COYNE
Gateway To Opportunity
CHICAGO
World’s Greatest Electrical Center
THIS is the “Coyne Opportunity Book” you requested. Its purpose is to acquaint you with the fascinating World of Electricity and to show you the opportunities awaiting in this field, for those who have Coyne Training. I want you to feel as you go through this book that you and I are having a heart to heart talk right in your own home.

Success in life may be had by learning how to apply certain sound principles. These principles are positive guideposts pointing the way to Success. You must learn to read them if you would succeed. Hard work alone will not make you successful. You must be Trained to Succeed.

Talk to any successful business man and ask him to mention the principles by which he would be guided in choosing a vocation. He will tell you. First, select the work you like and for which you are best fitted. Secondly, make sure that your work is a real necessity—something that is needed by every home, every industry, every human, and for which the need will grow greater from year to year. Third, make sure that your work will not be seasonal but will offer you the opportunity for steady employment.

The amazing field of Electricity meets all these requirements. Here is a vocation of tremendous interest—one of the greatest of all modern necessities—its progress has been great in the past—it should be still greater in the future. Trace the progress of Electricity, to the present date—Recall the immortal names of Edison and Steinmetz; think of the many uses of Light and Power, the mightiest forces ever developed by Mankind; and you will say to yourself “What a glorious field for Service! What a glorious opportunity for profit! What a wonderful life work for a young man to choose!”

As the President of this world famous SHOP TRAINING SCHOOL I invite you to join the ranks of the many successful Coyne graduates whom we have helped in the last thirty-nine years. Here in my school we will give you a short INTENSIVE, PRACTICAL “LEARN-BY-DOING” training that will give you your start in this fascinating field.

Now that you have read my message I want you to go through this Book. Read it page by page. After you have done so should you find anything that is not perfectly clear to you, write me a letter. I will be glad to give you any information you may want to know.

H. C. Lewis, President
Coyne Electrical School
Home of the Big Coyne Shops
Here You Can Spend the Most Important 90 Days of Your Life

In the picture above you will see the home of Coyne. This building was built expressly for Coyne. The entire building is occupied by Coyne and (with the exception of a small space used for our offices) is devoted to our PRACTICAL TRAINING SHOPS. I have devoted this page to our building because it has an important part in the training you will get here at Coyne.

Our building is built of concrete and steel construction and naturally it is a fireproof building. Large windows on all four sides permit entrance of plenty of fresh air and cheery, healthful sunlight. But what will particularly impress you about the home of the Coyne shops is its cleanliness, and clean-cut, business-like appearance. You won't find any fancy frills here, just as there are no costly, unnecessary trimmings in connection with Coyne Training.

Here at Coyne you will find what I sincerely believe is the largest array of Electrical equipment ever assembled in one place for practical training purposes. And you will find all of this equipment systematically arranged so as to make possible the most efficient type of instruction for students.

As you go through this book, you will see reproductions of actual photographs of the various shop departments in which students are trained. The equipment shown in these pages plays a definite part in this task of training you for your start toward the opportunities in Electricity and a successful future.

Comfortable, efficient training quarters are necessary if you want proper training. We have left nothing undone to see that such quarters are provided in the home of Coyne.
COYNE is Located in Chicago—
THE ELECTRICAL CENTER OF THE WORLD

1. Many prominent manufacturers of Electric Appliances are located in Chicago.
2. Many electric Substations of this type are found throughout Chicago and vicinity.
3. A striking night view looking over the tops of buildings in the famous Chicago "Loop".
4. Chicago has many such large and modern power stations.
5. Steel mills of this type use huge electrical equipment.
6. 8, 10 and 13. These views show typical power plants that contribute to Chicago's reputation as the Electrical Center of the World.
7. Chicago has long been known as the Railway Center of the U. S. This view shows a modern Diesel Electric train.
9. Great manufacturing plants of this type provide electrical supplies for users all over the world.
11 and 12. A large part of the world's telephone equipment is made in Chicago.
14. Chicago also abounds in huge skyscrapers, possessing their own electric power systems.

Chicago has rightfully earned her name as the Electrical Center of the World.
Illinois ranks first among all states in the number of persons employed in electrical manufacturing.
Since 1869, the Chicago Region has been the telephone manufacturing center of the world. One manufacturer alone occupies 102 buildings, covering 200 acres of ground and produces 80% of the world's telephones.
Chicago has an annual per capita consumption of Electricity of over 1000 Kilowatt hours, with a general average for the U. S. of only 600.
The largest electrical generator ever made, developing 200,000 Kilowatts, or over 265,000 H. P. is operating in the State Line generating plant at Chicago.
Electrical transportation companies in the Chicago region, operate over 1900 miles of single track line and transport over 10% of passengers carried on electric railways in the U. S.
These are only a few of the important reasons indicating why it is logical to study electricity here at COYNE in Chicago where frequent inspection trips make some of these remarkable electrical sights available to you.
Make up your mind to train for Electricity at COYNE in Chicago where you have the happy combination of a successful PRACTICAL Electrical School located in the World's Electrical Center.
You Will Have a Chance to Inspect MANY LEADING ELECTRICAL PLANTS

Above is a photo of students examining one of the famous Wright whirlwind motors at the great municipal aviation field. This shows them the use and application of the ignition experience they get in our airplane ignition department.

This is an automatic substation of the street railway systems, and the students are shown examining the 2000 K.W. converter, and switchboard. Trips to such plants as these are intensely interesting and inspire the student to work harder.

The photograph below shows a large group of students on an inspection trip to the North Shore and the special electric train that took them to inspect several late type automatic substations and the Great Lakes Naval Aviation Station.

The oval picture above is of an outdoor substation and these students are examining the oil switches, lightning arresters and transformers, with instructors along to explain every part. Trips like this are of great value as a supplement to your Coyne training.

The picture to the right shows a group of generators and mammoth switchboard in one of the largest private power plants in the world, at Sears, Roebuck & Company.
Modern electric signal and supervisory controls afford a profitable field.

Steam Electric power plants use trained men.

Telephone exchange testing and maintenance require skilled services.

Trained electricians are required for Airport Lighting.

**ELECTRIC CITY the COYNE “Learn by Doing” Training Can Prepare**

YOU and I are living in a remarkable age — AN ELECTRICAL AGE. Since this strange force known as Electricity, was first discovered, thousands of uses for it have been developed. Modern inventive genius has developed thousands of machines and devices which add to the comforts and conveniences of living. This marvelous and fascinating form of energy has changed our habits and the way we live. Perhaps no other single force plays as important a part in our every day lives as Electricity does today; and its real development has apparently just begun. New applications of electricity are being developed constantly. Today, industry and, in fact, our very civilization, depend upon electricity for their existence.

Electricity lights our homes, offices, stores, hotels, theaters, factories, schools, streets, trains, shops, parks, highways, etc. Many millions of new electric lamps are manufactured and sold each year. Electric light bulbs are made in sizes ranging from that of a grain of wheat to huge lamps consuming 50,000 watts of power.

**Electricity Is Used Everywhere**

MILLIONS of electric motors are in use. These range in size from 1/1000 H. P. and even less, to several thousand H. P. These motors operate our gigantic industrial plants, factories and mills. Electric motors operate our street cars, subways, elevated trains and even railroad trains. Electric motors operate many devices right in our own homes, such as our refrigerators, washing machines, oil burners, fans, air conditioners and many other machines.

Electric motors operate the elevators in our modern skyscrapers. They are used in oil fields and refineries, on pipe lines, on grain elevators and scores of other places too numerous to mention.

Electricity provides ignition and lights for our automobiles, it operates our radios, talking pictures, public address systems, electric signs, many household appliances, X-ray machines and other electro-medical devices in hospitals and clinics. This widespread use of electricity naturally has created many job opportunities for those trained to work with this equipment.

**Electricity Is the Heart of Modern Industry**

IN addition to the millions of electric lights and motors with which we come in contact in our daily lives, electrical energy has become the driving force of modern industry. Huge electric furnaces are used in treating and annealing steel. Electro chemical processes contribute to the treatment of fine metals and other valuable materials. This application of electricity is also used in electro-plating laser metals. Electricity is necessary in the operation of arc welders, butt welders and spot welders. Welding is rapidly replacing riveting, bolting and casting in construction of metal machines, steel structures and devices of many kinds.

Electric refrigeration and air conditioning have improved working conditions and helped to speed up production in industry. Their application has facilitated the handling of materials in various types of plants and improved and speeded up methods of production. Electric cranes and conveyors reduce manual labor and speed up the handling of materials and machines.

New types of Mercury Vapor and Sodium Vapor lamps are improving factory lighting for 24 hours per day operation. Photo-electric cells, vacuum tube amplifiers and automatic electric controls are making great economies possible and improving methods in industrial plant operation.

Electricity must STAY IN ACTION OR INDUSTRY WOULD STAND STILL. Since industry depends on electricity as a motive power to operate its machines and devices, you can readily understand why thousands of trained electrical men are required to install, operate and maintain this necessary electrical equipment.

**The Electrical Industry Is a Growing Field**

IN selecting a vocation for your life work there are two very important factors that should be taken into consideration. First, it is important to select a trade that is alive and growing—one with prospects of many years of development and growth ahead of it. Only such a trade can hold out any promise of steady and profitable employment in years to come. Many of the older trades are now on the decline because these crafts have been replaced by newer and better methods.

Secondly, it is essential that the industry selected be in its period of development and growth. Many a man today is out of work because the trade or industry in which he started his career has become out-of-date and
OPPORTUNITY field
You For Your Start In This Fascinating Field

has been replaced by better and more modern production methods.
The electrical industry is one of the fastest growing industries today.
It has a record of steady and constant growth in the past, and should
continue to grow for many years to come. Thousands of news electrical
consumers are being created, thousands of farms are being electrified, and new
factories and new plants are being built every year. Hundreds of thou-
sands of people are employed in the great electrical industry.
The extent of the development still in store for the electrical indus-
try is impossible to predict. Industrial and scientific experiments now in
progress, indicate that many more new opportunities are now in the
making. Some of the present day applications of electricity were not even
thought of only a few years ago. What new uses coming generations
will find for Electricity only the future will reveal.

Many New Electrical Jobs Each Year

MILLIONS of dollars are spent each year for new equipment
and for the maintenance of old equip-
ment. Thousands of new homes are be-
ing built. These are more completely
equipped for the use of electricity than ever before. Factories, stores
and offices are adding to their electrical
equipment and the number of elec-
trical devices used.

Railroads are electrifying. In transportation, electricity has played
an important role for many years.

Today with the rapid progress in the
field of fast, lightweight trains, it is
becoming even more important. Die-
sel-electric trains are replacing steam
trains. Ships are being propelled by
electricity.
The Refrigeration and Air Con-
ditioning Industries are expanding
rapidly. Factories, homes and offices
are being equipped for year 'round air
conditioning.

Millions of new automobiles re-
quire the services of trained ignition
and battery men. Modern automatic
telephones, elaborate alarm signal and
control systems, and communication
facilities all require trained men.

Opportunities for Better Pay in Electricity

BETTER salaries are paid in the
Electrical Industry than in many
other fields which are already over-
crowded, or in which unskilled labor
can be used. This is a Machine Age.

Millions of new automobiles require the services of trained ignition
and battery men. Modern automatic telephones, elaborate alarm signal and
control systems, and communication facilities all require trained men.

Electrical machinery manufacture and
testing offers a big field.

Great hydro developments like Boulder
Dam are creating more jobs.

Electric welding in modern industrial
plants.

Private owned power plants offer
another profitable field.

Railway electrification requires many
trained men.

Steam turbine driven electric generators
must be serviced by trained operators.
THE field of Electricity offers you a choice of scores of interesting jobs in the many electrical branches. In addition, Coyne Training prepares you to go into business for yourself and be independent as your own boss.

Excellent Opportunity—Small Investment

MANY Coyne Graduates found it possible as a result of the helpful service rendered by the school to open up a shop of their own with only a small working capital. Today, these fellows have established a permanent business with only a small working capital. They were able to do this by matching the value of their electrical training against the working capital provided by some friend or acquaintance. Others found it possible to take over a small "going" business, already established, but run down because of poor management.

Here are only a few of the instances of how Coyne graduates were able to use their valuable training in a business of their own that is today paying them real dividends each week.

William Golding of Ohio was a coal miner before he came to Coyne. He only had a fifth grade schooling. Shortly after completing his training he opened up a small electrical shop of his own. His business grew until, to use his own words, he was “doing most of the electrical contracting within a radius of 25 miles of his home town.”

E. Don Frank of Illinois says: “I now have a prosperous, successful electrical shop... I have never once regretted the day I enrolled with Coyne. . . .”

I could quote many other graduates who have found that real opportunities awaited them in a thriving business of their own, once they had the benefit of Coyne Training.

Free Consultation Service

An outstanding feature of Coyne Training is the Consultation Service offered to every graduate without charge. As part of this service, we show you how to start a small business of your own with a limited amount of money and help you with the purchase of your materials and to get the best trade discount on your purchases. We will also give you the benefit of our assistance in connection with your sales problems and you will be able to get technical advice you need, from our Consulting Staff.

Read the excerpts below from just a few of the many Coyne graduates who have been successful in a business of their own.

THESE COYNE GRADUATES ARE IN BUSINESS FOR THEMSELVES

Coyne Training Can Prepare You To Be Your Own Boss

His Business Increased Nearly 300%

“Before coming to COYNE I was farming with my father. . . . It is needless to say that without COYNE Training I would not be half owner of the only Electric Shop in a city of 2,000 population, and that we wouldn’t have the business that we do now. Nowadays it is more than we can do.”—ELDON P. CARTWRIGHT, Iowa.

Owns Successful Business In Small Town

“I am electrical contractor in a town of about 8,000 people. I have a lumber mill with about 25 large motors in my care as well as repair work of all kinds. I have 1 man working for me over 1 year and we are so busy on work 8 to 10 hours per day. . . .”—J. H. SHOPE, Pennsylvania.

Says He owes Success to COYNE Training

“Few years ago I started business for myself with a small motor repair shop. Today this is just a sideline, as now I am running a sales and distributing business representing several of the principal electrical companies in the country. My business has climbed from a few dollars up into the thousands and I attribute my success to the training I received in the 12 weeks in which I spent at Coyne’s.”—HAROLD DIETZ, Indiana.

Owns Battery Service Station

“I have started a business of my own—that is, my brother and myself bought out a battery service station with a fair business in battery work. Since we have added electrical work, we have all we can do.”—P. W. JAMES, Nebraska.

Single Job Pays for Training

“I have just finished a two-month job with a Company on a million dollar gas Booster Station. . . . My COYNE Training was responsible for me being trusted with this most important Electrical work. . . . I made enough money to have more than paid for my COYNE Training on this job.”—ELDON FRANK, Ill.

Age No Handicap

“I entered Coyne with less than an eighth grade education and at the age of 40. My first job was through Coyne Employment Service with a big battery house in Chicago. Today, I own my own business.”—A. H. MOORE, Washington.
In the following pages of this catalog I will tell you about the big Coyne Shops and explain the "Learn-by-Doing" method that has proved so successful in training fellows for their start in the big opportunity field of Electricity.

I want to ask you to go through this book with me very carefully and thoroughly. Read the pages before each department so that you will understand what each picture means. I am going to tell you about each department first, then I'm going to show you some pictures from that department. Every picture is a bonafide reproduction of a photograph taken right here in my school while the students were working and doing the same work that you as a student of Coyne will do when you get here. So once again let me say, don't skip through this book; take it page by page as it's written. Then you will get the true story of Coyne.

I'm going to show you through every department and while, of course, I can't picture all the equipment you will work on when you come to take your course, I am going to show you a lot of it in each department. To describe everything at Coyne would take a book much larger than this one. I am sure, however, when you have been through this book with me you will agree on one thing. Coyne offers you the practical training you need. I know long before you have been through this book you will admit that Coyne Training offers you advantages that cannot possibly be obtained by any other method of training.

You Advance Step by Step

When you start at Coyne you start in just as though you knew nothing about Electricity. If you have had experience then you are not required to do the jobs you know if you can pass the examinations. But when you come to Coyne we assume you have had no previous electrical experience so we start you off in the elementary department doing the simplest work. There are a given number of jobs in each department. You start in, for instance, on job number one; when that is done satisfactorily and the instructor has passed your work then you move on to job number two, etc.; when you have completed every job in this department and have proven you can do them satisfactorily you are passed to the next department where you have many more interesting jobs. Of course, in each department you enter, the work becomes more advanced. But you've been progressing step by step and very soon you are getting into advanced branches of electricity. It has all been so gradual and so easy that your work is a pleasure. You find yourself so interested, so fascinated with the progress you make and the easy way in which you do it that almost before you realize it, you will have received a practical training, which should give you your start to a successful future.

Now Let's Go Through the Shops

I've told you these things because I want you to be familiar with them before we start our trip through the shops. Now as we go through the following pages, I want you to pay particular attention to how my students are getting their training. As you go through these different departments I'm sure you can't help but agree with me when I say: The practical way to learn electricity is the way it's taught at Coyne. Now the first pictures I will show you will be of the elementary department, so before you look at the pictures of this department read the next page carefully so that you will better understand just what I'm going to show you.
Elementary and Circuit Department
Here’s Where You Start Your Electrical Career

T
HE first thing that impresses you upon entering this department is the light, airy room. It’s just flooded with daylight and fresh air, which is the ideal working condition.

Now in this department we give you in a simple, clear, practical way an understanding of important Electrical Laws and Principles. Just enough fundamental theory to enable you to understand the Practical Work you do later on the equipment. You learn at the beginning that Electricity, even though an unseen force of nature, can be measured and handled with meters and other devices, just as easily as water, steam or other elements. The nature and uses of Electricity are very simply and easily made clear to you by the practical methods and equipment we use here at Coyne.

We Don’t Use Books to Train You
A
t Coyne we don’t ask you to study dry text books to learn Electricity. Instead the important practical facts are explained to you in interesting talks by the instructors, using simple language and plenty of blackboard illustrations to make them clear. Then these points are demonstrated and proven to you on actual equipment.

Just imagine how much easier, quicker and more interesting it is to learn Electricity in this manner. You will find Electricity so interesting when taught in this way that you will eagerly follow every word and move of the instructor as he carefully and thoroughly explains each fascinating point to you. You will get a real thrill, hour by hour, as you so easily learn the important things about electricity which you must know to be a trained practical electrical man.

You will be surprised at how easily you remember things learned in this way. Then by working them out yourself on the actual equipment you get them fixed in your mind to stay.

You are also shown how to take brief practical notes and diagrams from the lectures and shop jobs, so you will have these in your own note book for future reference on the job at any time.

Practical Shop Work Helps You to Learn Electricity Easily
A
FTER each talk and explanation of important Electrical principles by your instructor, you go to a bench with a number of interesting electrical devices on it and work out practical jobs to prove each point. Your instructor shows you just how to proceed in wiring up these interesting jobs from your own notes and diagrams, and is always ready to help you whenever you need assistance. You work with batteries, magnets, relays, bells, buzzers, meters, annunciators, motors, lamps, phones, tubers, etc. You find each job so interesting you hardly wait to finish one to start the next.

This practical work is what you need to become capable of handling your work in the field after you graduate. Employers in the Electrical Industry want men who not only know the principles of electricity, but also how to apply them to actual equipment. They don’t want men who have to be told how to do each step of the job. They require men who know how to figure out what needs to be done, and who have the practical training and ability to go ahead and accomplish it. That is why the finishing with practical shop training is qualified to advance farther than the one who must “pick up” his knowledge as he goes along.

“Learn-By-Doing”
S
o many ambitious fellows make the mistake of trying to learn Electricity entirely from books or printed lessons, or by just picking it up on the job. As a rule they may plug along for years on the small jobs and at low wages. They may learn a few things, of course, but it is found that many men, they never really learn how or why certain electrical machines operate, or how to fix them quickly when they fail to operate.

But here at Coyne you actually learn by doing practical jobs under the guidance of widely experienced instructors, who know just how to explain the important principles and methods to you. And we have provided many types of electrical equipment and devices for you to connect up, test, operate, shoot trouble on and repair.

This large outlay practical training equipment along with our 29 years of experience and the modern system of instruction we have developed, is what makes the Coyne learn by doing method so efficient. And your own common sense tells you that this practical training should prepare you for Electricity, and will make you of much greater value to employers than any one could ever be just with a little book study or “picked up” knowledge. That is why many men after spending a lot of time and money have come to Coyne and prepared for steadier jobs and better pay.

Take Your Time Here at Coyne
W
hat I mean by this is that you don’t have to move along with any class. You can go as fast or as slow with your work as your own ability or any other reason that may be valid. You are not held back by others nor is anyone pushed ahead to keep up with others. And you do not have to recite before any classes. Here at Coyne you get individual instruction on your problems and take them up with your instructors personally, and get sincere personal assistance whenever you need it.

We also use visual instruction, pictures, blackboard illustrations and even motion pictures along with your actual work on equipment to enable you to learn easier and faster. We make every effort to duplicate the actual work you will have to do when you go out on the job. Some students have told us that when they left Coyne and went to work it was just about like stepping from one job into another, because the work they had in school was so much like that out on their job.

You Advance Step by Step
W
ith the modern practical system we have developed here at Coyne you are continually learning something new and interesting about Electricity, and you advance so rapidly that almost before you realize it you are wiring and operating rather complicated equipment.

You start out with the very simple principles and jobs, when ready you advance step by step, each job preparing you nicely for the next, and at the same time teaching you something important to your future success in the field.

Each principle and job are thoroughly explained by your instructor, then you make a few notes or a sketch of the important parts to remember, and next you work it out right on the actual equipment. Isn’t this by far the best way to learn practical Electricity and train for your start to a better job?

Alarm and Signal Work
I
n this Elementary and Circuit Section you wire up, test and operate a number of very practical door bell, office call, signal, burglar and fire alarm, and telephone systems. This line of work is a profession in itself, and keeps many thousands of signal men employed in big factories, offices, stores, on railroads, ships, and with the telephone and telegraph companies.

You may use a lot of this knowledge on your first job after graduation, or frequently on profitable jobs on the side, or in business for yourself. You also learn to read blue prints and diagrams, and to wire electrical systems from definite plans, and how to test and shoot trouble in a definite systematic manner, that will make you much more valuable to your employer.

Laying Your Foundation
T
his interesting work in the Elementary and Circuit Department not only prepares you for a job in one of the branches of signal work, but it also lays a very important foundation for all your training in the latter departments and for your work on larger equipment both in school and on the job. Your knowledge of circuit tracing and testing will be a great help to you in laying your foundation in the latter departments and for your work on larger equipment both in school and on the job. Your knowledge of circuit tracing and testing will be a great help to you in laying your foundation in the latter departments and for your work on larger equipment both in school and on the job.

Many of the simple rules or methods you learn in this department will help you when you are used to wiring up your power jobs in later departments, and is one of the most important qualifications of the good electrical wireman or maintenance men.

Many of the simple rules or methods you learn in this department will help you when you are used to wiring up your power jobs in later departments, and is one of the most important qualifications of the good electrical wireman or maintenance men.
-You Start Right In Doing Practical Work!

Here is a general view of part of our circuit equipment. You see students wiring up and testing burglar alarm, door bell and signal systems. This is where they commence to put the current to work, and apply many of the things learned in their elementary instruction.

These men on the left are wiring a telephone. They learn the use and operation of every part, and then actually talk over it to other phones in the department when they get it wired. Proving out their work gives them confidence.

The students shown above are performing interesting tests with laboratory instruments to demonstrate and prove some of the important principles of electricity.

Each important principle of electricity is explained in simple language and with blackboard illustrations. Then these principles are demonstrated and proven right before you on actual equipment.

Wiring and testing special equipment for proving Ohm's law and effects of electricity with meters and instruments. These students you see are experimenting with spark coils, relays, transformers and meters.
Here you get into bigger work, and start to do wiring for light and power systems.

This is a very important branch of electrical work and offers splendid opportunities for the wiring of houses and factories, for lights and motors, after your training has been completed.

The trained man can make good money working for contractors. The fellow who wants to go in business for himself, will have a real opportunity to start a nice business with very little money.

In any community where there is electric power, there are houses, farms, factories or other places to be wired up for lights and power. Many of our graduates have opened a business of their own when they left school and have later worked up a good trade right in their own communities.

**The Instructor Works With You**

Remember the instructor is always near to help you and show you the best methods, as a result of years of experience. In this way, efficient teaching helps to save you a lot of time.

Now in this department you start off with the simplest work first and make your first splices.

The instructor shows you how to properly strip wires and how to make the common and best splices. He shows you how to make them correctly and to avoid the common mistakes.

Then after he has shown you how, you make a number of splices yourself and have the instructor inspect them.

When you can make them all O. K. he shows you how to solder them.

You next go to a bench where you wire up several different systems of switches and lights.

You learn the purpose of conduit (the pipe used to run wires thru) and the use of various fittings, and what the different kinds of switches are for.

When you have connected all your wires and taped your splices the instructor inspects the job and shows you how to test it out with the current, to prove that all joints and connections are O. K. and that the lights work as they should.

**Coyne Training Is Practical**

And now, you advance to the house wiring section, where we have erected a group of skeleton rooms for you to actually wire up the same as you would out on the job.

Here you pull wires in longer runs of conduit and learn about BX (or armored cable) and knock and tube work and all the common types of wiring. You install a complete system of lights and switches and convenience outlets.

You learn about the most up-to-date methods and materials. And you do the work according to the national code or the rules by which practically all wiring must be done nowadays to make a safe and dependable job and pass the inspection.

And while you are doing this you have at all times the help and advice of your instructors so you can handle your work on the job when you get out in the field.

Now when you have this job all wired, you learn how to test it, to prove that there are no short circuits, open circuits or "grounds" at any of the splices or connections.

**Now You Can Turn On the “Juice”**

And now you are ready to connect the lamps and switches and then turn on the “juice” and what a thrill when you see your own first wiring job in operation, and the lights all respond to your touch on the switches. Then is when you will say you’ve glad you chose the Coyne method of practical training.

We give you special practice in bending, threading and cutting conduit, and the use of proper tools and fittings for this kind of work.

And then you go to a special motor wiring job and get your first power wiring. Here you wire up motors, starters, with conduit systems, and when you get all wires all in and tested, you turn on the current and watch the motors run.

Imagine hearing the smooth hum of the motors, running on “juice” that comes through the wires you installed yourself.

**Illumination - A Fascinating Field**

With the tremendous increase and improvement in lighting systems everywhere today and the demand for the most complete and efficient lighting in all new buildings and remodeling of thousands of old inefficient systems, this branch should require well trained men.

We teach you the simple facts about the nature of light and principles of illumination, the types of lamps and fixtures to use for various jobs and how to determine the size and amount of light required for various classes of work. Also how to lay out lighting systems.

You will wire up and operate sign flashers and learn flood lighting and advertising illumination. You also learn about types of lights used for movie studies and airplane landing field lighting. These are very active fields and employ thousands of trained electrical workers.

**Electric Ranges Offer More Opportunities**

Electricity is coming into more and more use for home cooking. There are over a million electric ranges in this country today, and it is estimated that there will be several million more in use in the next few years. These ranges require trained men for installation and servicing. An understanding of this work will prove mighty useful to any man wishing to specialize in electrical appliance repair or intending to start a business of his own.

Many graduates are also making good money running a profitable business of their own, just specializing in illumination, wiring or electric appliance work.

Other graduates of Coyne in smaller towns must handle several branches to make a good business or hold the best jobs, so right here I want to make a point and make it strong. There are many branches of work covered in our complete course, that graduates can profitably specialize in. Yet in many other cases, in order to get in on the more profitable jobs, they must be able to handle or take charge of several branches. That is why we insist on giving every one of our students a practical training in many phases.

Now that I’ve told you about the Construction Department, I want you to see the pictures on the next three pages of this book.
This work offers you a real opportunity to work for electrical concerns, or to go into business for yourself and be your own boss.

General view of a section of the construction or wiring department. Notice the large and well-lighted shop. The men are wiring and testing light control circuits in their first small conduit layout, and getting real practical experience in the handling of tools and different kinds of switches.

These students are putting in wiring in conduit, BX, and knob and tube, in the actual room frames, and learning to wire lights and switches the same as they will do out on the job.

And this is how you learn to handle conduit. Most of the new and modern wiring for light and power is run in these pipes called conduit. And a practical man working in this line, must know how to bend, cut and thread this conduit. These students are getting actual work with threading dies, bending "hickey's," and in cutting pipe.
Here are some of the motors the students wire and test in this department. This actual work teaches them how motors and starters must be wired according to the code, and how to test to locate troubles in the wiring, which might cause motors to fail to operate. And it gives them still more practice in the use of tools. Don't you agree that to “Learn by Doing” is certainly best?

Coyne Training His Turning Point

“I am completely satisfied with my training for it was the turning point of my life. With the training I have worked myself up to assistant chief electrician for the ——— Foundry Co. and have a very good future to look to.” — WILLIAM HOWELL, Va.

Here is an electric range, with automatic temperature control equipment. These students are learning how it is constructed, and wired, and where to look for any troubles that might develop in such equipment. In many localities where hydro-power makes electricity lower in cost, these electric ranges are being sold and installed by the thousands, creating jobs for trained men to wire and repair them.

Coyne Grad. Chief Electrician

I am still Chief Electrician and getting along almost perfectly. I consider that good. I believe that Coyne can prepare one for the job. We have about 1500 H. P. here, everything from ½ H. P. to 200 H. P. motors. — P. DUZE-NACK, Colorado.
IMPORTANT NOTICE!

Since this catalog was printed I have found it possible to effect a further saving which I am glad to pass on to my new students.

By referring to question 21 on this page and also the Terms of Tuition on Page 44, you will notice that every new student was formerly required to pay incidental fees of $19.00 in addition to the regular tuition cost.

However, until further notice, I am offering to include the beginner’s school supplies and the other compulsory services, AT NO EXTRA COST.

This means that you pay only ONE tuition rate here at Coyne. There are no extra compulsory school expenses outside of your tuition cost. Any other necessary shop expense throughout your entire training course should not exceed $5.00 and this expense would be optional with you. Any shop prints or reference material you might care to buy would be entirely up to you!
These students are making practical tests on various lighting fixtures with foot-candle meters and photometers. Their instructor is giving them a personal explanation of one of the modern type photocell foot-candle meters. This kind of practical training enables our graduates to qualify for a job in illumination work.

Here you see part of the illumination section, and some of the different kinds of light fixtures you work with. The instructor is showing students how to test the amount of light from each fixture with a "foot-candle meter." You learn which type of fixture is best for home, office, or factory use.

Special instruction on the mercury vapor lamp, and the operation and care of these interesting units. Thousands of these lights are in use now, and thousands more installed yearly in the big industrial plants. And the maintenance electrician who can install and repair them can qualify for the better jobs.
Why We Want Coyne Students to Have Practical Armature Training

In this department you get a practical training in winding, testing and repairing armatures and stators, both of large power motors and generators of many horsepower.

The armature can be called the heart of Direct Current motors and generators. And all power motors and generators, whether D. C. or Alternating Current, have either armatures or stators to be wound.

Opportunities for Trained Men in Armature Work

Think of the many millions of motors of all sizes in our great factories and industrial plants all over the world today. The man who can quickly find and repair the troubles in these motors, and keep the wheels turning, is a valuable man in any organization.

Power plants with their generators and motors, street railways and electrified steam railways with their big motors, hotels, and office buildings with elevator motors, and now many electrified ships, are all creating additional opportunities for skilled armature winders at interesting steady jobs.

Easy to Understand—Personal Instruction

In this department, your instructor first explains an armature to you in simple shop language. He shows you an armature core and shaft, and explains how the core is made.

He explains the purpose of the slots and coils, and shows you how a completed armature creates powerful magnetic fields when current is applied, and how this magnetism makes a motor armature turn. Also how the coils generate voltage in a dynamo.

So you see, in this department you are learning a lot about the operation of motors and generators. And right here you begin to see the need and use of many of these important laws and rules of electricity that you learned in the Elementary Department. All of our departments dovetail together and there is just a gradual step by step advancement, until you are right on power equipment almost before you know it.

And you will be surprised how simple and easy even the advanced work is, with the methods we use, and with the personal help and explanations of your instructors.

Actual Work on Wire Windings

After the instructor has explained the armature, he shows you how to make your first wire-wound coils. Then how to put them in. Then he lets you go ahead and put in the rest and complete the windings with your own hands, but always with his ready help and advice any time you need it. All of your windings are done with real copper wire on actual armatures.

Operate the Armatures You Wind

When you have the coils all in place, the instructor shows you how to test each one to prove that there are no faults in them. And then you connect up the coil ends to the commutator (the commutator is the group of copper bars on which the brushes run). You learn how to make a sketch or winding diagram, to make your connections from, so you will be able to do winding from the plans used out on the job.

Then after you solder the connections and the commutator is trimmed, you test the whole winding out finally on a special machine for this purpose and with meters, to see if there are no "grounds," "shorts" or "open circuits" in it. Then what? Why, you put it in a motor frame and actually run it. What a "thrill" you get out of it. When you see the armature you wound with your own hands spin merrily in the motor, you just feel that you can now wind any armature.

Once more you will say, how much better this kind of training is than the theory you would get by studying from printed lessons or books.

Now You Wind Large Armatures and Stators

When you have finished your windings on small armatures and stators, you are ready to start on the large windings.

Your instructor shows you how to make large coils and how to carefully tape and insulate them and place them in the well insulated slots of the large cores.

This work makes you more confident and better able to "tackle" and wind or repair any of the large armatures and stators when you get out on the job.

When you finish these coils, you test them. And then connect them and solder them to the commutator.

Some of the windings are baked in a modern electric bake oven.

The instructor shows you how to cover them with a special varnish or insulating compound, and tells you at what temperature and how many hours armatures of different sizes should be baked.

This treatment keeps the moisture, oil, and dirt out of the finished windings, while they are in service. It greatly increases the life of a winding.

You also get special instructions on all types of material and tools to use on different windings, and the best shop methods for winding and testing.

Training Is Practical

You will get practical training in various methods of testing and "trouble-shooting," to locate troubles quickly out on the job.

And regardless of what line you later take up, your armature training will always be of great value to you. And it will be a great help in your understanding of motors in the next department or on any future maintenance job.

You will always remember the kind of practical work you do in this department and the thrill and confidence that comes of seeing your own windings work in the motor.

So now let's see the armature department on the next three pages.
You will actually wind both Armatures and Stators and learn about the operation of motors so when trouble develops on any job, you can correct it. Your Armature training here at COYNE should make you more valuable to your employer.

Here you see a general view of part of the Armature Department. And you will notice the large, airy, and well lighted shop these men are working in. Actual winding and testing of D. C. and A. C. motors of various sizes will give you the practical training you need in this work.

These students have finished their first small windings and here you can see them winding and testing large armatures and stators. In the background you see men truing up a commutator in a lathe and others winding a 200 H. P. A. C. stator. And in the foreground, instructor shows a student how to test his finished winding, before connecting up the leads.
This man is testing a finished winding of a small D.C. armature, before connecting the leads to the commutator. These actual wire windings you do first on these small armatures get you acquainted with the use of tools and handling of coils, so you are ready for the large windings you do next in this department.

These students are testing finished windings of armatures and stators. This is the way they find their mistakes and learn to make their windings correct. Testing armatures and stators and locating faults in the windings, is very valuable to any maintenance man.

Above you see our students removing part of an armature winding, to repair some bad coils. This kind of real experience teaches them the proper use of soldering irons and tools, and the right methods to save time and do first class work.

And these men are taping and putting in new coils in a 100 horsepower A.C. stator. This is the kind of actual work that makes them able to handle a job in the field. You don't forget this kind of experience, and when you have done actual work like this you should have the ability and confidence to tackle repair jobs anywhere.
And here they are getting special instruction on operation of a lathe, to true up commutators on armatures. The instructor shows them how to grind and set the cutting tool, and how to make a nice smooth cut on the copper.

Substation Maintenance Operator

"I have a job with the Power Company. Substation maintenance is my work and I like it real well. It certainly isn't much trouble for a trained man to get a job. I got my job with this company the following week after I put in my application. I feel now that the greatest thing I ever did was when I enrolled at Coyne."—JAMES DIBLE, Ohio.

These men are operating coil winding and forming machines, and making up coils for large armatures. This makes them acquainted with the same type of equipment they will use in winding shops when they get out on the job.

This Student is testing an armature on the growler, a machine for quickly locating trouble and faults in windings. This kind of instruction enables our graduates to get right at the cause of armature troubles without waste of time.

Thanks Coyne for Help

"I was hired by the Electric Light & Power Co. as a frequency changer floorman... I like the work fine and am proud of my Coyne knowledge of electricity. Thanking you for your help in my interest, I am."—RAY BRAMLEY, Missouri.

These students are operating the electric bake oven, and just removing an armature that has been wound, covered with insulating compound and baked, to harden the insulation. This treatment keeps out the moisture, oil and dirt that would otherwise ruin the winding.

This Student is testing an armature on the growler, a machine for quickly locating trouble and faults in windings. This kind of instruction enables our graduates to get right at the cause of armature troubles without waste of time.

Thanks Coyne for Help

"I was hired by the Electric Light & Power Co. as a frequency changer floorman... I like the work fine and am proud of my Coyne knowledge of electricity. Thanking you for your help in my interest, I am."—RAY BRAMLEY, Missouri.

These students are operating the electric bake oven, and just removing an armature that has been wound, covered with insulating compound and baked, to harden the insulation. This treatment keeps out the moisture, oil and dirt that would otherwise ruin the winding.

Thanks Coyne for Help

"I was hired by the Electric Light & Power Co. as a frequency changer floorman... I like the work fine and am proud of my Coyne knowledge of electricity. Thanking you for your help in my interest, I am."—RAY BRAMLEY, Missouri.

These students are operating the electric bake oven, and just removing an armature that has been wound, covered with insulating compound and baked, to harden the insulation. This treatment keeps out the moisture, oil and dirt that would otherwise ruin the winding.
HERE you get into the most fascinating work of your whole course so far.

We have used the term D. C. in several places and wherever we have, it means Direct Current.

You are now ready to APPLY many of the things you have learned in all the previous departments to the actual operation, care and repair of D. C. or Direct Current power equipment.

For example, the simple laws and demonstrations of magnetism you had in the Elementary department will make it very easy for you to understand the operation of the largest motors and generators. And the work you have had on armatures will help you to understand still more thoroughly the equipment in which they are used.

You will also have good use for your knowledge of circuit tracing, in wiring and testing the controllers in this department.

So again you see how easy and simple we make it for you to understand even the advanced equipment, by our step by step practical system of training.

Great Opportunities In This Field

D. C. motors and generators are used very much in mines, steel mills, for electric railways, elevators, and in some districts close to generating plants where all the local electric work is carried on by D. C., including factories and industrial plants. Some big factories that operate their own power plants, use D. C. equipment, and so do some small towns. Even the business district of Chicago, known as the "Loop," is operated largely by D. C. So this is a very broad field, and offers splendid opportunities to trained men, as power plant operators and motor maintenance men.

Realizing the great importance of this field we have installed thousands of dollars' worth of equipment to make your work in this department really practical. You work on motors and generators of many types, and from the smallest to those of many horsepower. Controllers of all common types, from the simple hand operated ones to the modern automatics, and photo-cell types.

Even a complete power plant switch board is provided for your final operating experience.

D. C. Motor Training Easy and Practical

WHEN you start your work in this department, your instructor first explains the operation of D. C. Motors, using actual parts of a machine and interesting blackboard sketches, some of which are in various colors to make it easy for you to understand every point.

He goes over with you briefly the work you had in the Elementary and Armature Department that applies to these machines, and sees that you understand every principle of them thoroughly. Naturally, a proper understanding of their operation will make you able to wire them up or find and fix their troubles much more quickly when you get out in the field.

When you understand motor operation, he tells you of the different types of motors and their characteristics and where each is used.

Plenty of Personal Help

THEN you go right to the equipment in the department and he shows you how to connect up, test and run the actual power motors. In this way you prove out everything he has told you and by doing the work on the equipment yourself you should easily remember what you learn.

Then your instructor explains D. C. motor starters and speed controllers. Again he takes a simple controller first, shows you all the parts and explains about each. Then he draws it all out on the blackboard so you can get a still better picture of it in your memory, and also in order for you to copy a sketch of it to keep in your own notebook, so you can easily refresh your memory whenever you have need for the information.

You are taught how to select the right motor for different uses. And also how to test the horsepower of motors with special testing equipment used for that purpose. Then how to determine their efficiency, using both the horsepower test, and meters.

This is all very interesting work, and qualifies you to hold a job, when you get in the field.

Your work on Controllers covers wiring, testing and repairing as well as care of coils, contactors, overload devices, etc.

Instructors Work With You

THEN you also get complete instruction on trouble shooting and repairs, and how to test to quickly locate any of the common troubles in both starters and motors, and then how to fix them.

Your instructor will often cause something to go wrong with a machine and then tell you to find the trouble and fix it. It is sometimes necessary for you to take the equipment completely apart. If you get stuck it is always near and ready to help you out, and show you the right way. This repair work makes you familiar with the proper use of tools. You also learn how to connect motors for dynamic braking operation, by which they can be stopped quickly and smoothly by their own magnetic braking effect. This is another very valuable thing to know, as you can make it save lots of time on certain motor jobs for your employer.

Now You Are Ready for the Next Department

YOU ARE NOW READY for the next step. After you have thoroughly mastered the operation of D. C. motors, you will be ready for special instruction on D. C. switchboards and ways, and on the special operation of D. C. motors used as generators.

Power Switchboards

NOW you get special instruction on D. C. switchboards and how they are constructed, wired and operated. You learn the kind of materials used for the panels, how they are erected, and how the meters and switches are attached, also switchboard circuits and arrangements of bus bars and control wiring.

Your instructor explains the use and care of all the instruments, circuit breakers and switches, and then how to operate the board. This is explained first with blackboard diagrams which you can copy and keep, and then you are instructed right on the main power board in this department.

Here the instructor demonstrates each operation and shows how to read the meters, how to adjust the generator voltage, connect generators in parallel and then equalize their load with the controls on the board.

Then you do the same operation yourself, and what a thrill you get when you realize that you are controlling many horsepower or kilowatts of energy from real generators in the department, the same as you may do later, in some power plant.

You are instructed in common power plant operating rules, so you will be prepared when you get out on the job.

Meters and Instruments

EXT you learn about meters, voltmeters, ammeters, watt-hour meters, demand meters, and recording instruments.

The instructor explains them with actual meters and parts before you, and simple sketches to make clear their operation and their connections. You learn how to read them, and how to test and adjust them and the different uses for each.

You also learn how to use what is known as a "meggert," a device used to test the insulation of machines.

Now You Start On Generators

NEXT your instructor explains the operation and care of different kinds of D. C. generators and their use. Then you wire up and test and operate different kinds of generators and motors-generator sets. You work out your problems on this equipment until you understand generator operation, care and repair.
The work you do on Direct Current Equipment helps fit you for opportunities in "trouble shooting," repairing and maintaining power equipment in Power Houses, Manufacturing Plants, Industrial Concerns and on Railroads. Just imagine yourself as one of these students.

Here is a general view of the D. C. Department. Just see how interested these men are in wiring up, operating and testing D. C. motors and controllers of all common types. Notice the wires coming down from overhead, to supply current for running tests.

These students are learning the operation of a motor-generator and when they finish this job they understand the operation and care of this equipment.

These students are learning the operation of an automatic controller and compound motor, and learning to make the same tests and repairs they will have to do out on the job.
Here are students getting real operating experience on a large modern D.C. Switchboard. They learn to connect and operate generators in parallel, and to take care of circuit breakers, switches and instruments. This kind of training prepares them for a power plant or substation operating job.

These students are operating and testing motor generator sets, building up voltage, and measuring the output of these units.

Upper view shows student receiving personal instruction on D.C. meters. Lower view, these men are making horsepower and efficiency tests on D.C. motor generators.
This is how our students learn to test automatic remote control equipment, and learn how to quickly locate troubles, so they can save time and money for their employer on the job.

**Always a Booster for Coyne**

I have been more than pleased with the training I received at Coyne and always will be a booster. . . . I was made Foreman of one of these plants which takes in Elect, mining and milling of zinc lead and iron ore. The plant mills 6 to 7 hundred tons each 24 hours and at the present time is being enlarged to take care of 1,000 to 1,500 tons per day. — F. L. NORTHRUP, New York.

Here you see several students testing and operating generators. The large machine at the left, is used to make practical demonstration of a three wire generator, and also dynamic brake tests.

**Thanks Coyne for Help In Landing Job**

I wish to thank you and the Coyne Staff for all you have done for me. I have obtained a good position with the Tractor Co. as an electrician. I got the job the first time I called after you sent them the recommendation. I can truthfully say this much for Coyne, they never let you down as the saying goes. I'll always speak a good word for Coyne whenever I have the opportunity. — M. V. JOCHUMS, Illinois.

And this is a horsepower test. You learn to test the horsepower and efficiency of motors, and to select the proper motor for various jobs they are used on.

Real practical training. These students are completely overhauling and repairing a D. C. motor, and repairing the field coils, and the commutator and armature.

These students are wiring up and operating modern automatic controllers, and testing their operation right with the motors.
HERE you enter the large Alternating Current Department and commence your work in one of the most fascinating and profitable branches of the entire electrical field.

Wherever we use the term A. C. you will understand that we mean Alternating Current.

Alternating Current equipment is used in practically all of the large power plants of the country and in the majority of the thousands of great electrically equipped factories and industries.

There are so many different uses for A. C. that we cannot mention them all here and it is one of the most rapidly developing branches of electricity.

A great many electricians in the field today who have not had the benefit of Coyne Training, are not familiar with A. C. Current, and as a result are not prepared to handle the better jobs.

That is why it pays to get your training at Coyne where you can be sure of getting practical knowledge of A. C.—you will have plenty of actual A. C. power apparatus to work on. You should understand and remember what you learn because you have done the work with your own hands, right on the equipment.

Plenty of A. C. Power Equipment

BECAUSE of the great importance of A. C. today in any branch of electrical work and because you will need a good understanding of it to become a success in any branch of electricity, we have gone to great expense to make this department efficient.

Here you can work on a great number of real commercial sized A. C. Power motors from those of less than one horsepower to those of over a hundred horsepower. Motors, controllers, generators, transformers, power plant switchboard, outdoor type substations, transmission lines, lightning arresters, oil switches, air breakers, welders, etc., all help to make this department fascinating, enjoyable and extremely valuable.

You will be thrilled with every minute of the time in this department until you are ready to leave it, with a practical knowledge of A. C. that will give you full confidence to step out and "tackle" jobs in this line.

A. C. Made Simple

IN this department your instructor first gives you a practical explanation and demonstration of the nature of Alternating Current and how it differs from Direct Current.

He then uses simple blackboard diagrams and parts of equipment along with his plain shop talk to make these principles clear to you.

No course would be practical without the explanations of these principles of Alternating Current that we make so clear in this department.

We even use motion pictures along with the practical talks to help you grasp certain facts about A. C. and the construction and operation of A. C. Power Equipment.

Then after these simple explanations you go to the actual equipment and with the help of your instructor you make a definite test and prove each fact by working it out on the live equipment.

You start by wiring and testing small motors and then gradually progress to the largest and most advanced machines. Because in this department, just as in all the others, our courses, your work has been arranged so each job is just a step ahead of the last. You reach and master the bigger jobs as soon as you master the smaller ones.

You have been prepared all along the way for each step ahead.

After you thoroughly understand the simple motors, you go to the larger apparatus.

Real Practical Work On Trouble Shooting

WHEN you have a motor connected up to run, you test its speed and its pulling power.

You change the connections and reverse the motor. Remove a wire here or there to see how it acts when a connection comes loose. You observe if it acts in good condition and with connections O. K. and also how it acts and sounds when various things are wrong.

In this way you learn to quickly locate troubles by the symptoms. And you also use test lamps and meters to make tests for the troubles that can be detected easily only by a trained man.

And after you have done this on a number of motors, you can find and fix any of their component parts quickly. It is this kind of training that enables Coyne trained men to advance faster than the average electrician.

Personal Help and Instruction

YOUR instructor is always near to help you with anything you get stuck or puzzled on. He points out ways to do each job best and how to save time and locate troubles quickly, and just where to look first for most common troubles. He continually gives you patient advice from his and our long years of field experience.

When you finish any job he asks you questions about it to check up and help you be sure you know all the important points. And many of these questions answer for him may be the same you will be asked when applying for work later, so you can see how every part of our course is planned to help you handle a job successfully.

While working on motors you have very important jobs on which you make horsepower, efficiency and power tests. These are very important for you to know if you wish to qualify for a job.

Then you work on what are known as synchronous motors and learn how to use them and perhaps save your employer thousands of dollars by improving the conditions and equipment in his plant.

Power Plant Experience

WHEN after you have mastered all the motors and controllers, your instructor explains various types of A. C. generators to you—how they operate, how to take care of them, wire them, test and repair them. Then you actually connect up and operate them. Then you get real power plant switchboard operating practice on the large modern main switchboard, at which you are given the responsibility of operating the generators and controlling the power for the entire department.

This equipment you operate generates enough power to supply a small town.

You learn the modern methods of remote control operation used in the larger power plants.

You also work on an outdoor type substation with its transformers, choke coils, lightning arresters, high tension fuses and switches, and even a 3 phase transmission line on high tension suspension insulators running to this substation.

Don't forget you will go on inspection trips to some of the largest and most modern power plants and substations while in this department (as you have seen pictured on page 3.)

Arc and Spot Welding

BECAUSE of the thousands of these machines now being used in modern industrial plants and the great increase in their use, you can get in this department, training in the principles and operation of welding apparatus.

You can get instruction in arc welding with modern welding generator and transformer equipment and spot and butt welding on specially built machines of this type.

Another one of your very important jobs in this A. C. Department is that of overhaul, test and repair of several types of A. C. motors, starters, etc. Here you go to special work benches where you can conveniently take apart and reassemble these machines with the proper tools.

The instructor will show you how to make certain tests and notes of connections and troubles on them.

Valuable Training in Modern Maintenance

A LONG this same line are given careful instruction on maintenance of many types of A. C. machines used in big factories. Not only on how to find and fix the troubles but how to do this in the quickest and best way and how to make regular and systematic inspections and tests of equipment to locate and correct faults before they become serious and perhaps cause an actual shutdown and loss of time and money in your future employer's plant. Then you practice these methods right on the department equipment.

You learn how to plan a list of stock parts to carry for quick emergency repairs and the best of modern methods of maintenance as used in the largest industrial plants and power plants in the country.

You can readily see how such training here at Coyne will fit you for a start in this great field in which thousands of opportunities have been created for trained men.

That's why we have spent many thousands of dollars and years of careful planning to see that you get a practical training on many types of apparatus. Then when you finish here, you should be confident and able to go out and tackle a job in wiring, operating or maintaining and repairing of A. C. machines.

The training you get here should lay the foundation for your start to success in the electrical field. So now let's see this interesting department in the pictures on the next five pages.
Here is a general view of one section of our alternating current department. And these students you see on these interesting jobs, are getting practical experience on many types of A.C. motors, controllers, and power equipment. In the far background you will see men working on top of substation apparatus.

These students are testing the horsepower, efficiency, and power factor of induction motors, all very valuable things for the practical maintenance man to know.

And these students are connecting up, and testing a motor and controller with static condensers, which are used to improve "power factor" in the most modern plants.
Here you see some students working on a synchronous converter, and making some very interesting connections and tests, under the supervision of the instructor on the right. This machine is used to change Alternating Current to Direct Current. It's the actual work on such equipment as this that gives Coyne graduates ability and confidence.

The picture on the right shows an instructor explaining the operation of some photo electric cell control equipment with which these students are working. Actual experience on such interesting equipment is one of the important reasons why Coyne Trained men are capable.

These fellows are connecting up, testing and repairing various types of A.C. motors and controls. When they understand their operation, use, and care, the instructor checks their work, so they know it is right, and when they leave school to take a job on the outside, it seems just like changing from one job to another.
Here an instructor is explaining important principles of an induction motor, on a machine specially cut away, so the student can observe these points both while the motor is idle and when it is running. This is an example of how some of our specially prepared equipment will save your time, and quickly and easily make its operation clear to you.

Another view of a section of our A. C. department showing students working on a wide variety of A. C. motors and control equipment. You learn how to inspect, connect up, test and repair many types of A. C. machines. This practical training in modern maintenance work helps to make Coyne Students more valuable to their employers.

And here we have different types of modern automatic, remote control equipment for A. C. motors. These men are getting acquainted with every part of them and their care and operation, by wiring them up and testing them out with the motors.

This is an outdoor type substation structure, and these students are connecting the transformers, checking the lightning arresters and voltage regulator, and becoming acquainted with this type of equipment.
Real practical work overhauling and repairing an A.C. induction motor. This is the kind of work that makes you sure of yourself when you get out on the job, for when you understand all the working parts of such equipment you have confidence in yourself.

And these students are getting actual operating practice on a large A.C. switchboard. Here they learn the operation and care of meters, circuit breakers and switches, and how to synchronize and operate alternators in parallel and equalize their load. And in this way they qualify for a position in A.C. Power plant operating.

Here you see several students connecting, testing, and operating a large synchronous motor, and its exciter generator. This equipment is also used for correcting power factor, and every up-to-date, well trained man should know this work well, to qualify for a job of this type.

This is an electric spot welder. And this student is learning how to operate and take care of such equipment. There are thousands of welding machines in use in industrial plants today, and the well trained man is one who knows how to keep them going.

Here you see several students connecting, testing, and operating a large synchronous motor, and its exciter generator. This equipment is also used for correcting power factor, and every up-to-date, well trained man should know this work well, to qualify for a job of this type.

These students are connecting up a bank of power transformers for 3 phase operation, in the outdoor type substation in this department.
These students are operating a carbon pile A. C. motor starter, and an automatic "across the line" starter. A good knowledge of these devices is very important, as they are widely used in many industrial plants today.

Here is another complete overhaul and repair job on a motor generator. These men are testing the armature with a magneto, and repairing the field coils and brushes.

Here you see several of our students testing power circuits and equipment on the main A. C. switchboard and studying features of switchboard construction and wiring. So you see how our training in this department prepares you to hold a job in A. C. work.

These students are getting real practice with tools and instruments in connecting up cables on large power transformers.

These men are learning arc welding and how to operate and maintain welding machines. There are thousands of these machines in use in industrial plants all over the country, and the increased use of welding operations is serving to open up many new jobs for skilled men in this line.
Great Opportunities for Trained Men in These Big New Fields

Although two of our newer industries, Electric Refrigeration and its closely allied branch, Air Conditioning have rapidly grown until they are now counted among our largest and most active industries. These fields are expanding at an astonishing rate and have created jobs for thousands of additional trained men; and this remarkable growth should continue for many years.

In approximately ten years time, the annual production of Electric Refrigerators has jumped from 100,000 units to over 2,000,000 units per year. Today many millions of homes are using Electric Refrigerators to save money and improve health by preventing food spoilage. Millions more of our homes are yet to be equipped with electric refrigerators.

Refrigerators have their electric motors, controls, switches, and fuses, as well as their compressors and evaporators and all of this equipment must be maintained and serviced by trained men. Manufacturers of Electric Refrigerators use trained men for testing and inspecting these units. Dealers and distributors require the services of trained installation and repair men. And besides the millions of electric refrigerators in homes, there are thousands of large commercial electric refrigerators used in stores, meat markets, packing houses, restaurants, hotels, candy shops, etc.

New mechanical developments always need trained workers who know how to make and service equipment. Employers engaged in the manufacture of Refrigeration and Air Conditioning apparatus will always require the services of skilled workers to fill the many key jobs such as salesmen, service repair men, installation and factory positions.

Air Conditioning Is a Big New Field

Air Conditioning is another great new industry which is closely allied to the field of Refrigeration. For hundreds of years, people have heated their homes for increased comfort and health during the winter, but only recently have we developed for general use, a method of cooling interiors, thereby promoting better health and comfort during the hot summer months. Now, thanks to modern air conditioning equipment, we can cool the air in buildings by absorbing the heat with special refrigerant gases and then pumping the heat outside with electric motor driven compressors.

Air Conditioning equipment is now being installed in homes, offices, hotels, theatres, restaurants, and even in shops and factories for the purpose of improving working conditions, and in the processing of certain materials.

Think of the splendid opportunities that have been created for ambitious men who are wise enough to train now and prepare to get into such new, live and rapidly growing fields.

Easy to Learn By Coyne Methods

We have spent thousands of dollars to provide many types of Refrigerating units for your practical shop instruction and experience. It is surprisingly easy to learn about the operation, care and repair of these interesting refrigeration and Air Conditioning units, under the personal supervision of experienced Refrigeration instructors who show you step by step how to do the work on well-known machines of different types.

Practical Work on Well Known Machines

You get your experience on many different types of household refrigerators, commercial units for stores, meat markets, etc. You will easily realize how practical is your Training on the many makes of compressors and refrigerators which are provided for you to overhaul, test and service in this department. This is a very important point for you to remember, because you want to get your Training on machines made by the outstanding manufacturers. For this reason, we are constantly adding late types of Refrigerating machines so that this department will always be up-to-date and give you instruction on the kind of equipment you will have to work on when you are out in the field.

You will learn about Refrigerant liquids that boil at temperatures near zero. You will learn about reciprocating and rotary compressors, flooded and dry type evaporators, expansion valves, float valves, thermostatic switches, various types of motors, etc. You will be taught modern methods of installation, servicing and testing refrigeration and Air Conditioning units.

In addition to this practical Shop Training, you will get many practical pointers on salesmanship to aid you in sales work or in the operation of your own refrigeration business. Coyne students who possess sales ability frequently make successful equipment salesmen because they are better able to explain their machines to customers and also to service equipment in need of repair.

Modern Air Conditioning Equipment

So as to provide Coyne students with an opportunity to work under actual working conditions similar to those they will experience in the field, we have even built a two-room bungalow with heavily insulated walls for the purpose of conducting practical Air Conditioning tests and demonstrations. This laboratory building is equipped with instruments for measuring the air flow, air temperature, air moisture content, etc., as well as automatic control devices to regulate these conditions. Cool, crisp, invigorating temperatures can be maintained inside this test building even when the air outside is hot and damp.

You will be shown how to calculate the proper size of Air Conditioning units and equipment to use for various sized rooms or buildings, and how to test, operate or service equipment of this kind.

Now is the time to train for these profit making fields. Why struggle for a foothold in overcrowded lines? It is easy to understand that the fellow with foresight who gets in on the ground floor is bound to benefit over a period of time. Here is your big chance to enter an uncrowded field of profit making possibilities. Now is the time and Coyne is the School where you can get the type of training that will prepare you for a start in these money-making fields.

Now, look at the pictures of our Refrigeration and Air Conditioning Department on the following pages and you should be convinced that here at Coyne you will be able to get the practical type of training you want and should have in order to enter these interesting and profitable branches of Electricity.
A general view of part of our Refrigeration Department. The students are overhauling, servicing and testing many types of refrigerators, compressors and controls. Note the late type electric ice cream machine in the foreground.
Coyne students overhauling and servicing a modern commercial refrigeration compressor for an ice cream machine.

A view of the air conditioning Laboratory in which students make atmospheric and pressure tests. The air in this room is cooled, washed and filtered.

To the right is a view of part of the Refrigeration Department. Instructors give personal assistance to students on these shop jobs. Note the ideal daylight working conditions for each student.

Coyne Helps Him To Land Job

"I also wish to thank you for the letters you sent on my behalf to various companies here. I'm sure you will be glad to know I now have a well paid salaried position in the service department of a leading refrigerator manufacturer." — W. S. FRANCEY, Mich.

A group of students in the Refrigeration and air conditioning department listening to an interesting explanation by the instructor, of the action of a modern compressor.
Students making tests on Refrigerating units. Note the special equipment making it easy for the student to inspect and handle every part of the machine.

Refrigeration Service Business

"I am now in business for myself. . . . I do service work on all makes of refrigerators for several dealers here in town. . . . I may need a helper before very long and I would like a Coyne graduate if possible to get on in this locality." — D. F. Cannan, New York.

In this Bungalow, containing a well equipped Test Laboratory, Coyne students study temperature control, moisture content, etc. On the left you see the air conditioning unit.

Student recording gauge readings for future reference. Such information is valuable when you are out in the field working on a job.

To the left is another interesting view of the Refrigeration and Air Conditioning Department. Many popular makes of Refrigerators can be seen. The orderly arrangement of work benches provides plenty of shop space.
Students receiving personal instruction on servicing, charging and testing a large commercial refrigerator. Practical shop work of this kind, under the guidance of a thoroughly experienced instructor, gives you the skill and confidence you need on the job.
Now that you have covered all departments up to and including Electric Refrigeration and Air Conditioning, you need only to know how to apply that electrical knowledge to the work in this department.

In each phase of Electrical work you have covered in our general course should help you to easily understand automotive electrical equipment. Then you should be able to understand electrical work on cars, trucks, buses and tractors, and in Diesel Electric plants.

The Automotive field offers a fine opportunity to our graduates to start a business of their own. Many of them have started up an ignition and battery repair shop on very small capital and are today enjoying a profitable business.

**Practical Work on Many Types Of Equipment**

You work on a number of complete engines such as the Ford, Chevrolet, Nash, Plymouth, Packard, Pontiac, Paige cut-away, farm light plant engine, etc. You wire, time and operate and get actual electrical trouble shooting work on real running engines. We also teach you about valves and carburetors and those things so closely linked to ignition for the proper operation of an engine.

You overhaul, test and repair generators, starting motors, cut-outs, coils, condensers and magneto's of different types and get plenty of practice with the proper tools and instruments used in repairing and testing these parts. You recharge magnets, and test spark plugs, magneto's, and various ignition devices. Then, there are special ignition test benches, latest type motor analyzers and other modern ignition test equipment in which you are trained to locate defects in various systems out on the job. In all of these jobs of wiring, timing, trouble shooting and repairing you have the instructor's ever-willing help to make each step clear and he answers all your questions.

**Tractor Ignition, Farm Lighting Plants**

There are numerous construction companies, oil companies and even ranches that use entire fleets of tractors and pay well for men to keep the electrical system of these machines in tune. That is why we give you plenty of practical work on ignition trouble shooting to prepare you to handle this type of work. There are many localities where this work is very profitable and your work on various types of engines and magneto's in this department enables you to find and fix common electrical troubles on tractors in "short order."

Some of our students come from large ranches where they use a number of tractors, trucks, cars, and their own farm lighting plant, just to get this knowledge and practical training to use on these farms and save money and time by keeping this equipment in good running order.

**You Build and Repair Storage Batteries**

In the battery department you receive practical instruction in storage batteries. The instructor, thoroughly explains lead plate cells, their parts, how they are constructed and how they operate, also how to test and charge them.

Then you start to build your first complete battery cells. You melt the lead in a modern electric melting pot, then pour and mold it into posts, straps and parts for the cells.

Then you get instruction and work on lead burning with an oxygen and gas flame. This part of battery work is very critical and must be done right. Therefore you are given plenty of personal instruction and actual work on it.

When you have mastered the trick of lead burning on terminals and connections you assemble the plates and separators into complete cells, seal them in the case, and burn on the connectors. Then you put your battery on charge, and get practical work operating charging lines and closely linked to ignition and battery work are also motor generator, rapid charger machines.

You learn how to test batteries with hydrometers, meters and up-to-date high rate discharge equipment. In fact you are instructed in the practical phases you need to enable you to take charge of battery work for some shop or run one of your own—even to some practical pointers on how to start, build and run a business.

**Diesel Engines**

The amazing new development of the Diesel Engine is creating new opportunities for men with combined Electrical and Diesel training.

Along with your shop training in Electricity here at Coyne you can also get valuable training in the OPERATION, CARE and MAINTENANCE of Diesel Engines, and all their auxiliary equipment such as fuel pumps, injectors, starters, governors, etc. You will be shown how fuel can be exploded or fired by the heat of high compression without the aid of other igniters. Common Diesel operating problems, troubles and adjustments are explained and made easy to understand by our simplified practical shop method of instruction. Here at Coyne, Diesel work fits in splendidly with your training on Automotive and other types of internal combustion engines. This valuable combination training offers many opportunities to Coyne trained graduates who in the future intend to specialize in Diesel work.

Many big trucks and buses are now equipped with Diesel Engines. Soon many garages should need trained men with combination Ignition and Diesel knowledge. Many municipal power plants using Diesel Engines to drive electric generators to supply current to towns throughout the country, require men with combined Electrical and Diesel training. Privately owned industrial power plants require trained operators to run their Diesel-Electric Generating units. The new high speed Diesel Electric trains we hear so much about use a Diesel Engine to operate an electric generator, which in turn supplies current to powerful electric motors which drive the train. Many other electrical devices such as lights, fans, refrigerators, cooking ranges, radios and air conditioning equipment on these trains increase the need for an all round electrical training for these jobs.

**You Apply Your Training To Aviation Electricity**

To make our course more complete we have included Electrical training in this great new field—Aviation.

This big field is one that is going ahead by leaps and bounds and the next few years should see great growth and development. Thousands of planes will probably be used for carrying passengers, mail, express and freight.

The instructor will give you an explanation and demonstration of the OPERATION, PRINCIPLE, and PARTS of these engines and their ignition systems. Then you will go to the different types of engines and put the knowledge you have gained into actual practice and operation.

You will get actual experience in wiring, timing and adjusting them as well as trouble shooting, by systematic testing methods to locate faults in the wiring or electrical parts, right on the engine.

You will get instruction and experience on the different kinds of magneto's and will learn how to adjust and overhaul them. Your training in this department will cover electrical ignition and also how to adjust and fly airplanes, and should fit you for this big and growing field. And by getting this training now, you still have the opportunity to get in on the ground floor.

On the next three pages you will see some splendid shop views of the unusual and interesting facilities available in our Diesel, Automotive Ignition, Storage Battery and Airplane Ignition Department.
Here is a part of our Auto Department. Note how well lighted and ventilated these working quarters are, and the roomy, convenient working conditions that are typical of all our shop departments. In this department you will get plenty of real work with many kinds of electrical equipment and on automobile and airplane engines and farm lighting plants. You get actual wiring, timing and trouble shooting on all these different types of engines, on real running tests.

Instruction on the operation and care of farm lighting equipment is another valuable feature of the practical work in this department.

These students are using modern garage type test units for giving final tests to generators, starters and coils they have overhauled and repaired. This equipment shows you the actual results and voltage of the generators at different speeds, the same as on the car, so you know whether your work is done right. Your work on such equipment helps you qualify for a job where services of trained practical men are required.
This section of our auto department shows some of the benches where you will overhaul, repair, and test many types of generators, starters, ignition coils, magnetos, condensers, etc. You learn to quickly find and fix their common troubles, and how to use the tools and test meters and devices to simplify this work. This is the type of practical work that should make you able to get a job, or run a repair shop of your own.

Students, adjusting and checking ignition on late model Plymouth engine. This sort of practical experience prepares Coyne students to understand coils, distributors, wiring or timing on many types of engines.

Students doing practical work on ignition and starting equipment of a modern Chevrolet engine. Actual work on “live” late type engines gives Coyne students an up-to-date training.

These students are wiring the ignition and preparing to mount the magnetos on a Pratt Whitney Wasp Aircraft engine.

Students in our Aircraft Ignition section assembling and wiring ignition equipment and adjusting magnetos on a radial aircraft engine.
Here you see a section of the battery department, and students learning to assemble plates, do lead burning, and assemble complete cells, and batteries. The training these men get on lead burning is a big help to them when they are on the job.

**Owns Profitable Automotive Business**

"Have been devoting most of my Electrical work to the Automotive line the last year, as we have quite a lot of this work. Have also built a nice battery business in connection with the other line of work. With the instructions received at school makes this work interesting as well as profitable. . . ."

—H. E. HALLENBECK, Missouri.

And these students are melting lead in a modern electric melting pot, and moulding lead posts and straps for the batteries they are building. This work gives them excellent practice with tools, and modern equipment.

Operating a motor generator rapid charging machine, and testing batteries with a high rate discharge outfit. This practical work qualifies Coyne students for a job in this line or to enter a business of their own.

Here they are operating the charging line and equipment of the Tungar type. Both the half wave and later type full wave chargers are used here. And you see these students testing the acid, and the voltage to determine the exact condition of the batteries being charged.
Electric starters and electric "hot plugs" form an important part of Coyne instruction in Diesel Engines. This view shows two students working on a late type Deutz Engine.

Coyne students operating and testing a marine type Diesel Engine. This job provides practical experience with air starting equipment and electric hot plugs.

These students are learning the operation and adjustment of a Diesel Engine by actual work on modern equipment.

This is an 85 H. P. automotive type Diesel Engine. You get actual shop experience on various types of Diesel units so that you may have a practical training in this important branch of work.

Here you see students at work on a popular type of stationary Diesel Engine.
Now That You Have Been Through Our Shops
I Want You to Read This and Following Pages

You have seen actual pictures of Coyne—both inside and out. You could hardly help noticing our wonderful fireproof building on page one. Also you must have been impressed with the light, airy conditions in our shops; all warm and cozy in winter—well ventilated in summer.

You will find all of them friendly, sincere, patient and understanding. You will be permitted to do the more advanced work.

Now, I want you to read the balance of these pages. I know of no finer student the training he needs. We take it carefully. I give you the facts you want to know. I have tried to point out to you facts which are important.

Because we understand this important fact, Coyne training has been made individual training. One student is not pushed ahead because he may be bright, nor is another held back if he can go ahead faster.

Therefore, should you require a little longer time than 12 weeks to complete the course you are permitted to spend as much extra time in the shops as you may need. This is entirely up to you. Regardless of the length of time you spend, there is no extra tuition charge. Your Life Membership allows you to take whatever time is necessary, and you can review any part of your course at any time, both while you are a student in school and also after you graduate.

Coyne Training Inspires Confidence

We believe that an important start, should find part of any training is to build along with that training, confidence in oneself. Many men fail in life because they lack confidence in themselves. Perhaps they possess the ability to accomplish results but they don’t succeed because they lack confidence to go ahead.

Here at Coyne we consider it a part of our training to make a fellow self-reliant and to think and reason things out in a practical way.

Many Opportunities Ahead in Electricity

The Coyne Electrical Course gives every student the training he needs. We take it for granted you know little, if anything, about Electricity. When you enroll at Coyne, we feel that you are here for just one purpose — to learn Electricity as quickly as you can. How little you know about it when you arrive is not nearly so important as the fact that you must be prepared to give it your best.

However, as I have already pointed out, if you have some electrical knowledge before coming to Coyne, then you will not be held back but will be permitted to do the more advanced work.

No Entrance Examinations — No Experience Necessary

The Coyne Electrical Course is equipped to give you a practical, workable knowledge of many branches of Electricity.

The students who come to my school are the fellows who want a training that will equip them to go out and do actual Electrical work. The necessary theory is given in the student in a practical way, through blackboard talks, demonstrations, and by actual practice.

That is why our graduates are equipped to go right into electrical work when they have completed our training.

That too, is why the students who come to Coyne have advanced education or previous electrical experience.

I have tried to point out to you facts which will help to guide you and save you a lot of time. So I say, Coyne is the place to get your training, because the Coyne Shops are equipped to give you the type of training you need.

Coyne Training is Learn By Doing Shop Training To Help Make You a Practical Man!
I have tried here to answer every question you would probably want to ask, but I want you to feel free to ask any other questions you may think of. Also, if my explanations are not perfectly clear to you, don't hesitate to write me. I want you to thoroughly understand everything about my school.

Sometimes a fellow has a problem that's different from any other fellow's. So if you have any problem at all, don't hesitate to discuss it; if it's of a confidential nature, it will be kept confidential.

1. When is the best time to enroll?

There is no special time to start. My school is in session all year. Since the training is individual, a student can start any school day of the year.

2. What do you mean when you say "no books"? Does it mean you do not teach theory?

This is a question that is asked very often. When we went to public school or if you ever enrolled for a correspondence course—practically all of your work was done from books. Here at Coyne we don't teach you with text books. We don't condemn books if they are properly used for reference purposes or to supplement our methods of teaching.

Our instruction, however, is on actual Electrical equipment and not by text-books. We give a student the theory he needs by practical talks, blackboard sketches and equipment demonstrations. And of course you learn the practical Electrical facts that he will be required to know in order to hold an adequate position. We eliminate the detailed technical theory and advanced mathematics which are required for an engineering degree. This alone means a saving of time. Practically all the students at Coyne we provide personal instruction for each student which makes rapid progress in his studies.

Again, our Learn-By-Doing Method on full-size commercial equipment, enables the student to learn practical Electricity much faster than by studying text books alone. That is why Coyne can help to train a student in 12 weeks to become a practical Electrical worker and prepare him for a start in the field of Electricity.

15. Can I take more than 12 weeks to complete my training?

Yes! There will be no extra charge for additional time. The required 12 weeks is the minimum time to complete the regular course is 12 weeks. However, some students decide to take longer. No one is hurried or held back. There is a certain number of jobs to complete, so much shop work to be done, and every student is permitted to take more time, should he feel it necessary to do so.

16. Does every student complete the regular course in 12 weeks?

Occasionally a student may need more than the required 12 weeks in which to complete the regular course. Sometimes a student may be a little slower in grasping the work. However, the majority of our students are able to complete the regular course of training in the prescribed 12 weeks time. Naturally, it is impossible for us to tell a student in advance whether he will require additional time. We can only determine this after you have actually started your training. But, if you feel that you might require more than 12 weeks in which to complete the regular course, then you should count on this. When you come to school and bring along enough money with you to cover the small extra cost of living expenses. I want to make clear once again that there is no extra tuition charge for additional training. Of course, if you decide to take more time, you should let us know in advance so that we can plan to accommodate you. If you are not satisfied with your progress, you may return to the course, for which you have paid tuition fees, and continue your studies.

17. If I have to leave school—can I return at any time?

If you are forced to leave temporarily—you can come back and finish at any time. Your Life Membership gives you this privilege.

18. Do you grant a diploma?

Yes, a diploma is issued to every student upon satisfactory completion of his course.

19. What are the advantages of a Life Membership?

When you enroll at Coyne, you are entitled to a Life Membership. This entitles you to stay at Coyne as long as necessary for you to complete the course in a satisfactory manner. In addition, you have the privilege of returning to school after you graduate, to take up any new features we may have added to the course, for which you paid tuition fees. As you know, new Electrical improvements, equipment and new ideas are continually being developed. As we add new equipment to our courses, you are entitled to come back for additional training at no extra cost.

20. Do you have facilities for disabled students?

Yes! Many students who are hard of hearing or physically disabled, are sent to Coyne by various agencies. The loss of an eye, arm or leg need not discourage you. We have excellent facilities for handling disabled students. Write to us about the nature of your ailment and we'll advise you if you can master Coyne Training.

21. Are there any extra expenses?

Every student is required to pay at the time of entrance, an Entrance Fee of $75.00 for Graduation Fees, which covers his Diploma, School Pin and a Lifetime Membership. In addition to this, the necessary School Supplies is $14.00 and covers a monogrammed Notebook, scratch pad, pencils, a set of drawing instruments, leatherette card case and other items. This makes a total of $19.00 for incidental fees.

22. Will I need any shop tools?

Students are not required to bring any tools while attending school. The tools you will need during your entire training period will be loaned to you by the School without charge.

23. Do you give your students and graduates employment help while in school and after graduation?

Yes, while a student is going to school we will give him the services of our employment department to help him locate a part time job. After graduation this department gives him an employment service. This is fully explained on page 41.

24. What should my living expenses amount to?

Room and Board can be had for as low as $6.50 a week. This includes living quarters and meals. Light and heating expenses may also be had if desired. The rate ranges from 5.00 per week up, depending upon the type and number of rooms wanted. The cost of life insurance, lights, linens, etc., is also included.

25. Where will I live while going to school?

Most of our Boarding places are within easy walking distance of the school and in most of them, there are no other roomers, except Coyne students. Also, all M. C. A. is very nearby.

26. Do your students go to church on Sundays?

This, of course, is optional with the student. We do not force anyone to go but we feel if you go to church at home, you will want to go here. There are churches of many denominations right in our neighborhood and our welfare department will see that you get acquainted in the church you care to attend.

27. Do you, Mr. Lewis, personally handle the students' affairs?

No, it would be difficult for me to do this. Every Coyne student knows that Coyne is not a one-man institution. There are many wonderful organizations of fine fellows with which I have surrounded myself. There is a man assigned to each department who takes charge of all the problems which come under his department. Each of my assistants submits reports to me and in this way I can pace ourselves on many things each day; which gives me time to think about ways and means to render the greatest possible assistance to the students. Through these departmental heads I keep in touch with the progress of the student body and you will always find the man at the head of any department ready and willing to give you help or advice.
There are Many OPPORTUNITIES in the
ELECTRICAL INDUSTRY
HERE ARE JUST A FEW OF THE MANY BRANCHES
YOU SHOULD BE PREPARED TO ENTER

When you finish Coyne Training you
should be all set and ready for your start
in the field. You should have the practical facts
about Electricity in many of its branches. You
will have a right to feel confident—for you are
getting into a field with which you should be
familiar.

I've shown you how you get this expe-
rience in our shops. I've shown you how you do
the actual work yourself on many types of
motors and other Electrical equipment.

Now let's examine this vast field of Elec-
tricity. You'll appreciate the wonderful oppor-
tunities more and more as you go along, of
course, but right here I want to mention a few
of the outstanding branches of the Electrical
Industry you should be prepared to enter.

House Wiring
The present number of
houses being wired is about
100,000 a year—a huge num-
ber to be sure. But authorities
say that this is less than one-
third of those that should be
wired—that we will soon see an increase to
over 350,000 a year. As new construction in-
creases, the opportunities in this field should
grow greater.

Electric Signs
There are many thousands of elec-
signs now in use which are out-of-date and
ready for replacement. Profitable work is
afforded for trained men in sign factories,
installation and maintenance crews. Its well-
paid, enjoyable work, and Coyne Training
helps to prepare you for its many possibilities.

Armature—Motor Work
With all manufacturers
turning to electric motors
for power, and discarding old-
fashioned steam or gasoline
equipment, the future in this
branch of Electricity is bound
to grow greater. Coyne train-
ing helps prepare you for jobs as Armature
Winder, Motor Serviceman, etc.

Power Plant Work
The great power plants must be kept hum-
ming day and night, year in and year out,
because millions of homes and factories de-
pend upon Electricity. Power Plant Work provides some of the
steadiest, most dependable and interesting jobs. Some of
our graduates are today filling positions as Operators, Super-
intendents, Line Maintenance Foremen, Sub-station Operators, etc.

Electrical Maintenance
The job of maintenance electrician is a
mighty responsible one, with hundreds of
motors, all wiring and electrical equipment to
look after. The new developments, such as
Electric Welding, Electric Furnaces and Ovens,
Photo-Electric Cell Controls, etc., mean that
the man trained by the latest, most up-to-date
methods naturally has the preference.

Electrical Manufacturing
Thousands of mammoth factories are
busy the year around, turning out electrical
equipment for power plants, telephone systems,
and all industries using Electricity in any form.
These jobs require the services of trained men.

Auto Electricity
The Battery and Ignition
worker has splendid oppor-
tunities in any garage or ser-
vice station, for most auto re-
pair jobs are electrical. Big
corporations generally employ
their own Auto Electrical man
for their fleets of trucks, busses and tractors.

Electric Refrigeration
From a small beginning only a few years
ago, this industry has become one of the
important industries of our age. No longer is
Electrical Refrigeration considered a luxury
but is now recognized as a prime necessity.
From an annual production of 100,000 units,
less than ten years ago, sales have expanded to
a point where today, there are nearly two mil-
lion units sold annually, representing a cash
outlay of several hundred million dollars. Thou-
sands of men are employed in this industry and
opportunities should be open to men who are
trained to install, service and repair Refrigera-
tion equipment.

Mining Electricity
Since 95% of mining operations can be
handled electrically, at much less cost and
greater speed, the mining industry is going in
for Electricity in a big way.

Electricity In Railroading
With only 7,000 miles of railroad now
protected by continuous control signal
apparatus, you can realize the immense future
in this work. Train control is a most exciting
branch of Electricity. Another wonderful oppor-
tunity exists in connection with complete
electrication of railroads—on which hundreds
of millions of dollars are being spent.

Aviation Electricity
I've already told you, on
page 31, of some of the
thrilling opportunities in this
new, growing branch of
Electricity.

Marine Electricity
Every important ship is provided with a
complete electric power and light system
of its own. Some big ships have from 6 to 20
electricians on the payroll. It is estimated that
there are many thousands of electrical jobs
aboard ships.

Air Conditioning
Within the next few years, every mod-
er home, every place of business and
mode of Transportation may be air conditioned,
cool in the summer and warm in the winter.
There are many opportunities in this branch
of electricity alone, for the men who are
Trained to handle Air Conditioning equipment.

Diesel Engines
The Diesel Engine is one of the
great, modern developments
connected with the field of
Electricity. Many new oppor-
tunities have already been
created for trained electrical
men who have a knowledge of
Diesel engines. Diesel-Electric units are rapid-
ly being adopted by railroads, steamships,
power plants and industrial plants and will un-
doubtedly become increasingly important from
year to year.
Let Me Tell You About COYNE TRAINING SERVICE

Part-Time Employment Help Available To You As a Student
Lifetime Employment Help Available To You As a Graduate

NOW, that I have described our course of practical training, I want to tell you briefly how Coyne may bring real service to both while you are a student at school and after your training has been completed.

Coyne has a record of over 39 years of steady growth and success. I have always believed that if Coyne was to continue to grow and maintain its reputation, it must be done through our satisfied students and our successful graduates. In short, if you are satisfied, I feel that you will recommend the Coyne school to others and this may bring some of you to our training shops in the future.

Part Time Employment Service for Students

First, I want to point out that Coyne maintains a special department for the sole purpose of assisting students who wish to do part-time work in order to help with their living expenses. This department is in charge of an employment manager who personally handles every student request for employment assistance. This service is available to every student who needs it during the regular training period. Most of the jobs offered to students call for unskilled help and require the services of students for a few hours daily.

Get Your Training First

I have always felt that the fellow who spends a lot of time worrying about getting a job before he gets his training is putting the cart before the horse. A man has found out that the important thing is not so much the problem of finding a job but in getting the right kind of training. That's the real purpose behind Coyne Training—to help prepare you to hold a job and make a success of your work.

It stands to reason that no employer wants to keep a man who doesn't know his stuff and he isn't going to promote an employee who has failed to demonstrate his ability. So the important problem is to get the right kind of training that will put you in line for a job and then help you to make good in it.

Coyne Gives Graduates Valuable Employment Assistance

For many years I have maintained at considerable expense, a Graduate Department comprised of a group of men who have had many years of experience in placing students of this school. These assistants of mine give each graduate personal help whenever he requests it. Scores of Coyne graduates have been helped directly to find employment through this service. While there is a great deal that I might say to convince you of the value of our employment service, I feel that the many letters in my files afford the best proof of our ability to first get a job and make a success of your work.

Life-long help we are ready to give you while you are a student and after you leave school; but I want to tell you briefly about a few of the principal phases of this service so that you will have a better idea of how the Graduate Department directly helps many of our graduates to locate jobs.

A Few National Concerns Who Have Employed Coyne Graduates

Texaco Co.  Standard Oil Co.
Socony Vacuum Oil Co.  Bethlehem Steel Co.
Ford Motor Co.  Chicago & Northern Illinois Railroad Co.
Stevens Hotel  P. & N. Steamship Co.
Dodge Motor Co.  Firestone Tire & Rubber Co.
Buick Motor Co.  Texaco Co.
Stevens Hotel  Fairbanks-Morse Co.
Frigidaire Corp.  General Electric Co.
Ford Motor Co.  Consumers Power Co.
Stevens Hotel  American Bridge Co.
Dodge Motor Co.  Union Pacific R. R. Co.
Buckeye Incubator Co.  Socony Vacuum Oil Co.
City of Shawano, Wis.  Procter & Gamble Co.
City of Shawano, Wis.  Continental Can Co.
Procter & Gamble Co.  J. E. Seagram & Son, Ltd.
Pratt & Whitney Co.  J. E. Seagram & Son, Ltd.
Johnson Fan & Blower Co.  Simmons-Keeler Co.
Fairbanks-Morse Co.  J. E. Seagram & Son, Ltd.
Ewa Plantation Co.  [Hawaii]  Buckeye Incubator Co.
Gibson Electric Co.  Fairbanks-Morse Co.
Koshare Vacuum Oil Co.  General Electric Co.

1. Contacts with Many Employers

The Graduate Department keeps in touch frequently with thousands of employers throughout the United States and Canada. These employers are made acquainted with Coyne graduates, and reports of new projects which are being planned or already under construction, are sent to our graduates frequently. In this way, graduates are directed to the most logical sources of employment.

2. Personal Calls by Our Staff

Members of our staff personally contact industrial concerns concerning employment opportunities. These assistants of mine give each graduate personal help and attention, regardless of his location.

3. Tips From Graduates

Many of our graduates are employed in responsible jobs with industrial concerns. They select men for their own departments or crews. These graduates frequently employ other Coyne graduates. These men also notify us of openings in their own place of employment or nearby plants.

4. Graduate Employers

Many Coyne graduates are in business for themselves. As their business grows, they find it necessary to employ more men. Often they prefer those who have had a training similar to their own.

5. Employment Bulletins

Reports of new projects which are being planned or already under construction, are sent to our graduates frequently. In this way, graduates are directed to the most logical sources of employment.

6. Consultation Service

Promotion through our Consultation Service which affords valuable technical and business advice to Coyne graduates who are at work for some employer.

7. Employers' Service

Promotion for Coyne Graduates through direct consultation service to their employers.

You Will Find Us Ready to Help

I am sure that after reading this short description of the help we are ready to give you while you are a student and then after you graduate, you can't help but be convinced that we will do everything possible to assist you to apply your training. Right here I want to point out that every bit of service we give you is FREE OF CHARGE and you will find it available whenever you need it, for the rest of your life. I don't know of another school anywhere who does more for its graduates than we do here at Coyne. And that is the way we want you to feel about the service we give you. You will find it possible for me to get Coyne training for getting me part-time employment while I was at school. If it had not been for your splendid co-operation and help I could not have been able to get the training I received at your school . . . .

—A. SINGLETON.

Part-Time Employment Help Needed These Students

"I wish to thank you for making it possible for me to get Coyne Training by getting me part-time employment while I was at school. If it had not been for your splendid co-operation and help I could not have been able to get the training I received at your school . . . ."

—A. SINGLETON.

Employment Service Helped These Students

"I wish to thank you for your help in getting me part-time employment. I don't think there is another school of any kind that looks out for their students as much as you do. . . . I am now employed in the Signal Department of the Chicago, Burlington and Quincy Railway System and like it very much."

—B. N. RICHMAN, South Carolina.

"Your letter to the Steel Mill of Mansfield, Ohio, did the trick. . . . It was the bug that released the letter from the school they sent me a letter asking me to come in and talk to them. I am now employed as Electrical Maintenance man and am doing fine . . . ."

—H. R. HEU-BERGER, Ohio.

Employers Praise These Coyne Graduates

"Regarding your letter of Mr. Verner Sandstrom and B. Malek of our organization attended your school. We believe the work they took from you has been of much value to them in carrying on their work with this company."—A Northern Power Company.

"In reply to your inquiry regarding the satisfactory nature of the services of our employee, John Lindquist, please be advised that his services have been quite satisfactory and that recently he was given an increase in salary, due to the high quality of the work he has been turning out."—A nationally-known Airline Co.

Typical Job Leads for Coyne Graduates

"At the present time we are contemplating installing new equipment which will be in supplement to the power we are now receiving from our old Utilities Company. To maintain and assist in the installation of this equipment, we will be needing seasoned men. Do you have any available graduates who are interested and whom you would like to recommend? . . . ."

—A large Midwest Packing Company.
Our Student WELFARE DEPARTMENT Will Make You Feel at Home

The Welfare Department plays an important part in Coyne School life.

The minute you arrive you feel that you are among friends. Coming to Coyne from a distant town, you are immediately impressed with the friendly atmosphere of your new surroundings. Parents may feel assured that their sons will have the best of care at all times.

My Welfare Director is one of those fine, kind, warm-hearted men you enjoy meeting and knowing; nothing stiff or formal about him and no problem is too small or trifling to get his attention, no matter how busy he is or what he is doing.

Your Entertainment at COYNE

When I tell you about the numerous entertainment features at Coyne I do not want you to get the impression that this is made too big a part of the work here. We always keep foremost in mind the big fact that the main thing we are all here for, my staff as well as my students, is sincere work. But, just as all work and no play makes Jack a dull boy, I realize the importance of clean wholesome entertainment features, as well as athletic activities.

Very frequently we hold, during a noon recess hour, some form of wholesome entertainment, such as instrumental music, singing, tap dancing, tumbling, magician’s acts or athletic exhibitions. There is never any charge to our students for this entertainment.

Athletics

Quite often, during the noon hour, we hold an amateur boxing tournament. All contestants are volunteers from the student body. Maybe a lad from Oklahoma takes on a fellow student from Canada, and so on, boys being represented from all parts of the United States and many foreign countries. The bouts usually go one and two rounds and, while always lively and full of humor and interest, are put on in a fine spirit of sportsmanship—never any rough stuff.

Outdoor Sports

Then, as you know, Chicago is one of the greatest cities in the world for outdoor sports. In the summer, if you like baseball, you can visit either the White Sox or Cubs’ grounds.

There are swimming and hundreds of other good, clean recreations. In the fall the biggest football teams in the country play here. Then in the winter there is skating in the Parks, Theatre and great athletic contests going on constantly. The sight-seeing Russes, Stockyards, Field Museum and hundreds of other buildings and places of interest afford a fellow hours of good clean recreation without sacrificing any of his school work.

We Help You Locate a Room Near the School

When you arrive at Coyne and complete your enrollment you will meet my Welfare Director who will refer you to your room. Student rooms are located within a short distance from the school in houses that are as a rule not over one block from the school. Then within five minutes’ walking distance from the school is the Y. M. C. A. where many students like to stay.

Room and board can be had for as low as $6.50 a week. Special low rates are also made for light house-keeping rooms, in the case of married students who wish to bring their wives with them.

If you come with a friend and want to room with him, that too can be arranged. Or if you have friends or relatives in Chicago, with whom you could stay, that will be fine.

You will find that every effort has been made to keep you comfortable during your stay with us. You will be surprised that little things you probably would never have thought of yourself have all been planned out and taken care of for you.

In case you happen to feel indisposed at any time, the folks with whom you make your home can notify us at once. Should there be occasion for medical attention, the school physician is available.

The Y. M. C. A. Right Near COYNE

The Y. M. C. A. is just a few blocks from the school and our students may join while here at a special price. This also gives them the privilege of roaming there if they so desire. There are numerous events given by the Y. M. C. A. and many athletic activities to interest those who like athletics. This membership affords opportunity for full gymnasium and swimming privileges.

Church Services

No matter what your religion may be or what your denomination, you will find a church of your choice in Chicago and you will become their member from other towns and cities.

On Sundays, groups of students often attend one of the neighborhood churches, escorted by an instructor. Special classes and discussions are occasionally held for Coyne students and these are strictly non-sectarian.

Attendance is purely voluntary—no student has to go unless he wishes to. It’s a matter of personal choice.
Beautiful CHICAGO
Get Your Practical Shop Training in the WORLD'S WONDER CITY

Chicago has many beautiful churches of all denominations.

Chicago has nearly 30 miles of bathing beaches fronting beautiful Lake Michigan.

Above: Ice skating is a popular winter sport in Chicago.

Above: The million dollar Buckingham Fountain.

Right: Holiday excursion on beautiful Lake Michigan.

Looking down Randolph St. — Chicago's Theatrical Rialto.

Wrigley Field, Home of Chicago "Cubs"

A typical football crowd at Soldiers' Field Stadium
You May Call on COYNE Anytime
For CONSULTATION SERVICE

We do not feel that our duty to you ends with your graduation. We believe that it is part of our job to give you every reasonable assistance to help you succeed—because, after all, your success is part of our success.

We Want Your Friendship

When you leave this Institution, we want you to feel that you are a part of it. We want you to feel that in Coyne you have a great friend, upon whom you may always rely.

Coyne has been helping to train men for Better Jobs ever since 1899, and we are proud of our thousands of graduates—proud of the success so many of them are making out in the field—and we count them as our good boosters and friends.

We want your friendship and good will. And when you come to Coyne, we're going to do everything in our power to prove our friendship for you. In fact, you'll find that everyone at Coyne, every Departmental Head and every Instructor, is anxious to do everything in his power to help you. We are all like one big happy family here at Coyne, working together in the common cause of making successful men out of ambitious fellows like yourself.

What To Do When You Arrive in Chicago

When you arrive in Chicago, just walk right out of the depot and you will see several Yellow Cabs. Get into one of them and tell the driver to take you to The Coyne School, 500 South Paulina Street, Chicago.

Our office is open and ready to receive you daily from 7:30 in the morning until 6:00 o'clock at night; on Monday, Wednesday and Friday evenings from 6:00 to 9:00, on Saturday from 7:30 to 4:00 and on Sunday from 9:00 to 4:00.

Should you arrive in Chicago after 4 P. M. on Saturday or Sunday, or after 9 P. M. on any other day, just tell the taxi driver to take you to the Fort Dearborn Hotel. Spend the night there and take a Yellow Cab to the school the next morning.

Don't worry about your accommodations! We'll arrange for your room when you get to the school.

Terms of Tuition

The enrollment blank shows you the complete tuition charge—and this covers everything, except the $5.00 Graduation Fee, and $11.00 for School Supplies, making a total of $19.00. There are absolutely no other compulsory charges of any kind. Any other supplies which a student may purchase, such as blue prints, etc., should not exceed $5.00 during the entire training period.

The one tuition charge covers all work in all departments of your course, and even includes full review privileges and a Life Membership. Shop tools will be loaned to you in each department without charge.

What Your Living Expenses Will Amount To

If you are like most of the fellows here, you haven't got much money to spare and will want to get by just as reasonably as possible. You can get room and board accommodations as low as $6.30 a week. The only other necessary expense would be for laundry and this should not run over fifty to seventy-five cents a week.

School Information

Examinations—Students are graded largely on shop work, with some credit on notes. Examinations are not designed to "catch" the student, but to test his knowledge. He will be required to pass an examination before leaving each department.

Reports—Reports of students' progress and conduct will be made to parents or guardian twice a month, if requested.

Expenses Will Amount To

Shop Hours—Since our instruction is individual, a student can enter any school day. The school is in session every day in the year, except Saturdays, Sundays and Holidays. The hours are 8:30 to 4:30, with an hour at noon for lunch.

Clothing—You don't need to dress up. Most of our students wear overalls or an old pair of trousers and work shirt. We don't recommend good clothes for wear in the shops. You can use your Sunday best over the weekends if you want to bring some dress clothes with you.

Care of Students—Students are lodged in clean, comfortable rooms only, which are frequently inspected by the Welfare Director.

Sickness—Absence from class is noted and inquiries made to discover the cause. Students found sick are given the best of care.

Money—We supply students with deposit privileges at the office. Money deposited with the School Cashier may be drawn as needed. In coming to School, don't bring cash or a personal check. Get a cashier's check or traveler's check at your bank; or an Express or Postoffice money order.
I Have Given You The Facts

Now—I Am Going to Put It Up to You!

In the pages of this book I have told you how you can make your start to success. You want to make more money. You want the good things in life. Electricity, the opportunity field, offers you all of these advantages if you will prepare for them. I am sure there can be no doubt in your mind but that the best and quickest way to obtain this training, is by the practical "LEARN-BY-DOING" Methods used at Coyne. I believe you are convinced that Coyne offers you this type of training. You are ambitious, of that I am sure. But, you can be ambitious and still be a failure if you are not a man of action. It is the man of Action, the man who makes a Decision and goes through with it, who generally makes a Success. Great men and successful men, have been men of action, men who acted when the opportunity came. Electricity is the field of Opportunity, Coyne is the key that will open the door to that opportunity. Use this key—Decide Today—There can be no half-way—a man is either a success or a failure. You either step ahead or fall behind.

Coyne Training Can Give You The Start To Success

The decision now rests with you; you can decide to go on as you are. This may mean nothing to look forward to but low pay, hard work and a bare existence in your old age.

Or

You can decide to enter one of the World's Greatest Industries which offers you opportunities for advancement and a brighter future. I believe I know how you will decide, so I say—mail your enrollment Today and make your plans to come just as soon as possible. The entire staff at Coyne is here to help you to a happy and successful future.

President.