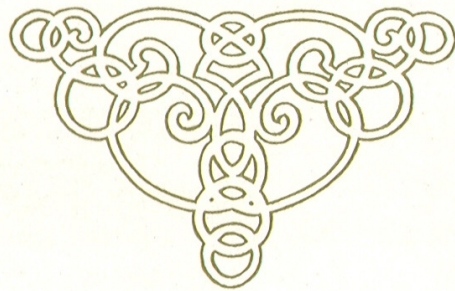






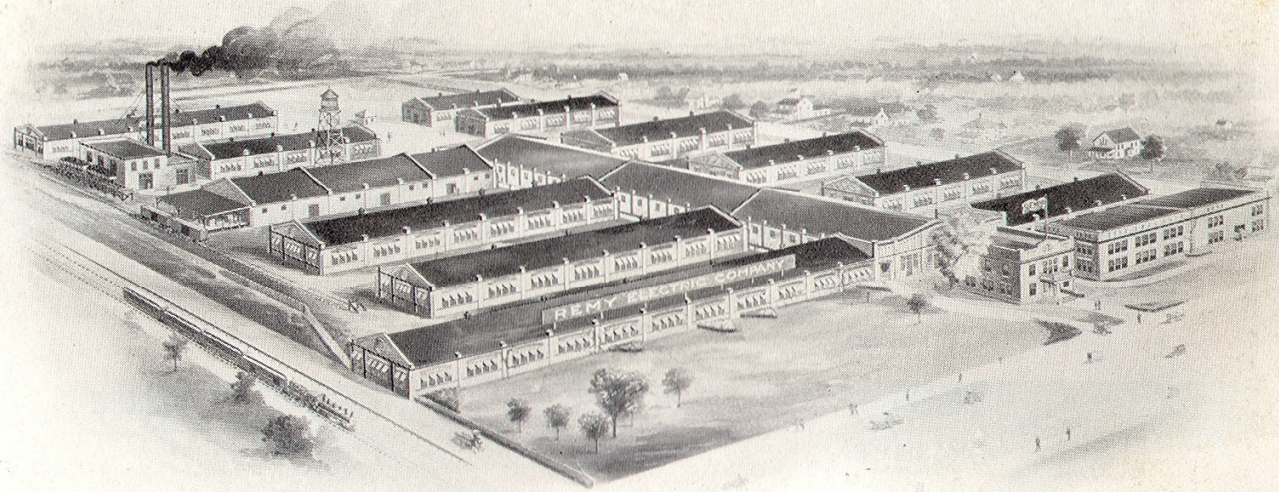
THE REMY ELECTRIC COMPANY

"Pioneer Makers of Ignition Magnets"



ANDERSON ~ INDIANA





PRESENT PLANT OF THE REMY ELECTRIC COMPANY



Stock Room



Testing Room



Packing Room

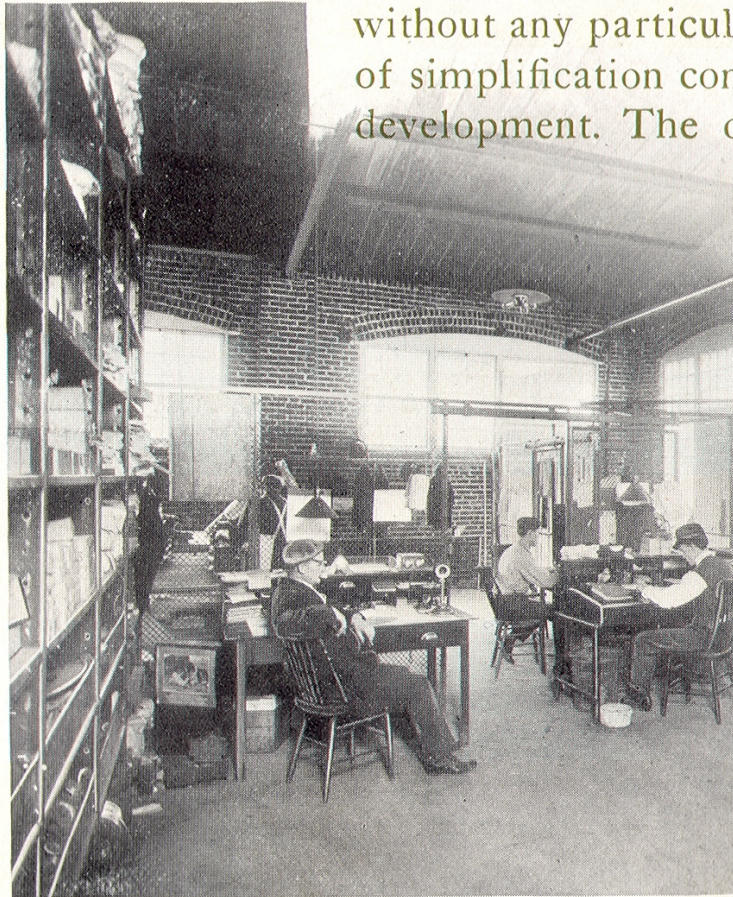


## HISTORICAL *of* THE REMY ELECTRIC COMPANY



**T**HREE periods mark the development of any mechanical device for which there is a logical demand and which is founded upon sound principles. The first is the period of discovery, or that time during which the possibility of the device is proven. The second period is one of economical development. This period is devoted to the construction of the device upon fundamental principles; but its operation at this time is often too involved for any but expert hands. And then comes the task of simplifying the device so that its use may become possible to the average man—the man





Stock Keeper's Office

without any particular mechanical skill. This process of simplification constitutes the third and last period of development. The device has now reached the stage where it may be accounted a commercial success, and is ready for universal adoption.

The air ship, for example, is in the first period of its development. Man has discovered that it is possible for him to fly, but he has not yet begun to develop the art economically.

The second period of development is well exemplified in the locomotive engine, the operation of which requires skilled hands.

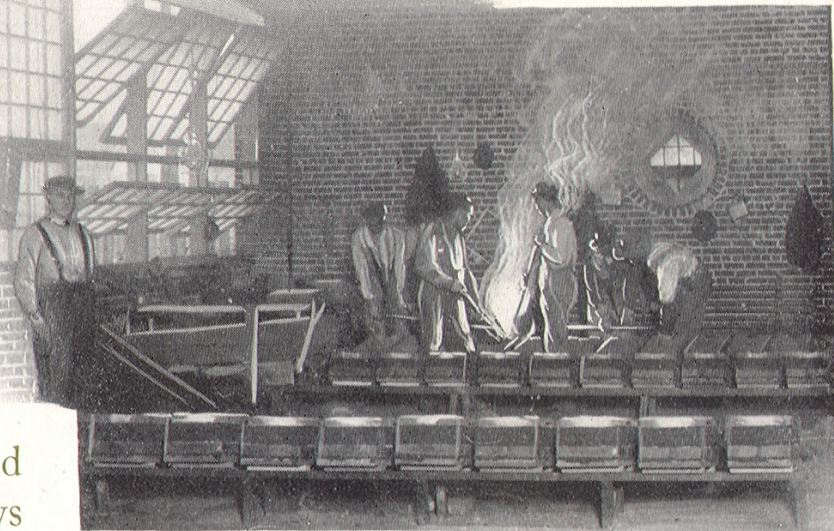
The third and last period of development is well illustrated



by the ordinary clock or watch. These time-keeping machines require no attention but winding, and any one can wind them. They have been simplified so that the average man finds himself competent to use them.

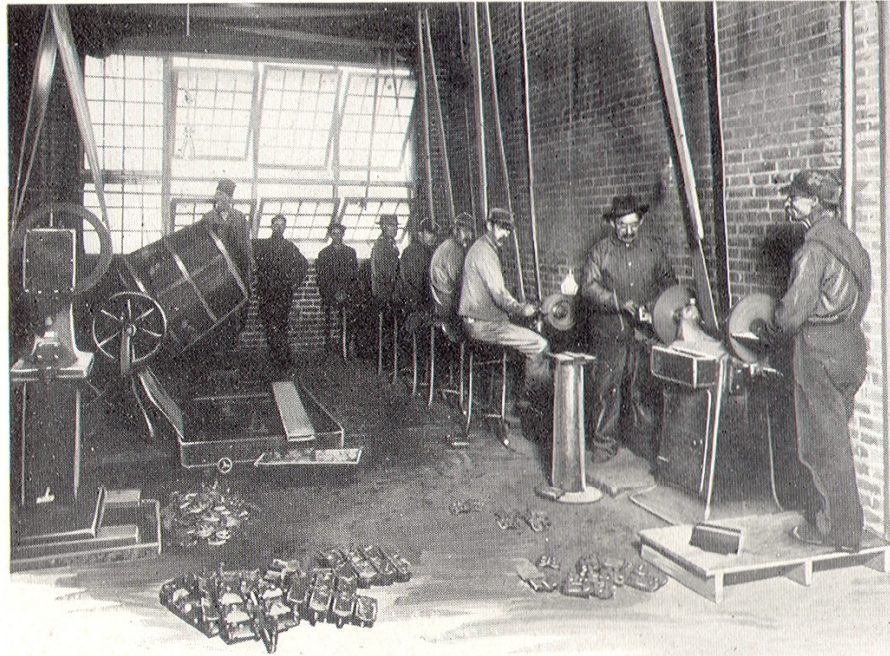
The magneto, upon which the motorist relies for the spark which drives his car, has only within very recent years attained to the third and last period of development, and a bit of casual information is worth while.

At first the "make and break" system of ignition was accepted by manufacturers generally. This form, however, as embodied in early European makes, proved too delicate and intricate for practical use. The average driver found it a source of mechanical trouble; water affected it; short circuiting was common; the tourist charged many aggravating delays



Pouring Off in Bronze Foundry





Finishing Department in Bronze Foundry

development. The first advocates of this latter system, and the system which practically all makers of magnetos have finally accepted, were the Remy Brothers, of Anderson, Indiana. It is not amiss to say, in this connection, that no other system has ever been accepted by Remy Brothers.

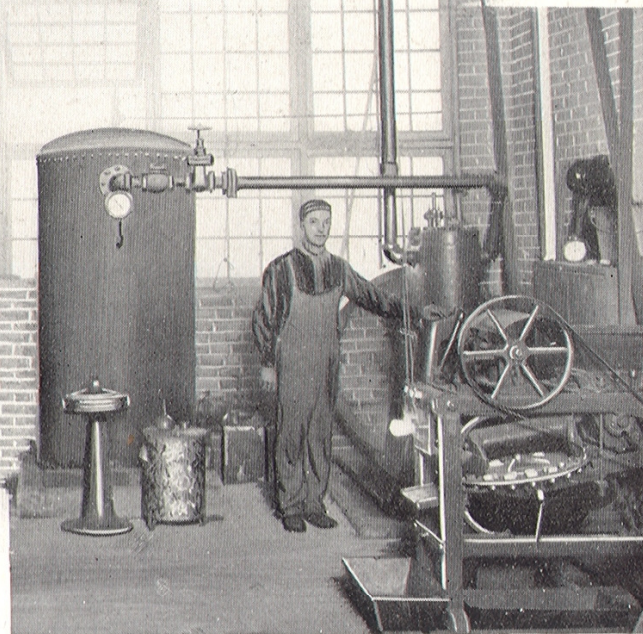
against it, and the race driver was often left far behind because of imperfect ignition due to the "make and break" system. At this time the magneto was in its second state of development.

Then came the jump-spark high-tension system which ushered the magneto into its third and practical period of



They began the manufacture of magnetos in a modest way. Their previous experience, as the makers of dynamos for ignition purposes, qualified them in their undertaking. The jump-spark principle was in the beginning adopted as the underlying basis of their future development, and they have never deviated from it. They believed in the beginning that upon this principle they could build a magneto that would perform its function under all road and track conditions, and the fact that the largest makers of automobiles in the world today equip their cars exclusively with Remy magnetos proves that their faith was justified.

The Remy Electric Company was incorporated under the laws of Indiana in 1901, and immediately took over the ignition manufacturing business previously conducted by



In the Foundry





View in Automatic  
Screw Machine Department



B. P. and Frank I. Remy. B. P. Remy accepted the responsibility of the manufacturing department, while the executive phases of the business were assumed by his brother. The entire development of the company's business has been conducted under the above arrangement, and since the incorporation of the company *no change has been made in its ownership.*

It has been the constant endeavor of those responsible for the welfare of the company to conduct its business along approved conservative lines,



Upper View—Tool Room  
Lower View—Raw Stock Receiving Room



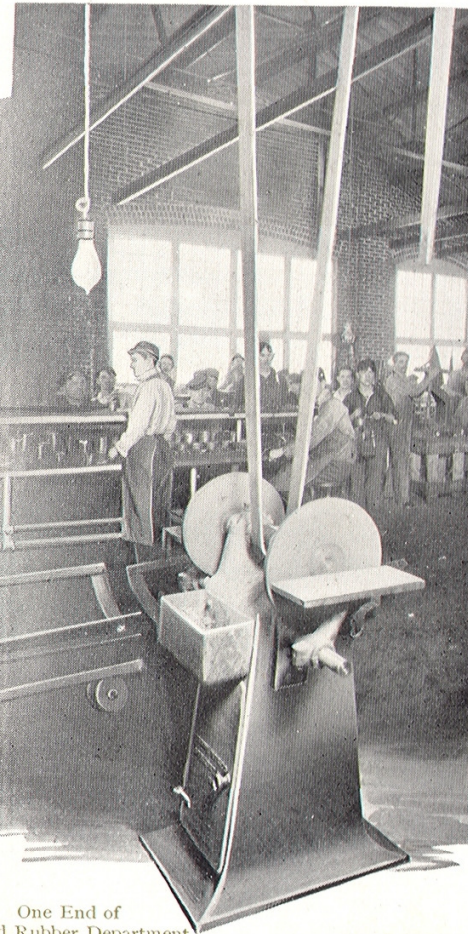


A Row of  
Specially Built Lathes



bearing in mind at all times the possibilities of the field in which they were working and providing facilities equal to the task they had outlined. It has been the object of the Remy Electric Company to make the best possible magneto and to perfect an organization which enables them to make the best magneto possible in any quantity demanded. The demands have been enormous, but at no time have the facilities been unequal to an emergency. This latter fact proves conclusively that the organization perfected by the Remy Company is adequate.

In many plants when orders come in large quantities the quality of the workmanship often suffers. The Remy Electric Company, however, due to its priority of experience in the manufacture of jump-spark high-tension magnetos, has been able to simplify manufacture



One End of  
Hard Rubber Department





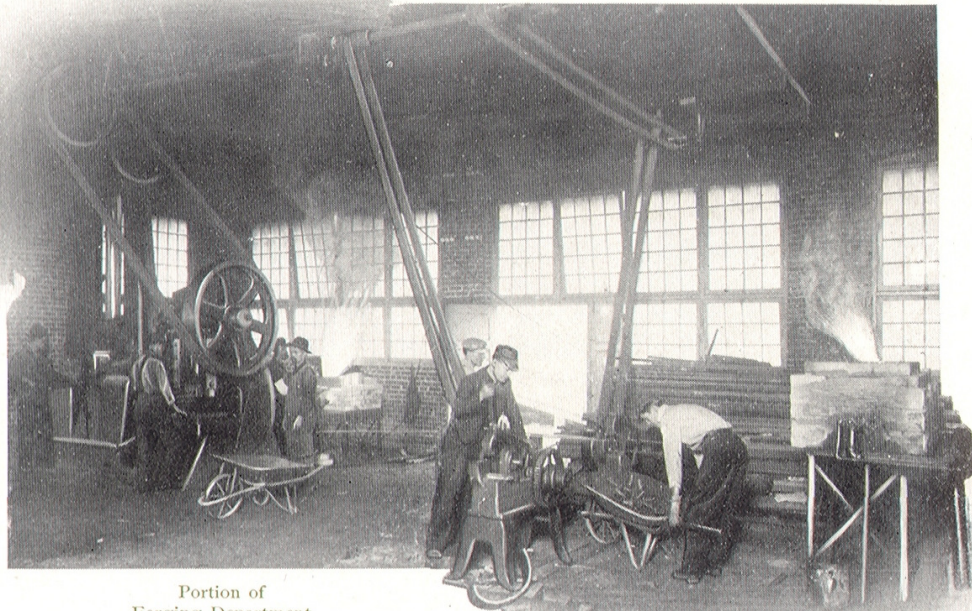
Making  
Magnets

so that, by aid of a system of triple inspection, they have been secured at all times against faulty production. All parts of the Remy magneto are manufactured in the Remy plant under the general supervision of one head; hence perfect alignment in assembling is obtained, and the large output can be handled with dispatch. Absolute uniformity is preserved throughout the entire machine.

Permanence has been the aim toward which the Remy Electric Company has worked at all times. Consistency of purpose, uniformity of effort and a constant safeguarding against mechanical disablement or the disablement of its organization in any way has resulted in stability.



The Remy Electric Company knows the demands of large manufacturing concerns, and disappointment on deliveries is a thing unheard of. The importance of this fact is obvious to large automobile builders, and it has no doubt contributed its proportionate share to the popularity which the Remy magneto enjoys. Illustrating this rule of precaution, the reader will note that the various buildings of the plant as shown in the birdseye in this booklet are separated so that the total destruction of any one of them by fire would not injure the others, and would therefore not interfere with the constant business of manufacture. Another illustration: The organization



Portion of  
Forging Department



throughout is so perfected that the loss of any one man, however important his duties, would not interfere with orders being filled on schedule. The officers of the Company, while giving their attention to special work, have qualified themselves to assume the responsibility of the entire plant should it for any reason become necessary.

The atmosphere which pervades the entire force employed by the Remy Electric Company is characteristic. Every employe is taught that the success of the company means his success so long as he adapts him-

self to the Remy spirit. The Remy spirit is a 90 horse power spirit that climbs the hills of difficulty with mechanical indifference; a spirit that has never had to extend itself to the limit; a spirit that means power and speed sufficient for the roads whatever they may be. It is this spirit, instilled into its entire force, that has driven the Remy Electric Company to



View of  
Hard Rubber  
Department

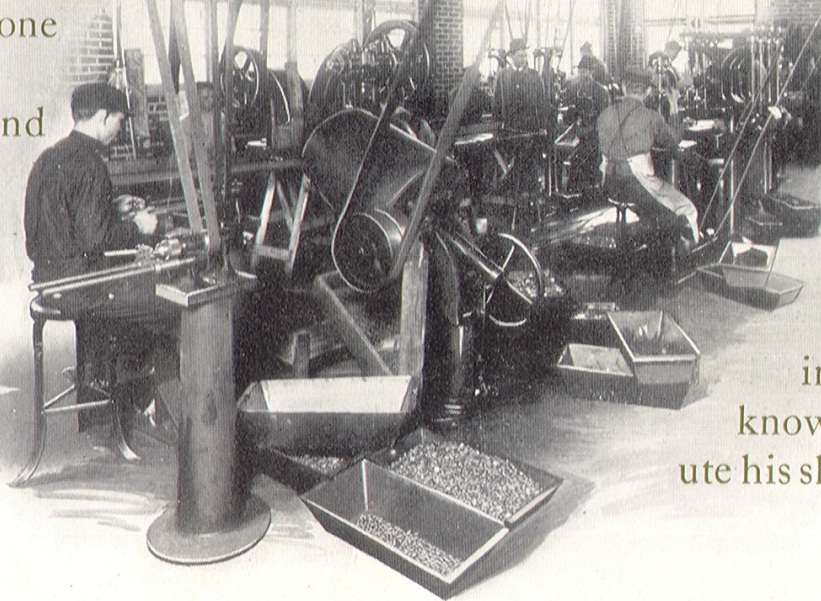


preëminence. This spirit has proven conducive to an optimism and sense of stability that is reflected upon the faces of its employes. There is no quibbling in the Remy organization.

Every one has his work and does it.

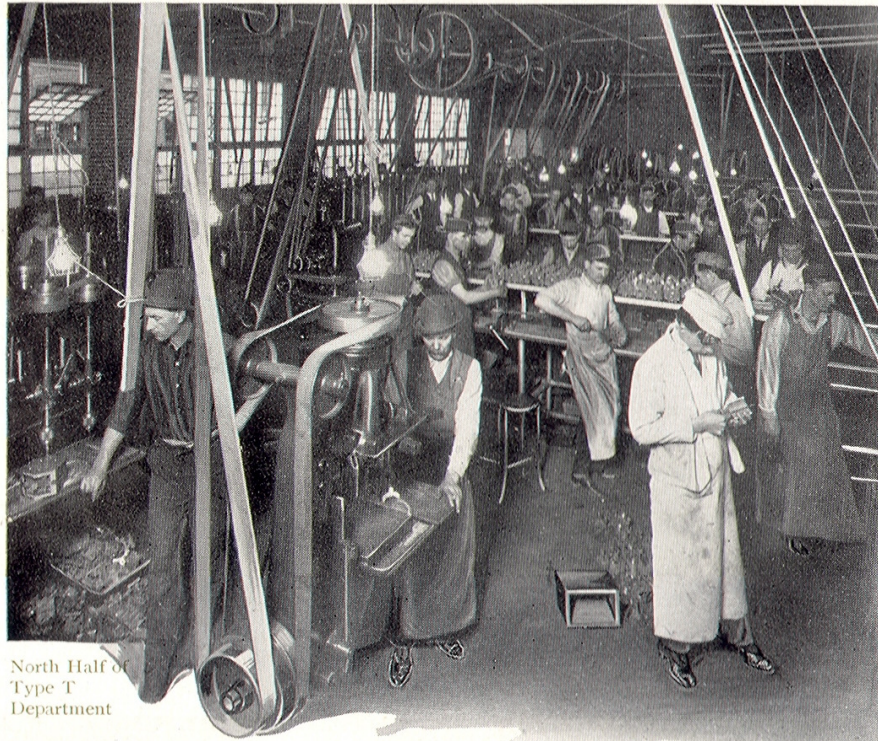


Some Special Machinery Processes



Each man has pride in his department, and knows that he must contribute his share toward its success.





North Half of  
Type T  
Department

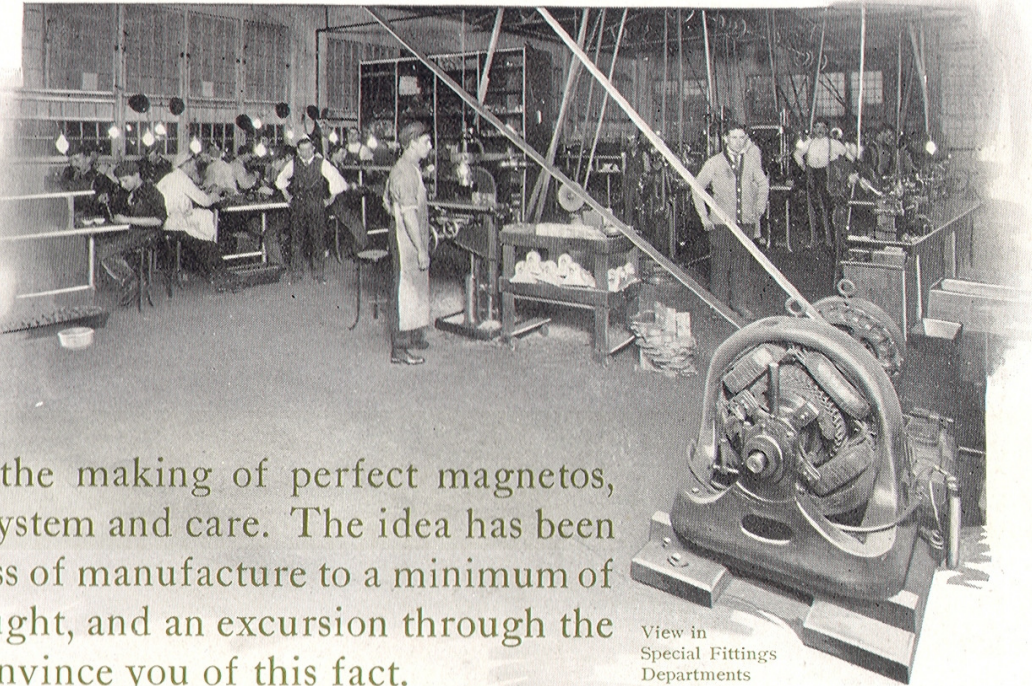
The plant itself shows forethought and care in its planning. The prime object is good work, and the fact that good work can be done only under favorable conditions has been recognized. The site of the factory is ideal. A large lawn, which in season presents an admirable example of the landscape gardener's art, lies out in broad expanse before the long

stretch of big, roomy buildings. The façade of the main office building is an artistic entrance to cleanliness, order and sanitation. Pure air, pure water, supplied by the company's own well, and plenty of light combine to



make the most favorable conditions under which men could work. The spaces between buildings are kept free from debris and clutter. Tools, machines, everything that goes to the making of perfect magnetos, show the result of system and care. The idea has been to reduce the process of manufacture to a minimum of lost power and thought, and an excursion through the Remy plant will convince you of this fact.

In the successful manufacture of any product system is imperative. The working out of a system that is adequate to extensive demands requires care, and in many cases years of analytical and experimental study. Every production is governed to a great extent by its own pecul-



View in  
Special Fittings  
Departments

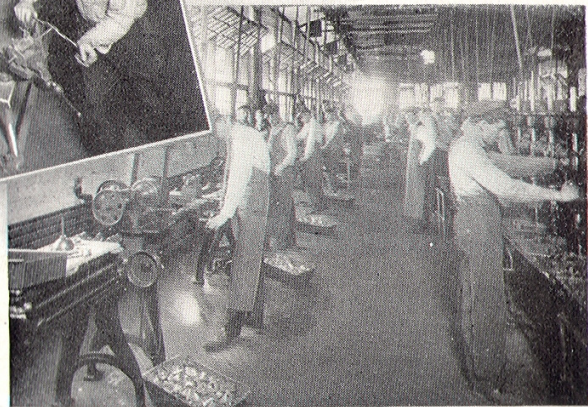




View of Assembling  
Type S Magnetos—Looking South



View of Assembling  
Type S Magnetos—Looking North



View of Machinery Process  
Type S Magnetos



iarities, and the system growing up to it is usually in the nature of an individual evolution.

Production is of two sorts, manual and mental. In all processes of production the two are evident, but in varying proportions. Some work can be done without the workman's concentrated attention; he can go about it mechanically and obtain satisfactory results. But where sensitive adjustments are required, and where slight variations in the sizes of delicate parts would result in an imperfect product, the workman must concentrate his brain on the business before him; and he is no longer a workman, but a craftsman.

The manufacture of a magneto is necessarily a



Main Winding  
Department



Testing Resistance





Assembling Coils

delicate and painstaking operation; one that requires not only manual skill, but a concrete knowledge of mechanical laws as well. The fundamental laws of electricity are to be considered at all times. Faulty insulation, imperfect winding, or inaccuracy of fitting render a magneto worthless.

By application of recognized economic facts it has been discerned that where such precision and skill is necessary it is advisable to limit each mechanic to a single process connected with the making of a single part. Thus he becomes skilled in this particular act; by constantly performing the same work he becomes a specialist at it. And in this way, if the rule



is observed throughout an entire factory, the absolute limit of nicety and accuracy in construction is obtained.

Only to the superintendent and his assistants, in a modernized factory, is a general knowledge, under the above system, necessary.

In some of the finer processes, where extreme accuracy is demanded, even the skilled hand of a specialist is not sufficiently dependable. This fact has resulted in automatic machines which produce parts in which there is practically no variation. With such machines in departments which demand them, and with part specialists and expert foremen, the utmost degree of efficiency in manufacture is obtained.

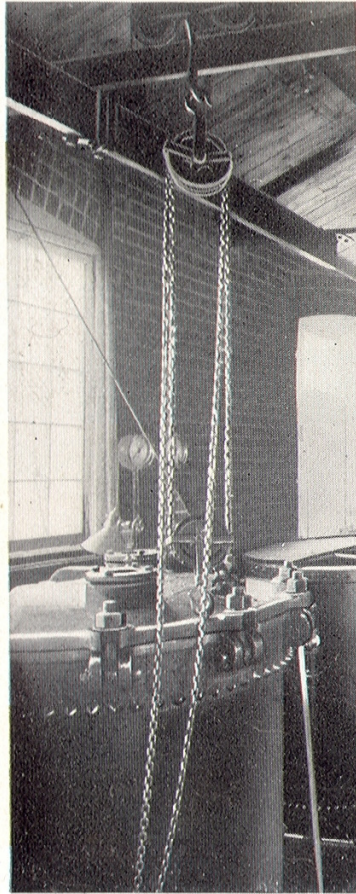


Box  
Factory



View in  
Warehouse  
Showing  
Three Divisions





This system of manufacture has been adhered to by the Remy Electric Company to the minutest detail. Every process is allotted to men who have become specialists through long experience. Where even specialists can not be sufficiently accurate automatic machines of the latest types have been installed. The result represents not only the maximum of quality, but remarkable dispatch in manufacture as well.

In the manufacture of the Remy

Impregnating Room



magneto need was found in a number of departments for special processes. For example, experience has taught that hard rubber made by ordinary methods, such as rubber mills use, is not sufficiently



A Section of the  
Repair and Connection Department

perfect to meet the exacting demand of this company. As hard rubber is the only material known to science which has the physical properties necessary, it became imperative to develop special processes.

As has been stated, every part of the Remy magneto is made in the Remy factory. Material is received in the raw stock receiving room, building No. 9, where it is unpacked, checked and inspected. It is then passed into the general stock room, in the same building, where it is stored to await requisitions from the various manufacturing departments.





Garage Where Magnetos are Installed and  
Employes' Cars are Kept

The stock-keeper's office is in this building, and from this place he keeps check on deliveries to the various departments, and the arrival of raw material.

The foundry is located in building No. 8. Captions under views

of this department are self-explanatory. All molding and other work in the foundry is done by machinery. All equipment is modern throughout. Oil is used for fuel. All castings are made from a single mixture of bronze, which has proven best for the most severely used parts of the magneto, and which reduces the possibility of error in mixing to the minimum. Here the law of simplification has been found particularly applicable.

The magnet making department is contained in building No. 12.

One of the most interesting departments of the entire plant is the auto-

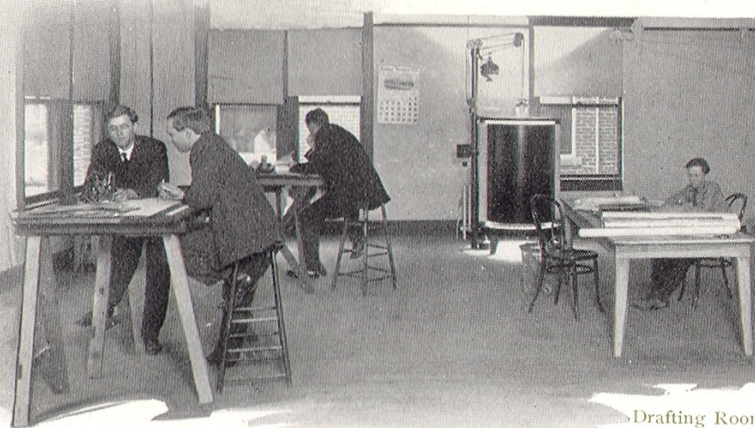


matic screw machine shop, in building No. 7. Two rows of automatic screw machines are shown. These machines will produce screws which vary not to exceed one-half of the thousandth part of an inch. They require no attention whatever except in placing the rods from which the screws are produced. They depend only on the belts which propel them and the floor upon which they sit.

In the toolroom such gages and special machinery as are necessary are manufactured. This department is located in building No. 10, and is at the disposal of all other departments. Without it the accuracy demanded would be impossible.

The department where special hard rubber processes are carried out is housed in building No. 11.

In the main winding department all windings for both magnetos and coils are made. Over 2,500 miles of wire is



Drafting Room





Stenographers—General Office

consumed here daily. This work is done in building No. 4.

The windings are impregnated with either insulating varnish or waxes in the impregnating room in build-

ing No. 5. This is a very interesting process, the coils being heated in a vacuum; without reducing the vacuum the impregnating material is turned in, and the vacuum is changed to a high air pressure, thus compressing the insulating material into the interstices of the insulation. Thus only can perfect insulation be obtained.

In the testing room, building No. 9, magnetos are carefully run at varying speeds in both directions, and if they do not come up to rigid requirements they are returned to the manufacturing departments from which they came. To this department the Remy magneto owes much of the reputation for dependability which it enjoys. No faulty machine es-



capable the vigilance of the triple system of inspection in force here.

In building No. 2 a garage is maintained where employes' cars are kept and wherein the engineering department finds opportunity for making practical tests. This department also serves as a school wherein road experts may be trained in the practical use of the magneto.

The main office building, in building No. 1, contains the offices of the general manager and his assistant, general superintendent, the various subdivisions of the sales department, also accounting, purchasing, stenographic and specifications department.

In these departments the same careful systematization characteristic of the entire organization prevails. The most modern office equipment has been installed. The offices of the general manager and the general superintendent are in close touch with those of their assistants, both literally and commercially. Every desk of importance is provided with extension phones, and dictations are all given by the use of a phonograph.





A perusal of this booklet will make certain things evident. It shows that the beginning of this company was modest, that the development has been gradual, and therefore healthful; and that every detail of the company's growth is founded upon sound business. Furthermore it is shown that the equipment of the plant is modern and adequate and that the principles of construction involved are consistent with the most advanced practice. Upon the principle of specialization stress is laid. Employees are accorded the utmost consideration, and at the same time the highest standards of production are enforced. By careful systematization quantity of output is effected without in any way decreasing its quality.

The standard of Remy construction has been at all times maintained; the popularity of this particular machine is the logical result of painstaking endeavor; and, for the future, the Remy Electric Company pledges itself to the same conscientious, consistent policies that have brought it thus far.





Kansas City Office  
New York Office

A FEW OF OUR BRANCH DISTRIBUTING OFFICES

San Francisco Office

Chicago Office  
Detroit Office





Office Force at  
Six o'Clock Dinner

## APPLICATION OF A MODERN IDEA

**A**MONG the departments in building No. 2 which are decidedly noteworthy are the dining room and kitchen. These are located on the second floor, so that they can be easily accessible to the office and sales force. The primary object in providing these conveniences was comfort; yet the advantages derived by association here are practically invaluable. In the dining room, as perhaps in no other place, is manifested the *esprit de corps* which has become recognized as "the Remy spirit." Here those who have charge of the company's various interests



find unusual opportunity to discuss the ever-arising new problems of importance; and thus, in the ordinary channels of conversation, many of the company's most telling plans have been evolved.

Here salesmen talk of their experiences with the trade, and by association of ideas many new advantages of the Remy magneto are established. The science of salesmanship has more than once been forwarded by an occasional bit of discovery laid bare at a Remy luncheon.





## A BRIEF RÉSUMÉ OF EARLY GROWTH

THE small halftone in the upper left hand corner of this page is an accurate reproduction of the shanty in which the idea of the Remy jump-spark high-tension magneto was evolved. The architecture of the building, far from being elaborate, was as rudimentary as were the first experiments conducted in it; yet it represents the nucleus around which the Remy idea has been built. The facilities of the workshop were necessarily limited. As the soundness of the Remy principle became gradually recognized, new quarters were imperative, and the plant shown in the lower corner of this page was built. Its size was commensurate with the growth of the institution. It represented factory building in its simplest form, but for all that ample floor space, light and ventilation were obtained. Dynamo ignition apparatus was manufactured here, and the simple, hardy lines of the present Remy magneto began to develop.

