

PRODUCTION - Women's Branch - Industrial Section

War Dept.

Production  
Women's Branch  
Industrial Service Section

From: Amy Hewes, Women's Branch, Industrial Service Section.  
To: Clara M. Tead, Director Women's Branch,  
Industrial Service Section.  
Subject: Visit to plant of HUMMEL AND DOWNING, Milwaukee, Wis-  
consin. Inspected by Gertrude Bruyn and Irene Gibson,  
November 7, 1918.

Reason for visit.

The visit was made to advise regarding conditions for women's work. A government inspector in the district has reported that the company was employing women.

Persons interviewed.

Mr. C. T. Parke, General Superintendent.  
Mr. Klocksie, Chief Army Inspector.  
Mr. O. J. Strey, Assistant Army Inspector.  
Miss Anna Schubeck, Forewoman of stitching department.

Organization.

Mr. J. P. Hummel, President.  
Mr. T. W. Ross, Vice President.  
Mr. G. R. McKowen, Secretary and Treasurer.

There has been no reorganization for war contracts.

Contracts.

Pl4441-1272F 8/31/18  
For 3,726,000 fibre board discs for use in fibre con-  
tainers for propelling charges for 155 mm guns.  
Deliveries are to begin day after receipt of order  
and proceed at the rate of 50,000 a day. The contract  
shall be completed 1/15/19.

MSC 319.12/37

Products other than Ordnance.

About 9% of the company's monthly output is for Ordnance. It holds no Navy or Aircraft contracts.

The commercial products formerly and at present manufactured are paste board packing boxes and cartons for food stuffs.

Salient features regarding employment.

## 1. Source and character of the labor supply.

The city of Milwaukee provides the labor. Very few foreigners are employed. The women are for the most part young and seem industrious and interested.

## 2. Numbers employed.

About 500 men and 150 women are employed. Of these women only 30 are on Ordnance work, 22 company employees and 8 government inspectors.

## 3. Hours.

Men and women work the same number of hours, totalling to 9 hours and 45 minutes a day. The hours are:

Monday to Friday  
7:00 A.M. to 12:00  
12:45 P.M. to 5:30

Saturday  
7:00 A.M. to 12:00

Note: The lunch hour has recently been extended from a 30 minute period to a 45 minute period, but the company has not as yet extended the closing time to 5:45, so employees virtually work only 9 hours and 45 minutes a day, but are paid for 10 hours.

## 4. Wages.

Time rates. Women employed by the company receive 20¢ an hour for a straight ten hour day, making \$2.00 a day. Mr. Parke stated that the basic 8 hour day law had never been mentioned to the company. About 30% of the women are paid by the time.

Government inspectors receive 20¢ an hour for 8 hours and time and a half for the two hours over time, making \$2.20 a day.

Piece rates. About 70% of the women are on piece work. Four days is the average length of time required before a woman is put on piece work. Amounts received on piece work average daily about as follows:

	Minimum	Maximum
Stitching operation	\$2.75	\$3.75
Creasing "	2.50	3.00
Printing "	2.60	3.20
Glueing "	2.25	2.75

#### 5. Occupations of women.

Women throughout the shop working on regular commercial products are employed in stitching, creasing, feeding the printing presses, peeling, glueing, and helping various machine operators.

Women doing Ordnance work are engaged in peeling, inspecting, and wrapping.

Peeling. Fifteen women are at work on this operation. The work consists in knocking with a wooden hammer the paste board discs from the large piece of paste board from which they have been cut. The women sit at benches to do this.

Inspecting. There are eight government inspectors who put the discs through the following stages of inspection:

1. Visual examination.
2. Test for thickness (.001 inch) with micrometers.
3. Test for diameter (5.625 inches) with a go and no go gauge.
4. Test for strength with a Mullen compressed air machine.

None of these occupations are replacement ones.

#### 6. Training.

Foremen and fellow workmen give the only training which the women receive.

#### 7. Employment management.

Mr. Parke, General Superintendent, employs both men and women and places them. Foremen arrange for transfers and discharge. Absentees are not looked up.

#### 8. Working conditions.

Industrial relations and shop practices. Mr. Parke stated that there had been no trouble from organized

labor. He does have difficulty with high labor turnover, especially in the case of the men. The women seem to be more stable.

Plant construction and shop layout. The plant from the point of view of construction might be called model. It is a new six story steel frame and brick building with about ninety percent window space. Lighting and ventilation throughout the plant are both excellent

Factory housekeeping. The entire factory seemed clean and orderly. Apologies were made for a corner which was somewhat torn up because of a new machine being installed there. Even this section did not seem particularly untidy, indicating the standards of cleanliness and order were comparatively high.

Accident and health hazard. There is great danger of accident from the unguarded staying or stitching machines. Miss Schubeck reported that one accident had happened several years ago, but that since then the thought of danger never seemed to occur to the operators. It would seem wise to attach permanent side guards to these stitching machines. Working conditions in general, however, appear to be conducive to good health.

Sanitation and service features.

Toilet and washing facilities. These facilities are the same on all the floors of the building. In each case there is a toilet room with two enclosed, spring-seat toilets. Just outside the toilet room there are porcelain wash troughs with about 30 faucets. At the end of each trough there is a bubbler fountain connected with an artesian well.

Cloak room. On each floor where women are employed there is a good sized cloak room equipped with individual lockers and a few tables and chairs. These are also used as rest rooms.

Lunch room. A new lunch room is now being built on the fifth floor and will be ready for occupancy within a week. This is a room about 25 feet by 75 feet and is very well lighted and ventilated. It has recently been freshly painted and is equipped with about fifteen small tables. Hot drinks will be served here free of charge every noon hour.

Medical care. The only provision made for medical care consists in the keeping of a first aid kit in the office of the foreman of the staying machine room.

Recommendations.

1. Permanent guards should be put on the staying machines.
2. There should be a scientific method for first aid treatment.

Action taken.

The above suggestions were made to Mr. Parke.

AMY HEWES,  
Supervisor in Women's Branch,  
Industrial Service Section.  
By:

GERTRUDE BRUYN, Inspector.

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War Rept

Production  
Women's Branch  
Industrial Service Section

From: Amy Hewes, Women's Branch, Industrial Service Section.

To: Clara M. Tead, Director Women's Branch, Industrial Service Section.

Subject: Visit to plant of Milwaukee Brush Company, Milwaukee, Wisconsin. Inspected by Gertrude Bruyn, November 6, 1918.

Reason for visit.

The visit was made at the request of a government inspector in the district who suggested that the advice of the Women's Branch might be valuable.

Persons interviewed.

Mr. I. C. L. Cornell, Superintendent.  
Mr. F. W. Ludems, Chief Army Inspector.

Organization.

Mr. E. F. Streich, President.  
Mr. F. D. Jacobs, Vice President and Sales Manager.  
Mr. E. W. Hoffman, Secretary and Treasurer.

The present organization is about six years old. The work on Ordnance contracts has caused on reorganization.

Contracts.

P6178-1463 4/18/18  
For 458,000 thong brushes for cleaning rod on 1917 Model Rifle. Deliveries to start 6/25/18 and proceed at the rate of 150,000 per month until contract is completed.

P11893-2043 7/13/18  
For 2,000,000 thong brushes for cleaning rod on 1903-1917 U. S. Rifles. Deliveries to start sixty days after date of order and contract to be complete by 1/1/19.

P16903-2792 10/22/18  
For 3,000,000 thong brushes for cleaning rod on 1903-1917 U. S. Rifles. Deliveries to start ninety days after date of order and contract to be complete by 2/22/19.

Ms 919.12/14  
h/c

Products other than Ordnance.

At present about 50% of the output is for the Ordnance Department. The company has no other government contracts. Commercial products manufactured here are floor, street, and buffing brushes.

Salient features regarding employment.

## 1. Source and character of the labor supply.

Almost all the women workers are young American Girls. There are a few Polish women. All live in the city of Milwaukee.

## 2. Numbers employed.

There are about 60 men and 60 women employed. Approximately 40 women are engaged in Ordnance production.

## 3. Hours.

Men and women work 10 hours a day and 55 hours a week. The hours are:

Monday to Friday  
7:00 A.M. to 12:00  
12:45 P.M. to 5:45

Saturday  
7:00 A.M. to 12:00

## 4. Wages.

Time rates. Government inspectors receive \$2.40 a day. Company women employees receive the following wages:

For trimming \$2.25 a day.  
For clipping 2.25 a day.  
For inspecting 2.25 a day.

Beginners on bending and twisting are given a wage of \$2.00 while learning the operations, which usually requires about a week. They are then put on piece rate.

Piece rates. Earnings on piece work average as follows:

Bending \$3.50 a day.  
Twisting 4.00 a day.

## 5. Occupations.

The operations performed by women are as follows:

Bending. This operation is performed on a small punch press. A brass wire about five inches long is inserted half its length in the head of the brush. As the press descends the head is forced down a small opening so that the extending wire is bent double.

Twisting. From the bending operation the brushes are taken to the twisting machines. These were invented by Mr. Cornell the Superintendent. Here the head of the brush is placed in the tail end of the machine and the wire end left free. The women then insert the bristles between the two pieces of wire. These are distributed the length of the wire by hand and then the wire end is factored in the head of the machines. The head of the machine revolves rapidly, twisting the wires which hold the bristles. The movement is controlled by a foot lever.

Clipping. The wire ends which project beyond the bristles are clipped off on small automatic screw machines.

Trimming. The trimming machines are Mr. Cornell's own make. The main part of the machine is a hollow cylinder about two inches long and one inch in diameter. Inside the cylinder are small blades. The brush is inserted in the center. As it comes in contact with the revolving blades, the bristles are trimmed to the correct size.

Inspecting. The women engaged in inspecting examine for:

- a. Over-all height.
- b. Length of brush part.
- c. Diameter of brush.
- c. Even distribution of bristles.

## 6. Training.

The only training which the women receive is given by the foremen.

## 7. Employment management.

Mr. Cornell, General Superintendent, employs both men and women. He also places them, arranges transfers, and discharges them. Transfer methods are very simple. If an employee grows tired of one occupation, she is permitted to change for a short period until she is rested. Turnover among women is enormous. Mr. Cornell did not estimate it in percent but granted that it was hampering production. He believes that the principal reason for this turnover is the fact that so many of the women are married and have no real interest in the work. He does not consider that the company is at fault.

## 8. Working conditions.

Industrial relations and shop practices. Relations between employer and employee are very informal. Mr. Cornell handles all questions of discipline and will not allow anyone else to superintend. He prides himself on being lenient to those whom he considers deserving of leniency.

Plant construction and shop layout. The building is an old one-story brick structure in very bad repair. The long narrow room in which the women work on the Ordnance material is dark, dirty, and poorly ventilated. The only light and air in the room come from five small dirty windows at the side and back of the workers. The company does not own the building and for that reason is unwilling to make many improvements. The fire hazard is great. There is a large amount of inflammable material in the shop, gangways are congested, and exits are few and badly located.

Factory housekeeping. The factory appeared to be in a very dirty condition. Floor space is badly cluttered up and the entire shop is poorly kept up.

Accident and health hazard. On account of the nature of the work there is little danger from the machine operations. Some of the women complain that the wire and bristles make their hands sore. No uniforms are worn by the women.

Sanitation and service features. The toilet and washing facilities which are used by the women engaged in Ordnance work consist in an inside small toilet room containing two dirty toilets and an old rusty iron trough. The room is painted an ugly dark gray. There is a small combination cloak, rest and lunch room. No special person seems to be responsible for keeping this clean. The women generally eat lunch in the shop.

There is no provision for medical care.

## 9. Community conditions.

All the employees live in the city of Milwaukee. Trolley lines run within a convenient distance from the plant.

Recommendations.

1. There should be a reorganization of employment methods.
2. A new fully equipped toilet and wash room should be installed.

3. A comfortable rest room should be furnished.
4. Ventilation in the work shop should be improved.

Action taken.

The above recommendations were discussed with Mr. Cornell, Superintendent, who expressed appreciation of the assistance offered by the Women's Branch.

AMY HEWES,  
Supervisor in Women's Branch,  
Industrial Service Section.  
By:

GERTRUDE BRUYN, Inspector.

Production  
Women's Branch  
Industrial Service Section

From: Amy Hewes, Women's Branch, Industrial Service Section.

To: Clara M. Tead, Director Women's Branch,  
Industrial Service Section.

Subject: Visit to plant of FEDERAL PRESSED STEEL COMPANY,  
Milwaukee, Wisconsin. Inspected by Gertrude Bruyn,  
October 31, 1918.

Reason for visit.

The visit was made at the request of a Government Inspector in the district who reported that women were working in this plant and suggested that the advice of the Women's Branch might be of value.

Persons interviewed.

- Mr. George F. Markham, President.
- Mr. Arthur Blank, Government Inspector.
- Mr. Robinson, Shipping Clerk.
- Mr. Curly, Assistant Government Inspector.
- Miss Bessie Lawrence, Forewoman of Government Inspectors.

Organization.

- Mr. George F. Markham, President.
- Mr. William K. Winkler, Vice President.
- Mr. W. J. Hanson, Secretary.

The company was organized in 1909 and there has been no special reorganization for war contracts.

Contracts.

GA208 for 2200,000 brass cartridge cases for 4.7 howitzers. Deliveries to start four months from receipt of order and contract to be completed three months after that date.

G1379-757 for 1,500,000 Mark II cartridge cases for 3", 15 pounder guns. Deliveries to start January 15, 1918 and proceed at the rate of 9,000 a day until the contract is completed.

MS 319.12/210

P10460-2088TW for 68,500 Mark I Livens projector gas shell. Deliveries to start July 31, 1918 and contract to be completed by January 1, 1919.

P11902-2217TW for 13,500 gas cylinders attachments to emplacement sets. Deliveries to start 30 days after receipt of steel and proceed at the rate of 600 a day until the contract is completed.

### Production.

Delayed production on these gas shell, according to Mr. Markham, is due to the fact that they have been unable to perfect a welding process. Only seven firms in the United States are making these Livens projectors and all are having the same trouble. A new forge welding furnace is now being set up and when that is completed it is estimated that 300 Livens will be put out every 24 hours.

### Products other than Ordnance.

At the present time the firm is doing 100% war work. Before the war its commercial products were pressed steel and brass tanks for acetylene and prest-o-lite. The company has no contracts with other Government departments.

### Salient features regarding employment.

#### 1. Source and character of labor supply.

The labor supply is drawn entirely from the city of Milwaukee. The men employees seem to be of a very rough class but most of the women are of a higher grade. Eight women employed at washing the cartridge cases are middle-aged, foreign women, rather coarse and hardened.

#### 2. Numbers employed.

The total number of men employed on all three shifts is about 500. About 50 women are employed.

#### 3. Hours.

Men,

Shift I

7:00 A.M. to 3:00 P.M.  
(5 minute lunch period)

Shift II

3:00 P.M. to 11:00 P.M.  
(5 minute lunch period)

## Shift III.

11:00 P.M. to 7:00 A.M.  
(5 minute lunch period)

## Women, Employees of the Company.

Monday to Saturday  
7:30 A.M. to 12:00  
1:00 P.M. to 4:30 P.M.

## Women, Employees of the Government.

Monday to Saturday.  
8:00 A.M. to 12:00  
1:00 P.M. to 5:00 P.M.

All working hours for both men and women total to eight hours a day and forty-eight hours a week.

## 4. Wages.

Men. Employees of the company begin on time rates of \$3.50 a day. It was impossible to obtain very accurate information regarding piece rates. \$3.50 was given as the minimum earning on piece work and \$12 as the maximum.

Government inspectors receive \$3.50 a day.

Women. Company inspectors receive \$2.40 a day and the washers \$2.68. Government inspectors receive \$2.50 a day.

Just recently there has been some agitation concerning wages. Mr. Markham stated that about a week ago a committee of women employed by the company had visited the General Superintendent asking for a raise in wages. These women were employed on inspection and received \$2.40 a day. The request was for a raise of 20¢ a day. Even this would not bring their wages up to the same amount that the eight washers were receiving, which is \$2.68. Mr. Markham said the matter had not been decided but also stated that he felt sure they would not raise company inspectors higher than government.

## 5. Occupations of women.

Women are employed at washing and inspecting cartridge cases.

Washing. Eight women wash the finished cartridge cases. There are two sets of troughs, each set containing four

different solutions, and one woman stands at each of these sinks. The cartridge cases are trucked to the troughs and the women immerse them horizontally in each of the four solutions, each time scrubbing the outside surface with a stiff brush. The first solution, is a strong soap powder solution, made of "Wyandott soap powder", second, a weak soap powder solution, then warm water, and lastly, hot water. The cases then dry for six hours before they are inspected.

Inspecting. The inspection operations consist in:

- a. Visual examination for
  1. Dents
  2. Scratches
  3. Defective metal
  4. Greasy surface.
  
- b. Tests for
  1. Wall thickness
  2. The diameter of the primer hole
  3. The diameter for the counter bore.
  4. The depth of the counter bore
  5. The diameter of the base and diameter of the shoulder.
  6. The height of the shoulder
  7. The thickness of the flange
  8. The inside diameter of mouth.
  9. The length of over-all.
  10. The diameter of muzzle with ring gauge.
  11. The diameter of neck with ring gauge.
  12. The thickness of base.
  13. The concentricity of the primer hole.
  14. The indent height through the primer hole.

6. Training.

The foremen give the only training which the women receive.

7. Employment management.

All women are hired either by Mr. Augustus Johnson, Chief Company Inspector, or by Mr. Blank, Chief Army Inspector. There is no centralized employment agency for the women. There is an employment office to which men may apply, but there is no definite person in charge there and the superintendents for the different shifts interview applicants.

Mr. Markham reported that the labor turnover among the men during the summer had been approximately 500%

a month. He attributed this to the fact that a very rough class of labor was employed and the employees acquired the habit of working there three days and then laying off. He hopes that in the cold weather there will be no temptation to take such vacations.

As far as Mr. Markham knew the turnover among women has been small. Mr. Blank reported that only two government inspectors had left since women were first employed last spring.

#### 8. Working conditions.

Industrial relations and shop practices. A shop committee of women recently conferred with Mr. Markham regarding a raise in wages (See paragraph under Wages).

The Federal Pressed Steel Company is not a member of the Milwaukee Manufacturers' Association. It will not join this association until the work on Government contracts is completed.

Plant construction and shop layout. The main part of the plant is a brick and reinforced concrete one story rectangular building with about 50% window space. This was built in 1912. Just two months ago there was added to this a new wing almost as large as the original building. This is a steel frame brick building and practically 90% of its wall space is windows. The whole plant now covers approximately two acres of ground. Lighting and ventilation in the old buildings are poor, but in the new part where the women work are excellent. The building itself is fire-proof and the women are located near two doors of the shop on the ground floor. There is a sprinkler system throughout the plant.

Accident and health hazard. No serious health or accident problems were noted. The inspectors have chairs with backs and may sit at their work. The women engaged in washing the cartridge cases are provided with rubber gloves and stand on wooden racks; so their feet are kept in a dry condition.

No uniforms are worn.

#### Sanitation and service features.

Toilet and washing facilities. There is a new toilet room containing five enclosed toilets. Ventilation here is good. Adjoining this and in one end of the rest room there is a long wash trough with running cold water. Paper towels and soap are provided. There is also drinking water in this trough.

Rest room. The rest and lunch room, at one end of which is the washing trough, is a room about 20 by 50 feet just newly painted. It contains tables and benches where the women eat their lunches. At present clothes hang on hooks around the edge of the room, but lockers are being built just outside of this room and these will provide individual locker space for the women. There is a very small dressing room next to this row of lockers.

Medical care. The only medical care given the employees is administered by one of the men employees who owns a first aid kit. Mr. Blank reported that this was a very poor arrangement. To his knowledge, however, there had been only two very minor accidents to women and these were small scratches from rough brass.

9. Community conditions.

A trolley line connecting with the center of the city runs within three blocks of the plant. Most employees travel on this to and from work. The trip takes about half an hour.

Recommendations.

1. A study should be made of cause for the high turnover of men and the feasibility of substituting women for the drill press operations.
2. A first aid room should be equipped.
3. There should be running hot water in the wash troughs.

Action taken.

These recommendations were discussed with Mr. Markham and the assistance of the Women's Branch offered.

AMY HEWES,  
Supervisor in Women's Branch,  
Industrial Service Section.  
By:

GERTRUDE BRUYN, Inspector.

*Miss Van Dyke* 37  
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WAR DEPARTMENT  
OFFICE OF THE CHIEF OF ORDNANCE  
**PRODUCTION DIVISION**  
SEVENTH AND B STREETS NW.  
WASHINGTON

Answer should be addressed to "-----**COPY**----- Section, Production Division, Seventh and B Sts. NW., Washington, D. C."

In replying refer to No.

**From:** Office of the Chief of Ordnance, Womens Branch, Amy Hewes, Director. Chicago District Ordnance Office.

**To:** Mrs. Clara M. Tead, Director, Womens Branch, Industrial Service Section,

**Subject:** SUPPLEMENTARY REPORT - Visit to Gisholt Manufacturing Company and NORTHWESTERN ORDNANCE COMPANY, Milwaukee, Wisconsin, Inspected by Avis King, October 30, 1918.

REASON FOR VISIT

Theseclosley affiliated plants were visited to obtain information of the progress made in the training and employment of women.

PERSONS INTERVIEWED

Mr. C. A. Johnson, President  
Mr. Bullard, Superintendent of Instruction  
Miss Koppke, Instructor.

TRAINING SCHOOL

The Gisholt Company employs nowabout 140 women. All but ten of these women have been trained in the vestibule school. The outline of this course is given below.

Outline of course for girls

- Step 1 Lecture on the various measuring scales used in machine shop work.
- Step 2 Drawing lines and measuring same within limits of 1/16th.
- Step 3 Drawing lines and measuring same within limits of 1/32nd.
- Step 4 Measuring cold rolled stock for lengths and diameters using both scale and calipers, Limits 1/64th.
- Step 5 Measuring sample pieces, getting length bore and outside diameters in 64ths, using scale, inside and outside calipers.
- Step 6 Lecture on micrometer caliper.
- Step 7 Measuring cold rolled stock, using scale and micrometer.
- Step 8 Measuring sample pieces, using scale for length, calipers and micrometers for inside and outside ~~xxxxxx~~ diameters.
- Step 9 Sketching plug guage, milling cutter and snap guage, inserting dimensions in thousandths. Explaining use of thickness guage and applying same in practise.
- Step 10 Using bevel protractor, measuring standard threads. Calipering drill sizes, guaging tapped holes and selecting machine screws to fit same. Using depth guage. Inserting dimensions as indicated in drawing.
- Step 11 Practise in reading drawings, review of tools and use of same.

WAR DEPARTMENT  
OFFICE OF THE CHIEF OF ORDNANCE  
PRODUCTION DIVISION  
SEVENTH AND B STREETS NW.  
WASHINGTON

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*In replying refer to No.*

The firm has found this school of infinite value in determining placement. The rating the foreman accords the girls after a week or two of employment invariably coincided with the school rating, a fact which would seem to check up on the value of the school. The firm has not allowed the plan of refusing to put girls who fail in the school to work because they do not wish people to leave the plant with a grievance. But girls who fail in the school rarely last and usually quit voluntarily within a week. (A sample rating card is filed in the Record Form Folder.)

At the present time women are graduated from the school into the shop. This week they expect to put a woman through a part of the course in the men's service school. This will be begun by having a woman take a lathe apart and reconstruct it and then grind a complete set of tools. If this succeeds, they will put more women through this training.

The course for men is as follows:

1. Dismantling a Gisholt tool-grinding machine to learn its construction.
2. Assembling, adjusting, and oiling the grinding machine.
3. Grinding a set of standard tools on the grinding machine to learn clearness and rake.
4. Brushing and cleaning the grinding machine to teach care and neatness.
5. Dismantling an H-21-in. standard belt-driven Gisholt turret lathe.
6. Scraping bearings, Vs, etc. for use in overhauling machinery.
7. Assembling, adjusting and oiling the lathe to learn construction and care.
8. Operating the lathe to be familiar with all of its movements.
9. Heavy cuts on J-28-in. standard belt-driven Gisholt lathe to see execution.
10. Placing tools on lathe as per layout sheet for machining countershaft pulley.
11. Operating 28-in. lathe on counterpart pulleys, as per time study.
12. Dismantling tool set-up to teach proper disposition of tools.
13. Cleaning lathe and tools to teach care and neatness.
14. Boring jaws on an H-21-in. standard motor-driven Gisholt turret lathe for practise.
15. Cutting threads on lathe to learn method and practise.
16. Turning tapers on lathe to learn method and practise.
17. Placing tools on lathe as per layout for drilling, boring, reaming and turning a steel piece.
18. Operating the machine on a steel piece for experience on steel work.
19. Dismantling set-up and cleaning tools to teach care and neatness.
20. Placing tools on the machine as per layout sheet for making crosshead pins from bar stock.
21. Operating machine on crosshead pins for experience with bar stock tools.
22. Dismantling and cleaning up tools to teach care and neatness.

WAR DEPARTMENT  
OFFICE OF THE CHIEF OF ORDNANCE  
PRODUCTION DIVISION  
SEVENTH AND B STREETS NW.  
WASHINGTON

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In replying refer to No.

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- 23 Cleaning up machine to teach care and neatness.
- 24 Estimating the basis for planning method and tooling of work.
25. Taking a new man for a trip through all departments of the factory.

LABOR SITUATION AT NORTHWESTERN ORDNANCE PLANT

At present men only are employed in the ordnance plant. If women are used later they will come from the Gishelt shop School. The management is unable to estimate how far the expansion will go because of the unsettled war situation.

EMPLOYMENT DEPARTMENT

When interviewed in regard to the installing of a woman employment executive, Mr. Johnson said it might be future development but would depend on the continuance of the war, and also on whether women are employed after the war. He stated that the company is so experienced ~~that~~ in personnel matters that even if they should install ~~an~~ a woman executive, they would not need outside help in doing so but would take someone from the plant for the work.

AMY HEWES  
Supervisor in Women's Branch  
Industrial Service Section

By AVIS RING  
Supervisor in Employment Management.

Production  
Women's Branch  
Industrial Service Section

From: Amy Hewes, Women's Branch, Industrial Service Section.  
To: Mrs. Clara M. Tead, Director Women's Branch,  
Industrial Service Section.  
Subject: Visit to plant of FARLEY AND LOETSCHER COMPANY, Dubuque,  
Iowa. Inspected November 8, 1918 by Amy Hewes and Ruth  
E. Knowlton.

Reason for visit.

Mr. Slayton of the Production Division requested an inspection of the plant. A letter advising rest periods had been sent and the visit was made to follow up results in regard to suggestions made.

Persons interviewed.

Mr. John Loetscher, Secretary.  
Miss Paley, Government Inspector.

Organization.

C. Loetscher, President.  
J. M. Burch, Vice President and Treasurer.  
A. A. Loetscher, Superintendent.  
John A. Loetscher, Secretary.  
Frank Neill, Army Inspector.

Contracts.

P9188-1756Sa

For 67,406 ammunition boxes Browning machine gun.  
Deliveries: to start July 1, 1918, 1500 a day until  
completed.

P14820-2509Sa 9/11/18  
For 125,000 ammunition boxes for the Browning machine  
gun M1917, water cooled.  
Deliveries: 3,000 boxes a day, to begin 9/23/18, to  
be completed 11/18/18.

Mrs. S. 3/19/12/11

Production.

Production on present contracts is practically completed. Work on the new contract will begin in the immediate future.

Products other than Ordnance.

The company has contracts with the Construction Division and is making window sashes and door frames for the cantonments. It also holds Navy contracts.

Salient features regarding employment.

## 1. Source and character of labor supply.

No scarcity of labor was reported. The women employed are residents of the town and live at home.

## 2. Numbers employed.

Men	600
Women	160

No one under 16 is employed.

## 3. Hours

Monday to Saturday.  
7:00 A.M. to 12:00  
12:30 P.M. to 5:30

The hours total ten per day and 60 per week. When production conditions permit the schedule will be 55 hours with Saturday half holiday.

Thirty minutes are allowed for lunch at noon. There are two rest periods for women of five minutes each, one at 9:30 A.M. and one at 3:00 P.M. Notices of the rest periods are posted as "according to the Federal Statute". In practice they exceed five minutes. A majority of the workers use the opportunity to eat sandwiches or drink coffee.

## 4. Wages.

The women are all paid a time rate. They begin at 23 $\frac{1}{2}$ ¢ and are raised to 25, 27 $\frac{1}{2}$  and in a few cases to 30¢ an hour. Until recently the beginning rate was 20¢ an hour. Time and one half is not given for the ten hour day.

The majority of men are on time rates and average \$3.00 to \$3.50 a day.

## 5. Occupations.

The Browning Ammunition Box has an outside dimension of  $7\frac{1}{2}$  x  $12\frac{1}{2}$  x  $4\frac{1}{2}$  inches and weighs about five pounds when completed. It is very carefully and strongly made. Mr. Loetscher said that they had been putting out too finished a product and hereafter as a result of Washington conferences would aim more for quantity production.

The operations the women perform may be divided into four groups, (1) Putting on the lid, (2) Puttying, (3) Painting, (4) Fitting. Women do some inspecting and assist in packing.

The work is performed by groups and the box is passed along from one to another for the successive steps. In fitting on the lid women are employed as follows:

1. Fit lid on box and see that lock catches.
2. Drive two nails to fasten lid.
3. Drill holes for screws in cover. One woman does this by hand.
4. Saw lid for hinge - one woman.
5. Put on hinge - Screws are driven in by a screw driving machine in two operations.

The putty is put in around the corners and edges with fingers.

A first inspection by company and government is made before painting.

In the paint spraying department one woman blows out the dust in the box with compressed air. The boxes are sprayed inside and out with linseed oil and the outside is painted dull gray to decrease visibility. Women put the boxes on hooks of a revolving frame which carries them under a hood where they are sprayed by men. Women remove the boxes after they are sprayed. They also re-touch them when paint is rubbed off. The boxes are placed on trucks with shelves and unloaded on racks in the drying room by women. The shelves weigh approximately thirty pounds and are lifted by two women.

In the fitting department the pins which hold the handle are put in and the leather handle is put on.

One woman is employed on the final government inspection. The boxes are given a visual inspection and tested with a gauge. Variation in inside dimensions of  $1/16$  of an inch is permissible.

6. Training and substitution.

Training is not essential. The worker does the work as well at the end of the first day as at the end of a month or more, according to Miss Paley, an operative, who had performed many of the operations. Women have been substituted for young boys and old men to a great extent.

7. Employment management.

Women are employed by Mr. Jack Loetscher, General Foreman. Women were first taken on in August. During the last two months it is reported that labor turnover has very much decreased. The wage scale is high for the town.

8. Working conditions.

Plant construction. The plant consists of two brick buildings connected by an overhead passageway. The newer building is a five story fireproof brick structure. The shop is clean and well ventilated. An exception is the paint spraying department where exhaust seems inadequate.

Accident hazard. The hazards appear small. Women working near machines are required to wear uniforms. No women are working on saws.

Sanitation and service features.

The main toilet room is on the second floor in the new building. There are four toilets and six bowls with cold water. On the third and fourth floor two toilets and locker rooms are partitioned off, each with three open toilets and two wash bowls.

The women object to the open toilets and as a rule use the second floor room in the new building.

Tables and benches are placed in the locker room on the second floor. The janitress makes hot coffee for the women's lunch on a small gas stove.

9. Community conditions.

Dubuque is a town of 43,000. The people are largely well-to-do German farmers. A trolley line connects the different parts of the town.

Recommendations.

1. The exhaust on the paint spraying machine should be made more effective.
2. Partitions should be put up to separate the toilets in the old building.
3. A time and output study should be made to determine the most effective length and time for rest periods and methods of relieving choke points of production, known to exist.

Action taken.

The recommendations above were made to Mr. John Loetscher. If the plant continues to do work on which women will be used the toilets will be rearranged. It is expected that the painting operation may be omitted from the new contract. The time study will be made if the plant fills its new contract.

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By:

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