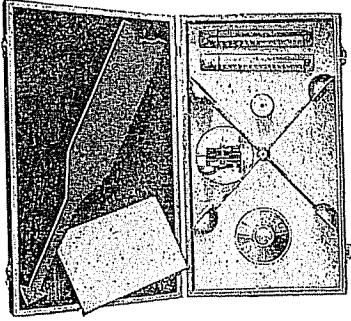


## Gilbert Weather Bureau

No. 6530

This outfit enables you to study the first principles of the weather. It contains an anemometer for determining the velocity of the wind, a wind vane for wind direction, as well as thermometers by which you estimate the humidity in the air, etc. The book which is included with the set is written in language that you can easily understand. Every part of this set is strongly made and when set up will operate splendidly. You will enjoy the time you spend making charts. The records that you make can be compared with reports from other sections of the country, and in this way you learn the direction a storm takes in traveling across the continent. The outfit is packed in stained hardwood cabinet  $18\frac{3}{4} \times 10\frac{1}{8} \times 2\frac{1}{8}$  inches. Weight approximately 4 lbs. Price \$15.00. (In Canada \$22.50).



## Gilbert Machine Design

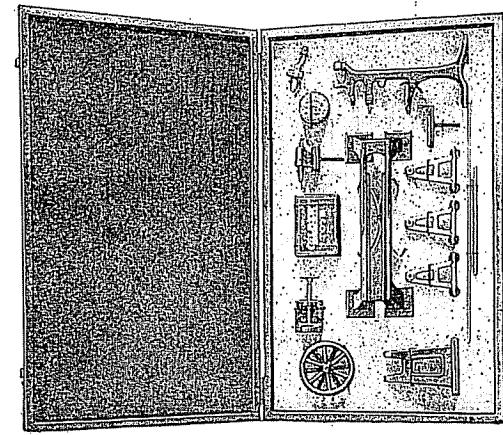
No. 6535

Any boy who has been in a factory and has seen the lathes and drills spin around at a rapid rate, has marvelled at the work that was done on the different machines. You remember how the polishing machine gave a bright finish to the pieces of metal, and what attractive pieces of wood were turned out on a lathe. Wouldn't you like to have an equipment which you could set up in your own

home and have it operate just like the big machines do?

Gilbert Machine Design is knocked down machinery, in miniature. If you are interested in mechanics you will be pleased with this set. There will be any amount of fun for you putting axles in place and connecting them with rods. Then when your machine is complete you can make it go exactly in the same way as the big machines do in factories. The parts are made of cast iron with nickel plate finish. You can be sure that your machinery is strongly built and will last a long time.

With the set comes a book of instructions which explains the different types of machines and the work each one does. Packed in stained hardwood cabinet,  $20 \times 12 \times 3\frac{1}{4}$  inches. Weight, 8 pounds. Price, \$10.00. (In Canada, \$15.00).



## Gilbert Weather Bureau

No. 6532

A very complete weather bureau outfit made to provide you with special instruments. Included in this set is the maximum and minimum thermometer and a sunshine recorder, in addition to an anerometer for determining the velocity of the wind, wind vane, etc. You will find that this equipment will allow you to compare the records you make with those sent out by the official Weather Bureau stations. This outfit will take all the vague ideas out of your head in regard to the weather. It will show you what an intensely interesting subject the study of the weather really is. Set comes in stained hardwood cabinet  $20 \times 12 \times 3\frac{1}{4}$  inches. Weight approximately  $7\frac{1}{4}$  lbs. Price \$37.50. (In Canada, \$56.25).

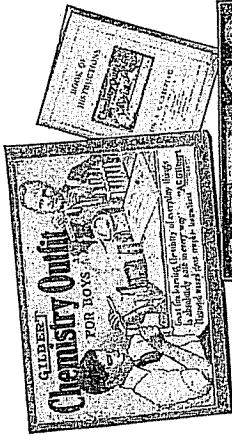
## CHEMISTRY

The word "Chemistry" is supposed to be derived from an Arabic word, "Chema," meaning to hide; hence "the Hidden Science." The origin of chemistry dates back to very early times and is credited to Tubal Cain—the father of workers in metal. Credit is also given to Herman, the Egyptian god of art and sciences. His son is said to have colonized Egypt, which was foremost in the knowledge of chemistry in those ancient days, for they had developed the sciences of making glass, pottery, colors, embalming fluids and other products, to a high degree, and the early Egyptian can really be said, therefore, to have had an advanced knowledge of chemistry. Then Paracelsus, the Greek physician, carried the study along and discovered the influence of chemistry upon medicine in the treatment of human ills, and it was through him that the action of salts upon the human system was first known. Then quite a time elapsed, hundreds of years during which time contributions were made by unknown scientists to the knowledge of chemistry, but which really had little influence upon the development of modern chemistry. It remained for the great Englishmen, Cavendish, who discovered hydrogen, Rutherford who discovered nitrogen, and most important of all the Frenchman, Lavoisier, who is really credited with being the father of modern chemistry, to pave the way for the development of this wonderful science.

There is hardly a science today that is more important or holds more fascinating interest to scientists throughout the world. If we are to unravel the secrets and marvels of our wonderful earth and life there is no science that will enable us to understand these wonderful things of nature that most people think are magical and mysterious, like a knowledge of chemistry.

Very few large industries hope to cope with their competitors without a competent and able chemist to assist them in their development and in the analysis of the things that they buy. The doctor without an insight and knowledge of chemistry would be totally unable to cope with the practice of medicine. During the last great war, the Chemical Warfare Department was as important to the Army and Navy as any other branch of the service.

Get an insight into this wonderful science with a Gilbert Chemistry outfit. Read the descriptions of the sets on the following pages.



## GILBERT CHEMISTRY OUTFIT

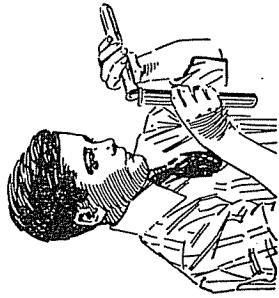
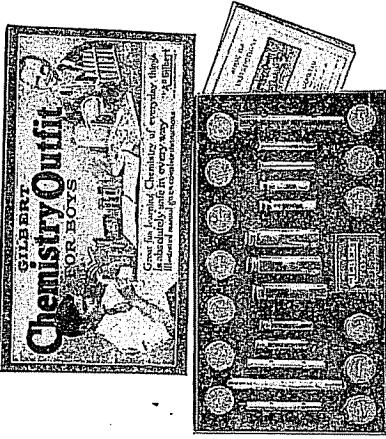
No. 5001

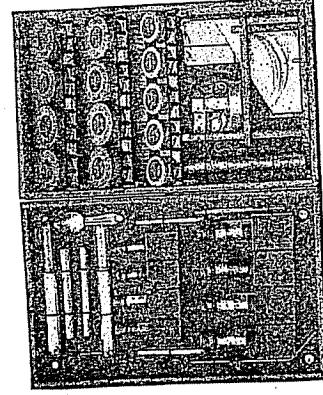
This set on chemistry consists of simple solutions that are entirely harmless. Behind each experiment you do there is an important fact which explains why certain substances exist. In a very easy and simple way you will become familiar with elements that form many things used in everyday life. Nothing ought to interest you so much as making a wet cell battery. This is needed very much to produce electricity for different purposes. The instructions tell you in plain language how to use the material you have. All big names used by the professional chemist are omitted, and you should have no trouble in understanding every direction given. An outfit that pleases and provides you with genuine fun. Packed in special sealed carton, size  $12\frac{1}{4} \times 8\frac{1}{4} \times 1\frac{1}{4}$  inches. Weight approximately 1 lb. Price, \$2.50. (In Canada \$3.75).

## Gilbert Chemistry Outfit

No. 5003

With the harmless solutions that come in this set you can prepare many substances used in everyday life. Produce startling effects by placing one ingredient with another. Make a wet cell electric battery. When you have completed it you can find out how to electro-plate, which is explained in the book of instructions included with each set. Learn the method of making cloth fire-proof. After you have performed several experiments it will be easy for you to use your chemicals to bring about some amazing results, such as passing an egg through the neck of a bottle and manufacturing a disappearing ink. Aside from getting facts about the composition of articles, you have the material to provide an excellent entertainment for your friends. Packed in the Gilbert sealed carton,  $12\frac{1}{4} \times 10 \times 1\frac{1}{4}$  inches. Weight approximately 1 pound. Price \$3.50. (In Canada, \$5.25).

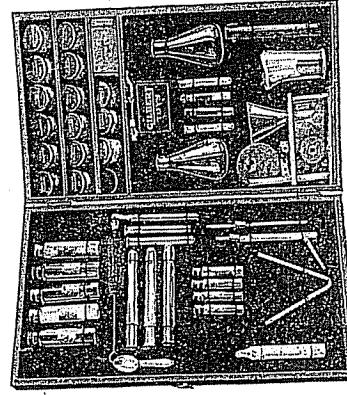




## GILBERT Chemistry Outfit

No. 5004

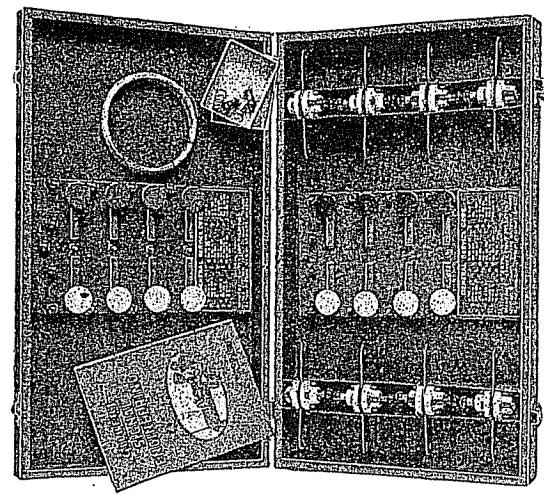
If you know Chemistry, you will know how a great many of the things which are so necessary to your everyday life are manufactured or grown. Chemistry tells you how dye is made for the clothes you wear; what the substance you call "lead" in the pencil you are writing with, really is; how soap is made; how your mother's silverware is plated—and any number of interesting things like that. Wouldn't you like to be able to make ammonia for your mother—or a bar of soap—do chemical magic tricks—or make a wet battery to operate your door bell. You can do these things with my chemistry outfit. Here's a corking chemistry outfit in a hardwood cabinet which is a chemical laboratory in itself. In addition to the many acids and alkalis included, this outfit has a test tube rack, filter paper, alcohol lamp, etc. Book of instructions gives complete directions for the many experiments you can do with this set. Packed in hardwood cabinet,  $13 \times 8\frac{1}{4} \times 3\frac{1}{4}$  inches. Weight approximately 3 pounds. Price \$7.00. (Canada, \$10.50).



## GILBERT Chemistry Outfit

No. 5006

With a set of this size—the largest in the Chemistry outfit—you can learn the elementary facts of this science and make your play both fascinating and beneficial. Doesn't it mean something to you to be able to do electroplating—to make tests of metals? It will be a very easy matter for you to plate old metals, etc., with a finish resembling gold. All this is explained in a book of instructions which covers every detail and is included in each set. There are a great many tricks that you can do with your solutions. With this larger set you can do many of them. There is a valuable knowledge you get in everything you attempt. A description of the manufacture of gas—the methods used in making soap—the elements present in peroxide of hydrogen, and how this is made. Packed in a hardwood cabinet this set is very convenient to carry about. Size,  $10\frac{1}{8} \times 18\frac{1}{8} \times 2\frac{1}{2}$  inches. Weight 5 pounds. Price, \$9.50. (In Canada, \$14.25).



## GILBERT Signal Engineering

No. 6542

A clear day—a hike in the country, and a little signal practice—this you will certainly enjoy if you have a Gilbert Signal Engineering Outfit. What better sport could you have than that of sending messages by signals, using many different systems?

Gilbert Signal Engineering will teach you how to use the Heliograph, the Wig Wag,

Ardois, the Semaphore, and other systems of signalling operated with such great success by the U. S. Army and Navy. Learn about the signals used by ships when out at sea. You will find that many times when out camping or hunting a knowledge of signals will be a great help to you. Suppose some night you and your friends are at camp, you can exchange messages by means of flash-light signals. The book of instructions which comes in each set explains the use of your equipment and makes it possible for you to thoroughly understand signalling in general. You will learn how communication was carried on thousands of years ago by means of torches and firebrands. The part of the book that ought to interest you very much is that which deals with the building of different kinds of signal apparatus telling you how to make flags, discs, and distaffs to use with the Wig Wag system, a Heliograph to produce sun flashes, and a Semaphore and Blinker arrangement. For real play get a Gilbert Signal Set. It contains two complete sets of electric signals with red and white electric lights together with key-board for operating them. Comes packed in a stained hardwood cabinet  $18\frac{1}{4} \times 10\frac{1}{8} \times 2\frac{1}{8}$  inches. Weight approximately 4 lbs. Price, \$15.00 (Canada, \$22.50.)

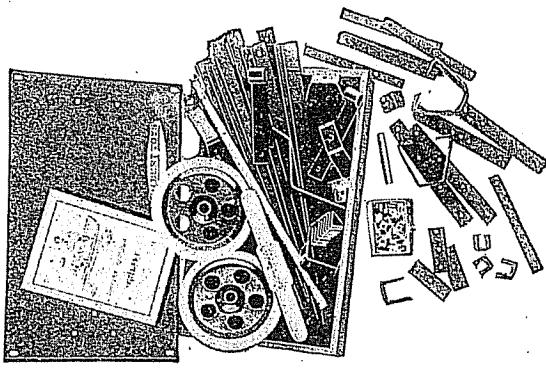
## Gilbert Outdoor Wheel Toy

Here's the greatest toy of all, boys—a regular humdinger. With this New Wheel Toy you can make a cracker-jack coaster and many other fine things easy as rolling off a log—a sporty wagon, a dandy geared speedster, a glider that is better than the regular ones, a wheedbarrow, a baggage truck that's the real thing—something new every week.

These toys are not models or flimsy affairs. They are honest-to-goodness ones, exceptionally strong and sturdy—toys that you can get on and ride yourself. All you need is a screwdriver and wrench and the parts in the outfit. With them you can build the glider, wagon, coaster, etc., in no time at all. Think what fun you can have building yourself a different toy every day or every week or as often as you like. There's no end to the sport my New Wheel Toy will give you. Read over carefully the description of each outfit.

You cannot imagine what real fun is until you have learned to build your own coaster and glider and taken a long spin down a hill. You will surely travel fast, and safe.

An outdoor wheel toy means that you will have bully times—that you will get real enjoyment from your play outdoors. Get one of these sets and learn how delightful it is to build your own toys.



## Gilbert Wheel Toy

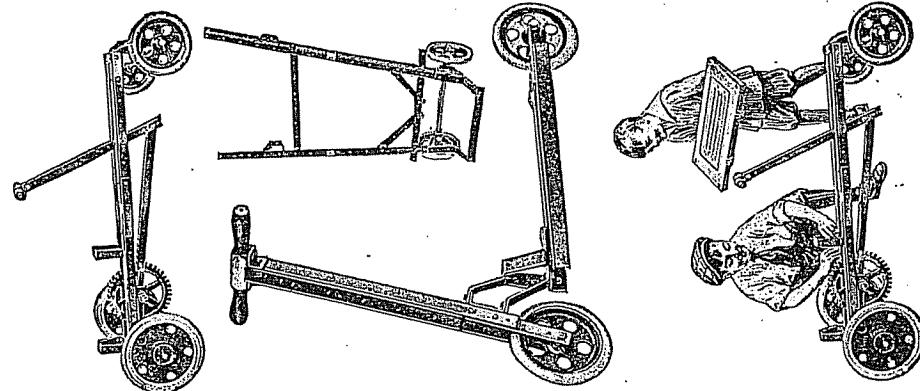
ALL STEEL MODEL

No. 9003

Take a spin on a coaster built by yourself. Go as fast as you like for your coaster is strong and substantial. Built with your own hands from sturdy steel parts you can depend upon it to carry you at a great clip. There is great fun getting the various braces, axles, nuts, wheels, etc., together. You can build a factory truck, two-wheeled wagon, glider, etc., with this set.

A Gilbert Wheel Toy provides plenty of outdoor sport. The beauty of owning a set of this kind is that you can take your glider apart after you have used it and build a two-wheeled wagon or factory truck. This is a new way to enjoy your spare time. Just look at the two special steel disc wheels. They are made of heavy high-grade steel which is stripped out, shaped and formed and then put together with a special locking hub and rivet device that gives them great strength.

The models you make are more than toys, mind you—real things—things that you can actually use and bang around and have great fun with. A screwdriver and a wrench are all that is necessary to make the things shown in the book of instructions which comes with each set. There is included also, angle irons, nuts, screws, axles, bolts, steel plates and wheels. Packed in stained hardwood cabinet  $14\frac{1}{8} \times 8\frac{7}{8} \times 2\frac{1}{4}$  inches. Weight  $25\frac{3}{4}$  lbs. Price, \$10.00 (Canada, \$15.00).



## Gilbert Wheel Toy

ALL STEEL MODEL

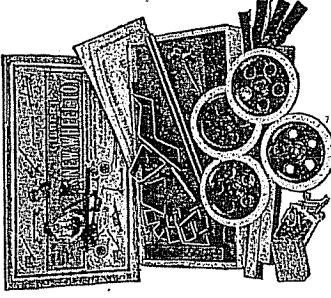
No. 9005

With this larger Gilbert Wheel

Toy set you can build larger and more difficult out-door models like the geared speedster, etc. This set contains the special 8-inch disc steel wheels in addition to the small 5-inch size, enabling you to travel faster and easier on the models you build. The speedster, equipped with these big wheels is a crackerjack and beats anything you ever saw for design and speed.

You can be sure of one thing. A Gilbert Wheel Toy builds strong, sturdy, substantial models. Every part is made of the best quality metal insuring you models that will stand long and hard usage. A wrench and a screw driver are the only tools you need to put together all parts in the outfit, and build yourself models which will surprise you in the fun you can have with them. The parts go together very easily, everything is made to fit and the book of instructions tells you in a very easy way just how to construct any model you wish.

The set comes packed in a stained hardwood cabinet on which the seat for your models makes a unique cover, and the cabinet itself makes the body of the wagon model. The parts set in so compactly that you won't think it possible that it contains all the angle irons made of first quality band iron, pinions, nuts, bolts, gears, etc. Size of box  $14\frac{1}{8} \times 8\frac{1}{8} \times 3\frac{1}{8}$  inches. Weight approximately 30 lbs. Price, \$15.00 (Canada \$22.50).



## WHEEL TOY No. 9004

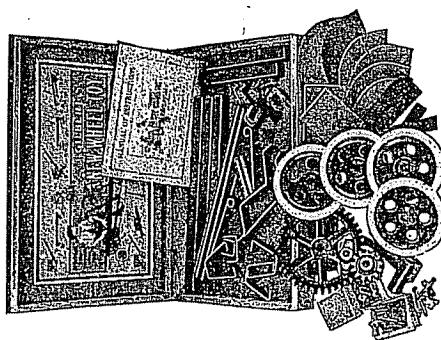
### With Wood Parts

The first New Wheeled Toy Set, boys, and a dandy. It contains all the parts to build the coaster, glider, flat-topped wheelbarrow, flat-topped wagon and many other toys. All parts are put up so compactly in a hardwood cabinet  $9\frac{1}{2} \times 16\frac{1}{8} \times 2\frac{1}{2}$  inches that you scarcely believe it possible that you can build such wonderfully big toys with them. A book of instructions which comes with each outfit shows you just how every model is built. Price, \$6.50 (Canada \$9.75).

## WHEEL TOY No. 9006

### With Wood Parts

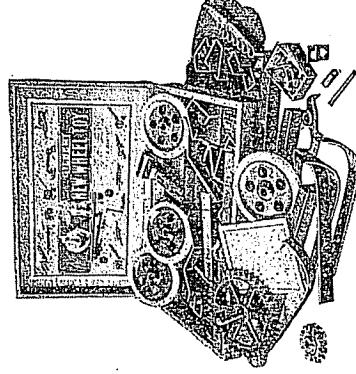
The special gears, pinions, axles, etc., which are included in this outfit enable you to build the big geared speedster in addition to lots of other toys, such as the go-cart, snow-shovel, hobby horse, wagon, wheelbarrow, coaster, glider and a great many more. If comes packed in a sturdy, serviceable, hardwood cabinet  $10\frac{1}{8} \times 13\frac{1}{8} \times 2\frac{1}{2}$  inches, and includes a manual giving complete directions for building the toys. Price, \$10.00 (Canada \$15.00).



## WHEEL TOY No. 9007

### With Wood Parts

An even larger outfit than the No. 9006 Set. In addition to the gears, pinions, axles, and many other parts, this set has also a set of sled runners, so that you can build winter toys—bob sleds, wagon sleds, etc. Then, too, there are larger quantities of the standard parts, enabling you to build larger models. Packed in hardwood cabinet  $12\frac{1}{2} \times 20\frac{1}{4} \times 3\frac{1}{2}$  inches, with complete book of instructions. Price, \$15.00 (Canada \$22.50).





You simply press a button or turn a switch and you have light. Do you know why—or where it comes from? No! Because it's electricity.

What is electricity? I am sorry to confess, that neither you nor I, nor anybody who lived, or is living, could answer this question. We do not know what "electricity" is. We cannot define the idea "electricity," but we can turn to advantage the phenomena of electricity. We can, and we do it. We have mastered this mighty force and made it our powerful servant. We can produce it, and are more the servants of electricity than it is our servant. It is hard to imagine what man's life would be without the use of electricity, and I think the time not very far off when the height of civilization will not be measured by soap, but by the electric meter.

While electricity is still a mystery, much is known about the rules and laws governing its nature. Although it is without doubt one and the same, it is for convenience sometimes classified according to its motion, as:

1. Static Electricity, or electricity at rest.
2. Magnetism, or electricity in rotation.
3. Current Electricity, or electricity in motion.
4. Radiant Electricity, or electricity in vibration.

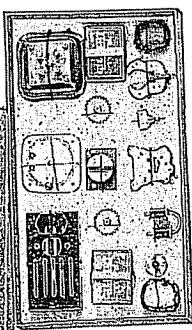
You can learn with Gilbert Electrical Sets why we give one and the same electricity different names and also how every one of the different branches seems to be a special science by itself. But to understand the fundamentals of electricity, to be acquainted with Electrical Engineering, you must start with the first elements and advance step by step.

It is one of the most intensely interesting subjects you ever studied. And fun? Say, boys, you never dreamed of the fun you can have experimenting with it. One of the biggest fields for men today is the electrical field, and the boy who knows about electricity is the boy who will win in life.

## Gilbert Electrical Set

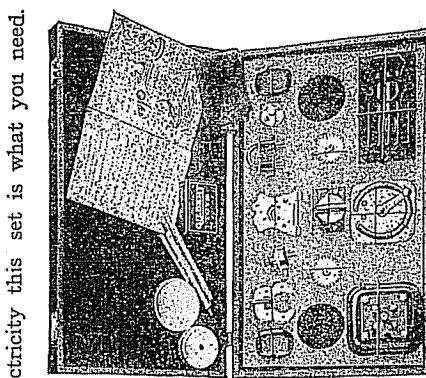
No. 3003

Nothing equals the power of electricity in the world to-day. It furnishes us with light and makes trains and trolley cars operate. There are many uses, and you, no doubt, are familiar with some of them by watching the electric appliances you have at home. The Gilbert Electrical set makes your play real. The things you can do with this set will surprise you. Enjoy the fun there is in building a powerful surprising power when connected with the gear box included in this set. Learn how to control its speed—how to make it go forward and reverse. The boy who owns one of these fascinating and instructive electrical sets will certainly have a big amount of fun, and before he realizes it, he will be known by all his friends as a junior electrical engineer. Packed in new carton, 18 x 10 x 1 1/4 inches. Weight approximately 3 lbs. Price, \$6.50 (In Canada, \$9.75).



## Gilbert Electrical Set

No. 3004



For an elementary knowledge of electricity this set is what you need. You will learn to construct a motor that will furnish you with power to operate anything you make. This little electrical laboratory will teach you the fundamental laws of gears and electric machinery. The set contains a model for an electrical sounder enabling you to study and exercise practical telegraphy. By playing with an equipment like this you will be able to understand the dynamo or the generator, the big apparatus used to produce electricity, and many other wonderful electrical things. With each set is a big book of instructions telling you how to perform each experiment. Packed in a hardwood cabinet, 13 x 9 x 3. Weight approximately 3 lbs. Price, \$10.50. (In Canada, \$15.75).



## Gilbert Tele-Set

No. 3502

Get your boy friend to help you string your wires for your Tele-Set. Get it set up and start operating it. An outfit you can use any time with a whole pile of fun. This outfit works just like the instruments in the telegraph stations where communications between distant points take place every day. Some time or other you have wanted to put up a telegraph set that was real and practicable and one that you could use with your chum. You were unable perhaps to get the right kind of instructions and you did not care to spend a large amount of money to get material and then find that it was too difficult to set up your equipment.

Here's just the outfit you want. In the book of instructions included with the set everything is explained very simply so that it will be easy for you to understand how every part works. You won't be discouraged when you start to work with this set because the apparatus has been prepared especially for your use. Think what fun it would be for you to go to your telegraph set and call your friend who lives a few houses away from you. He can answer your call and then you are ready to send your message. After you have used your set and know the code, it will be very interesting for you when in a telegraph office to listen to the instruments they have there. It is well, too, that you become familiar with the code used in Wireless. Then you will be in a position to understand the transmission of messages by this system as well as by telegraphy. This is the game for you—the kind of play that gives you plenty of fun and at the same time teaches you things every boy is eager to know. The best part of a set like this is that you can use it any time—day or night. Get a Gilbert Tele-Set and have good times. Packed in Gilbert Toy sealed carton  $12\frac{1}{8} \times 8\frac{3}{8} \times 2$  inches. Weight approximately 1 lb. Price, \$2.50. (In Canada, \$3.75).



## Gilbert Phono-Sets

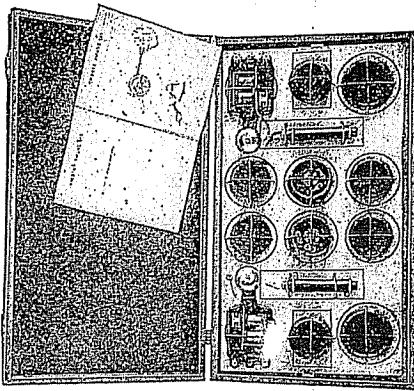
### *Real Working Telephones*

Say, boys, here's new electrical sets that are dandies. Real telephone outfits that you can rig up from your house to the house of your chum and talk to him any time you want to. You can have some corking good times. On rainy days, for instance, you can talk to him as much as you want to. Your folks can use them, too. You will have your own private telephone system with no telephone operators to bother you or listen to what you are saying.

You can rig them up from kitchen to parlor and talk to your brother or your sister, or play that your sister is the lady of the house, who is ordering things from you over the 'phone, and you are the butcher or the grocer. You sure can use it in lots of ways and have a pile of fun with them.

No. 3503  
Say, boys, here's new electrical sets that are dandies. Real telephone outfits that you can rig up from your house to the house of your chum and talk to him any time you want to. You can have some corking good times. On rainy days, for instance, you can talk to him as much as you want to. Your folks can use them, too. You will have your own private telephone system with no telephone operators to bother you or listen to what you are saying.

No. 3503 Outfit. Contains two complete telephone stations, with phones already to be assembled, wire and complete book of instructions. Packed in Gilbert Toy sealed carton, size  $18 \times 10 \times 1\frac{1}{4}$  inches. Price, \$6.50. (In Canada, \$9.75.)



No. 3504

Outfit. Two complete telephone stations, same as in No. 3503, and also fitted with bell call system so you can ring up your chum or whoever has the other station.

Complete book of instructions also included. Packed in stained hardwood cabinet, size  $18\frac{1}{4} \times 10\frac{1}{8} \times 2\frac{1}{8}$  inches.

Price \$12.00. (In Canada, \$18.00).

No. 3504

## Have Your Own RADIO STATION

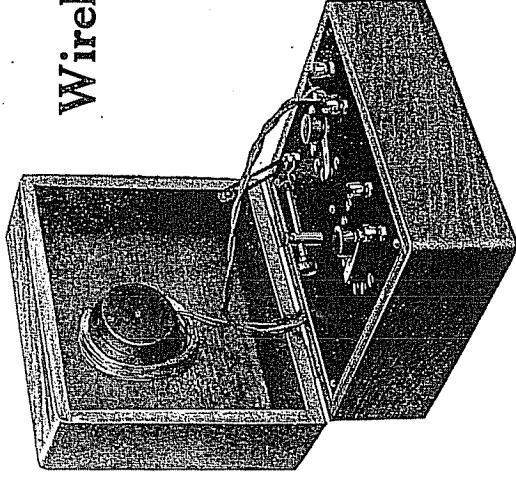
Boys, you don't know what you are missing without a Wireless station. You are losing more fun and more pleasure than you think. It's great, I can tell you, to have an apparatus and receive the messages that are sent out from Wireless stations all over the country. There are a great many boys anxious to learn radio, and you'd be surprised at the number who have already installed equipments in their homes and are enjoying the work that can be done with Wireless. They seem to realize very much the importance of this method of communication to the world today, and are eager to get all the information they can so as to understand thoroughly the wonderful improvements that have been made in the equipment necessary to send and receive Wireless messages.

Have you ever been in a Wireless station when a message has been either sent or received and listened to the buzzing of the instruments? It's really wonderful. Doesn't it seem marvelous to you that the operator can sit at his instruments and by simply ticking a telegraph key, send a message many miles over the country. Or, perhaps, receive a message from half way around the world. Think of it, boys, that message doesn't travel on wires or anything we can see, it just goes out on the air and is picked up by another Wireless station miles away.

Get in on this great new science. Enjoy yourself by securing a radio outfit and establishing a station of your own. It's easy—and you're sure to be enthusiastic about it. Read the description of the Gilbert Wireless Station in operation at the factory in New Haven. If you live within range of it and have your own station you can receive the reports sent out by the operator every day. This is a big help to you in beginning your work with Wireless for the messages are sent out at slow speed, first, so that you can learn the code, and then at faster speed. If you do not live within range of it there are big stations scattered all over the country so that Wireless signals can be heard everywhere. Put a Wireless station in your home and you'll soon see how valuable it will be to you.

## Gilbert Wireless Receiving Outfit

No. 4006



Think of it, boys, a complete wireless receiving equipment put up in a hardwood cabinet only  $6\frac{3}{4} \times 7\frac{1}{4} \times 5\frac{1}{2}$  inches when closed. It does not seem possible, does it? This outfit is going to make wireless receiving a great deal more attractive to many boys. Today, most boys think that they can't afford to take it up—that it costs too much. Not so with this set. A wireless station is now within the reach of every boy—for who can't soon earn the small amount this set costs.

It's complete in every way, boys, containing a special loose coupler, mineral detector and one head phone. All arranged very compactly in a stained hardwood cabinet. With each set comes a big book on Wireless, telling just how to rig up your station and how to operate it. The code is given so you can very easily learn what the signals you receive mean. There is also a list of wireless stations all over the country, and by referring to this you will know what stations to listen for.

Wireless operating is the most fascinating thing you ever tried and it opens up a tremendous field for ambitious boys. It's an entirely new science in which great men are experimenting every day. Who knows but what some day you may be just as famous. It's the boy who follows up his advantages that makes a name for himself.

Get one of these 4006 Wireless Outfits and get in on the most interesting science of today. Price \$12.50. (Canada, \$18.75).