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Lumber in Arkansas and Mississippi

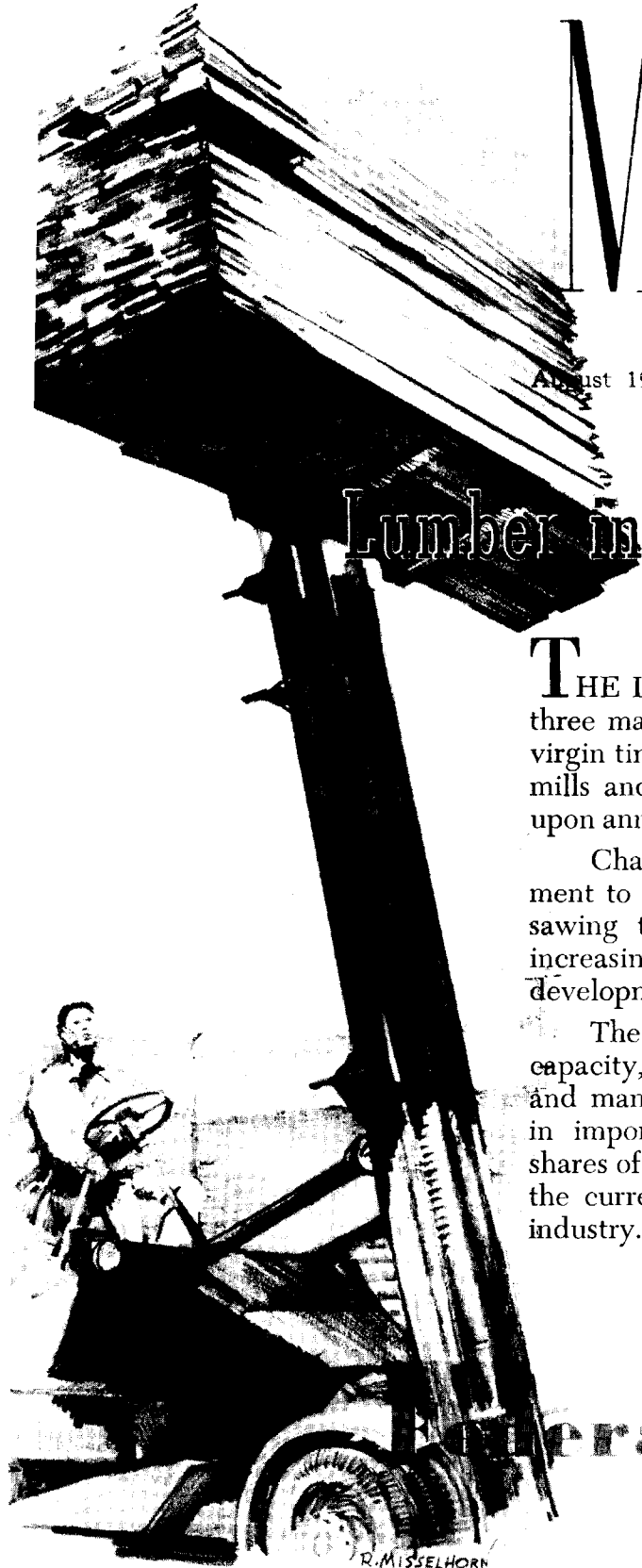
THE LUMBER INDUSTRY of Arkansas and Mississippi has had three major stages of development: (1) big-mill processing of the virgin timber, (2) the harvesting of second growth by small portable mills and (3) the current period of transition toward dependence upon annual growth of sustained-yield forests.

Changes in markets and rising costs stimulate technical development to increase timber yields and labor productivity. Changes in sawing techniques and mechanization of materials handling are increasing mill efficiency. Use of sawmill waste for pulp is a new development with a great potential.

The industry in the future will be influenced in size by forest capacity, processing costs, and markets, presenting complex planning and management problems. Small mills appear likely to diminish in importance. Long-run changes may eventually increase the shares of Arkansas and Mississippi in national lumber markets. Thus, the current transition promises a long and productive life for the industry.

Federal Reserve Bank
of St. Louis

Survey of Current Conditions—p. 98



Lumber in Arkansas and Mississippi

The lumber industry of Arkansas and Mississippi . . .

OVER A SHORT SPAN OF SOME 75 YEARS the lumber industry in Arkansas and Mississippi has gone through alternating periods of wild growth and sharp contraction under the influence of changes in the national markets for lumber and in the condition of its basic resource, the forests. The postwar period has been one of contraction for the industry. From 1947 through 1953 total production of all types of lumber declined 36 per cent in the two states. Employment provided by the industry fell off by a slightly smaller fraction, 33 per cent, or almost 26,000 people, in the same period.

Considering the many prophecies made over the years that timber resources in these states would soon be exhausted, the recent declines in production and employment might be taken as a sign that the end of the timber was in sight. Were this the case, it would be extremely unfortunate for both states, because as late as 1954 the lumber industry provided 27 per cent of all manufacturing employment in Arkansas and Mississippi, and it has provided more than half of manufacturing employment in earlier years. The lumber production of these states is of national importance as well. It made up one-eighth of our national lumber supply in the peak year 1925 and about one-tenth in the war year 1942.

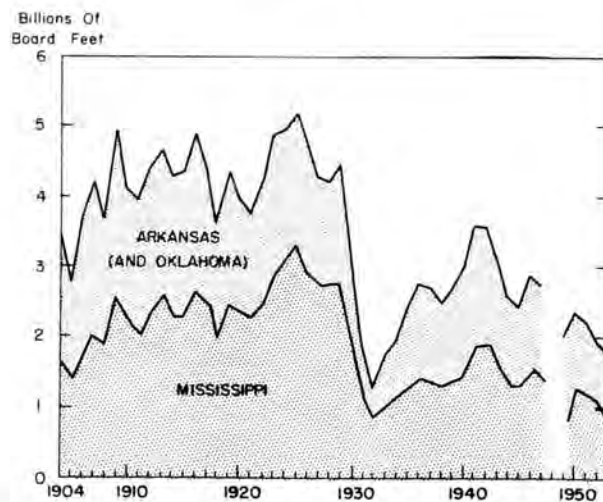
. . . has had three major stages of development: . . .

Fortunately, the situation is not so dark as it might appear. The industry is not dying out. Instead, it is working toward a new size and shape, influenced by complex changes in markets and technology, and disciplined by the slow processes of nature. The industry in these two states embraces many diverse activities, ranging from growing trees, through logging, sawing, drying, planing, and marketing, which are performed separately or in varying combinations by some 2,500 firms. It is sometimes considered to be two industries, divided according to the two main branches, pine and hardwood manufacturing, which differ in some important respects. However, both branches have been influenced similarly by many of the major forces discussed in this article; therefore, only occasional distinctions are drawn between them here. The lumber industry's history can be viewed as a long process of adaptation of these many firms to

the opportunities presented by the basic forest resource, on the one hand, and the markets for lumber on the other. Three major stages in the development of the industry may be discerned. They have no sharp dividing lines separating them because they overlap to a considerable extent, but each stage can be said to have been dominant over a particular time period.

The first of the major stages of development from about 1890 to 1925, was characterized by the meteoric rise of production which came with the cutting of the virgin timber, often compared to a gigantic mining operation. This was followed from about 1925 through World War II by the era of the portable mills, such as the one in the facing illustration, a period of great instability and impermanence in which the industry suffered a general decline in efficiency. The third stage is the current one. Today the industry appears to be developing a technology and a structure suited to the efficient utilization of the timber pro-

LUMBER PRODUCTION
IN ARKANSAS AND MISSISSIPPI
1904-1953



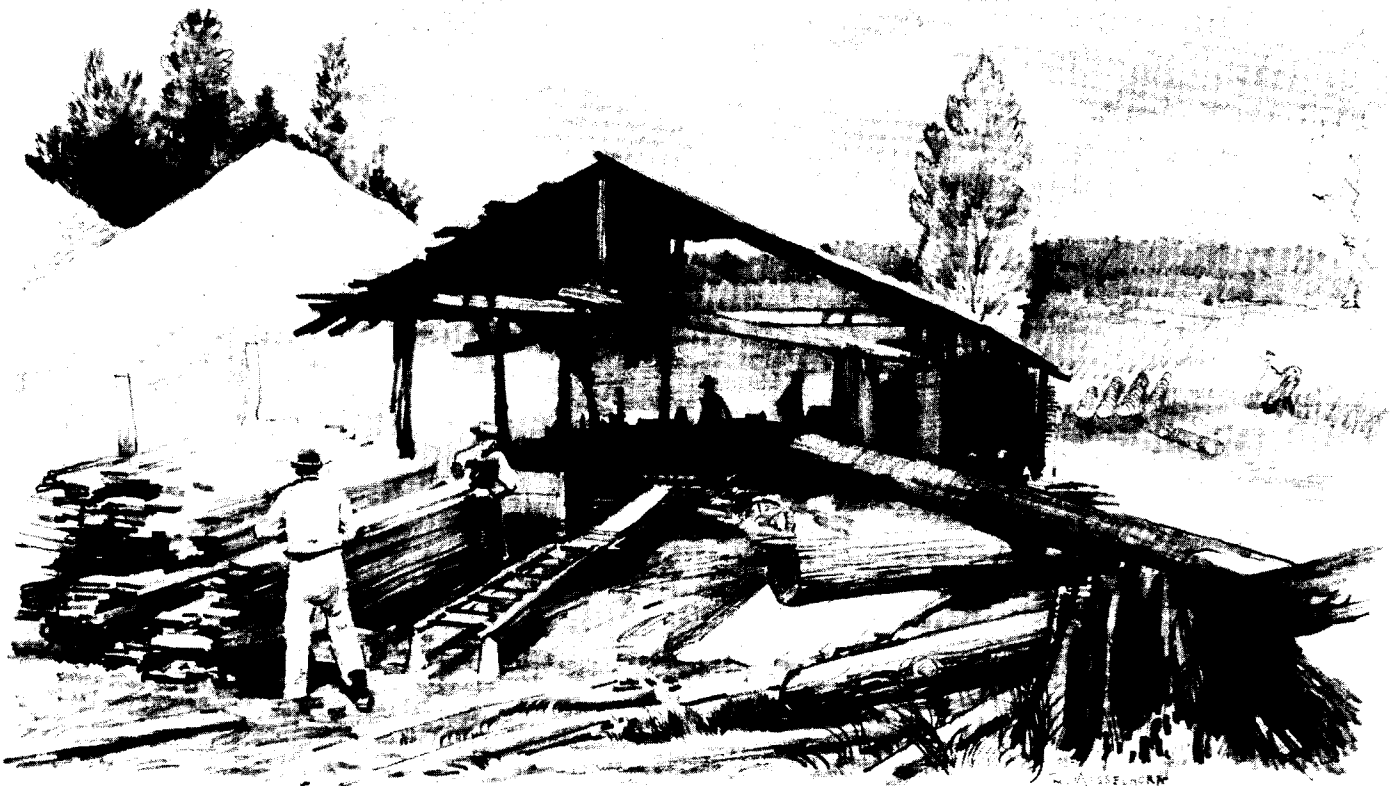
Source:

1904-1946, *Lumber Production in the United States, 1799-1946*, U. S. Department of Agriculture Miscellaneous Publication No. 669, October 1948.

1940-53, *Fact for Industry*, U. S. Department of Commerce, Bureau of the Census, Series M15G.

(1) Since 1947 Arkansas and Oklahoma production have not been reported separately. For consistency in the series, Oklahoma production, which averages about 10 per cent of Arkansas production, has been included in the earlier years as well.

(2) No estimates available for 1948.



duced by sustained-yield forests. The key to understanding each of these major periods lies in the condition of the forest resources which prevailed at each time.

Of most interest, of course, is the current transition period, for in it are being made decisions of crucial importance for the future. While much of the impending change appears to be inevitable, predetermined by things done or not done in the past, there still remains much scope for the exercise of judgment and will.

... (1) *big-mill processing of the virgin timber*, ...

The first of the major stages of development of the industry began shortly before the turn of the century. The virgin forests stood then as an immense store of capital ready to be converted into the houses and buildings needed by a rapidly growing

nation. As the white pine harvest of the Lake States drew to a close, experienced and well-equipped operators moved down into the South. They did things on a grand scale with railroads and very large mills, ripping into the timber at tremendous speed. Their era reached its peak about 1925, after which many of them pulled up their tracks and machinery to move on to timberlands opening in the West.

By the standards of today their operations were wasteful. They destroyed much young growth in order to get the big trees they wanted and, in general, they made no effort to leave good seed trees to restock the acres they cut. However, it should be remembered that there was a big job to be done then in the building of cities. With urban population of the country growing then by more than 15 per cent per decade, there was a tremendous demand for the swift and inexpensive conversion of trees into lumber.

... (2) the harvesting of second growth by small portable mills, ...

By 1929 much of the virgin timber was gone. Big mills all over the South were closing for lack of timber of the kinds they were accustomed to using. The national building boom had crested in 1926 and construction activity was already embarked on its long slide into the depression ahead. One of the leading lumbermen of Arkansas today recalls that in 1929 he was just starting out with his first small mill. He was consoled by his father—a lumberman of the old school, who believed that all of the worth-while timber was gone—with the observation that at least he was still young enough to start over again in some other business after going broke, as he was sure to do.

A proliferation of small mills, colloquially known as “peckerwoods” or “groundhogs,” began to glean the timber overlooked in the first cutting and to harvest the volunteer second growth which had sprung up unbidden on the cutover lands. The new growth was too small and too sparse to support the railroad and skidder type of logging operation employed before. Trucks became the chief means of transportation. The portable mills moved from tract to tract, producing rough green lumber for sale to concentration yards or to larger saw mills where the final drying and finishing were done.

The small mills had a number of advantages over the larger ones. By locating right in the tracts from which they got their logs, they were able to save on log hauling costs. In addition, by sawing the logs at the site, they greatly reduced the weight carried to market. They did not require a large capital investment in equipment and they had almost no administrative or selling expense. Many operators worked part time, returning to farming whenever the demand for lumber slackened. Thus overhead costs in periods of slack demand were not such a problem to them as to the larger mills. When demand revived, as in World War II, the portable mills were able to get into production without delay.

However, the small mills required more labor per thousand board feet than did the big stationary mills because of a lack of facilities for mechanical handling of logs and lumber. They also had a higher percentage of waste in the form of sawdust. The circular saw used in most portable mills is approximately twice as thick as the band saw used in the larger mills.

The logging practices of the small operators were wasteful of timber also. They generally had no more interest in preserving the productivity of the stands they cut than had the large operators of the

preceding era. The trend toward small mill operation, therefore, resulted in a reduction in efficiency in terms of two of the main inputs, labor and timber.

Of course, not all of the large mills disappeared. Many of those that stayed supplemented the timber from their own lands by buying logs or rough lumber wherever they could. Some of them began programs of forest management on their lands, pioneering in the development which is of so much significance today. And an intermediate size fixed mill developed.

Apparently the large mills, too, suffered a loss in efficiency in terms of labor requirements. Some evidence of this was provided by Bureau of Labor Statistics studies of labor requirements in 1935 and 1946 in the southern pine industry. Plants surveyed in 1946 required an average of 41.2 man-hours of labor per 1000 board feet from felling the trees to loading the finished lumber, roughly a third more than was required by similar plants in 1935. Much of the change was attributed to the cutting of smaller trees in 1946 than had been used earlier, and to the competition of higher paying industries for skilled labor.¹

The use of smaller logs which increased labor requirements also increased the percentage of waste because the smaller the log the larger the proportion of waste material included. In 1946 none of the plants in the sample of mills surveyed was using the waste material for anything except fuel with the result that the increase in waste was nearly all net loss.

The timber resources of both Arkansas and Mississippi deteriorated seriously in quality and quantity during this period except in the relatively small part of the commercial forest under intensive management.²

... and (3) the current period of transition toward dependence upon annual growth of sustained-yield forests.

The third major era to be discussed is the current one of rapid transition, which began soon after World War II, and probably has a considerable time yet to go. The period appears to be one in which the lumber industry is adjusting practices and structure to the utilization of sustained-yield forests. In order

¹ “Labor Requirements in Southern Pine Lumber Production,” *Monthly Labor Review*, December, 1946.

² For discussion of changes in the timber resources see: *Forest Statistics for Arkansas*, Forest Survey Release 71, March 1953. Southern Forest Experiment Station. *Forest Statistics for Mississippi*, Forest Survey Release 59, May 1949. Southern Forest Experiment Station. *Mississippi Forest Resources and Industries*, Forest Service. United States Department of Agriculture. Forest Resource Report No. 4.

to understand the changes which are taking place, it is necessary to consider certain of the influences tending to bring them about and some of the technical and organizational possibilities available to the industry which might facilitate adjustment.

Changes in markets . . .

First among the influences at work is the competition of other materials for markets. For example, according to estimates of the Stanford Research Institute, the use of lumber in home building has declined from 18,900 board feet per dwelling unit in 1920 to 10,520 board feet in 1953, a 44 per cent drop.³ About half of this decline in lumber use was attributed to changes in architecture and size of dwellings and the remainder to the increasing use of other materials. Rises in prices of lumber relative to the prices of other materials have encouraged substitutions. Furthermore, the price of lumber is expected, according to the Stanford report, to continue to rise more rapidly than the prices of competing materials.

In addition to the unfavorable position of lumber generally in comparison with competitive products, the situation of southern pine versus western softwoods works an extra hardship on the southern pine producers. The western producers enjoy cost advantages in processing large virgin timber which partially offset the freight costs required to reach eastern markets. The combined competition from other materials and from western softwoods puts a virtual ceiling on the price of southern pine.

. . . and rising costs stimulate technical development . . .

While prices of pine are being held down, the influences tending to increase costs—such as declining saw timber supplies and the accompanying use of smaller trees which were mentioned earlier—are still very strong. The price of labor is rising also, as alternative employment opportunities increase within and without Arkansas and Mississippi. No doubt, this cost-price squeeze has contributed to the reduction in production of recent years.

Given such pressures on the industry, what are the possibilities for adjustment? Two major objectives being sought are: increased efficiency in the use of timber and increased productivity of labor. By following the lumber manufacturing process through from the growing of the trees to the loading of the final product for shipment, many possibilities for advancement toward these objectives can be seen. All

³ *America's Demand for Wood 1929-1975*, summary of a report by Stanford Research Institute, Stanford, California, to: Weyerhaeuser Timber Company, 1954, pp. 33, 34.

of the ones described here have been demonstrated in the states under study or elsewhere, but, like advanced techniques in other fields, some of them are far from typical.

. . . to increase timber yields . . .

To start with the trees, it is becoming more and more apparent that timber is man-made, that trees are the product of investment of capital, even if much of the investment consists merely of waiting. And yields can be sharply increased with improved management.⁴

A concrete example of the results of good forest management is cited by the most recent forest survey of Arkansas. A seven-county area in Southern Arkansas, according to the report, is one of the few large areas of the country in which there has been a sizable gain in pine volume since the middle 1930's. A gain of one-third in pine saw-timber volume from the 1930's to 1951 has resulted from the conservative timber harvesting, hardwood control, and fire protection employed in the region.⁵

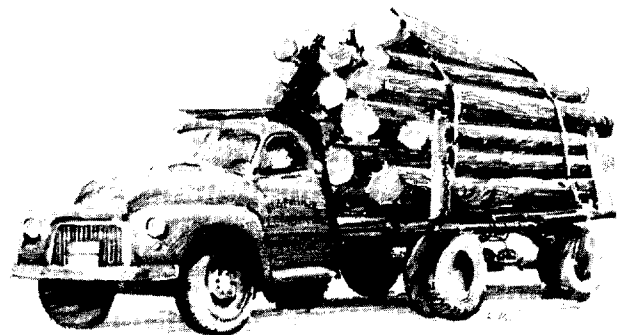
Experiments of the Mississippi Forestry Commission and other public and private agencies on selective breeding of superior trees look considerably beyond the management practices conventionally used. Productivity per acre could be greatly increased if a larger percentage of the young seedlings planted, or the growth naturally seeded, could come from trees having higher than average growth rates, small branches, straight trunks, little taper, and resistance to disease and insects.

. . . and labor productivity.

It is at the sawmill that the most exciting possibilities for changing techniques can be found. Without watching a sawmill work, the average layman can

⁴ There is a vast literature on increasing yields through improved management. For a report on one case study see Clifton B. Luttrell, "The Covington Farm, A Case Study in Planning and Financing Farm Woodlot Production," Federal Reserve Bank of St. Louis, *Monthly Review* XXXVI, No. 12, (December, 1954).

⁵ *Forest Statistics of Arkansas*, p. 10.



have little conception of the complexity of its operation or of the infinite number of places within it where skill and judgment must be applied. Skill and judgment come to their clearest focus at the headsaw (illustrated on the adjoining page) where the sawing of the logs is begun.

In a technique hundreds of years old the sawyer appraises each log with a glance to decide how best to start breaking it down into lumber, much as the livestock buyer at the stockyard sees not live animals but what they will dress out. His practiced eye takes in such characteristics as density, crook, or taper, and location of scars or other faults. In an instant the log is hurled onto the carriage where the blocksetter riding the carriage dogs it down securely. The sawyer then feeds the log into the saw and a slab is peeled off. On the back side of the saw (the one illustrated here) the slab or board falls onto rollers or a moving chain to be carried away to the next operation. The sawyer then signals to the blocksetter how he wants the log held for the next cut—advanced by the thickness of the next board or timber he wants to make, or perhaps rolled over for a cut off the other side. All of this is done with almost unbelievable speed and precision.

Beautiful though the performance of a skilled sawyer and blocksetter may be, it was the fact that such an operation had to precede all other mill operations that has had much to do with the deterioration of the big mills' position in the industry over the past 20 or 25 years. It was this step in the manufacturing process which was largely taken over by the portable mills. Sawing logs into lumber with carriage and headsaw alone, and especially the careful sawing for maximum quality or grade, requires big logs to pay out. It takes but a quick mental calculation to realize that the bigger the log the greater the average amount of lumber produced with each pass of the carriage because the face is wider. Since the headsaw sets the pace for the whole mill, when headsaw efficiency declined with the sawing of smaller and smaller logs other operations suffered from loss of volume.

Changes in sawing techniques . . .

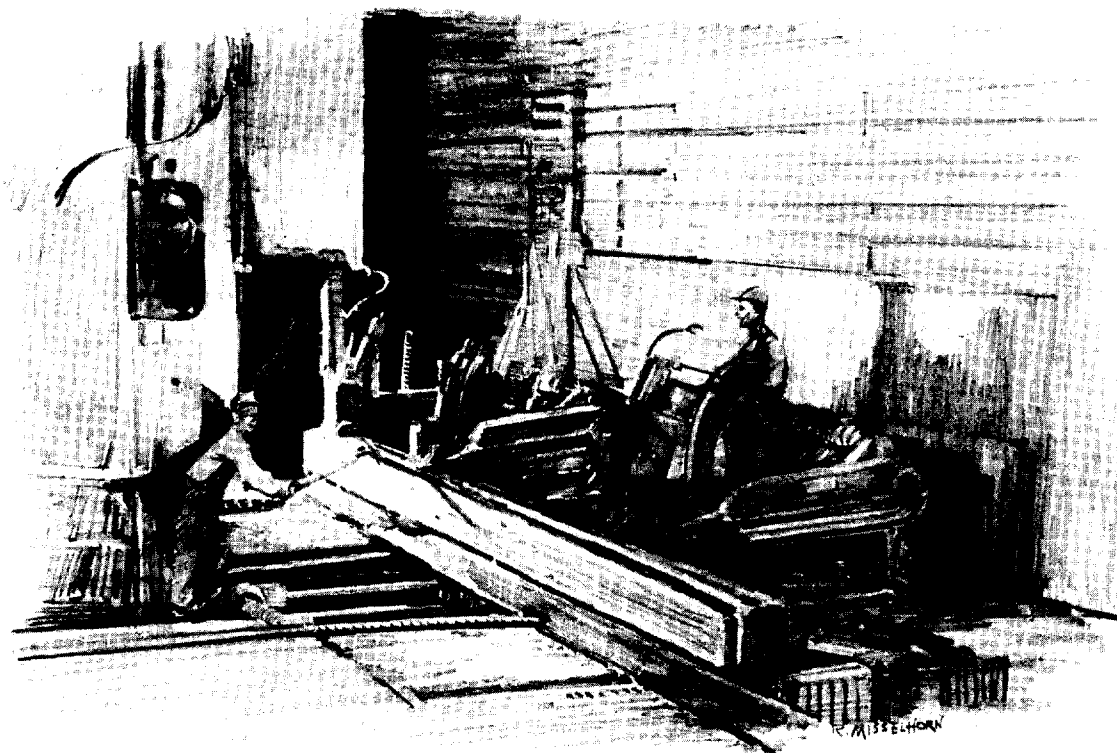
Improvements in headsaw and carriage have offset to a considerable extent in some mills the effects of declining log size. One man rides the carriage now, doing electrically or with compressed air what used to be done by two or three men by hand. The carriage itself runs much faster. Most of the carriages were formerly powered by a long steam cylinder, called a "shotgun", which puffs big clouds of steam into the air with each stroke of the carriage. To the

cost-conscious engineer today, each puff represents precious horsepower forever lost. This was not of much consequence in the old days when the steam was produced from burning the scraps and sawdust. But now the waste wood is becoming too valuable to be used for fuel, and many of the carriages are being converted to electric or hydraulic drives.

A more radical change in technique than speeding up the conventional headsaw and carriage is the use of gangsaws. The gangsaw, as its name implies, has a number of blades cutting at the same time so that it can reduce a log to boards in one operation. The blades are thinner than the bandsaw, and thus make less sawdust. The gangsaw has another advantage in that once it is set for producing boards of a certain thickness, it will do so with great accuracy, avoiding the chances for error that creep in with the continual setting and resetting required in sawing one board at a time with carriage and headsaw. The gangsaw technique has been developed to perhaps its finest pitch in Sweden where sustained-yield forestry has been practiced much longer than it has in the United States and where the average sawlog is smaller than in this country.

However, the use of gangsaws has some disadvantages for application to Arkansas and Mississippi timber. Best results are obtained when logs of uniform size and quality are sawed, and these are not generally found in the typical timber tract in these states. Furthermore, pre-sorting of the logs to get uniformity at least in batches runs up the handling costs. What appears to be a good compromise is a combination of the conventional bandsaw headrig with a battery of gangsaws. With this technique the sawyer would quickly slab off two or more sides of each log, making the best of its crook, taper, or other faults, and then send the cant (as the slabbed-off log is then called) to a gangsaw for further processing. By this combination the mill would economize in the use of the special talents of the sawyer and his costly equipment, while not losing the possibility of his giving special treatment to the occasional superior log. And the gangsaws could be operated at their most efficient rates by confining each to cants of a particular size.

In another application, used at several Arkansas mills, logs below a certain size are automatically shunted off to a round-log gangsaw, while the larger ones go to a bandsaw headrig. Roundlog gangsaws used in this way provide an efficient means for sawing the small logs from the top sections of the trees cut. They also up-grade some crooked logs because they can be made to follow the curvature of a log which has a moderate "sweep," producing several



full-length boards which would have shown up as short material or scraps on the bandsaws. This is because the bandsaw and edger necessarily cut in straight lines across the arc of a curved log at some points, producing several short boards and only a few full-length ones from each curved log.

... and mechanization of materials handling are increasing mill efficiency.

The succeeding operations of trimming, edging, drying, and planing in the mill probably present some other opportunities for tightening up on costs, but the really impressive opportunity is in materials handling. From the saws of a big mill come literally millions of separate pieces of material each year to be moved, graded, sorted, stacked, and re-sorted. When labor was less expensive, manpower was used lavishly on these tasks which are now increasingly being taken over by machinery. The forklift truck sketched for the cover is but one of the more obvious signs of the revolution in materials handling within many of the mills.

Use of sawmill waste for pulp is a new development with a great potential.

Practically all of the possibilities for technical improvement discussed above are of the type to be achieved within the individual plant. However, one of the most significant innovations in years is one based upon the integration of separate enterprises within the region. This is the utilization of sawmill waste by paper and pulp mills. For years sawmills and smoke have gone together because there was no economic use for the slabs and other scraps produced by the mills. Even after papermills came to the South, sawmill waste was not usable because it contained too much bark and no inexpensive way to separate wood from bark had been found. But within the last few years sawmills in the South have begun to install debarking machines to strip bark from the logs before sawing. All of the slabs and trimmings, being free from bark, can then be fed into a chipper to be made into pulping chips for sale to pulp mills. There are about seven or eight barker and chipper installations at Arkansas sawmills now, with more planned. There

are apparently none in Mississippi yet, but several installations have been planned.

The potential value of this step toward fuller utilization of timber is enormous. Experience with the barkers and chippers now operating indicates that about half a cord of chips, with a sale value of about \$6.00 at recent prices, can be produced with every 1,000 feet of pine lumber. This will provide the operator an estimated net profit on the chips (or a net reduction in his cost of producing the lumber) of from \$3.50 to \$4.00 per thousand feet of lumber produced. The significance of this development for the individual sawmill is clear, but the significance for timber utilization in total is great also. For example, the Stanford Research Institute projections for pulpwood production indicate that about 7 per cent of total pulpwood production in the South may be in the form of mill residuals by 1960, and this proportion may exceed 10 per cent by 1970.⁶

The industry in the future will be influenced in size by forest capacity, processing costs, and markets, . . .

At the beginning of this article it was noted that the lumber industry was working toward a new size and shape, influenced by changes in markets, technology and resource conditions. Some of the past changes in the industry were related to the shift from use of the dense-growth, large-tree virgin forests to the use of the more scattered, small-tree second growth forest. If the industry is now coming to depend more and more upon sustained-yield forests, what can be said about the size and structure of the industry in the future? Obviously, there can be no simple answer to such a question, but some observations can be made.

One determinant of the future size of the industry, measured in lumber production, will be the annual rate of growth of sawtimber, which in turn will depend largely upon the size of the growing-stock inventory. Between the forest surveys made in Mississippi and Arkansas in the 1930's and those made after World War II, the growing stock declined in both states. In a sense, the industry had continued over that period to consume part of its capital stock of trees instead of living off the "interest." However, there are signs that the capital liquidation may be coming to an end, if it has not already stopped. In Arkansas at the time of the most recent survey, 1947-51, annual net growth of sawtimber was almost 2.2 billion board feet, as compared to a sawtimber drain for all purposes of 2.1 billion board feet. Since 1948 the drain, as indicated by lumber production, has declined, so some net accumulation in growing stock

could be occurring. Similarly in Mississippi, the sharp decline in lumber production since the 1946-48 survey may have halted the depletion of sawtimber growing stock. On the positive side, there has been an upsurge of interest in forest management throughout both states. Educational efforts of public and private agencies and wider recognition of the economic benefits of forest investment are bringing about improvement in the forest resource.

While the inventory decline in the two states may have leveled off, this does not necessarily mean that lumber production will not decline further. Not all of the indicated annual growth will be available for marketing because much of it will be in trees below marketable size and quality. Furthermore, efforts to rebuild the stands may reduce the annual cut at least temporarily.

. . . presenting complex planning and management problems.

In view of the sawtimber inventories as estimated by the postwar forest surveys in Arkansas and Mississippi, the typical saw log processed when the industry is on a sustained-yield basis will be small. A large part of the saw log volume of both states at the time of the surveys was concentrated in the smaller sizes. Just how small the typical log will be in the future will depend in part upon the policies of the saw mill operators and timber landowners. Some of the considerations affecting the choice of an optimum size log for milling are relationships among log size and yields of lumber by quantity and grade, yields of by-product chips, costs of logging and processing, and growing time.

Management of an integrated timber growing and lumber manufacturing firm trying to maximize returns over the long-run has a difficult time with such a complex planning problem in view of uncertainty as to future market preferences. For example, if the firm decides to gain volume at some sacrifice in quality with, say, a 10-14-inch log as the target, it may find 20 years from now that it should have planned for a larger average log size in order to obtain a better price. Or, conversely, the firm that holds back cutting to get larger logs may find the extra quality does not offset the loss in volume. In either case, the forestry program of the firm cannot be quickly turned toward another objective if the first proves to have been a poor selection.

Small mills appear likely to diminish in importance.

One of the most striking structural changes in the industry over its history was the shift in relative importance of the big mills and the small portable

⁶ *America's Demand for Wood*, Table 15, p. 59.

mills. As has been pointed out, the small mills, with their flexibility and low overhead, had some advantages in the utilization of small scattered stands. But the nature of the technical improvements in lumber manufacturing coming into use and the rising price of labor suggests that the pendulum is swinging back again toward the larger fixed installation. This by no means implies that portable mills will disappear. Their operators are hardy and resourceful, and some of them are using recently developed equipment which is considerably more efficient than the machinery in the typical older mill. However, the smaller mills as a group will probably produce less of the total output of the industry in the future.

With labor and sawtimber increasing in cost, the lumber manufacturer is under much more pressure to make the best possible use of each of them. The very small mill cannot well apply the mechanical handling or the large volume sawing which are increasing yields for the larger mills. The question is whether it will, in the future, cost more to saw logs into rough lumber near the timber stand and then haul the lumber to a concentration yard or mill for finishing, or to assemble the logs at a mill where the whole manufacturing process can be completed in one place. The big mills apparently were at some disadvantage in comparison to the small ones in the initial sawing step when they had to apply their big-log techniques to small logs. But it appears now that they will be able to offset the larger log-hauling costs with lower processing costs at the mill by adopting methods specially designed for small logs.

Of particular importance in influencing the future structure of the industry will be the use of barkers and chippers. One of the chief advantages of the portable mill operator was that he located his mill near a heavy raw material from which he removed a large part of the weight before shipping it. Now, most of the weight he removed would be a valuable byproduct for a mill large enough to install a debarker. This confers a compelling advantage upon the larger mill unless, or until, very small debarkers are developed and widely used.⁷

⁷ Slabs with the bark still on are collected from small mills in some parts of the South to be put through slab debarkers and chippers. Extensive development of this system would aid the small mills but probably would not yield as large a saving as would log debarkers and chippers at larger sawmills.

Long-run changes may eventually increase the shares of Arkansas and Mississippi in national lumber markets.

A special circumstance which may some day benefit the lumber industry in Arkansas and Mississippi is that eventually the western states will have to depend much more on second growth timber than they do now, which may substantially weaken their advantage in processing costs. If by then the Arkansas and Mississippi producers have mastered the small-timber manufacturing techniques with which they have been experimenting, and have increased the productivity of their forests, they may be able to capitalize on their freight cost advantage in reaching the big eastern markets and thus increase their share of the total market.

Thus, the current transition promises a long and productive life for the industry.

To sum up, in two major periods in the past the lumber industry of Arkansas and Mississippi has developed a technology and a structure suited to the utilization of a particular kind of timber resource. In the first a relatively small number of large producers harvested the standing inventory of virgin timber. In the second, many small producers with simple, light equipment processed the small scattered growth which first replaced the virgin timber. At the present time a new industry with new techniques is in course of development for the eventual more stable processing of the annual growth of sustained-yield forests. What this industry will be like 25 or 50 years hence depends to a peculiar extent upon the decisions made today, because the numbers of trees and the kinds of trees provided for today will do much to set basic conditions for the industry in the future.

A. JAMES MEIGS



Survey

OF CURRENT CONDITIONS

EIGHTH DISTRICT business activity continued at a high level in July, after allowance for seasonal slackening in some industries, and demands of businesses and consumers for bank credit were large. Farms of the district benefited from the best growing weather in several years, but prices of major district farm products declined.

Strength of commercial and industrial activity in the district . . .

Some district manufacturers reduced production in July for vacations, but there was no apparent slackening in the demand for their products. Steel ingot production at St. Louis declined a few percentage points during July, but held at a high level of 96 per cent of rated capacity and producers' order books reportedly are full. Similarly, production of Southern pine and hardwoods was down over 10 per cent in

early July, an approximate seasonal drop, but orders and shipments were exceeding production of softwoods and were at least equal in the case of hardwoods. Livestock slaughter in the St. Louis area was somewhat lighter in June and early July than a year ago, reflecting the more favorable rainfall situation this year. Last year the drouth compelled some distress selling of livestock from areas where pastures were below normal condition.

. . . was revealed in demand for bank credit and in shrinking unemployment figures.

The strength of industrial and commercial activity was clearly reflected in active demands for bank credit during the four weeks ended July 20. A business loan increase of \$32 million in the four-week period resulted from a sharp rise during July, more than offsetting a reduction in late June. Most types of borrowers, by major industry classification, increased their loans outstanding in part to finance the expansion of inventories and accounts receivable accompanying the upswing in activity. The demand for business loans was heaviest at the St. Louis banks, where commodity dealers increased their indebtedness more than normally for this time of year as the result of a relatively large direct movement of the wheat crop into hands of commodity dealers. There was an increase in loans to finance real estate and security purchases during the period.

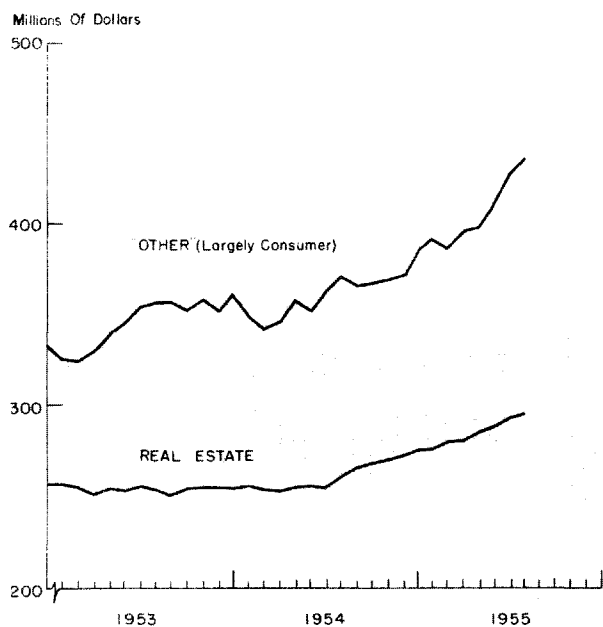
The high rate of business activity, including the construction industry, caused a further reduction of insured unemployment in the principal labor markets of the district during July.

Consumer spending was also high, bolstered by the use of credit . . .

Consumer spending at reporting district department stores in the first half of July was substantially higher than in the comparable period a year ago. Sales in housefurnishings were the dominant factor in the increase. A year ago the bulk of consumer spending on cooling appliances occurred in June

REAL ESTATE AND "OTHER" LOANS

Eighth District Weekly Reporting Banks



with a slump in July; this year the hot weather boost to sales came in July. Also traditional and special promotions in July apparently proved more attractive to buyers this year.

Consumers continued to borrow heavily at district banks, reportedly to finance automobile purchases. In the four weeks ended July 20 at weekly reporting banks, the group of loans which consists largely of loans to consumers increased \$16 million in contrast to an average rise of \$5 million in the corresponding weeks of the past six years. In addition, sales finance companies were large net borrowers during the period, districtwise and nationally, presumably for the purpose of relending to consumers.

. . . and by an apparent reduction in accumulation of liquid savings.

There are some indications that consumers have been supporting their expenditures not only with increased incomes and by greater use of credit, but also by reducing their rate of accumulating liquid savings. For example, time deposits at district member banks rose 4 per cent in the first half of 1955, while they rose 5 per cent in the same six months of last year. Published reports of 29 savings and loan associations operating primarily in the St. Louis metropolitan area showed that share accounts rose 11 per cent in the first half of 1955 as compared to a rise of 16 per cent in the first half of 1954.

Farms benefited from a month of good growing weather . . .

Farms of the district are enjoying one of the best growing seasons in years. Ample rains and moderate

temperatures have kept large areas green which were burned brown by this time in each of the preceding three years. Largely as a result, the yields per acre of all major district food and livestock feed crops are expected to be high. Increases from 1944-1953 averages for district states, according to United States Department of Agriculture estimates, may range from about 10 per cent for rice to 45 per cent for wheat. Yields per acre of corn and hay are expected to be approximately 25 and 15 per cent, respectively, above last year. While official production estimates for soybeans are not yet available, observation of district fields indicates that yields per acre may be well above those of last year.

During the past month district states production of cattle, hogs, and dairy and poultry products was higher than a year ago, as it was for the nation. The gain in output reflected, among other things, increases in the livestock population on farms and greater production per animal.

. . . but price declines have reduced cash farm receipts.

In face of favorable crop yields per acre and high production of livestock commodities, prices received for the products of district farms declined during July. Average prices of important district farm products on July 22 were 2 per cent lower than they had been four weeks earlier and 7 per cent lower than a year ago, reflecting sharp drops in soybean, hog, egg, and oats prices of 33, 20, 19 and 17 per cent.

District cash farm receipts during the first five months of 1955 were 7 per cent below receipts in the comparable 1954 period, and 12 per cent below their level of two years ago.



VARIOUS INDICATORS OF INDUSTRIAL ACTIVITY

	June 1955	June 1955 compared with*	
		May 1955	June 1954
Industrial Use of Electric Power (thousands of KWH per working day, selected industrial firms in 6 district cities)	13,829	- 1%	+15%
Steel Ingot Rate, St. Louis area (operating rate, per cent of capacity)	100	- 6	+41
Coal Production Index—8th Dist. (Seasonally adjusted, 1935-1939=100)	128 p	-0-	+14
Crude Oil Production—8th Dist. (Daily average in thousands of bbls.)	374.9	+ 3	+13
Freight Interchanges at RR—St. Louis. (Thousands of cars—25 railroads—Terminal R. R. Assn.)	105.8	- 6	+ 9
Livestock Slaughter—St. Louis area. (Thousands of head—weekly average)	80.0	-14	- 3
Lumber Production—S. Pine (Average weekly production—thousands of bd. ft.)	210.4	- 4	+14
Lumber Production—S. Hardwoods. (Operating rate, per cent of capacity)	92	+ 2	+ 3

* Percentage change figures for the steel ingot rate, Southern hardwood rate, and the coal production index, show the relative per cent change in production, not the drop in index points or in percents of capacity.
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Banking

BANK DEBITS¹

	June 1955	June 1955 compared with	
	(In millions)	May 1955	June 1954
Six Largest Centers:			
East St. Louis—National Stock Yards, Ill.	\$ 133.2	+ 7%	- 1%
Evansville, Ind.	179.8	+ 6	+13
Little Rock, Ark.	177.4	+ 6	+ 6
Louisville, Ky.	836.7	+ 6	+13
Memphis, Tenn.	701.0	+ 3	+16
St. Louis, Mo.	2,300.4	+ 5	+ 8
Total—Six Largest Centers	\$4,328.5	+ 4%	+10%
Other Reporting Centers:			
Alton, Ill.	\$ 44.1	+23%	+11%
Cape Girardeau, Mo.	15.1	+ 5	+ 8
El Dorado, Ark.	30.3	- 2	+ 3
Fort Smith, Ark.	52.4	-0-	+ 8
Greenville, Miss.	25.3	- 5	+ 8
Hannibal, Mo.	10.2	+ 7	+ 6
Helena, Ark.	7.5	- 6	- 1
Jackson, Tenn.	23.0	- 1	+12
Jefferson City, Mo.	61.8	-11	+ 4
Owensboro, Ky.	45.0	+ 8	+18
Paducah, Ky.	28.5	+ 6	-12
Pine Bluff, Ark.	32.3	+ 9	+ 2
Quincy, Ill.	43.7	+10	+11
Sedalia, Mo.	15.6	+ 7	+20
Springfield, Mo.	83.3	- 7	+ 9
Texarkana, Ark.	20.8	+10	+10
Total—Other Centers	\$ 538.9	+ 1%	+ 7%
Total—22 Centers	\$4,867.4	+ 4%	+10%

INDEX OF BANK DEBITS—22 Centers Seasonally Adjusted (1947-1949=100)

	1955		1954
	June	May	June
	159.3	156.4	145.2

¹ Debits to demand deposit accounts of individuals, partnerships and corporations and states and political subdivisions.

Agriculture

CASH FARM INCOME

(In thousands of dollars)	May 1955	Percentage Change	
		May '55 from May '54	1955 compared with 1954
Arkansas	\$ 20,858	-14%	+ 3%
Illinois	119,890	-20	- 8
Indiana	68,186	- 8	-10
Kentucky	25,647	+ 5	-14
Mississippi	20,707	+22	-33
Missouri	63,469	- 6	- 9
Tennessee	28,177	+10	-11
7 States	\$346,934	- 9	-10
8th District	\$143,341	- 7	-12

Source: State data from USDA preliminary estimates unless otherwise indicated.

Construction

INDEX OF CONSTRUCTION CONTRACTS AWARDED EIGHTH FEDERAL RESERVE DISTRICT* (1947-1949=100)

	May 1955		
	May 1955	Apr. 1955	May 1954
Unadjusted			
Total	221.0 p	237.4	205.9
Residential	304.3 p	300.8	235.5
All Other	182.4 p	208.0	192.2
Seasonally adjusted			
Total	195.6 p	217.0	182.2
Residential	269.3 p	273.5	208.4
All Other	161.4 p	190.8	170.1

* Based on three-month moving average (centered on mid-month) of value of awards, as reported by F. W. Dodge Corporation.

p Preliminary

ASSETS AND LIABILITIES EIGHTH DISTRICT MEMBER BANKS

(In Millions of Dollars)	Weekly Reporting Banks		All Member Banks	
	July 20, 1955	Change from	June 29, 1955	Change from
		June 22, 1955		May 25, 1955
Assets				
Loans ¹	\$1,476	\$ +44	\$2,298	\$ + 8
Business and Agricultural	720	+24		
Security	46	+ 1		
Real Estate	296	+ 3		
Other (largely consumer)	435	+16		
U. S. Government Securities	1,019	+ 6	1,977	-47
Other Securities	248	- 2	497	+ 9
Loans to Banks	6	-12		
Cash Assets	880	+29	1,358	+16
Other Assets	44	+ 1	66	+ 4
Total Assets	\$3,673	\$ +66	\$6,196	\$ -10
Liabilities and Capital				
Demand Deposits of Banks	\$ 647	\$ +30	\$ 661	\$ +16
Other Demand Deposits	2,100	-16	3,787	-12
Time Deposits	563	- 1	1,214	+ 6
Borrowings and Other Liabilities	104	+53	82	-19
Total Capital Accounts	259	-0-	452	- 1
Total Liabilities and Capital	\$3,673	\$ +66	\$6,196	\$ -10

¹ For weekly reporting banks, loans are adjusted to exclude loans to banks; the total is reported net; breakdowns are reported gross. For all member banks loans are reported net and include loans to banks; breakdown of these loans is not available.

Trade

DEPARTMENT STORES

	Net Sales		6 mos. '55 to same period '54	Percentage of Accounts and Notes Receivable Outstanding June 1, '55, collected during June	
	June, 1955 compared with			Instal. Accounts	Excl. Instalment Accounts
	May, '55	June, '54			
8th F.R. District Total	- 8%	- 4%	+ 5%	17	49
Fort Smith Area, Ark. ¹	-13	+ 4	+10	12	43
Little Rock Area, Ark.	-13	- 7	- 2	12	44
Quincy, Ill.	- 6	- 8	+ 2		
Evansville Area, Ind.	-10	- 6	+ 1		
Louisville Area, Ky., Ind.	- 8	- 7	+ 4	20	50
Paducah, Ky.	- 9	-20	- 9		
St. Louis Area, Mo., Ill.	- 5	- 3	+ 6	19	56
Springfield Area, Mo.	- 4	+25	+38		
Memphis Area, Tenn.	-20	- 5	+ 4	15	37
All Other Cities ²	- 2	- 4	+ 4	11	43

¹ In order to permit publication of figures for this city (or area), a special sample has been constructed which is not confined exclusively to department stores. Figures for any such nondepartment stores, however, are not used in computing the district percentage changes or in computing department store indexes.

² Fayetteville, Pine Bluff, Arkansas; Harrisburg, Mt. Vernon, Illinois; Vincennes, Indiana; Danville, Hopkinsville, Mayfield, Owensboro, Kentucky; Chillicothe, Missouri; Greenville, Mississippi; and Jackson, Tennessee.

INDEXES OF SALES AND STOCKS—8TH DISTRICT

	June 1955	May 1955	Apr. 1955	June 1954
Sales (daily average), unadjusted ³	106	121	117	110
Sales (daily average), seasonally adjusted ³	118	121	122	122
Stocks, unadjusted ⁴	130	127	134	119
Stocks, seasonally adjusted ⁴	130	121	125	119

³ Daily average 1947-49=100

⁴ End of Month average 1947-49=100

Trading days: June, 1955—26; May, 1955—25; June, 1954—26.

RETAIL FURNITURE STORES

	Net Sales		Inventories	
	June, 1955 compared with		June, 1955 compared with	
	May, '55	June, '54	May, '55	June, '54
8th Dist. Total ¹	- 1%	- 3%	- 3%	+10%
St. Louis Area	- 2	- 6	- 1	+12
Louisville Area	-10	- 2	- 4	+ 5
Memphis Area	- 6	-10	*	*
Little Rock Area	+44	+18	*	*
Springfield Area	+ 7	+ 3	- 5	+12

* Not shown separately due to insufficient coverage, but included in Eighth District totals.

¹ In addition to following cities, includes stores in Blytheville, Fort Smith, Pine Bluff, Arkansas; Owensboro, Kentucky; Greenwood, Mississippi; Evansville, Indiana; Cape Girardeau, Mo.

PERCENTAGE DISTRIBUTION OF FURNITURE SALES

	June, '55	May, '55	June, '54
Cash Sales	14%	15%	14%
Credit Sales	86	85	86
Total Sales	100%	100%	100%

OUTSTANDING ORDERS of reporting stores at the end of June, 1955, were 16 per cent larger than on the corresponding date a year ago.