we should esteem it a favor if some resident of that city, or of the state of South Carolina, would

furnish us with an article, or authentic materials for a comprehensive view of the commerce and resources, not only of that city, but of the state. It is our design to embody, from time to time, in the pages of the Merchants' Magazine, full and correct statements of the industrial resources of every section of the country, and thus render our journal, what it has been our endeavor from the start, a truly national work, free from all party or sectional bias.

### COMMERCE OF MANILLA.

MANILLA, is the sea-port city of the Philippine islands, and the capital of the Spanish settlements in the east. It is the only port in the Spanish Philippines with which Spanish vessels to, or from Europe, or foreign vessels from any quarter, are allowed to trade. Spanish vessels trading to China, Singapore, etc., are, however, allowed to proceed to various out-ports, and there take on board their outward cargo. The principal articles of export are sugar, which is, by far the most important; hemp, and stuffs made of hemp; rice, of which large quantities are sent to China; indigo, japan, and other woods; tobacco, segars, coffee, cotton, tortoise-shell, hides, ebony, etc. The tobacco of the Philippine islands is excellent, and might be produced in any quantity; but its growth is comparatively limited by its being made a government monopoly. The United States, France, and Belgium, have consuls, and each of the Canton marine insurance companies has an agent at Manilla. We believe, however, that there are neither fire, nor life insurance offices nor agencies; nor is there any newspaper, or other periodical publication, issued at Manilla.

We have received, however, from a correspondent of the *Merchants' Magazine*, C. GRISWOLD, Esq., formerly of New York, a printed sheet of tables, showing the quantity of sugar exported from Manilla, during ten years, from 1835 to 1844, inclusive. From this sheet we propose to give a tabular statement of the sugar export of Manilla, in each year, from 1835 to 1845:—

Years.	ENGLAND.			AUSTRALIA.			SINGAPORE.		
	Tons.	Cwts.	Qrs.	Tons.	Cwts.	Qrs.	Tons.	Cwts.	Q.
1835,.....	3,578	18	0	67	11	2	304	1	0
1836,.....	5,907	10	3	.....	.....	.....	106	5	0
1837,.....	2,972	11	3	121	6	1	372	8	0
1838,.....	5,527	10	0	956	7	2	66	17	2
1839,.....	5,636	13	1	3,041	10	1	.....	.....	.....
1840,.....	5,763	3	0	3,548	15	0	75	8	3
1841,.....	4,886	19	0	3,127	0	0	129	19	3
1842,.....	4,099	17	3	6,980	4	0	220	10	2
1843,.....	10,175	1	2	4,847	2	0	84	3	1
1844,.....	8,167	1	2	3,999	2	1	65	7	2

TABLE—Continued.

Years.	BOMBAY.			SPAIN.			AMERICA.		
	Tons.	Cwts.	Qrs.	Tons.	Cwts.	Qrs.	Tons.	Cwts.	Q.
1835,.....	635	16	1	153	18	0	5,380	17	0
1836,.....	.....	.....	.....	110	12	2	8,689	10	2
1837,.....	2,600	0	0	500	0	2	2,781	14	1
1838,.....	1,324	13	3	930	6	2	2,366	7	1
1839,.....	1,214	17	2	775	8	0	4,221	16	1
1840,.....	2,111	6	1	657	12	2	2,916	11	2
1841,.....	2,172	1	1	563	15	3	3,590	5	0
1842,.....	2,810	15	0	507	15	0	3,057	9	0
1843,.....	2,932	15	0	313	11	0	3,235	1	0
1844,.....	3,446	3	3	608	6	2	4,173	11	1

TOTAL SUGAR—CLAYED AND UNCLAYED.							
Year.	Tons.	Cwts.	Qrs.	Years.	Tons.	Cwts.	Qrs.
1835,.....	11,602	18	2	1840,.....	16,564	7	3
1836,.....	14,876	8	3	1841,.....	15,321	8	1
1837,.....	12,294	0	0	1842,.....	18,541	10	2
1838,.....	12,375	17	1	1843,.....	22,239	18	2
1839,.....	15,632	8	2	1844,.....	21,529	9	2

The following is the comparative annual amount, (averaged on the last ten years,) of sugar, the produce of the Spanish territory and industry, in the Philippine Isles:—

Ann. average on 10 years,....	CONSUMED BY			
	Eng. and colonies.	Spain.	America.	France.
For the year 1844,.....	10,583	512	4,041	36
	15,677	608	4,173	70

The following table shows the approximate average prices, in dollars, for a picul of 140 lbs. English weight:—

Years.	Clayed.	Unclayed.	Value of dollars.			
			s.	d.	s.	d.
1835,.....	4½	4 1-6	from	4 7	to	4 9
1836,.....	5½	4	"	4 8		4 9
1837,.....	4½	3	"	4 6		4 8
1838,.....	4¾	3	"	4 4		4 5
1839,.....	4 1-9	2½	"	4 6		4 9
1840,.....	4 1-10	3 2-5	"	4 7		.
1841,.....	4 3-8	3½	"	4 5		4 8
1842,.....	3 4-9	2½	"	4 6		7 8
1843,.....	3¾	2½	"	4 2		.
1844,.....	3¾	2 2-5	"	4 1½		4 3

These prices and exchanges are to be regarded as approximately rather than as fractionally correct. The unclayed sugar varies in price, (of which the calculations here are formed in average,) from two dollars upwards, per picul.

We refer our readers to the "Commercial Regulations" of the present number of this Magazine, for the port-charges, import, export, and entreport duties, and other regulations of trade at Manilla.

## MARITIME STRENGTH OF ENGLAND, FRANCE, AND THE U. STATES.

THE THREE GREAT NAVAL POWERS—POPULATION COMPARED—EXPORTS OF THE THREE POWERS—COLONIAL COMMERCE OF FRANCE—COMPARISON OF THE GREAT COMMERCIAL MARINES—ARRIVALS AND DEPARTURES OF ENGLISH, FRENCH, AND AMERICAN SHIPS—COMPARISON OF TONNAGE—OF THE CARRYING TRADE—VARIOUS OTHER COMPARISONS AS TO THE SHIPPING TRADE AND NAVIGATION OF THE THREE POWERS.

Baron Dupin has recently published in France an elaborate essay entitled "Comparison of the Three Principal Navies of the World." The editor of the *Revue Britannique* greatly extols the picture it presents, in the various lights of utility, commerce, and power; and it appears that the proof-sheets were communicated to him by the author as they come from the press. We make the following extracts:—

Three great nations share among them the dominion of the seas; they, alone, carry on more maritime commerce than all the others put together. These are the English, the Americans of the United States, and the French.

### POPULATION OF THE THREE GREAT MARITIME POWERS.

British Empire,.....	125,000,000
Kingdom of France,.....	36,000,000
Republic of the United States,.....	18,000,000
Total,.....	179,000,000

These three great powers extend over one-fifth of the population of the globe.

I have collected their imports and exports, for the last year, from the official documents hitherto published, that is, 1840.

COMPARISON OF THE IMPORTS AND EXPORTS TOGETHER OF THE THREE POWERS.

British Empire, .....	3,415,343,250 francs.
Kingdom of France, .....	2,063,208,552 "
Republic of the United States, .....	1,294,222,000 "
Total, .....	6,772,773,802 "

Consequently, considered relatively to the amount of commerce, as well as of population, France holds the second rank.

Let us see whether the strength of their respective commercial marines corresponds to these first results.

France being at once both a continental and maritime power, a considerable portion of its exchanges is carried on by land, which does not take place either in Great Britain or in the United States.

EXTERNAL COMMERCE OF FRANCE—(1ST BY LAND, 2D BY SEA)—AMOUNT OF EXPORTS AND IMPORTS.

1st, by land, .....	582,084,351
2d, by sea, .....	1,481,124,201
Total, .....	2,063,208,552

Although more than one-quarter of the French commerce is carried on by land, the rest, which is effected by sea, surpasses that of the United States in the total value of the articles.

But the commercial marine of the three states, is far from corresponding to the numbers in their respective maritime exchanges. It is to a similar disproportion, that I call the attention of the friends of the public good and of the national power.

COMPARISON OF THE GREAT COMMERCIAL MARINES—AMOUNT OF THE ARRIVALS AND DEPARTURES OF SHIPS, FOREIGN, AS WELL AS NATIONAL, EMPLOYED IN FOREIGN COMMERCE.

Nations.	Ships.	Tons.	Crews.
Great Britain, .....	56,154	9,586,924	516,951
United States, .....	23,948	4,715,333	234,476
France, .....	36,237	3,737,197	320,258
Total, .....	116,339	18,039,454	1,071,685

Here the tonnage of France loses the second rank, which the value of its merchandise assigned to its commerce. It is already, for us, a subject of deep meditation, to see this inferiority of tonnage, compared even with the United States.

The disproportion is still greater and more afflicting, when we consider separately the commercial business carried on—1st, under the national flag; 2d, under a foreign flag.

AMOUNT IN ARRIVALS AND DEPARTURES OF NATIONAL SHIPS EMPLOYED IN FOREIGN COMMERCE IN THE THREE PRINCIPAL MARITIME COUNTRIES.

Nations.	Ships.	Tons.	Crews.
Great Britain, .....	35,516	6,591,738	353,984
United States, .....	14,794	3,274,242	153,032
France, .....	15,513	1,416,329	138,604
Total, .....	65,823	11,282,309	645,620

For men who know how to seek and discover the causes of the inferiority of one marine below another, it is not requisite to go beyond this table, to perceive one of the principal causes, which place France so far below her two rivals in the comparative scale of their two commercial marines.

If we take, according to this table, the mean tonnage of the ships, and the mean number of tons navigated by one man in each of these three nations, we shall find the following proportions:—

COMPARATIVE EFFICACY OF THE COMMERCIAL MARINE OF THE THREE GREAT NAVAL POWERS

1.—Comparison of the Tonnages.

For. Commerce under the Nat'l Flag.	Total Tonnage of the mean ships.
Great Britain, .....	185,599 kilogr.
The United States, .....	211,170 "
France, .....	91,195 "



The French ships, therefore, employed in foreign commerce, do not exhibit in their mean size half the mean tonnage of the British ships, and a still less proportion compared to those of the United States.

But the greater the size of the merchant ships, the greater portion of tonnage will be assignable to each man of the crew; and, in the same way, the cheaper the means of transport, the more advantageous for the ship-owner and the merchant. The following comparison will show the truth of this observation:—

RESULT OF THE COMPARED EFFICACY OF THE COMMERCIAL MARINE OF THE THREE GREAT NAVAL POWERS.

2.—Comparison of the Carrying Trade.

For. Commerce under the Nat'l Flag.	Mean weight per man.
Great Britain,.....	18,053 kilogr.
The United States,.....	21,39 “
France,.....	10,218 “

Thus, in our commercial marine, the weight transported by each man of the crew is not equal to even half the weight transported by each American sailor, and is very little above the half of the weight transported by the English sailor.

This is one of the most deplorable facts for France—this is one of the causes of inferiority which we must endeavor, at any cost, to counteract. It explains to us, in great measure, the dearness of freight—dearer in our ports than among our rivals—and foreigners have the largest share of the trade they carry on with us, even in our own ports.

COMPARISON OF THE NATIONAL TONNAGE WITH THE FOREIGN TONNAGE, IN THE COMMERCE PECULIAR TO EACH OF THE GREAT MARITIME POWERS.

Powers compared.	National flag.	Foreign flag.
Great Britain,.....	6,591,738	2,995,186
The United States,.....	3,274,242	1,441,091
France,.....	1,416,329	2,320,868

We shall render the disproportions contained in this table much more evident, by giving the amount of tonnage under the national flag, compared with the corresponding quantity of tonnage under a foreign flag:—

TONNAGE CARRIED UNDER THE NATIONAL FLAG, IN COMPARISON WITH A MILLION OF TONNAGE UNDER A FOREIGN FLAG, IN THE RESPECTIVE COMMERCE OF EACH OF THE GREAT MARITIME POWERS.

Powers compared.	National flag.	Foreign flag.
Great Britain,.....	2,200,778	1,000,000
The United States,.....	2,272,058	1,000,000
France,.....	610,258	1,000,000

Under such very unfavorable results to France, the first desire of a friend to his country must be, to ask himself with anxiety whether the sad inferiority of France in this competition with foreigners, be simply a transitory state arising from casual circumstances? whether this inferiority be of long standing? whether it be decreasing, or increasing?

Let us throw light on these important questions. The comparative results which we have been exhibiting, belong to the year 1840—let us go fifteen years further back. Let us compare the progress made since that epoch.

In England, in the United States, in 1840, foreigners have not even one-third of the total weight of the carrying trade, whilst in France they have nearly two-thirds of it.

This melancholy disproportion, far from decreasing, inclines to increase; it is a comparative decay which I have already pointed out. There has been a vain endeavor to contest it, injudiciously founded on versatile differences that occurred in two or three consecutive years.

COMPARISON OF TONNAGE CARRIED UNDER THE NATIONAL FLAG, AND UNDER A FOREIGN FLAG, WITH A LAPSE OF SIXTEEN YEARS.—SHIPS IN BALLAST ARE NOT INCLUDED, OR THE DISPROPORTION AGAINST FRANCE WOULD HAVE APPEARED STILL GREATER.

Epoch.	French flag.	English flag.
1841,.....	1,205,193	1,886,985
1825,.....	751,321	815,110
Progress in 16 years,.....	454,872	1,071,875

Consequently, in 1825, the foreign tonnage exceeded the French only by one-eleventh, but now it surpasses the French by more than half. Whilst we gain 450,000 tons, carried by our own ships, foreigners have acquired nearly 1,100,000!

The wound must be probed, in order to discover on what side lie the remedies. After what we have established, we shall no longer be surprised at the frightful inferiority in number, and especially in size, of the vessels constituting French commerce, compared to the similar materials possessed by Great Britain and the United States.

COMPARISON OF COMMERCIAL VESSELS BY THE THREE GREAT MARITIME POWERS.

Maritime powers.	Number of vessels.	Total tonnage.	Mean tonnage per vessel.
Great Britain,.....	20,912	2,420,759	115 8-10
The United States,.....	.....	2,266,322	160
France,.....	21,178	699,452	33

Including 5,578 fishing-boats, total tons, 36,252.

What renders this disproportion still more deplorable, is the excessive inequality of the new constructions requisite to keep up, and gradually to increase, these maritime means. This may be seen by the following table, calculated, like the preceding, for the year 1840:—

COMPARISON OF THE NEW VESSELS BUILT ANNUALLY, REQUISITE FOR THE SUPPORT AND INCREASE OF THE COMMERCIAL MEANS OF THE THREE GREAT POWERS.

Maritime powers.	Number of vessels.	Tonnage of vessels.
Great Britain,.....	1,448	223,507
The United States,.....	679	116,344
France,.....	807	43,035

Here, again, we find the melancholy inferiority of tonnage, which places the commercial vessels of France below those of her foreign rivals.

COMPARISON OF THE MEAN SIZED VESSELS ANNUALLY CONSTRUCTED BY THE GREAT MARITIME POWERS.—YEAR 1840.

Powers compared.	Tonnage.
Great Britain,.....	131,568 kilogr.
The United States,.....	171,317 “
France,.....	53,314 “

Thus the mean tonnage of the new French vessels is not even the half of the new English vessels; it is not the third of the new American vessels.

By the necessary result of these great inequalities, we see that the same number of French sailors transports an incomparably less weight than the sailors of the two maritime nations.

COMMERCE OF WILMINGTON, NORTH CAROLINA.

Wilmington, a port of entry in North Carolina, is a place of considerable commercial importance. It is the most populous town in the state, exceeding at this time 8,000 inhabitants. It is the capitol of New Hanover county, and has a court house, jail, an academy, two or three churches; numerous stores, and about 800 dwellings. The harbor admits vessels of 300 tons, but there is a dangerous shoal at its entrance. Opposite the town, are two islands, dividing the river into three channels. The islands afford the finest and most productive rice fields in the state. The tonnage in 1840 was 10,163, and in 1844 it had increased to 14,728. According to the report of the Secretary of the Treasury, the clearances were in the year 1844, 188 vessels, with a tonnage of 28,165, and the arrivals for the same, were 137 vessels, with a tonnage of 19,710. Wilmington has nine steam saw mills running 180 saws, which cut annually 30,000,000 feet of lumber, valued at \$300,000. Several of these establishments have planing mills attached, and it is estimated that \$600,000 are annually expended at this place in the manufacture of lumber alone. Wilmington has also eleven turpentine distilleries, running thirty-four stills, which consume annually 230,000 thousand barrels of crude turpentine, valued at \$500,000 dollars. It is estimated that \$300,000 is employed in the manufacture of

spirits of turpentine. There are annually shipped from the city, of tar 30,000 barrels, rice, 150,000 bushels, staves and shingles \$200,000; and large quantities of tobacco, cotton, flaxseed, beeswax, manufactured cotton goods, etc. At this time, there is about being established an extensive cotton manufactory there, which, as well as every indication of manufacturing enterprise in the south, is to be regarded as a sign of promise.

#### PROGRESS OF BRITISH EXPORTS.

It is generally known, says Wilmer & Smith's Liverpool times, that the declared value represents the actual value at the time of shipment, and that the official value is the quantity of goods of each kind, estimated at uniform prices which were affixed to them in 1694; while, therefore, the declared value is an indication of cost, the official value is an indication of quantity, and the two compared together at any period, shows the changes which take place in the price of goods. Previous to 1814, the year to which the largest amount of goods, according to the declared value, was exported, was 1836. In that year, the exports of the United Kingdom amounted to £53,368,572, according to the declared or real value, and to £85,229,837, according to the official value; showing, therefore, that the price of goods had fallen from the official standard of value by 36 per cent. In 1844, (last year,) the value of British exports exceeded any former year, and amounted to £58,584,292, of which the official value was £131,564,503; showing that, now the price of goods has fallen below the official standard by no less than 55 per cent, or, in other words, showing that while the quantity of goods exported has increased since 1836 by 45 per cent, their value has increased barely 10 per cent. This is a striking evidence of the low price of goods at the present time, as compared with 1836, and of the great improvement and economy introduced into their manufactures during that period, by the improvements of machinery and otherwise. And there can be no doubt that it is chiefly to these improvements and the lower price of British goods, that the British command such an increasing demand in the markets of the world. The whole value of exports to all her possessions, including those in Europe, is not one-third of the whole, and her exports to foreign neutral markets are constantly more than two-thirds. This shows how fallacious is the general opinion that ascribes to her colonies the great bulk of export trade. The amount exported to the British possessions, in 1836, was £13,721,379, out of a total amount of £53,368,572. Last year the former had increased to £16,504,060; but more than the whole difference arises in the trade to the East Indies and Gibraltar, the latter being almost exclusively for Spanish consumption. The British exports to India, during that period, have increased from £4,285,829 in 1836, to £7,695,666 last year, and, therefore, alone shows a larger increase than the whole aggregate colonial exports; so that, leaving India and Gibraltar out, the remainder shows a considerable diminution. With so satisfactory a progress under the recent system of low duties, the Times thinks it is much to be regretted that any cause has arisen to induce the Indian government to increase the rates of duty. The following statement shows the comparative progress of the trade of the United Kingdom to the various geographical divisions, thus:—

	1836.	1840.
Northern Europe.....	£9,999,861	£14,326,797
Southern Europe.....	9,011,305	11,294,388
Africa.....	1,468,062	1,615,530
Asia.....	6,750,842	11,273,721
United States.....	12,425,695	7,938,079
British North American Colonies & W. I....	6,518,842	5,522,338
Foreign West Indies.....	1,238,785	1,173,931
Central & South America including Brazil..	5,955,468	5,429,502

This comparison shows a very large decrease to the whole of the western world, including the British colonies, while the largest increase is to Europe, and the next to the eastern markets. It is not a little curious and instructive, to find, that, in spite of hostile tariffs, made more and more stringent, on the continent of Europe, the greater liberality exercised in England towards the produce of those countries, has had the effect in so striking a way of increasing her exports.

COTTON MANUFACTURES OF CATALONIA, SPAIN.

It appears from returns that have lately been published in the Spanish capital, that the cotton manufacturers of Catalonia have consumed in the short space of nine months, 414,391 quintals (upwards of 41,000,000 lbs. avoirdupois) of raw cotton, which gives a return in custom-house duties at Barcelona and Havana of 9,098,515 reals, about \$475,000.

Statement showing the number of bales of raw cotton imported to Barcelona, from the 4th of December, 1844, to the 11th of September, 1845:—

From New Orleans.....	Bales. 68,454
From Brazil and Pernambuco.....	19,137
From Puerto Rico .....	3,757
From Cuba.....	739
Total bales.....	92,078

Calculated at 4½ quintals per bale, make 414,391 quintals.

DUTIES PAID ON THIS COTTON.

	Reals-vellon.	M.rs.
Calculating that two thirds was imported in Spanish vessels, which pay 3 per cent on the value of the cargo, and 1½ when left in bond, makes 14 reals, 1 marvedi per quintal, being.....	3,807,181	0
One-third in foreign vessels, which pay 21 per cent, etc.....	3,012,184	4
On passing through government stores at Havana, it paid 2 per cent.	2,279,150	16
Total.....	9,098,515	20

TRADE OF THE UPPER MISSISSIPPI

In March, 1844, there was an interesting report from the war department, which contains much valuable information for those, especially those interested in the improvement of the navigation of the Upper Mississippi. From this we gather that the total produce of the Upper Mississippi lead mines in 1825, was, in round numbers, 664,000 pounds; in 1827, 5,000,000. In 1838, the lead shipped from Galena, and ports above, 11,000,000 of pounds; in 1844, 39,000,000; and estimated for 1845, at 42,000,000 of pounds. The pine lumber sent forward from the mills on the St. Croix and Chippewa rivers in Iowa, in 1843, was 21,000,000 feet of plank, boards, and joist, 52,000 square feet of hewn timber, 3,400,000 shingles, 4,000,000 of laths. From the mills in Wisconsin, in 1842, 8,500,000 feet of boards, plank, and joist, 2,000,000 of shingles, 1,200,000 laths. The estimated value of the trade of Galena, and the ports above, for 1843, was, in round numbers, exports, lead, \$937,000, copper \$11,000, lumber \$225,000, hides \$23,000, agricultural products \$43,000; total exports \$1,250,000. The value of imports \$1,150,000.

IMPORT OF SUGAR IN ENGLAND.

The imports of sugar into Great Britain, up to November 1st, 1845, exceed those of 1844, by 24,000 tons, of which 10,700 are from the West Indies, 7,000 from the Mauritius, 4,500 from the East Indies, and 2,000 foreign, produced by free labor. The increase in consumption for the same period of eight months has been 24,100 tons.

## WEALTH AND COMMERCE OF LONDON.

At a meeting of the Free Trade League, Mr. H. G. Ward, a member of Parliament gave some details "which would," he said, "let them see what London was, better than the most hyperbolic language of general description."

"London is the point of inter-communication between colonies which stretch almost from the North Pole—from Canada to the Cape of Good Hope—and which brings the indigo of India, and the wood of Australia, from the antipodes, to enrich the manufactures of Leeds. It is the seat of a commerce that would seem fabulous to the merchants of Venice, Tyre, and Carthage, in the olden times!

"There were 100,000 houses of business, to half of which shops were attached, and all the details were upon the same gigantic scale. The water companies supplied 237,000,000 hogsheads per year; the gas companies supplied 10,000,000 cubic feet every twenty-four hours; of ale and porter, there were consumed 2,000,000 barrels every year; at Smithfield, in 1839, there were sold—cattle, 180,780; sheep, 1,403,400; there came 70,000,000 eggs annually from the continent; the paving and sewerage of London cost 500,000*l.* per annum; its newspapers used 30,000,000 stamps per annum; its steamboats carried 10,000 passengers daily, in pursuit of business or health; 1,000 miles of railway were completed at a cost of 47,000,000*l.*, and 59 canals at a cost of 14,500,000*l.*, connecting it with the most distant parts. The monthly business transacted by London bankers, through the clearing-house, averaged 75,000,000*l.*; it had been as high as 87,000,000*l.* Put all these elements together—add the intelligence and enterprise of London merchants—the skill and industry of her people—and London may challenge the world to produce such a combination of power and wealth. Then take the population in London. In 1801, it was 888,198; in 1831, 1,508,469; in 1841, 1,832,699; or 2,000,000 in round numbers, now. Its length, from east to west, was five miles and a half; or, reckoning from Chelsea to Blackwall, seven miles and a half. Its breadth, from north to south, was three miles and a half—a principality of brick. It had a river which marked it out for the seat of commerce from the earliest times, crossed by six bridges, which cost 5,000,000*l.* London bridge, alone, cost 2,000,000*l.*; Southwark, 800,000*l.*; Waterloo, 1,150,000*l.* The London docks covered 100 acres—the vaults contained cellars for 65,000 pipes of wine; the West India docks, 295 acres—space for 500 vessels; the Commercial docks, 49 acres, (40 water,) used principally for the Baltic trade; and St. Katherine's docks, 24 acres, (11½ water.) The port of London, in 1840, received 2,950 ships—tonnage, 581,000—manned by 32,000 men. The tonnage of the colliers in the river, in the same year, was 2,628,323. The tonnage of vessels trading with the colonies, (1,683 ships,) in that year, was 417,139; with Ireland, (907 ships,) 142,000; and those engaged in the coasting trade, colliers included, (20,205 ships,) 2,686,621; 3,166 British, and 2,335 foreign vessels, of 921,404 tons; total tonnage, 4,167,164—from Russia, Sweden, Germany, Holland, France, the Mediterranean, China, and the United States. London had paid, upon an average of the last ten years, 11,000,000*l.* in customs duties out of the 23,500,000*l.* to which the total customs revenue of the United Kingdom amounts. The value of the produce that entered and left her port had been roughly estimated at 80,000,000*l.* per annum; while 2,000 merchants and brokers had their counting-houses within a mile and a half of the Exchange."

## LARGE ITEM IN BRITISH EXPORT.

It is stated as a fact, in Wilmer & Smiths' Times, that the largest entry of goods for export, of the largest declared value ever included in one entry, was made at the Liverpool custom-house, the other day, from Mr. Jeremiah Garnett, for China—1,700 bales of goods, valued at £43,000. The total cargo, it is said, will reach £120,000.

## CONSUMPTION OF MEAT IN PARIS.

The consumption of butcher's meat in Paris, in September last, was 5,939 oxen, 2,253 cows, 6,558 calves, and 37,303 sheep. As compared with the consumption during the corresponding month of 1844, there was an increase in 1845 of 180 oxen, 676 cows, 897 calves, and 2,596 sheep.



**RAILROAD STATISTICS.**

**BALTIMORE AND OHIO RAILROAD.**

We have compiled from the last report of the Baltimore and Ohio Railroad Company, the following statement of the receipts and expenditures of that road, for each official year, from 1836 to 1845, inclusive. The length of the road is 177 miles, and was built at an average cost of \$43,077 per mile. The total cost to Cumberland is \$7,623,626.

The following is a summary view of the receipts from passengers and freight, in each year, from 1836 to 1845, inclusive:—

**SUMMARY OF RECEIPTS.**

Official year.	From passengers.	Am't from tonnage.	Agg. of passengers, and tonnage.
1836,.....	\$128,126 30	\$153,186 23	\$281,312 53
1837,.....	145,625 29	155,676 09	301,301 38
1838,.....	166,693 53	198,539 79	365,224 32
1839,.....	173,860 44	233,487 06	497,347 50
1840,.....	177,035 75	255,847 95	432,883 70
1841,.....	179,615 80	211,454 07	391,069 87
1842,.....	181,177 35	245,315 31	426,492 66
1843,.....	274,617 27	300,617 81	575,235 08
1844,.....	336,876 32	321,743 66	658,619 98
1845,.....	369,882 30	368,720 88	738,603 18
Total.....	\$2,133,510 33	\$2,444,579 85	\$4,578,090 20
Aggregate of passengers for the above period.....			\$1,605,246
Gross receipts in 1845.....			738,601
Gross expenses.....			363,843
Net receipts.....			\$374,762

This is about 5 per cent net on the entire cost of the work. Considering the immensely expensive rout through which the road goes, and the expenses in locomotives, repairs, etc., of the first year of such an enterprise, this is a favorable result. There is another fact worthy of notice. It is, that the amount of the receipts from tonnage is equal to those from passengers. The future continuance of the road is a matter of great importance to the west.

**SAFETY OF PASSENGER'S BAGGAGE.**

It appears from Wilmer & Smith's European Times, that quite an animated discussion has been going on in England, as to the best mode of protecting the baggage of passengers travelling by railroad. From the remarks of the editor of that journal, it will seem that the excellent method of ticketing baggage, as practised very generally on railroads in the United States, had not been adopted. The editor thus correctly describes our system, and recommends its adoption in England:—

“A number of cars or vans are placed upon the track, immediately in the rear of the engine and tender—the object of putting them in this position, is to ensure greater safety to the passenger carriages in case of collision, or should the engine run off the track. These vans are made quite water-tight, with a door at each side of the track, which are securely locked when the train starts, and are in charge of the conductor, who is also called baggage-master. One or more of these vans may be used for luggage to go “through,” or to the end of the rout, others are for “way” luggage. When a passenger goes to a station to take his place, (from Liverpool to London, for instance,) he gives his luggage to the conductor, who hands the owner a tin check with a number upon it, perhaps 1050. The conductor then places a duplicate 1050 upon the article of luggage, also giving a

check for each separate article of box, trunk, bag, or whatever it may be. On arriving at his destination, the traveller presents his check 1050—and as a matter of course, whatever article in the baggage-car which has 1050 upon it, belongs to him; and so on with the other checks, if he has any. The mode of delivery is thus: at the end of the journey, (at Euston-square station, for instance,) the luggage-cars are brought within a railing upon the platform, so that the assistants may not be interfered with. The door is then unlocked by the conductor, the first article at hand is taken out, whatever number is upon it is called out loudly by the assistant, the owner has the duplicate number in his hand, and as soon as he hears his number is called, he makes known the fact to the person who has called out, gives up his check, and takes his luggage. If a traveller has a number of packages, and does not wish to be detained, he can leave his checks with a porter or cartman, and feel assured that there will be no error in the delivery. The only objection to this mode of securing luggage, is, the detention at the end of the journey. If properly managed, however, the luggage of 200 passengers can be delivered within ten minutes—some of it, of course, in one. The advantage is, perfect security from theft.

#### FREIGHT ON THE BOSTON AND ALBANY RAILROAD.

The Albany Evening Journal has procured from the books of the company a tabular statement of the number of barrels of flour taken eastward, from the depot at Greenbush, during the last year, (1844,) and showing the number left at each stopping place on the line of the road. The aggregate of the general freight is also given, showing that the total movement of freight, both ways, over the Albany and Boston railroad, during the year 1844, amounted to 71,150 tons:—

Where to.	Bbls.	Where to.	Bbls.
Schodack,.....	3	Palmer,.....	8,889
Kinderhook,.....	215	Warren,.....	2,207
Chatham,.....	588	West Brookfield,.....	6,553
East Chatham,.....	619	South Brookfield,.....	780
Chatham Centre,.....	88	East Brookfield,.....	4,406
Canaan,.....	797	Spencer,.....	826
State Line,.....	2,791	Charlton,.....	5,266
West Stockbridge,.....	5,385	Clappville,.....	830
Richmond,.....	339	Worcester,.....	43,298
Shaker Village,.....	150	Milbury,.....	2,005
Pittsfield,.....	10,978	Grafton,.....	1,797
Dalton,.....	3,885	Westboro',.....	5,482
Hinsdale,.....	1,729	Southboro',.....	1,870
Washington,.....	205	Hopkinton,.....	737
Becket,.....	1,182	Framingham,.....	4,169
Chester Factory,.....	1,055	Natick,.....	689
Chester Village,.....	1,802	Needham,.....	964
Russell,.....	542	Newton,.....	707
Westfield,.....	8,578	Brighton,.....	9
West Springfield,.....	542	Boston,.....	154,054
Springfield,.....	18,072		
Wilbraham,.....	950	Total,.....	300,808
1844—Barrels flour, total,.....			300,808
1843—“.....			243,834
Increase in 1844,.....			56,974
1844—Tonnage, flour included,.....			58,582
1843—“ “.....			43,584
Increase in 1844,.....			14,998
Tonnage freight on Western railroad, 1844—Sent east from Albany,		Tons.	58,532 18 51
“ “ “ “ “ Rec'd from the east,...			12,568 15 3
Total tons,.....			71,101 13 54

## MERCANTILE MISCELLANIES.

## THE RICH MERCHANT BY BOOK-KEEPING.

THE Knickerbocker Magazine publishes the following authentic anecdote of an old New York merchant, whose name, were we permitted to mention it, would sound familiar in the ears of many of our metropolitan readers. As it is not altogether without a moral, we have concluded to record it in the pages of the Merchants' Magazine:—

"In old times, it was the custom of the merchants of the city of New York to keep their accounts in pounds, shillings, and pence currency. About fifty years ago, a frugal, industrious Scotch merchant, well known to the then small mercantile community of that city, had, by dint of fortunate commercial adventure and economy, been enabled to save something like four thousand pounds; a considerable sum of money at that period, and one which secured to its possessor a degree of enviable independence. His place of business and residence were, as was customary at that time, under the same roof. He had a clerk in his employment, whose reputation as an accountant inspired the utmost confidence of his master, whose frugal habits he emulated with the true spirit and feeling of a genuine Caledonian. It was usual for the accountant to make an annual balance sheet, for the inspection of his master, in order that he might see what had been the profits of his business for the past year. On this occasion, the balance sheet showed to the credit of the business six thousand pounds, which somewhat astonished the incredulous merchant. 'It canna be,' said he; 'ye had better count up agen. I dinna think I ha' had sae profitable a beesness as this represents.' The clerk, with his usual patience, re-examined the statement, and declared that it was 'a' right,' and that he was willing to wager his salary upon its correctness. The somewhat puzzled merchant scratched his head with surprise, and commenced adding up both sides of the account for himself. 'I did' na think,' said he, 'that I was worth over four thousand pounds; but ye ha' made me a much richer man. Weel, weel, I may ha' been mair successful than I had thought, and I'll na' quarrel wi' mysel' for being worth sax thousand instead.' At early candle-light, the store was regularly closed by the faithful accountant; and as soon as he had gone, the sorely perplexed and incredulous merchant commenced the painful task of going over and examining the accounts for himself. Night after night did he labor in his solitary counting-house alone, to look for the error; but every examination confirmed the correctness of the clerk, until the old Scotchman began to believe it possible that he was really worth 'sax thousand pounds.' Stimulated by this addition to his wealth, he soon felt a desire to improve the condition of his household; and, with that view, made purchase of new furniture, carpets, and other elegancies, consistent with the condition of a man possessing the large fortune of six thousand pounds. Painters and carpenters were set to work to tear down and build up; and in a short time the gloomy-looking residence in Stone-street was renovated to such a degree as to attract the curiosity and envy of all his neighbors. The doubts of the old man, however, would still obtrude themselves upon his mind; and he determined once more to make a thorough examination of his accounts. On a dark and stormy night he commenced his labors, with the patient and investigating spirit of a man determined to probe the matter to the very bottom. It was past the hour of midnight, yet he had not been able to detect a single error; but still he went on. His heart beat high with hope, for he had nearly reached the end of his labor. A quick suspicion seized his mind as to one *item* in the account. *Eureka!* He had found it. With the frenzy of a madman, he drew his broad-brimmed white hat over his eyes, and rushed into the street. The rain and storm were nothing to him. He hurried to the residence of his clerk, in Wall-street, reached the door, and seized the handle of the huge knocker, with which he rapped until the neighborhood was roused with the 'loud alarm.' The unfortunate clerk poked his night-cap out of an upper window, and demanded, 'Wha's there?' 'It's me, you dom scoundrel!' said the frenzied merchant; '*ye're added up the year of our Laird with the pounds.*' Such was the fact. The addition of the year of our Lord among the items had swelled the fortune of the merchant some two thousand pounds beyond its actual amount."

## BRITISH RAILWAY TRAFFIC.

For the last three months of the present half year, £2,113,062 has been received for the conveyance of goods and passengers on the various railways now opened in England, the length of which is estimated at about 1,180 miles.

## COMMERCE OF RUSSIA WITH CHINA.

Our export trade with China has hitherto been confined principally to our cotton manufactures; but, since the opening of her northern ports, facilities have been presented for supplying her colder regions with warmer fabrics, which Russia now chiefly sends by land. As our merchants have not, so far, entered into competition with her for this rich portion of the Chinese trade, we would suggest its importance; and, in proof of its value, we subjoin the following extract from the *Constitutionnel*, an influential French Journal. A late number of that paper contains a long article on the power and resources of the Russian empire, commercially speaking; from whence we make the following extracts:—

“Since the English forced the gate of the celestial empire, Russia has displayed a singular activity to fortify and increase its relations with China. There is, besides at Kiachta, an entrepot at Zuruchaitu. Three great roads are actually employed in communicating between both countries. Two of these roads pass from Siberia by the plateau of Mongolia, towards the Chinese frontier—another strikes from Kiachta, and takes a south-east direction, towards Peking; and the other goes round by Nertschinck, Zuruchaitu, Tsitchar, and crossing the Black river before arriving at Peking. A new communication, which has been lately established between Siberia and China, begins at Irtich, and moves by Baikal. This road answers directly the relations which Russia seeks to establish with China.

“To give an idea of the development of Russian commerce in these eastern countries, we need only say that, in 1829, the merchandise brought to the fair of Nijni Novgorod amounted only to 100,000,000 of francs, and in 1842 they exceeded 160,000,000 of francs. Russia cotton manufactures figure for 30,000,000 francs, and the other goods consist of cloth made for the north of China; of velvet, silks, iron, steel, and copper works, glass, porcelain, soap, &c.

“The increase of the fair of Nijni Novgorod is a remarkable indication that Russia seeks to create a commerce which she can maintain in defiance of European competition. It is in Asia she seeks for markets where she may command, until English competition meet her on that ground. That day, however, has not yet arrived; and Great Britain cannot now complain of the movements of Russia in those countries where there is no true industry, and where her productions are but little known. The transit across Russia has become impossible—so much so, that Prussia, that sent its cloths to China, has been obliged to give up the trade. In the far east are markets which Russia alone commands—where she finds neither competition from England, France, nor Belgium, and where everything is prepared for her own particular interest.”

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 TOBACCO IN GERMANY.

A Bremen paper gives the following particulars relative to the tobacco trade in the states composing the Zoll-Verein. The league derives from its own culture annually 405,000 cwt., equal to 32.4 per cent of the whole quantity supplied by this country to Europe. In the eight years between 1834 and 1842, the consumption of foreign leaf tobacco had increased 67.6 per cent, and it was estimated that in a few years the quantity required from the United States would be 450,000 cwt. These estimates are made with reference to the tobacco required for consumption alone; independently of which, Germany receives annually from the United States, 480,000 cwt. of leaf tobacco for manufacture and re-exportation.

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 CURIOUS FACT IN COMMERCE OF NORWAY.

At the late meeting of the British Association, Mr. Porter, in a paper “On the Trade and Navigation of Norway,” states the following curious fact, in reference to the fur trade of that country:—The greater part of the skins, sold by the Norwegians, are obtained from the Hamburg merchants, who buy them in London from the Hudson’s Bay Company; the Norwegians convey them to Finmark, from whence they are taken to Moscow, and sold to the caravan traders for the purpose of being bartered with the Chinese, for tea, at Kiachta.

## HAXALL'S VIRGINIA FLOUR MILLS.

THE following account of Haxall's flour mills, at Richmond, Virginia, is derived from the Richmond Enquirer:—

“The Columbian Mills property in this city, embraces about seven acres, situated within the corporation limits, at the foot of the falls of James river. On it have been erected extensive nail works not now in operation; a screw factory, and machine shop, built of brick, 40 by 100 feet, three stories high; a corn mill, with two pairs of stones; a woolen mill about to commence operations, 45 by 120 feet, four stories high, built of brick in a very substantial manner, and will contain six sets of machinery for the manufacture of flannels; a brick building, 40 feet by 40, four stories high, about to be applied to the manufacture of cotton yarns; a saw-mill, working three saws; and a flour-mill, 60 by 80, four stories high, besides two in the attic, built of brick, in the most substantial manner, in 1831 '32, and contains eighteen pair 5½ feet burr-stones, and three pair of burr-rubbers—the gearing and shafting of iron—and is capable, when required, of turning out 700 bbls. of flour per diem of twenty-four hours. In the month of August last, this mill manufactured 4000 bbls. of flour in six days, and five nights. Its usual production is about 500 bbls. flour per diem. A store house for wheat and flour, 70 feet front, and in all other respects similar in size and construction to the flour mill, stands 70 feet from it, forms part of the establishment, and is connected with it from the centre of each, by a gallery, in the roof of which, a conveyor carries the wheat as wanted to the mill, and an inclined plane returns it in the form of flour packed in barrels. These several mills are propelled by wheels, nearly all overshot, of 18 feet diameter, and 14½ feet wide. There is a space on this property for the erection of about six more woolen or cotton mills, as manufactures of this description may progress in this city; the whole supplied with water by a canal of about 600 yards in length, which is a part of the property. The flour made at these mills, bears the brand ‘Haxall—Columbia,’ is nearly all shipped to the South American markets, and stands as high as any flour in that important trade.”

## REMOVAL OF TOBACCO UNDER BOND IN ENGLAND.

The following notice, which is of much importance to the importers of, and dealers in tobacco, has been posted at the custom-house, the several dock and other public establishments, and also forwarded to the several ports approved of the warehousing of tobacco under bond, throughout the United Kingdom, with directions to the heads of the several departments to cause the same to be affixed in a conspicuous place in the custom-houses of their respective ports, for the information of the numerous members of that trade: “Custom-house. By the commissioners for managing and causing to be levied and collected her Majesty's customs, and other duties, notice is hereby given, that from and after the 15th day of October, 1845, instant, no leaf or unmanufactured tobacco, under bond (save and except in case of samples, duly ticketed and certified by the proper officer of customs) will be allowed to be carried or removed from one warehousing port to another, or from one warehouse to another, in the same port, without a true and lawful permit granted by the proper officers of the excise. Signed W. Maclean, assistant secretary.”

## PORT ADELAIDE A FREE PORT.

Advices have been received in England, as we learn from Wilmer & Smiths' Times, viz.: Sydney, by the last over-land mail, of the fact, that on the 4th of July last, by an act of council, Port Adelaide, in South Australia, was declared a free port, and that no duties were, thenceforward, exigible for pilotage, (which is, however, to be furnished by the government as heretofore,) harborage, moorings, &c. The intelligence was forwarded by W. H. Phillips, Esq., Lloyd's agent at Adelaide. We anticipate that one of the immediate advantages that South Australia will derive from this wise step will be, that numerous American whalers will resort to Port Adelaide to refit.



## THE BOOK TRADE.

- 1.—*A Popular and Practical Introduction to Law Studies, and to every Department of the Legal Profession, Civil, Criminal, and Ecclesiastical, with an Account of the State of the Law in Ireland and Scotland, with Occasional Illustrations of American Law.* By SAMUEL WARREN, Esq., F. R. S., of the Inner Temple, Barrister at Law. From the second London edition. Entirely remodelled, rewritten, and greatly enlarged. With an American Introduction and Appendix, by THOMAS W. CLERKE, Counsellor at Law. New York: D. Appleton & Co. Philadelphia: G. S. Appleton.

The former editions of this law manual have rendered its merits well known to the legal profession in the United States, and both students and the younger members of the law, who have not been benefited by its judicious advice, should embrace this opportunity of carefully perusing its pages, improved greatly, as they are, by the additions and emendations of the author, after ten years additional experience, and the illustrations from American law of a gentleman of our own country, well known as a legal writer and lecturer. A more systematic and comprehensive view of the means and appliances requisite for becoming a lawyer, and maintaining the profession in its dignity and honor, has never perhaps been written. If every aspirant for legal honors were master of its contents, and practised upon its valuable suggestions, recognised as they are by the most eminent jurists of England and America, the bar would have fewer members, but those more worthy of reaping the laurels now worn but by a scanty number. The author of a "Diary of a Physician" and "Ten Thousand a Year," has gained a literary name, for which he has by no means forfeited his legal preparation; and, with the exception of some few inaccuracies concerning the profession in our country, and some false views of history, the volume, for its superior merits, improvements, and manner of publication, (admirably adapting it to the professional library,) deserves unqualified praise.

- 2.—*The Book of Useful Knowledge; a Cyclopædia of Six Thousand Practical Receipts, and Collateral Information in the Arts, Manufactures, and Trades, including Medicine, Pharmacy, and Domestic Economy. Designed as a Compendious Book of Reference for the Manufacturer, Tradesman, Amateur, and Heads of Families.* By ARNOLD JAMES COOLEY, Practical Chemist. Illustrated with numerous engravings. New York: D. Appleton & Co. Philadelphia: G. S. Appleton.

This work directs to the preparing of numerous articles of value to the practical and scientific man, and states the components of substances, the processes and formulæ necessary; gives scientific principles, embracing many late discoveries, and an incalculable amount of information necessary to the chemist, manufacturer, physician, tradesman, scholar, and domestic economist. It is probably of greater assistance to chemistry than any other branch of knowledge; yet the information on all scientific subjects renders it exceedingly valuable as a book of reference to every class of society. It appears to have been compiled from the best materials, arranged with the greatest care, in alphabetical order, and thus well adapted for popular use. As a Cyclopædia, it is surprisingly condensed; and yet the different subjects are treated in a great degree at large.

- 3.—*I Promessi Sposi; The Betrothed.* By ALEXANDRO MANZONI. A new translation, reprinted entire from the last London edition. In two volumes. Appleton's Literary Miscellany. New York: D. Appleton & Co. Philadelphia: G. S. Appleton.

This great work of a novelist, ranked by the Italians above Sir Walter Scott, embodies creations of the most masterly character, noble lessons of courage, constancy, heroism, and faith, and scenes of surpassing beauty. The superstitious and the chivalric traits of South European character, the priest brigand, monk and bravo, noble and serf, nun and lady, all these materials are woven into a drama, enacted upon the soft carpet of Italian soil, and under the canopy of its burning sky, with a skill and power the reader is forced to acknowledge and admire. One of the greatest productions in the modern literature of Italy, is here for the first time given, in an un mutilated English translation, in which the spirit of the author is happily caught and faithfully expressed. The absorbing interest of the romance does not flag, from the commencement to its close, although occupying two closely printed duodecimos of nearly eight hundred pages.

- 4.—*The Life of Schiller.* By THOMAS CARLYLE. Appleton's Literary Miscellany. New York: D. Appleton & Co. Philadelphia: G. S. Appleton.

The merits of this model of biography have been long known to the literary world. The poet's life and character are pictured with a beautiful appreciation of his genius, a genuine sympathy for his struggles and sorrows, his triumphs and his fate, and in a clear and beautiful language that contrasts favorably with the singularly unpopular style which mars all the late writings of Carlyle. A deep love of every noble trait in Schiller's character, an enthusiasm in his joys and griefs, have made the author scarce less worthy of admiration than the genius, to both of whom, this work has given, we think, an enduring immortality. The three periods of Schiller's life form the division, and in the few last pages devoted to his character, there is such singularly vivid beauty, such a mournful lament for the loss of his powers to the world, and such a glorious view of the influence and worth of his labors as an artist and a man, that we lay down the book with feelings of the deepest veneration and love.

5.—*An Encyclopedia of Domestic Economy, comprising such subjects as are most immediately connected with Housekeeping; as the Construction of Domestic Edifices, with the modes of Warming, Ventilating, and Lighting them; a Description of the Various Articles of Furniture; a General Account of the Animal and Vegetable Substances used as Food, and the methods of preserving and preparing them by Cooking; making Bread; materials employed in Dress and the Toilet; business of the Laundry; description of the various Wheel Carriages; Preservation of Health; Domestic Medicines, &c., &c.* By THOMAS WEBSTER, F. G. S., etc., assisted by the late Mrs. PARKES, author of "Domestic Duties." From the last London edition, with Notes and Improvements, by D. MEREDITH REESE, A. M., M. D., of New York. Illustrated with nearly one thousand engravings. New York: Harper & Brothers.

The designs of this admirably compiled work are given at length in the title above. The subjects are apparently treated in a practical and interesting manner, and the whole forms an octavo of the largest size. The American editor has made such additions and modifications as were required to adapt the work to our own institutions of domestic economy. Taste in architecture and art, in furniture, and the management of the whole household economy, embodying the wisest calculation, and regard for the minutest incidents—everything connected with domestic life, health, and our well being, are embraced in the volume. It should form a part of every family library.

6.—*Harpers' New Miscellany, No. III.—The Philosophy of Mystery.* By WALTER COOPER DENDY, Fellow and Honorary Librarian of the Medical Society of London, etc. New York: Harper & Brothers.

Of the many "Libraries" that have been projected during the past year, no one is more deserving of attention than the present, the third volume of which is now before us. The subjects embraced in this treatise are of the deepest interest and curiosity. Ghosts, spectres, dreams, nightmares, fairy mythology, demonology, prophecy, somnolency, catalepsy, transmigration, sibylline influence, and a great number of similar topics of mysterious import, pass in historic, critical, or philosophic review, before the profound intellect of the author, who reflects much light upon subjects of such universally admitted obscurity. It is one of the most remarkable productions of the day, and must create an extraordinary degree of interest in the public mind.

7.—*Memoirs of an American Lady, with Sketches of Manners and Scenery in America, as they existed previous to the Revolution.* By Mrs. GRANT, author of "Letters from the Mountains," etc. Two Vols., from the London edition, in one. Appleton's Literary Miscellany. New York: D. Appleton & Co. Philadelphia: G. S. Appleton.

This is a reprint of the work published in England in 1808. The "American Lady," Mrs. Schuyler, was a personal friend of the author, and a daughter of Mr. McVicker, who came to this country, an officer in the British army, in 1757. The account of the settlement of Albany, the rare descriptions of the manners and customs of the people living in the country bordering on the Hudson, at that time, and the character of the heroine, whose friendship for the author called forth this tribute, gave the book much interest when published forty years ago. The preface contains a quaint letter from Grant Thorburn, who saw the author, then eighty years of age, on his visit to Scotland in 1834.

8.—*Irish Melodies.* By THOMAS MOORE. With the Original Prefatory Poem on Music. New York: D. Appleton & Co. Philadelphia: G. S. Appleton.

The Irish melodies of Thomas Moore can never be too often published; for, wherever there are voices, they will be sung; or sons of Erin, they will be read. Thirteen editions in London have already appeared; and, we presume, nearly as many of his complete works. This one comes to us in a handsome miniature form, like many volumes of the publishers of the same size; which, together, form a choice little library. The frontispiece, Moore's portrait, is a defacement of the volume; but, in every other respect, it is creditable to the taste of the publishers.

9.—*Life and Perambulations of a Mouse.* By a LADY. Illustrated with ten exquisite designs, by WILLIAM CROOME. Philadelphia: G. S. Appleton. New York: D. Appleton & Co.

Though Æsop has been dead centuries, and his fables almost forgotten, his art of making animals teachers of truth is not; and this little mouse, in its own autobiography, discourses of many shrewd things, not wholly restricted to the arts of purloining, or avoiding the feline enemy. With the "exquisite illustrations," children will be much pleased, and the mouse's experience may not be wholly useless to them.

10.—*Practical Piety.* By HANNAH MORE. New York: D. Appleton & Co.

The standard value of this work is too well known to require even a passing remark. Those who can appreciate it, will thank the publishers for presenting it in a form so attractive. It forms two remarkably neat diamond volumes.

11.—*The Records of a Good Man's Life.* By the Rev. C. B. TAYLOR, M. A. New York: Stanford & Swords.

The volume commences with a tribute to a departed friend of the editor, who is described as being distinguished rather for manly sincerity, for being in earnest, and heartily endeavoring to live up to his Christian profession, than for talent or learning. The papers of the "good man" form this volume, much of the matter of which is didactical, but obviously the natural expression of a sincerely good man. The doctrinal character of the work proclaims the author to be a decided Churchman; but the interest of the narrative, and the truths which are alike profitable to all sects, will cause the book to find its way into other hands.

12.—*The Vicar of Wakefield, a Tale.* By OLIVER GOLDSMITH, M. B. Library of Choice Reading, No. XXXIII. New York: Wiley & Putnam.

To the criticisms upon this delightful tale, identified as it is with the literature of the English language, by Mrs. Barbauld, Sir Walter Scott, Washington Irving, and Goethe, which are prefixed by the editor, James Prior, author of the "Life of Goldsmith," we would refer all those who have not, years ago, perused its charming pages. Speaking of Schlegel's idea, that "of all the romances in miniature the Vicar of Wakefield is, I think, the most exquisite," Lord Byron says—"I have found out where the German is right—it is about the Vicar of Wakefield." The publishers are about to follow it by the "Citizen of the World," and the other miscellaneous works of Goldsmith, with notes and illustrations, by Mr. Prior, the editor of this volume. This delightful romance is from Mr. Prior's edition, who was Goldsmith's biographer, and editor of his other charming works, which these publishers are about to transfer to their own "Library of Choice Reading."

13.—*Proverbial Philosophy.* By MARTIN FARQUHAR TUPPER. First and Second Series. Library of Choice Reading, Nos. XXXI. and XXXII. New York: Wiley & Putnam.

The author of these peculiar expressions of philosophical truth, preserves a characteristic derived, no doubt, from the experience of a practical business life. Like Lamb and Roscoe, he has shown that the pursuits of mammon, for he has been a votary in its very temple—a London bank—do not unfit men as teachers, or damp the enthusiasm of genius. Our own Sprague, a banker, like Mr. Tupper, has drank of the very spring of Helicon. Mr. Tupper's rhymed philosophy is at once beautiful in diction, pregnant with thoughts of universal application, and the different subjects embody the digested wisdom of ages, in unique, but striking, clear, and distinct language. The mines of inexhaustible wisdom contained in these two volumes, grow richer by searching; and truths as old as time, in different semblances and guises, are made attractive and living, though lying dead in the soul's dormitory. His religious high attemptings, and his gildings of the common-place, his sympathies and his teachings sparkle in the sunlight of every-day life, and the soul refreshed, finds the world and self not all sad and useless.

14.—*Specimens of the English Dramatic Poets, who lived about the time of Shakespeare, with Notes.* By CHARLES LAMB. In two parts. Library of Choice Reading, Nos. XXIX. and XXX. New York: Wiley & Putnam.

The English dramatists, from whose plays these selections are made, lived during the half century from the middle of Elizabeth's reign to the close of that of Charles I. Charles Lamb, and who could have better made these selections, has prefixed to the fragments an explanatory head, making them thus a whole. The vulgar parts are, of course, expunged, and they exhibit the gems of all that literature. They show how much of Shakespeare shines in his cotemporaries, and in what he surpassed them. Among the dramatists selected from, are Sackville, Norton, Marlowe, John Webster, Rowley, John Ford, Ben Jonson, Beaumont, Fletcher, Massinger, and James Shirley. The selections, like his kindly writings, have the mark of Lamb's judgment and taste, and richly deserve the appellation of "choice."

15.—*Lectures on the English Comic Writers.* By WILLIAM HAZLITT. From the third London edition by his Son. Library of Choice Reading, No. XXXVIII. New York: Wiley & Putnam.

These lectures, which were delivered at the Surrey Institution, in 1818, by their author, are from the third London edition, with a short preface, by Hazlitt's son. Some were taken from the London Morning Chronicle, and the remainder written for Mr. Oxberry's edition of the plays remarked upon in the volume. The introductory essay on wit and humor, and critical remarks on Shakespeare, Ben Jonson, Wycherly, Congreve, and the later English comedists, as well as Hogarth, exhibit Hazlitt's critical power and refined taste.

16.—*Wiley & Putnam's Library of Choice Reading, No. 27.—The "Twins," and "Heart."* By MARTIN FARQUHAR TUPPER, author of "Proverbial Philosophy."

The pleasing artless beauty of Tupper's writings lies in their not affected, but real simplicity. The thoughts and characters of his creation are sportive, whimsical, and sometimes pleasingly romantic, but always true to the life. A practical, sound sense of the good and true, as necessary before the beautiful is to be considered, is evident in all his productions. He must write sensibly, and truly; perhaps he will indulge sentiment occasionally, but recovers from it, and allows himself to falter in it but for a moment. His style is called strange, because to write naturally is to be strange; but his influence will be as good as his nature is genial, when he embodies it in such novels as the "Twins," or in such characters as we find in the "Heart."

17.—*The Lord our Shepherd; an Exposition of the Twenty-Third Psalm.* By REV. JOHN STEVENSON Perpetual Curate of Cury and Günwalloe, and author of "Christ on the Cross." New York: Robert Carter.

A volume of two hundred and fifty pages, devoted to an exposition of that beautiful Psalm of David, commencing "The Lord is my Shepherd." Each verse or sentence elicits a chapter of comment, with passages which seem to flow from the same divine fount of inspiration.

18.—*Library of American Biography*. Conducted by JARED SPARKS. Vol. XVII. Second Series, Vol. VII. Boston: Charles C. Little & James Brown.

This valuable series certainly has one characteristic, that of entire originality. The above-mentioned men are almost unknown to our countrymen, and the exertions of their biographers to rescue their characters and labors from oblivion, merit much gratitude from us. The life of John Ribault, which is written by Mr. Sparks, relates not only his own deeds, but also gives a historical account of the first attempts of the French to found a colony in North America. His three voyages to Florida, encounters with the Spaniards, and finally death at their hands, and the ultimate attempts of the French under his successor, are narrated with Mr. Sparks's acknowledged skill and fidelity. The second biography, of Sebastian Rale, is from the pen of Convers Francis, D. D., and gives the account of that Catholic missionary, whose labors among the Indians of the French possessions in North America, and the sufferings and zeal of this resolute pastor, to which, and his attachment for his flock, he fell a martyr at the hands of the English and Indians. The third, is a life of William Palfrey, aide-camp of Washington, and afterwards a paymaster-general of the revolution, by John Gorham Palfrey, D. D., and contains, in addition to his interesting life, many new and valuable facts relative to conspicuous personages of the revolution.

19.—*America, and the American People*. By FREDERICK VON RAUMER, Professor of History in the University of Berlin. Translated from the German, by WILLIAM W. TURNER. New York: J. & H. G. Langley.

Few circumstances convince us more of our growing importance as a nation, than the fact that the most eminent minds of Europe interest themselves so much as to prepare, after a satisfactory view of our country and institutions, a volume bearing such marks of care and laborious research as are evident on the face of this. Looking upon our country as a philosopher and historian, the author has judged charitably of its defects, passing them over almost with silence, and endeavored to give Germany such an idea of the natural physical features of the land, our government, national, and social peculiarities, as shall interest and instruct, and such a history of our struggles, and the political success of both general and state governments, as shall aid them by our experience. Although the volume abounds with information that will be new to many of our countrymen, yet, as the translator very justly remarks, Americans will not resort to a work of this kind, written by a foreigner, and which treats of such a variety of difficult and delicate topics, to obtain minute information on matters of fact. Save Monsieur De Tocqueville, no one has approached, in fidelity and impartiality, the degree of success about our country that marks this book of Baron Von Raumer.

20.—*Gathered Leaves; or, Miscellaneous Papers*. By Miss HANNAH F. GOULD. Boston: William J. Reynolds.

The name of Miss Gould will say more for the rank due to these "Leaves" in the literary herbarium, than an extended notice. Many of the papers are now first published, while a very few have seen the light before. They are of the general character of fugitive productions, suggested by incidents in life, or books. The author's style is strongly impressed upon them all; while we especially admire that of the piece, "The Painter's Last Touch," in which the power of religion over art, and their connection, is vividly brought forth, in a tale of great beauty of creation. The prose pieces are characterised by that peculiar blending of the familiar with the religious in sentiment, for which her writings are remarkable. The poetical pieces are, "The Grave of L. E. L.," the "Cemetery of the East," and the "Linden Tree." The volume is got up with much taste, save the lithographic specimens, which we think are decidedly out of place, among gems of thought that need no adornment.

21.—*Friendship's Offering; a Christmas, New-Year, and Birthday Present, for 1846*. Boston: Phillips & Sampson.

Although many of the articles in this volume are old, yet their general character is very commendable. There are two or three pieces from the pen of Henry B. Hirst, a well known contributor in this field of literature. Sartain, too, has executed all the engravings for the work, and with his usual skill. The frontispiece and vignette are rather the best of the collection. The binding is neat, and paper tolerable; and, although it cannot take the highest place among its brethren, it has a modest air, which seems to be content with its proper rank in the scale. The original tales are interesting, and those that are not, are among the best that can be selected. It is, on the whole, a very appropriate gift-book for the season.

22.—*Memoirs of John Frederic Oberlin, Pastor of Waldbach, in the Bau de la Roche*. With an Introduction by HENRY WARE, Jr. Second American edition, with Additions. Boston: J. Munroe & Co

This volume contains the principal, as well as many of the minute particulars of the good Oberlin's life—a man who devoted fifty years of it to the practice of disinterested goodness; whose exertions have made his flock known to the Christian world, and whose charity was as unbounded as his energy and zeal were unconquerable. The translator, the lamented Ware, has performed his task in a scholarly manner, and the memoir will show the distinction of theoretical and practical Christianity, or the greatness of good deeds contrasted with the sounding brass and tinkling cymbal of the letter, without the spirit and the life.



23.—*A Practical System of Book-Keeping, by Double and Single Entry, both in Single and Co-partnership business, exemplified in Three Sets of Books, with the most Approved Forms of Exchanges, Calculations, &c., used daily in the best approved Houses in this Country.* By B. Wood FOSTER, Practical Accountant. Fifth edition. New York: Saxton & Huntington.

Mr. Foster's book has passed through five editions, and his system has been tested for years; in addition to which, he has the testimonials of the first merchants and citizens of Boston. The editions, since the first, have contained, in addition to the practical forms for business men, theoretical information and explanation for the use of schools and teachers. In addition to the forms, and the ordinary information required by the merchant, there is a list of business terms and definitions, rates of gains, and valuable arithmetical rules.

24.—*Letters Addressed to Relatives and Friends, chiefly in Reply to Arguments in Support of the Trinity.* By MARY S. B. DANA, author of the "Southern and Northern Harps," the "Parted Family," etc. Boston: James Munroe & Co.

The author of these letters was brought up in the Calvinistic Trinitarian faith; her father now living in South Carolina, and her deceased husband, both preachers of that faith. She has, however, been led to abandon it, and adopt the Unitarian expression of Christianity; at least so far as regards the doctrine of the Trinity. The present volume consists of a series of well written letters, addressed to relatives and friends, setting forth the reasons that induced in her mind the change; with a general view of all the arguments usually presented in support of Unitarianism. The candid and charitable spirit evinced in these letters will be appreciated by liberal-minded persons, who may not adopt her conclusions or creed.

25.—*The Missionary Memorial. A New Religious Gift-Book.* New York: Edward Walker.

A splendid new work under the above title, of the external, as well as internal embellishments of which, we can scarcely speak too enthusiastically. The design of the volume is to supply something in the form of an annual, which shall comprise a higher order, and more permanent kind of literature, than has hitherto been attempted in such works; and we are gratified to observe an unusual array of prominent writers lending their aid and sanction to the project. Without referring to their names or their contributions, which form a most attractive variety, it will suffice to say that we have as yet seen no work better adapted to its end—that of a religious gift book—or one more likely to win its way to universal favor among the Christian community. The embellishments are very striking, especially the frontispiece, which is a fine specimen of printing in oils from wood blocks, a new process, and a very artistic and effective one it is.

26.—*Notes from Over Sea, consisting of Observations made in Europe, in the years 1843 and 1844. Addressed to a Brother.* By Rev. JOHN MITCHELL. In 2 vols. New York: Gates & Stedman.

The first of these two volumes details the author's observations in England, Scotland, and Ireland; and the second, in Belgium, Germany, Switzerland, and Italy. Like most books of travel, they contain some new information, and original matter; colored, of course, by his own peculiar habits of thought. Three or four chapters are devoted to the "Church of England," "Puseyism," and "the Dissenters;" and, though he dwells much upon the religious characteristics of the countries, he does not forget to visit and describe the wild scenery of the Highlands, and the softer majestic scenery of the Rhine and the continent. He dwells much on the condition of the people; and, altogether, his "observations" are well worth a place among the numerous books of travel in our time.

27.—*The Housekeeper's Assistant, composed upon Temperance Principles; with Instructions in the Art of Making Plain and Fancy Cakes, Puddings, etc. Also, for the Cooking of all the Various Kinds of Meats and Vegetables, with a Variety of Useful Information and Receipts, never before published.* By an OLD HOUSEKEEPER. Boston: Munroe & Co. New York: Saxton & Huntington.

The design of this little manual is clearly explained in the title. Mrs. Ann H. Allen, its experienced compiler, adopted in early life the views of the late Dr. Benjamin Rush, of Philadelphia, in regard to intoxicating liquors, which led her to discard their use, either as a beverage, or for culinary purposes. Temperance is, therefore, the leading feature of the work. The receipts and rules are given with, and the calculations of ingredients reduced to, mathematical certainty. It appears to be so admirably adapted to its purpose, that no accomplished housekeeper should be ignorant of its contents.

28.—*Lays for the Sabbath. A Collection of Religious Poetry.* Compiled by EMILY TAYLOR. Revised by JOHN PIERPONT. Boston: Crosby & Nichols. New York: Saxton & Huntington.

This beautiful selection of sacred poetry was first published in England, without the name of the author. Without departing from its original plan, but with a view to the better adaptation of it to the taste and feelings of the lovers of religious poetry in the United States, Mr. Pierpont has withdrawn from it many pieces, and substituted others, both from English and American writers. The highest use of poetry is the expression of the religious sentiment; and that expression, in simple rhythm, will oftener awaken its loftiest aspirations than sermons, or volumes of moral lessons. The best of that description of poetry is embodied in this volume.

29.—*Trippings in Author Land.* By FANNY FORESTER. New York: Paine & Burgess.

A delightful volume, replete with pure thoughts and just sentiments, in a diction at once elegant and graceful. We regret that it was received too late for a more extended notice.



- 30.—*Prairiedom; Rambles and Scrambles in Texas and New Estremadura.* By A. SOUTHERN. With a Map. New York: Paine and Burgess.

This book is well calculated to get up the adventurous spirit for Texas, for it details, in graphic and stirring language, the beautiful and productive characteristics of her soil, her boundless resources and healthy climate, and the wide and glowing field for, and objects of, enterprise. The present condition of the settled part of the land, and form of government, the ramble, bivouac, and the hunting scene, the Indian tribes, Mexican soldiers, prairies, springs, and rivers, flowing through this land of "milk and honey," are all glowingly described. They were written, as the author says, "for his own amusement, and he publishes them for the amusement of others;" and he has not, we think, misjudged the taste of thousands, who will read his graphic "rambles" with delight.

- 31.—*Mother's Manual, and Infant Instructor; designed for Infant or Primary Schools, and Families, etc.* By M. M. CARLL. New York: Paine & Burgess.

In this work, the author regards it as an established truth, that the development of the mental faculties, like those of the physical powers, is the result of exercise; that successive order is to be observed in the gradual unfolding of those faculties, and that each requires appropriate exercises adapted to its nature. He further maintains that each of the moral and intellectual powers requires a process of its own. The present (fourth) edition is an improvement on the first, and the ideas suggested in that have been successfully carried out, and simplified. It is illustrated with three hundred cuts, which are explained, and adapted to a regular course of useful instruction.

- 32.—*Common Sense on Chronic Diseases; or, A Rational Treatise on Mechanical Cause and Cure of the most Chronic Affections of the Trecinal Organs of both the Male and Female Systems, embracing the author's Views on Physical Education, and the Present Popular System of Artificial Life.* By Dr. E. B. BANNING. New York: Paine & Burgess.

The general design of the author of this little treatise, as stated in the preface, is "to instruct the people, and make suggestions only to the medical profession." It is not a professed system of medicine, or an infallible cure for anything; but is designed to show that there is a real distinction between mechanical and vital diseases, or those requiring mechanical or vital remedies; and that one will not answer the place of the other, and that the causes of those diseases are more common and extensive than is generally supposed. It has the marks of a good book of its kind.

- 33.—*King Solomon's Counsels to the Young, arranged and illustrated with Appropriate Examples.* By Rev. HORACE HOOKER, author of "Child's Book of the Sabbath." New York: Paine & Burgess.

The book of the Proverbs of Solomon has been called, by men of eminence, "The Young Man's Own Book;" but most of its maxims are designed for young men just entering manhood—hence, the writer of this little volume, in illustrating some of the proverbs, seems to have had in view those who can understand modes of thought and expression such as the intrinsic nature of the subject demands.

- 34.—*Lectures to Children, on the Last Hours of our Lord Jesus Christ.* By CHARLES A. GOODRICH. New York: Paine & Burgess.

The narrative of the Life of Christ contains many points of thrilling interest. To improve upon the beauty, simplicity, or interest of the honest men who wrote these histories, were a difficult task. The events selected, each of which forms the subject of a single lecture, are, the Garden of Gethsemane, the Trial of Jesus, the End of Judas, and Denial of Peter, the Crucifixion, the Resurrection, and the Ascension.

- 35.—*Lady Mary; or, Not of the World.* By the Rev. C. B. TAYLOR, M. A., author of "Records of a Good Man's Life," "Margaret," etc. New York: Stanford & Swords.

The author of the present volume is deservedly popular, as the author of works of a high moral tendency; and this one, the characters of which are from English domestic society, is interesting and instructive. Few works are better calculated for the Sunday reading of families, or for the Sabbath-school library of the Churchman. The character and death of a pure, fragile being, is represented in an artless and affecting manner; and those whom real trials have not entirely unused to the "melting mood" in reading narratives, will find an opportunity to cultivate their better impulses in its perusal.

- 36.—*Rules of Proceedings and Debate in Deliberative Assemblies.* By LUTHER S. CUSHING. Boston: William J. Reynolds.

As a manual for deliberative assemblies of every description, this little volume presents, in a clear and comprehensive form, all the necessary rules required for the systematic despatch of business in public meetings. It is the best work of the kind that we have seen, and should be in the hands of every person who ever expects to preside at, or take part in, any organized meeting.

- 37.—*The Bouquet; containing the Poetry and Language of Flowers.* By a LADY. Boston: Benjamin B. Mussey.

The selections of poetry accompanying the definition of each flower are very appropriate, and chosen in the peculiar vein of sentiment that harmonize the idea of the poet and that of the flower. The volume is not of the first rank of works of the kind, in paper and binding; but, having little pretension, it will modestly fill the place it deserves.

38.—*The Rose of Sharon, a Religious Souvenir for MDCCCXLVI.* Edited by Miss S. C. EDGARTON. Boston: A. Tompkins & B. B. Mussey.

This annual is one of the most beautiful of those which have appeared for the coming year. The articles are from such pens as Miss S. C. Edgerton, Miss Margaret Fuller, Mrs. C. M. Sawyer, E. H. Chapin, Horace Greeley, Henry Bacon, &c., and are of the highest literary merit, mostly of a spiritual, but unsectarian character. The volume is adorned by finished mezzotint engravings, chiefly by Sartain, printed on the finest paper, and bound in a neat and chaste style that adds much to its outward beauty. Each additional year, for this is the seventh volume, has improved the art and skill of its mechanical execution, and the taste of that class of charming writers whose gems of thought fill its leaves. It is our favorite annual.

39.—*The Amulet, a Christmas and New Year's Present for MDCCCXLVI.* With nine beautiful steel engravings. Boston: Otis Broaders & Co.

The names of the contributors of the articles in this annual are not given. We, therefore, presume that they are selected, which will perhaps, on the whole, be considered a recommendation, and though not of the first class, have some merit, particularly the poetical portion. The engravings are by Prudhomme, Petton, and Chapman, mostly, and if they possess any fault it is want of indistinctness. The volume is rather neatly bound in red morocco, and handsomely gilded.

40.—*An Inquiry into the Views, Principles, Services, and Influences of the Leading Men in the Origination of our Union, and in the Formation and Early Administration of our Present Government.* By THADDEUS ALLEN. Boston: S. W. Dickinson.

The object of this Inquiry is to introduce to the present generation the written evidences of the views, principles, services, and influences of the men who figured in the time of our Revolution, and let them speak for themselves, and in their own language. The plan is a good one; and if some of our partisan orators had drank a little more fully at the fountain of our political institutions, they would sometimes shape their statements and doctrines very differently.

41.—*A Commentary on the New Testament.* By LUCIUS R. PAIGE. 2 vols. Boston: B. B. Mussey.

These two volumes embrace a commentary on the four Gospels, and is, we believe, the first produced by a member of the Universalist denomination of Christians. "In one important feature," we quote from the commentator's preface, "it differs from any other heretofore published. It professedly illustrates the doctrine that Divine love is both universal in extent, and effectual in operation; that it will triumph over sin, and destroy it; that it will subdue and convert the hearts of sinners; and that it will secure the final holiness and happiness of all men, in the most unlimited sense of the phrase." As sinners, we certainly can have no objection to this view of man's destiny in the future; and all good men and good Christians will most assuredly seek and pray for it.

42.—*Memoir of John D. Lockwood, being the Reminiscences of a Son by his Father.* Carter's Cabinet Library. New York: Robert Carter.

A father's interesting narrative of a singularly gifted and amiable son, who died during the past year, a member of Yale College. His character, with so much of good in it, and his intellectual endowments, were worthy of a memorial like this; and the intellectual, far inferior to the moral part of him, judging from some exhibitions furnished us in the compositions in the volume, was of no common order. He died at the age of nineteen, and this interesting record of a true life will be profitable to all of his age and condition, into whose hands it may fall, for example, reproof, and correction.

#### BOOKS IN PAPER COVERS, PUBLISHED SINCE OUR LAST.

43.—*Morse's Cerographic Maps.* [This valuable publication is intended to embrace and form a Universal Atlas, to the preparation of which, in connection with Samuel Breese, A. M., Mr. Sidney E. Morse had devoted many thousand dollars, and years of labor. They are the best that have ever been given to the world, and of their more particular merits we shall hereafter speak at length.]

44.—*The Treasury of History.* New York: Daniel Adee. [No. 10 of this series contains the histories of the Italian, Austrian, or Tuscan states, Rome, Greece, the Ottoman and Turkish empire, Persia, India, and Arabia.]

45.—*Cosmos; a Survey of the General Physical History of the Universe.* By ALEXANDER VON HUMBOLDT. No. 2. New York: Harper & Brothers.

46.—*Harpers' Illuminated and New Pictorial Bible.* No. 42. [The most splendid edition of the Bible ever published.]

47.—*Amaury; Translated from the French of Alexander Dumas.* By E. P. Harpers' Library of Select Novels, No. 62. New York: Harper & Brothers.

48.—*The Author's Daughter, a Tale.* By MARY HOWITT. Library of Select Novels, No. 63. New York: Harper & Brothers.

49.—*Only a Fiddler! and O. T.* By the Author of "The Improvisatore; or Life in Italy," etc. Library of Select Novels, No. 64. Harper & Brothers.

50.—*The Stranger in Lowell.* Boston: Waite, Pierce & Co. [This is a very interesting little volume, written, as the author states in his preface, during a brief sojourn in the manufacturing metropolis of America. Written as they should be read, in stray moments, they yet embody thought, or the result of thought, and exhibit some experience, as well as quick observation. Much new and valuable matter about the neighborhood in which the book was written, a good acquaintance with the early history of New England, and many of the present characteristics of her people, as well as a true appreciation of "the beautiful," to which a chapter is devoted, are plainly observable in the pages. This medley of matter will be read with less indifference than many books written more methodically and tediously, and with more pretension, though with less claim thereto.]

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