

CIGAR MAKERS

—AFTER THE LAY-OFF

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PROGRESS ADMINISTRATION
RESEARCH PROJECT

WORKS PROGRESS ADMINISTRATION

HARRY L. HOPKINS
Administrator

CORRINGTON GILL
Assistant Administrator

NATIONAL RESEARCH PROJECT

on

Reemployment Opportunities and Recent Changes in Industrial Techniques

DAVID WEINTRAUB
Director

IRVING KAPLAN
Associate Director

Studies of the Effects of Industrial Change on Labor Markets

**THE W.P.A. NATIONAL RESEARCH PROJECT
ON REEMPLOYMENT OPPORTUNITIES AND RECENT CHANGES
IN INDUSTRIAL TECHNIQUES**

Under the authority granted by the President in the Executive Order which created the Works Progress Administration, Administrator *Harry L. Hopkins* authorized the establishment of a research program for the purpose of collecting and analyzing data bearing on problems of employment, unemployment, and relief. Accordingly, the National Research Program was established in October 1935 under the supervision of *Corvington Gill*, Assistant Administrator of the WPA, who appointed the directors of the individual studies or projects.

The Project on Reemployment Opportunities and Recent Changes in Industrial Techniques was organized in December 1935 to inquire, with the cooperation of industry, labor, and governmental and private agencies, into the extent of recent changes in industrial techniques and to evaluate the effects of these changes on the volume of employment and unemployment. *David Weintraub* and *Irving Kaplan*, members of the research staff of the Division of Research, Statistics, and Finance, were appointed, respectively, Director and Associate Director of the Project. The task set for them was to assemble and organize the existing data which bear on the problem and to augment these data by field surveys and analyses.

To this end, many governmental agencies which are the collectors and repositories of pertinent information were invited to cooperate. The cooperating agencies of the United States Government include the Department of Agriculture, the Bureau of Mines of the Department of the Interior, the Bureau of Labor Statistics of the Department of Labor, the Railroad Retirement Board, the Social Security Board, the Bureau of Internal Revenue of the Department of the Treasury, the Department of Commerce, the Federal Trade Commission, and the Tariff Commission.

The following private agencies joined with the National Research Project in conducting special studies: the Industrial Research Department of the University of Pennsylvania, the National Bureau of Economic Research, Inc., the Employment Stabilization Research Institute of the University of Minnesota, and the Agricultural Economics Departments in the Agricultural Experiment Stations of California, Illinois, Iowa, and New York.

CIGAR MAKERS — AFTER THE LAY-OFF

A case study of the effects of mechanization
on employment of hand cigar makers

by

Daniel Creamer
and
Gladys V. Swackhamer

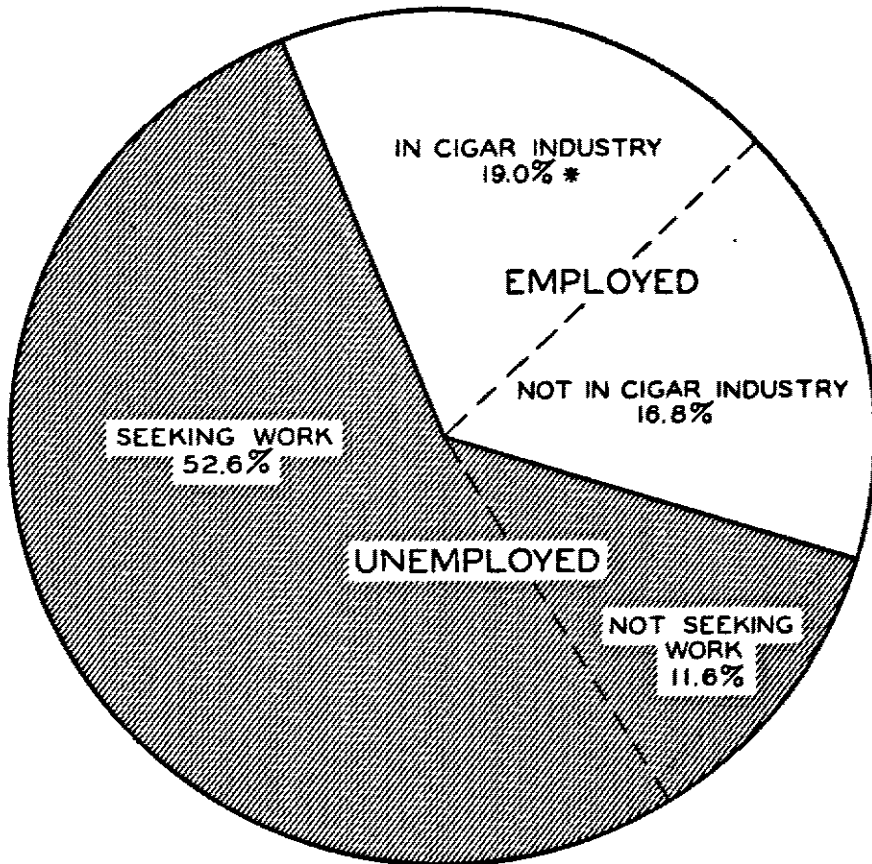
Studies of the Effects of Industrial Change on Labor Markets

Report No. L-1

Philadelphia, Pennsylvania

December 1937

EMPLOYMENT AND UNEMPLOYMENT AFTER LAY-OFF
PERCENT DISTRIBUTION OF TOTAL ELAPSED MONTHS
SINCE LAY-OFF



See table 22 for data.

WPA - National Research Project
LS-6

*This figure consists of 10.2 percent spent in working for others and 8.8 percent spent in self-employment which has constituted chiefly a form of disguised unemployment. See discussion, pp. 51-7.

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WORKS PROGRESS ADMINISTRATION

WALKER-JOHNSON BUILDING
1734 NEW YORK AVENUE NW.
WASHINGTON, D. C.

HARRY L. HOPKINS
ADMINISTRATOR

December 16, 1937

Hon. Harry L. Hopkins
Works Progress Administrator

Sir:

I have the honor to transmit a report on the study of the effects of mechanization on employment and earnings of workers in the cigar industry. The study is the first in a series on "Effects of Industrial Change on Labor Markets" and is based primarily on a case study of a plant which was mechanized in 1931. The competitive conditions under which the change in process was made and the characteristics of the personnel involved have been and continue to be so typical of the industry, as the supporting evidence presented shows, that generalization of the findings has been appropriately undertaken.

The principal finding, of special concern to a relief administration, is that many thousands of workers, formerly or now attached to the cigar industry as skilled artisans, will be primarily dependent for their well-being on public relief for many years. Since 1920, the cigar has rapidly been losing ground to the cigarette. Ever increasing numbers of cigar manufacturers have been finding themselves confronted with the alternatives of either losing their markets or reducing the costs of production and the price of their product to levels which will maintain a profitable volume of output. Mechanization of the cigar-making process has afforded the instrument for the reduction in cost, and the manufacture of a product to retail at five cents or less has resulted in at least the retardation of the decline in production. The combined inroads of declining production and mechanization of the production process have reduced the average employment in the cigar industry

from 114,000 in 1919 to 84,000 in 1929 and 56,000 in 1935.

The decline in employment represented by the above figures reflects only part of the loss of employment to which cigar workers have been subject. It is estimated that by 1929, ten years after the first cigar plant was mechanized, 35 percent of the total cigar output was a machine product. The aggravated price competition during the depression further favored the encroachment of machine production so that more than half of the 1933 output was machine made. Almost without exception, whenever a plant is mechanized, the entire force of hand cigar makers is dismissed and a smaller number of young women is hired to operate the newly installed machines. It is estimated that upwards of 15,000 machine operators have been thus substituted in automatic production plants, and that approximately 40,000 are working in the other plants. The hand cigar worker who can still find an employer for his craft works under the overhanging threat of displacement by machine competition - a threat reflected in his reduced wage rate and earnings. Available evidence indicates that, for cigars selling at 5 cents or less, hand workers whose product competes with machine production earn less than the machine operators.

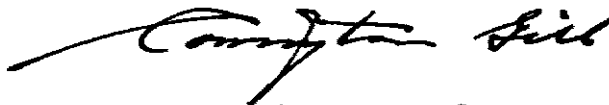
The great majority of skilled cigar makers are well on in years and have been long habituated to a single craft which is not transferable to other industries. The typical prospect, when the cigar factory at which he is employed mechanizes, is unemployment of long duration, interrupted for relatively few by occasional jobs. The displaced artisan cannot look forward to making a living at a job at his craft. Self-employment in the industry frequently does not yield subsistence.

The employed artisan who will be displaced by machines in the years ahead will find small comfort in the present coverage of the unemployment compensation laws. The chances are that irregularity of employment prior to his final lay-off will leave him with a very short or no period of eligibility for benefits ahead, and, in any event, the limited eligibility period will only postpone the problem of long-time unemployment. Typically too old a hand at his craft to make a favorable self-adjustment and not old enough for an old age pension, the cigar worker who will be displaced in the next few years will ordinarily, like his brother dis-

placed in the past, wait for the means test to overtake him.

This study was made under the direction of Irving Kaplan, Associate Director of our National Research Project. The Bureau of Research and Statistics of the Social Security Board has collaborated in the project, out of which this study has developed, by making available the services of Daniel Creamer, a member of its staff. The report was prepared by Mr. Creamer and Miss Gladys V. Swackhamer.

Respectfully yours,

A handwritten signature in cursive script, reading "Corrington Gill". The signature is written in black ink and is positioned above the typed name and title.

Corrington Gill
Assistant Administrator

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PREFACE

This study of workers in the cigar industry begins a series planned to throw light on the bearing of economic conditions and the technological developments associated with these conditions on the employment and unemployment experience of workers in selected industrial situations.

In the situation covered by this survey, more than 600 male cigar makers were laid off in 1931, and some 200 female machine operators were taken on instead to make a cheaper product by automatic machinery. The findings are based primarily on an analysis of the employment and earnings records of the cigar workers who were laid off and the machine operators who were substituted. During the 5 years following the lay-off, the cigar makers, as a group, were without work 52 percent of the time, although able and willing to work and actively seeking work. Nine percent of their time was spent in self-employment in the cigar industry, 10 percent in working for others in the industry, and 17 percent in working outside the cigar industry. The remaining 12 percent of the time was accounted for by those who became too old or otherwise disabled for work.

Five years after the lay-off approximately 13 percent were self-employed cigar makers, and many more had tried self-employment in the interim and had failed. Another 17 percent were employed by others in the cigar industry; some of these had the precarious security of jobs with "buckeyes",¹ while others were no longer cigar makers but had obtained semiskilled or unskilled jobs with the company which had mechanized its plant. Though many of them roamed far and wide in quest of a livelihood, the majority found no work at cigar making, and 25 percent found no work at all during the 5 years after the lay-off. Jobs were typically casual, unemployment typically of long duration, and the older the worker the more prevalent was going without work.

The effects of the mechanization of the cigar-making process are illustrative of the type of technological change in which the production process is completely converted from a system employing hand workers to one utilizing automatic machinery and

¹The "buckeye" is a self-employed cigar maker manufacturing on a small scale. He has no or only a few employees. In the situation surveyed, "buckeye" operation has constituted a form of disguised unemployment.

machine operators. Since mass production methods have become widely prevalent, the field for this type of technological change has necessarily become limited. Other examples do, however, come to mind. Glass blowing went through a cycle of such changes during the earlier decades in this century. In more recent years the baking industry has been similarly affected.

When a hand process becomes mechanized, the experience and personal characteristics of the hand workers ordinarily afford no special qualification for service in the substituted production process. Frequently, as in the case of mechanization in the cigar industry, there is at least an apparent advantage in substituting new personnel with the new process. The character of the technological change is thus important in determining the number and type of workers who become unemployed. On the other hand, the extent of unemployment facing the workers immediately affected by the loss of job is controlled, not by the type of technological change, but by the economic conditions under which the change takes place and by the characteristics of the workers affected. In the case of the cigar industry, the economic conditions have been those of markedly declining production, reducing opportunities for employment in the industry, and the characteristic worker is a skilled artisan long associated with his craft and an "older worker."

Examples of industries characterized by declining production and declining opportunities for employment are, of course, much more numerous than those of industries affected by the drastic type of technological change represented by the transformation of handicraft to machine methods. Moreover, during the past 8 years almost all industries have been subject to severe curtailment of production and employment for relatively long periods of time. Under such circumstances the pressure for cost reduction is indeed very great, and a technological improvement which reduces the number of jobs or substitutes one group of workers for another is likely to impose prolonged unemployment among many of the workers laid off. When jobs elsewhere, in the worker's usual industry or in other industries utilizing his special qualifications, are scarce, the worker's eagerness to work is usually of little consequence.

The cigar maker's skill is not transferable to other industries and this is characteristic of skills in many industries. The

skills of hand operatives and of skilled workers generally are, to a greater or lesser degree, specialized to an industry, and this specialization may fundamentally limit their transferability. These skilled workers are quite generally subject to the effects of technological changes, whether singularly drastic, as in the case of the cigar industry, or continuous and cumulative, as in most instances. Their security is therefore much more generally undermined by the more common types of technological change than by the complete conversion from hand to machine production.

Apart from the mechanical capacity to utilize or adapt skills required in other industries, long-established association with one industry may also limit the opportunity to become established in another industry. Men who have worked in the mines traditionally remain dependent on the availability of jobs as miners. It is the farm youth rather than the experienced farmer who finds his way into industry. While machinists were in demand by many Philadelphia metal industries in 1936, machinists attached to the heavy-equipment industries remained unemployed. In the same year, the Minneapolis metal-working plants were seeking machinists, but railroad machinists remained on the relief rolls. In all these cases the workers' skills are, in greater or lesser degree, specialized to the particular requirements of their usual industry. Other factors than the ability to adapt or acquire the skill required for jobs in another industry are, however, important. The absence of extensive and adequately used placement services may account for the worker's dependence on his habitual associations in his quest for work.

A number of studies of the National Research Project are concerned with the degree to which and the conditions under which workers in given occupations and industries find employment in other occupations and industries. Since age also is a selective factor, with older workers frequently finding it more difficult to establish themselves anew in industry than young workers, the relationship between age and the characteristics of employment and unemployment experience are subjects of analysis in a number of forthcoming reports in this series.

A debt of gratitude is owed to all the cigar makers who were interviewed and without whose generous cooperation this survey would not have been possible. We also are indebted to the R. G. Sullivan Company and the Manchester Local No. 192 of the Cigar Makers' International Union for their help in making necessary records available to us. Mr. John Bogaert, secretary of the union, Mr. Fritz Kuehn, and Mr. Michael Quinn, all former hand cigar makers at the R. G. Sullivan plant, were particularly helpful in tracing the whereabouts of persons in our sample and in providing general information on the history of the industry in the Manchester area. To Mr. Lucianus Altenau of Manchester we are obligated for information on the problems of the "buckeye" proprietors, and to Miss Jules Teras, forelady at the R. G. Sullivan factory, for material on the present-day conditions of employment of the machine operators. Finally, acknowledgment is made to the Portsmouth, New Hampshire, office of the United States Bureau of Internal Revenue, to the Division of Unemployment Compensation of the New Hampshire Bureau of Labor, to the office of the Commissioner of Charities of Manchester, the office of Charities and Correction of Hillsboro County, New Hampshire, and the Central Index of Agencies of Manchester for making available special tabulations included in the report.

DAVID WEINTRAUB
IRVING KAPLAN

PHILADELPHIA

December 7, 1937

APPENDIXES

APPENDIX A

A FEW CASE HISTORIES

To help the reader visualize the men whom our study concerns, the following case histories have been appended.¹ The cases are representative of the chief groupings presented in the tables. Case 1 represents a characteristic "buckeye" owner of rather more than usual resourcefulness. Case 2 is one of those still following the trade who were receiving an adequate wage. Case 3 is typical of the group receiving public assistance. In case 4 we have a white blackbird, a cigar maker who has accomplished the successful transition to other equally remunerative work. Case 5 is typical of those who found employment after the depression began to lift, but employment of a less skilled and dead-end sort. Case 6 represents those who in spite of active search have held only casual and part-time jobs and are unemployed today. Case 7 is representative of men in the higher age brackets who have had practically no employment since the lay-off though actively in the labor market and who are ineligible for WPA because relatives can assist them.

CASE 1

James Fontainbleau, a French-Canadian by birth, had 5 years of schooling and started to learn the trade at 14. He is now 55 and has 41 years of cigar making behind him. Married, he has lived in Manchester for 39 years. His first job was in Boston. Out of work there, he heard through other cigar makers of good conditions at the "7-20-4" plant and came to Manchester in 1898. His average output was 325 cigars daily. When the machines were installed in the Company's factory he rented the loft of an old building around the corner from the main street and acquired enough equipment for himself and two assistants. At first the response of the town to the "buckeye" shops was encouraging, and Mr. Fontainbleau, being early in the field, established a trade name and a list of customers. But as the number of "buckeye" shops increased steadily, the market became over-

¹The facts presented are true, but they have been rearranged to some extent, and the names and places have been changed to prevent recognition.

crowded in Manchester and its environs, with the result that selling became more and more difficult. He enlarged his field of selling, going many miles out of the city, but still the market fell off, and the small shops and saloons expected him to make purchases in return for handling his products. His men have been on part time, eking out a living by other employment, or forced to take WPA laboring work. Mr. Fontainbleau himself has tried to find a cigar maker's job in the New England factories where hand work still obtains, but without success. He estimated his net income during 1936 as between 12 and 13 dollars per week. More time goes into distributing and collecting on his wares than into making them. His comment on the whole situation was "If I could get a job at \$15 a week, I'd throw out my equipment tomorrow."

CASE 2

Fred Van Loon is 53 years old and a native of Belgium. After 6 years of schooling he started work at the age of 12, helping to set type in a printing plant in Antwerp. At the end of a year he left to learn cigar making and after 3 more years came to the United States. From the time of learning the trade until the lay-off at the "7-20-4" plant in 1931, a period of 34 years, he was steadily employed at cigar making. He came to the Company's factory 15 years ago from a shop in Philadelphia because his cousin who was employed in Manchester described the superior working conditions there. Immediately after the lay-off he found 2 months' employment during the Christmas rush in a neighboring cigar factory and then was without work for over a year. In the early part of 1932 he risked part of his savings in a shop of his own but lost money and at the end of 6 months gave it up. After another stretch of idleness lasting for a year, he took a job as a wool sorter in the Amoskeag mills in Manchester. Following 2 years of steady work he again found himself without employment when the textile mills closed in the summer of '35. There followed another 16 months of fruitless search, for there was no work to be had in Manchester for a man of his age and he lacked money to travel to more prosperous places. Through the good offices of a friend working in a cigar factory in Waterbury, Connecticut, he learned of an opening there and got the job in December 1936. His wife and two grandchildren are remaining in

Manchester until they know more of what the future holds for the head of the home. At the moment he may be regarded as a well-paid cigar worker for his wages are between \$17 and \$18 a week.

CASE 3

George Lederer was born in Germany 49 years ago. After 6 years of schooling he began work in a cigar factory at the age of 12 and within a few months went to work for his uncle as cigar maker. At the age of 25 he came to Boston, found work immediately, and was never without work at his trade until the lay-off at the "7-20-4" factory in 1931. He began work there in 1919 after other members of his family had preceded him and reported that wages were higher than in Boston. Since the lay-off he has found only unskilled work to do. For a year he "couldn't buy a job" but in the fall of 1932 he was employed for 2 months cleaning stables on a dairy farm. He had to leave when the weather became too cold for him to sleep in the unheated barn. The following summer he had 3 months of part-time, intermittent employment mixing cement for a private construction company. Being out of funds, he then applied for relief and became a wood chopper in the State woodyard for 10 months to pay for his groceries. Informed by a friend of an opening for cigar makers in a small factory in Vermont, he applied, got the job, and was occupied for 3 weeks. In the meantime he had lost his relief status and being single was unable to obtain emergency work again until 5 months had passed. Finally in December 1935, he was assigned to pick-and-shovel labor on a WPA highway repair project. Since that time he has been on relief, transferring from one project to another but always at unskilled labor. He was rejected for road-construction work by the Resettlement Administration following a doctor's examination but was returned to the same kind of work under WPA where he was working 3 days a week at the time of the survey.

CASE 4

Thomas Ryall, 42 years old, was born in Manchester and lived there all his life. He completed the seventh grade and started to work as a stock boy in the Company's factory at the age of

14. His father had been a cigar maker there before him, and the good wages and steady work were a source of much satisfaction to Thomas and his family. After 22 years of employment he was discharged in the last months of the lay-off. Three months of seeking work resulted in a laboring job with the city Department of Public Works. Within 7 months the job was completed, but he was successful in obtaining immediately a county position as assistant foreman in road building. After 4 months these jobs were designated for needy persons only and, as he was not eligible for relief, he was laid off again. But a city post of assistant commissioner fell vacant and he was appointed to the position after only 2 months of unemployment. He has held this position ever since, representing one of the very few cigar makers whose economic status is as good today as it was prior to 1931.

CASE 5

Johan Van der Bank was born in Amsterdam, Holland, but came with his parents to Manchester at the age of three and has lived there ever since. He is now 33 years old. His employment history was bounded by the walls of the Company's factory up to the time of the lay-off. He finished grammar school while still 13 and went to work when 14 years of age. His first job in the cigar factory was operating a banding machine. In 6 months he was promoted to stock clerk and continued as such for 2 years. At 17 he started making cigars. He had worked at this trade for 12 years up to January 1932. In the meantime, he had acquired a wife and 3 children and a home in Manchester. After leaving the "7-20-4" factory he was unemployed for nearly 3 years. During this period he sought work of any kind in all the industries in the city. He did not look for work outside, knowing he could not support his family at home and pay for room and board elsewhere at the wages obtainable during the depression. Finally in 1934 he got work as a warehouse clerk in a shoe factory which went out of business 5 months later. Within a month after this lay-off he found an opening as chauffeur for a private family for whom he has worked ever since.

CASE 6

Augustus Boerr was born in Belgium 39 years ago. After 7 years of school attendance he began making cigars at the age of 14. He worked for 5 years in the same factory in Ghent and then decided to try his fortune in America. Coming to Boston he found immediate employment at cigar making there. He had heard of the merits of the Company's factory and during a strike in the Boston factory he went to Manchester and applied for a job. He was accepted and did not return to Boston when the strike ended. Laid off at the "7-20-4" plant in the fall of 1931 after 20 years at cigar making, he did not try to continue at his trade as there were no good jobs available. He sought work of any kind in the shoe shops in Manchester and in the textile mills at Nashua, Lowell, and Lawrence. He also applied at the Portsmouth Navy Yard and at the trucking companies in Boston and surrounding towns. These out-of-town searches were made possible through the kindness of friends who took him along in their cars when they were going to these places. In spite of all efforts, however, Mr. Boerr has been able to obtain during the summer months only casual work inadequate in character to support himself and family. From June to September during the first two summers he got part-time employment as a caddy on the public golf course in the environs of Manchester. In November 1933 he was placed in the CWA at laboring work. But within 3 months all nonrelief workers were dismissed. Four months later in June 1934 he was offered a job at road building in a neighboring State. He took the job after arranging for his wife and child to stay with relatives. When in November the work was discontinued for the winter, he returned to Manchester. After another winter of idleness he found work as a construction laborer with a building firm. This employment was part-time and lasted for only 7 months. He immediately found another job as a cement mixer with a road-building contractor in a neighboring city but had worked only a month when the work was completed. That was in November 1936. Since then he has had no work.

CASE 7

Martin Eichhorn, 51, was born in Springfield, Massachusetts, and completed the grammar school. He started work as a roving

CIGAR MAKERS

boy in a cotton mill at the age of thirteen. His father was a friend of the foreman and got the job for him. After 3 years in the mill he decided to learn the cigar trade and got employment in a cigar factory there. For 17 years he worked in the factory but lost 1 to 3 months each year during the dull season. This continual loss of work finally prompted him in 1919 to seek an opening at the Company's plant. He knew of the favorable working conditions there and friends encouraged him. He was accepted and continued there until the lay-off. He had been a hand cigar maker for 30 years when the machines replaced him. Since that date in January 1932 he has had no employment with the exception of a few odd jobs each of less than a month's duration. He tried to get work at his trade in the cigar factories in Springfield by applying personally at the plants and writing to the union secretary but without any success. He also wrote to the overseers of several textile mills, but was told that he could not be given consideration in some of them because he resided outside the State. He believes his age has been the conditioning factor, but he is in good health and would take a job at \$10 a week. He applied for WPA employment but was refused because his son, with whom he lives, is working in private industry.

APPENDIX B

DESCRIPTION OF PROCESSES¹

PRELIMINARY OPERATIONS

Although cigars may be made by hand, by machine, or by a combination of both methods, the first steps in manufacture are the same in any case. The very first step is the assembly of the leaf tobacco. Cigar leaf is classified according to three general types - wrapper, binder, and filler,-although there is a substantial degree of alternative use within each of these groups.

Tobacco leaf comes to the cigar factories in bales. The bales are opened and spread out. The leaf is sorted and put into proper condition for handling by moistening, generally by dipping it in clear water and allowing it to stand covered in trays for a day or two. If further curing is necessary, the leaf may be stored in bins for a period of from 1 to 6 weeks; otherwise it goes directly to the strippers or stemmers who remove the hard midvein of the leaf. From the stemming operation the leaf goes to the hand cigar maker or to the cigar-making machine.

DESCRIPTION OF HAND MANUFACTURE OF CIGARS

The simplest and earliest method of making a cigar is still in use in some shops, particularly those making higher priced cigars. It is referred to as the "out-and-out" method. The worker uses no tools except a knife with a curved blade and a board on which to work.

The worker cuts a thin strip from a wrapper leaf, another from a binder, and selects the right amount of filler, which may be composed of long leaves, short leaves, or scraps of tobacco leaves. (See figure 8.) He then fashions the filler into proper form and size in the palm of his hand and wraps it in the strip of binder, making the "bunch." (See figures 6 and 9.) This is then placed on the strip of wrapper which lies flat on the board, and with a deft rolling movement the worker fashions the cigar, beginning

¹Adapted from an unpublished report on the cigar manufacturing industry prepared by W. D. Evans under the supervision of W. H. Dillingham of the National Research Project.

APPENDIX C

WEEKLY EARNINGS OF CIGAR WORKERS

The data presented in this appendix are for July 1933. These data are based on a special survey of labor in the cigar-manufacturing industry made for the National Recovery Administration by the United States Department of Commerce, Bureau of the Census. The survey covered, as of July 1, 1933, all manufacturers making \$5,000 or more worth of products per year.

The earnings data summarized in tables C-1 and C-2 relate only to individuals who were paid on a piece-work basis. Pieceworkers in the cigar industry predominantly are employed directly on the "making" operation. The columns, "low" and "high", represent averages of minimum and maximum rates of weekly earnings, re-

Table C-1.- AVERAGE EARNINGS PER WEEK, BY CLASSES OF CIGARS
PRODUCED IN THE UNITED STATES

July 1933^a

Class of cigars ^b	Hand work				Machine work	
	Men		Women		Women	
	Low	High	Low	High	Low	High
Class "A"	\$11.88	\$14.13	\$ 8.90	\$11.80	\$10.71	\$13.62
Class "B"	15.26	16.78	11.11	13.57	9.75	10.89
Class "C"	16.92	19.68	12.34	15.34	13.77	14.76
Class "D"	20.71	22.11	15.22	18.07	(c)	(c)
Class "E"	21.89	25.58	18.64	24.64	(c)	(c)

^aThe Tobacco Study (U. S. Dept. Com., National Recovery Administration, Division of Review, mimeo. report, Mar. 1936), pp. 159-60.

^bClass "A" cigars manufactured to retail at not more than 5 cents each.
 Class "B" cigars manufactured to retail at more than 5 cents each and not more than 8 cents each.
 Class "C" cigars manufactured to retail at more than 8 cents each and not more than 15 cents each.
 Class "D" cigars manufactured to retail at more than 15 cents each and not more than 20 cents each.
 Class "E" cigars manufactured to retail at more than 20 cents each.

^cNo machine work on this class of cigar.

Table C-2.- AVERAGE EARNINGS PER WEEK, BY STATES, OF WORKERS ON CLASS "A" CIGARS

July 1933^a

State	Hand work				Machine work	
	Men		Women		Women	
	Low	High	Low	High	Low	High
U. S. ^b	\$11.86	\$14.13	\$ 8.90	\$11.60	\$10.71	\$13.62
Calif.	11.28	13.19	10.60	12.37	10.00	10.00
Colo.	12.67	12.67	n. a.	n. a.	n. a.	n. a.
Conn.	16.02	18.27	n. a.	n. a.	n. a.	n. a.
Fla.	9.66	12.07	8.67	11.19	9.97	12.57
Ga.	5.08	9.25	5.45	7.85	(c)	(c)
Ill.	14.80	15.63	11.25	12.17	12.00	12.00
Ind.	13.81	14.39	9.47	9.83	10.50	11.50
Iowa	11.50	14.00	9.76	14.42	22.00	28.00
La.	11.66	13.50	8.08	9.29	10.99	12.60
Maine	15.33	17.52	n. a.	n. a.	n. a.	n. a.
Md.	8.73	10.47	11.37	12.10	(c)	(c)
Mass.	15.94	16.64	10.53	10.87	15.02	16.60
Mich.	15.61	16.07	9.79	13.10	10.08	14.32
Minn.	14.21	16.97	10.50	11.67	(c)	(c)
Mo.	13.29	14.45	7.80	10.07	(c)	(c)
N. J.	13.30	16.41	9.79	11.69	10.70	14.81
N. Y.	14.13	16.53	12.80	15.82	12.53	15.49
Ohio	9.47	11.33	7.60	9.67	9.03	10.77
Pa.	7.79	11.36	7.50	11.23	9.64	13.67
W. Va.	14.93	15.04	n. a.	n. a.	n. a.	n. a.
Wis.	15.22	16.19	16.09	16.09	(c)	(c)

^aThe Tobacco Study (U. S. Dept. Com., National Recovery Administration, Division of Review, mimeo. report, Mar. 1933), pp. 163-4.

^bIncludes States not listed in the stub to avoid disclosing data for an individual establishment.

^cNo data obtained.

n. a. Data not available. Data are not shown to avoid disclosing information for an individual establishment.

spectively. The returns for all classes of cigars (table C-1) covered total numbers of piece workers as follows: 8,422 male hand workers, 18,518 female hand workers, and 11,978 female machine workers.¹

For more recent data on earnings, not grouped by classes of cigars, see *Monthly Labor Review* for April 1937.²

¹The Tobacco Study (U. S. Dept. Com., National Recovery Administration, Division of Review, mimeo. report, Mar. 1936), p. 120.

Not included in these tabulations are returns for 1,351 women and 405 men who were combination hand and machine piece workers. It is notable that the survey found a total of only 23 male machine operators in the country. These likewise are excluded from the tables of Appendix C. The weekly earnings of those of the 23 men who worked on class 'A' cigars ranged from \$14.01 (average low) to \$17.94 (average high). Of the 23 men, 15 were employed in Florida. (These details on the 23 men were obtained from National Recovery Administration file material by W. D. Evans and used in an unpublished report on the cigar manufacturing industry prepared for the National Research Project under the supervision of W. H. Dillingham.)

²"Earnings and Hours in Cigar Industry, March 1936," *Monthly Labor Review*, 44, No. 4 (Apr. 1937), 963-88.

APPENDIX D

SCHEDULE AND EXPLANATION OF TERMS USED IN THE SCHEDULE

The occupational history schedule, NRP Form #20, shown on page 93, was used for the survey. Certain terms on the schedule which are not self-explanatory are defined below:

Age is the age on last birthday.

Years in City were calculated from the beginning date of the most recent period of continuous residence in the community. Absences of 6 months or less were not counted.

Employment History: The employment data were divided into the first job, the longest job, and all jobs between 1926 and February 1, 1937, the date of the survey. This last section called for a chronological record of changes in employment status, the character of employment, and the kind of work performed. The information was entered in this section by beginning with the person's employment status at the time of the interview and working back in-chronological order to January 1, 1926.

A *job* was defined as gainful employment lasting for 1 month or more in an occupation with a single employer.¹ Periods of employment or unemployment of less than 1 month's duration were not entered. Unpaid apprenticeships were not considered as jobs. Self-employment and ownership were distinguished and included those usually self-employed, or doing contract or specialized work, or owning the establishment.

The character of employment was determined and classified into regular, casual or intermittent work in private industry, self-employment, emergency work, or unemployment. Full time and part time were also distinguished. Part-time work was defined as less than 30 hours a week. The designation of "casual" work was reserved for jobs in occupations or industries in which work is ordinarily contracted for by the hour or by the day, such as domestic service by day workers, "odd jobs" by laborers, or loads hauled by truck drivers. Intermittent employment was applied to the service of persons constituting "spare hands" or "contingent crews" on call for a particular employer or extra crews

¹For exception to work with a single employer, see definition for casual or intermittent employment.

hired to complete orders in the "rush" period in industries which ordinarily offered regular rather than casual employment. Casual and intermittent employment were recorded regardless of the number of employers involved in each period of a month or more. The industrial classifications were based on those in the United States Census. The tables in the report are constructed to conform to the industries and occupations found to be important in the locale of this study.

Unemployment History: Unemployment, to be recorded, was likewise of a month's duration or more. Unemployment was divided into unemployment seeking work and unemployment not seeking work. Employment status was determined according to whether or not the person had a job on the day the enumerator visited the house. If a man was employed at the time even though he was looking for another or an additional job, he was not regarded as seeking work. If the person was not seeking work during any month of the period between 1926 and the date of the survey, the reason for not seeking work was entered. Possible reasons were: out on strike, temporarily disabled (sick for over 1 month but under 1 year without pay), permanently disabled (illness of 1 year or more), retired persons living on income or pension, persons 65 and over who have not worked in the last 5 years, and those who consider themselves or are considered by their relatives as too old to work.

Emergency Work: Emergency work was used as an inclusive term to cover all forms of government-made work, whether city, State, or federal. If it was of more than 1 month's duration, it was entered, regardless of the number of hours employed per week.

SCHEDULE USED

A facsimile of the schedule used, NRP Form #20, appears on the following page.

OCUPATIONAL HISTORY SCHEDULE

7.	NAME	EMPLOYER	DATE	CLEARANCE DATA
	ADDRESS	SCHEDULE NO.		

10.	AGE	SEX	RACE	PLACE OF BIRTH	MARRIAGE STATUS	MILITARY SERVICE	AGE LEAVING SCHOOL	AGE BEGAN WORK	1-1 USUAL OCCUPATION	PRESENT EMPLOYMENT STATUS
				YEARS IN CITY					2-2 USUAL INDUSTRY	
				YEARS IN U. S. A.					3-3 YEARS AT USUAL	
A	B	C	D	E	F	G	H	I	J	

11.	TOTAL TIME EMPLOYED	TOTAL SEPARATIONS	TOTAL EMPLOYER SHIFTS	TOTAL OCCUPATIONAL SHIFTS	TOTAL INDUSTRY SHIFTS	AVERAGE LENGTH OF SERVICE PER JOB	AVERAGE LENGTH OF SERVICE PER EMPLOYER
	J	K	L	M	N	O	P

EMPLOYMENT HISTORY PRIOR TO 1906

12.	PERIOD		JOBS (OR UNEMPLOYMENT) OF MORE THAN ONE MONTH'S DURATION				CHARACTER OF EMPLOYMENT
	BEGINNING	ENDING	OCCUPATION	INDUSTRY	NAME AND LOCATION OF EMPLOYER	REASON FOR CHANGE	
	MO. YR.	MO. YR.					
			FIRST JOB				
		LONGEST JOB					

EMPLOYMENT AND UNEMPLOYMENT HISTORY 1906-1956

13.									

at the lighting end and finishing at the end which goes into the mouth, called the "head." It is necessary to trim the wrapper a trifle just before the head is formed; then, with a bit of gum tragacanth, the last bit of wrapper is fastened securely, and the head is smoothed between the thumb and forefinger. (See figure 10.) The cigar is then put in a gauge which stands on the table in front of the worker and is trimmed to the proper length.

This "out-and-out" method of cigar making prevailed generally until the introduction of the mold in 1869. The mold is a wooden block with cigar-shaped grooves carved in it, generally fifteen in number. Bunches of leaves are placed in these grooves, a duplicate block is placed on top, and the two are put under pressure for a few minutes. (See figures 6, 8, 9, and 10.) The blocks are then separated and the bunches are ready for wrapping.

Several decades after the mold came into use, the suction-table was introduced. This consists of a metal sheet with a perforated plate in the center, the plate being just the right size and shape for the cigar wrapper. The wrapper leaf is placed on the plate and held down firmly by air sucked through the perforations. A foot pedal raises the plate, and a roller is passed over it, cutting the leaf on the plate's sharp edges.

Although the mold and the suction-table changed the cigar maker's trade considerably, these devices probably should be considered tools rather than machines. Their use increased efficiency in manufacture but tended to supplement the skill of the hand cigar maker rather than to perform automatically any of the required operations.

DESCRIPTION OF COMBINATION HAND AND MACHINE MANUFACTURE OF CIGARS

About 1900 a machine was introduced which made short-filler bunches automatically. This machine, known as the automatic short-filler bunching machine, requires no labor other than that necessary to feed the hopper with filler and to place the binders. These operations can be performed by unskilled labor. The bunches, delivered in molds, are wrapped by hand. A significant but undetermined proportion of the cheaper short-filler cigars are made by this method.

DESCRIPTION OF MACHINE MANUFACTURE OF CIGARS

Although the automatic short-filler bunching machine reduced labor costs to some extent, the most expensive operation in the manufacture of cigars, wrapping, was still performed by hand. It was not until 1917, when a machine was patented which performed both the binding and wrapping operations and turned out a finished cigar comparable with the hand-made article, that the superiority of the hand-made product was seriously threatened.

This machine, the automatic long-filler cigar machine, requires four operators (see figure 3): one to place the filler on an endless feed belt; a second to place the binder leaf on the binder die; a third to place the wrapper leaf on the wrapper die; and a fourth to "catch" and inspect the finished cigar.

The machine performs the operations of the hand cigar maker mechanically. Knives cut the filler to the proper length, corrugated rollers compress it and pass it to the appropriate rollers where just the right amount of filler is cut off to form a bunch. The bunch is tapered and rolled in the binder, and then passed to the wrapper, spirally wound, formed, sealed, and clipped to the right length. The head end is smoothed by a roller, and the cigar is dropped on a table for inspection.²

The scrap-filler cigar is made by a two-operator machine (see figure 11): one operator places the binder leaf on the binder die and the other places the wrapper leaf on the wrapper die and inspects. The only major variation in procedure is in the processing of the bunch. Instead of a knife to cut the filler to the proper length, there is a balance to weigh the proper amount of scrap as it comes from the hopper.

SUBSEQUENT OPERATIONS

Subsequent operations are similar, by whatever method the cigars may have been made. The cigars are inspected, and then may be banded and boxed by hand or may go to a banding and wrapping machine. This machine, requiring one operator, automatically bands the cigars and wraps them in cellophane. The operator of the machine then usually packs the cigars by hand.

²A more detailed description of the operation of the long-filler cigar-making machine is given in "Technological Changes in the Cigar Industry and Their Effects on Labor," *Monthly Labor Review*, 33, No. 6 (Dec. 1931), 11-13.