





I want to explain to you all about the Erector Family, the World's Standard in Construction Toys. The Old Plan:-

The old type of Accessory Set merely converted one size construction toy set into the next higher-priced set. It mainly provided more parts of the same kind you already had.

The New Plan:-

Now when you obtain an Accessory Set, it will match with any standard Erector Set and in addition, the new Erector Family of Accessory Sets are complete units in themselves.

The Regular Erector Sets consist of: No. 1 Dandy Beginner's Set No. 3 The Set with the Long Girders..... No. 4 The Famous No. 4 with Powerful Electric Motor and Gear Box No. 6 The Set with the Boiler..... No. 7 The Set that builds the Steam Shovel..... No.71/2 Motorized Erector. The Set with the Chassis No. 8 Trail Blazing No. 8. The Set that Builds the Zeppelin, No. 9 Mechanical Wonder Set. with 110 volt Motor No. 10 Deluxe Set, Builds all Erector Feature Models..... No. 12 Master Engineer's Set, Amazing - Gigantic - Complete The New Erector Family of Accessory Sets consists of:-No. 3005 Erector Electrical Set. The Set that Electrifies and Illuminates No. B Big Girder Set. The Set That Builds the Ferris Wheel

No. C Erector Airplane Set

These New Accessory Sets are for the purpose of featuring and specializing in certain types of Trumodel building, Construction Equipment, Electrification and Illumination, etc.

THERE IS WORLDS OF FUN IN ANY ERECTOR SET

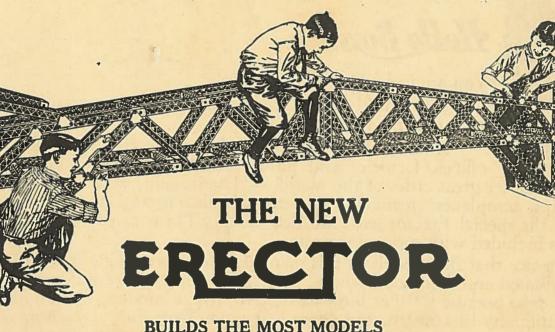
Your Friend,

Manual of Instructions

Section 1



ERECTOR SETS BUILD THE MOST MODELS



MANUALS FOR LARGER SETS MANUALS FREE WITH ALL SETS No. 1-No. 3-No. 4

OTHER

No. 7-No. 77 25c Each SEPARATELY No. 7½ 50c-No. 8 75c No. 10 and 12 \$1.00 No. B 35c No. C 25c No. D 25c

BUILDS THE MOST MODELS HAS THE MOST PARTS THE ONLY CONSTRUCTION TOY WITH THE SQUARE GIRDER

The A. C. Gilbert Company, New Haven, Conn., U. S. A.

IN ENGLAND The A. C. Gilbert Co., 109 Kingsway, London, W. C. 2

Form M984

THE WORLD'S GREATEST TOY FOR BOYS.





You are to be Congratulated!

Just think! You now own an Erector set which is the best toy of its kind ever made for boys.

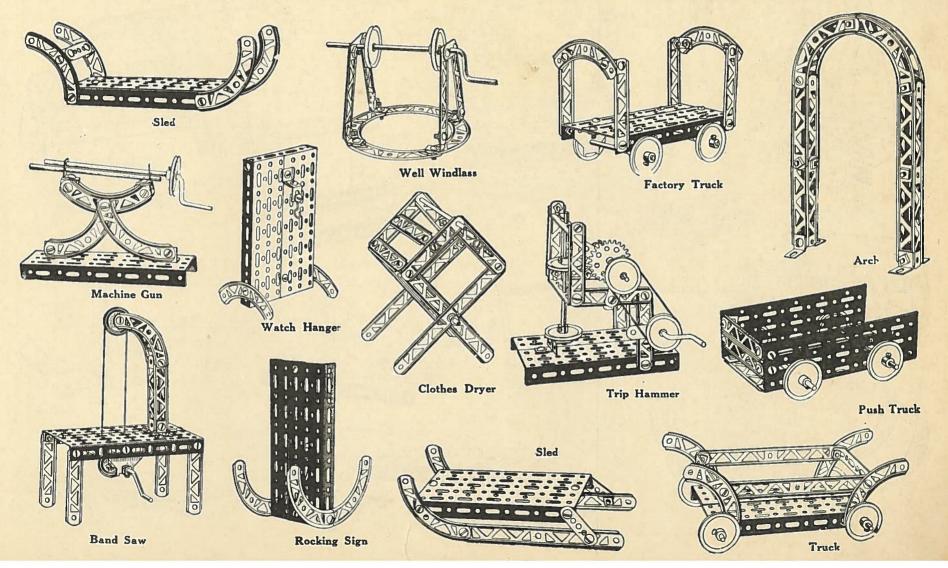
It has girders like structural steel, exactly like those used in sky-scrapers, offices, factories and public buildings in New York, Chicago, London, Paris, Berlin and other great cities of the world. Then again, you can build derricks, machine shops, battleships, aeroplanes, steam shovels, ferris wheels. engines, and thousands of other things for which only the special Erector parts are designed. These can be operated with the electric motor which is included with most of the sets.

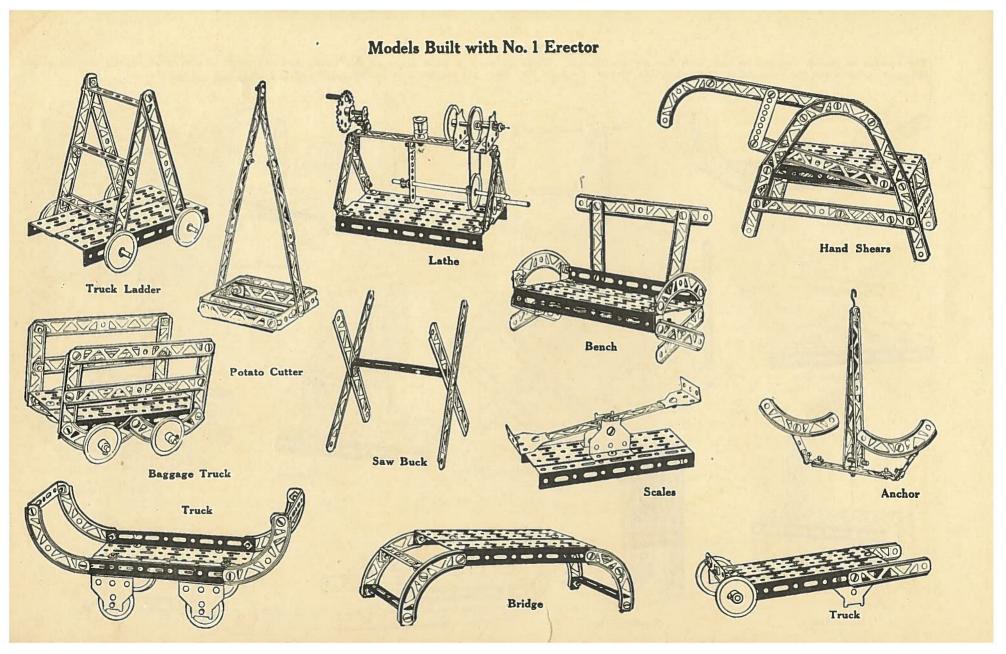
You will notice that the models in this manual cover a very wide range of subjects. Most of them were originated and designed by boys. For this reason I have not given a description under most of the models, because if other boys are able to invent models, I am quite sure that you will not have any difficulty in constructing them when you have the actual reproduction before you. It is much more interesting and also instructive to work out these models without being told every step in detail. This is what you will have to do when you become a real engineer.

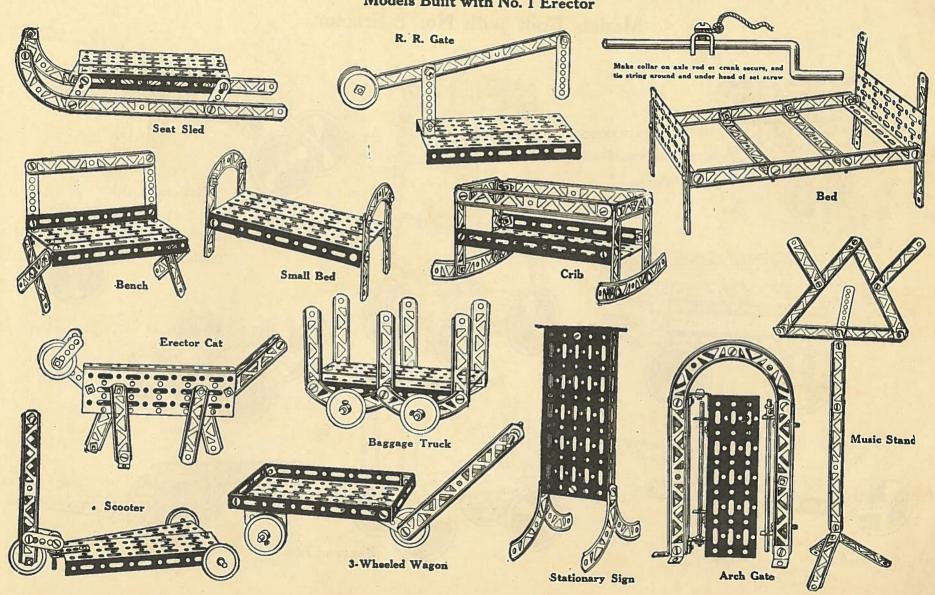
I know you are going to have lots of fun with Erector.

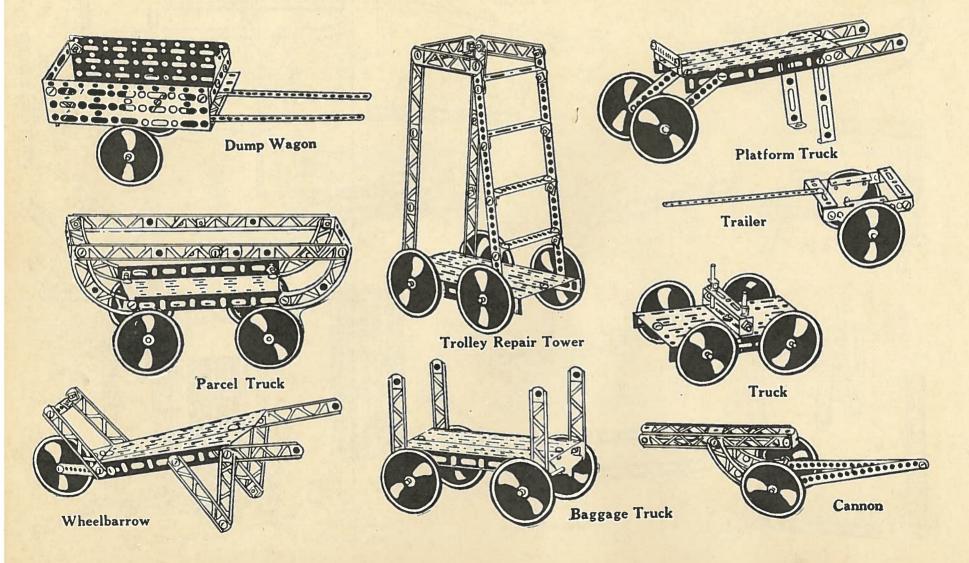
Your Friend.

The number of models that can be built with Erector is unlimited. While we show a great many in this book, they are only indications of the large number of different varieties and the adaptability of Erector, The World's Greatest Toy. Over 300 smaller models illustrated in No. 0-000-and Special Manual.

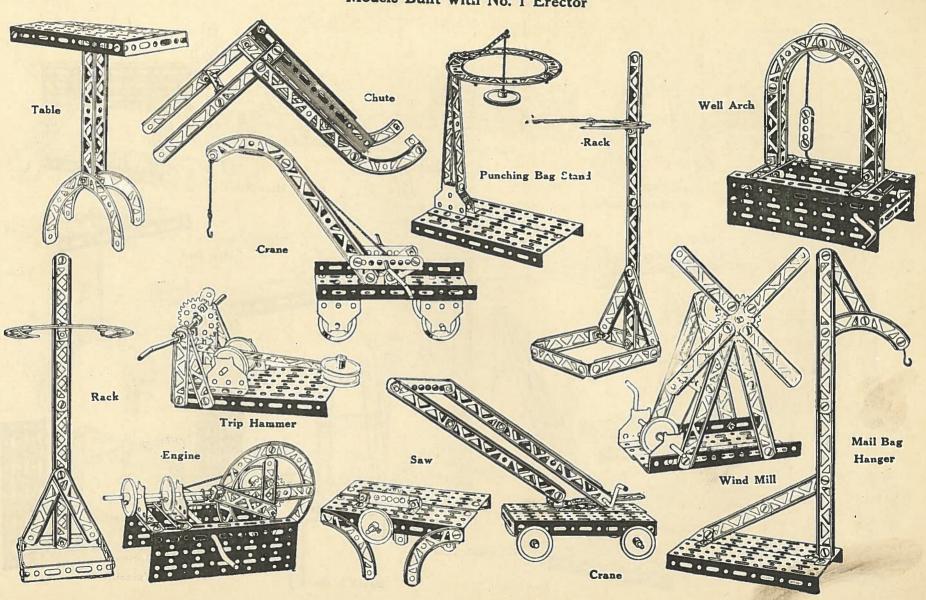


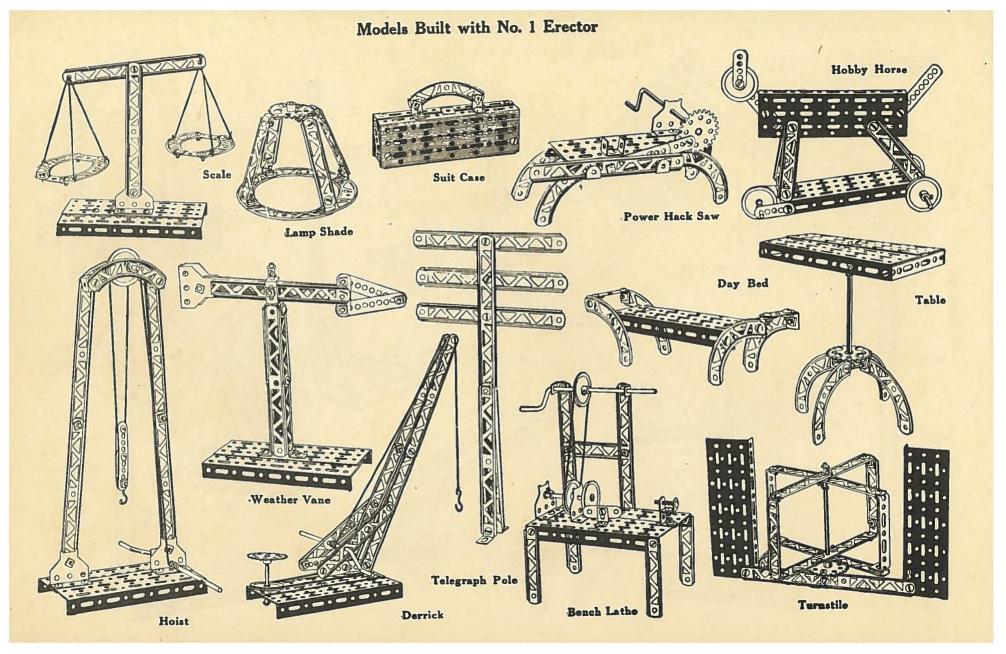


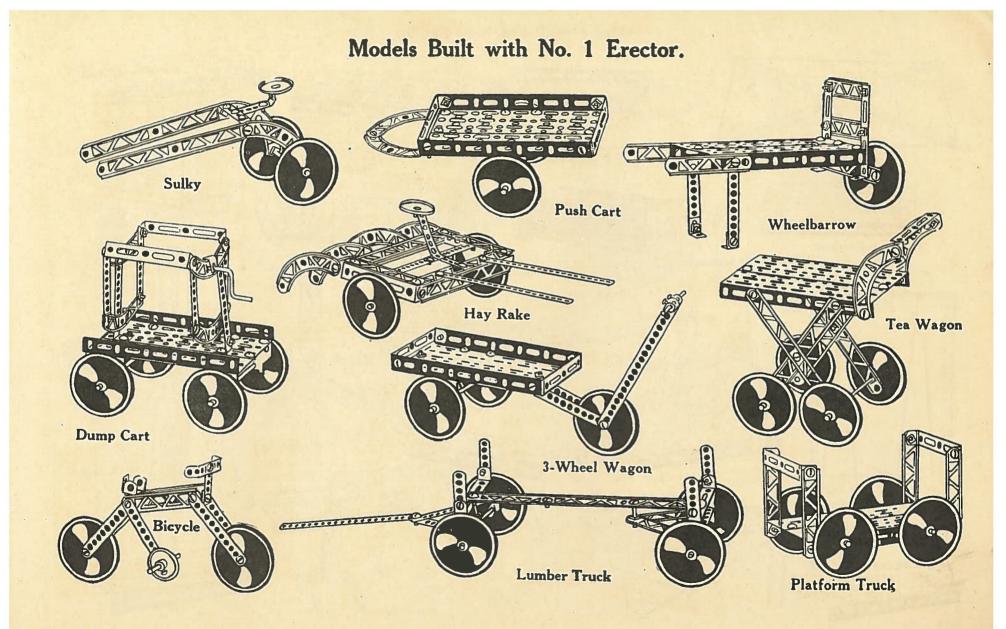


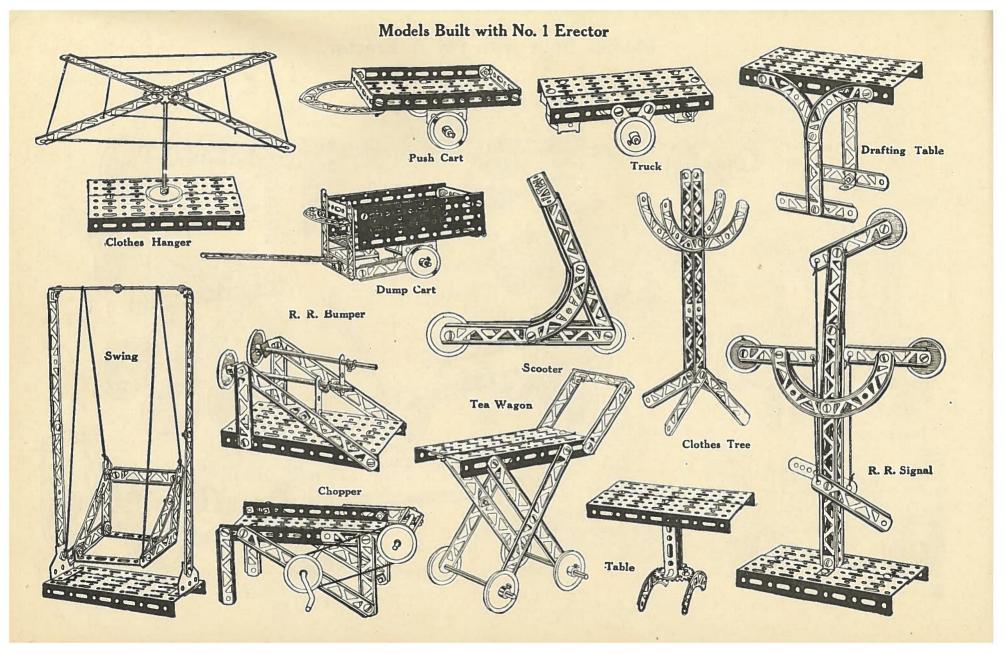


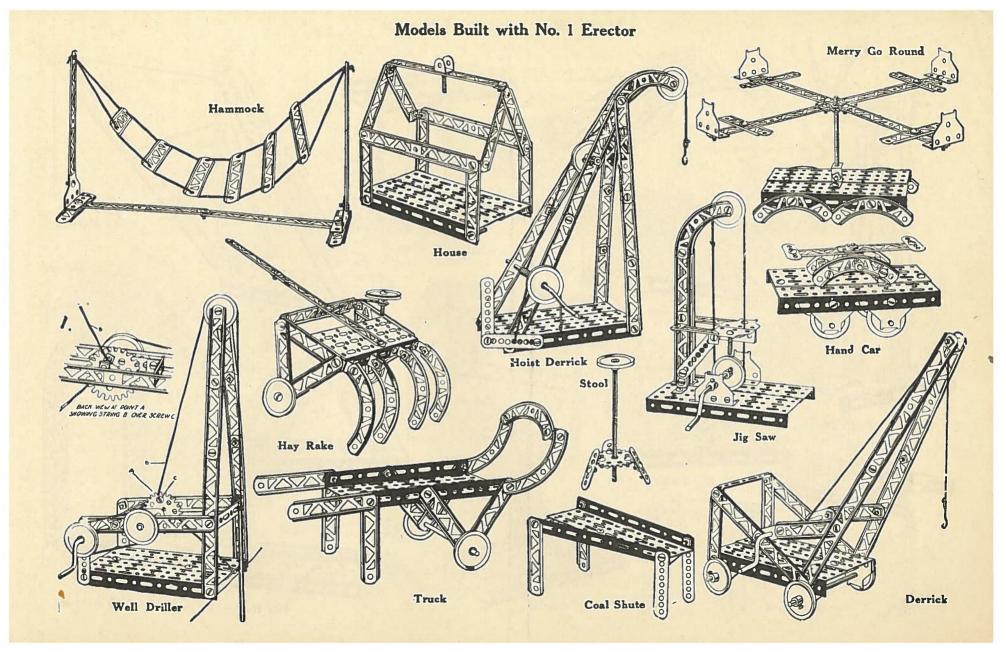
Models Built with No. 1 Erector

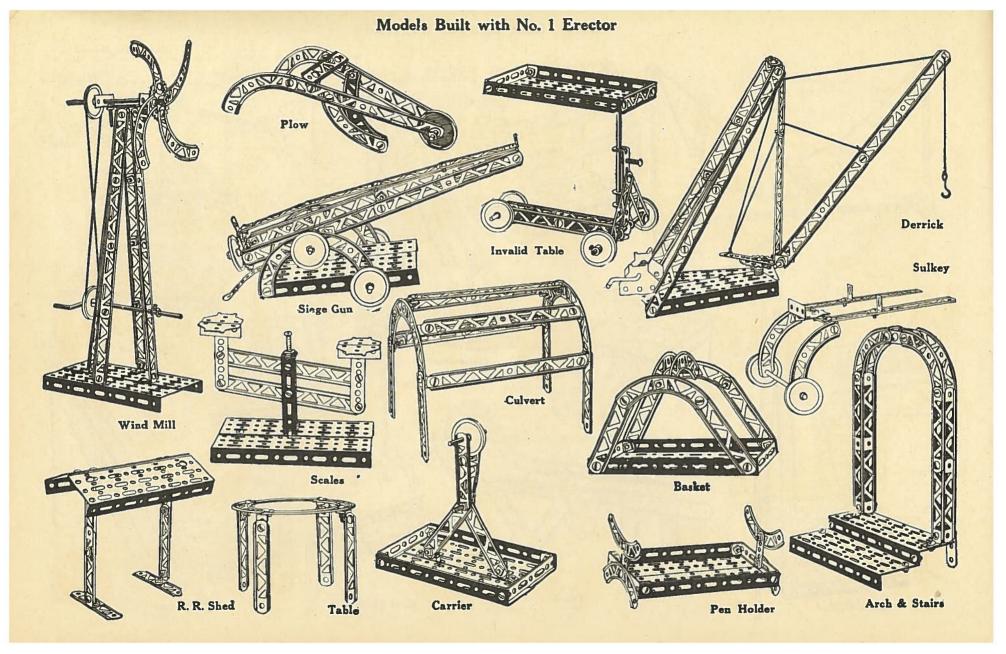


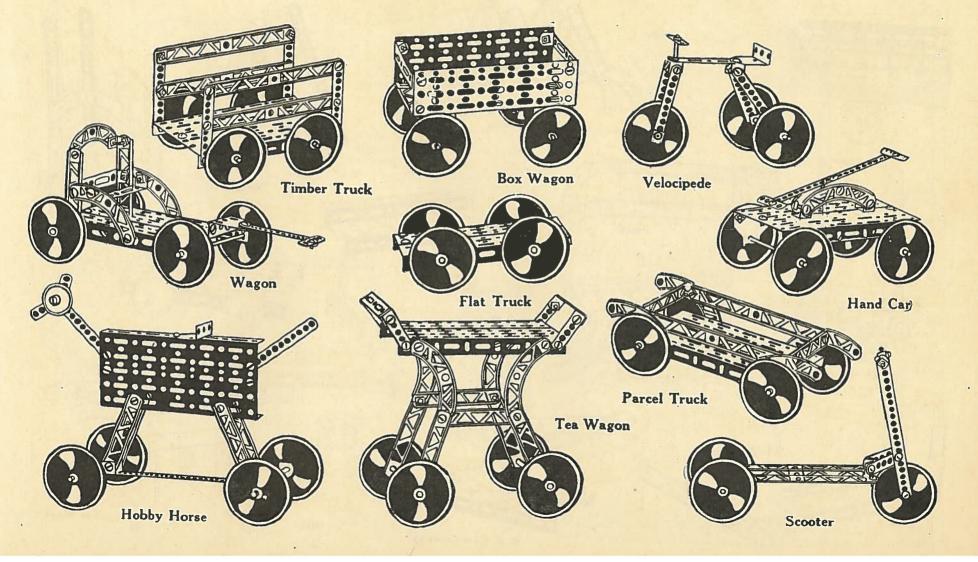


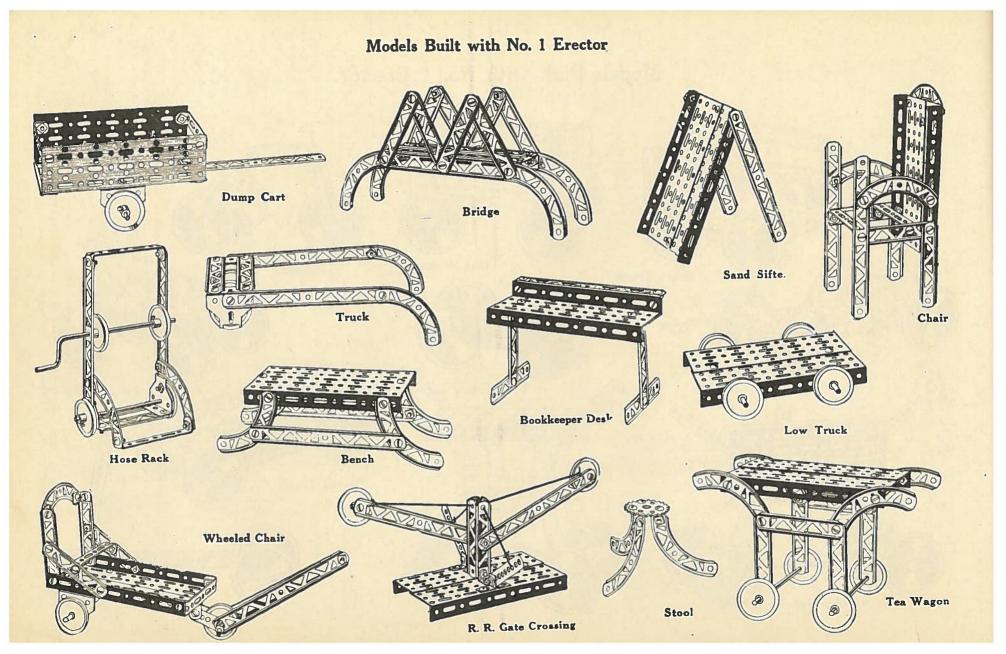




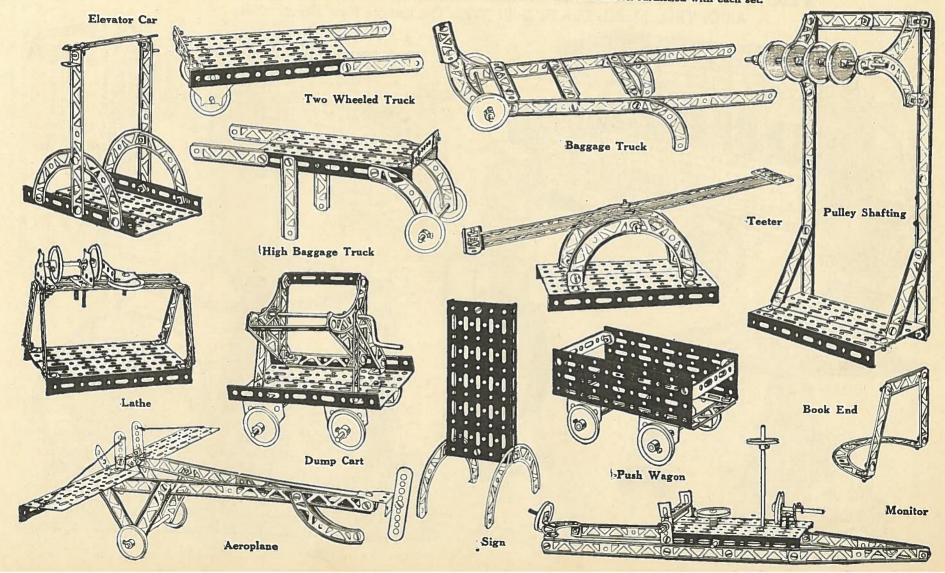


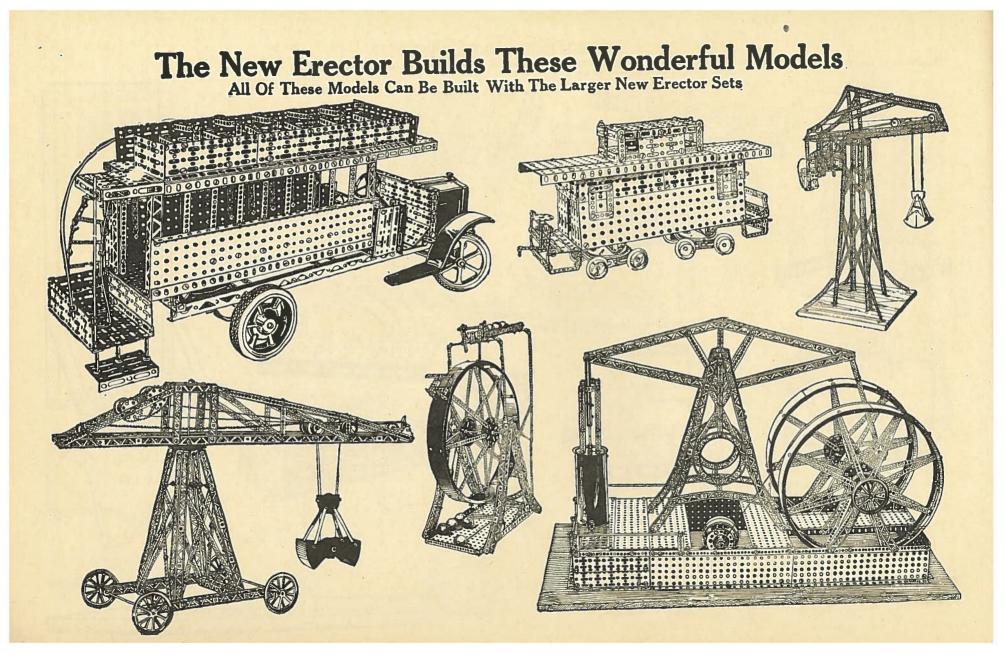






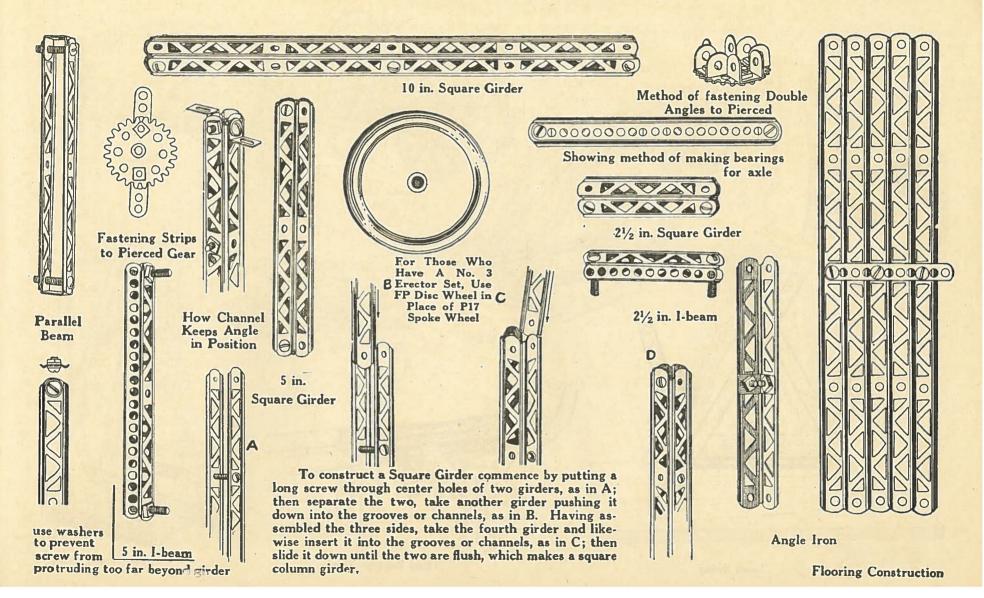
Hundreds of larger models can be built with larger Erector Sets. They are shown in other Books of Instruction furnished with each set.

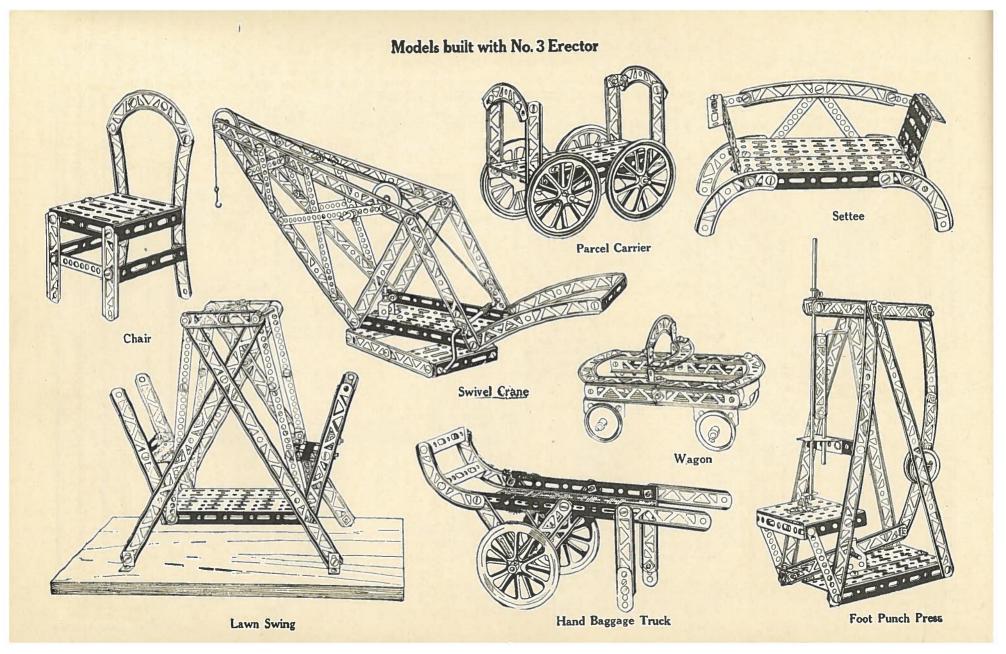




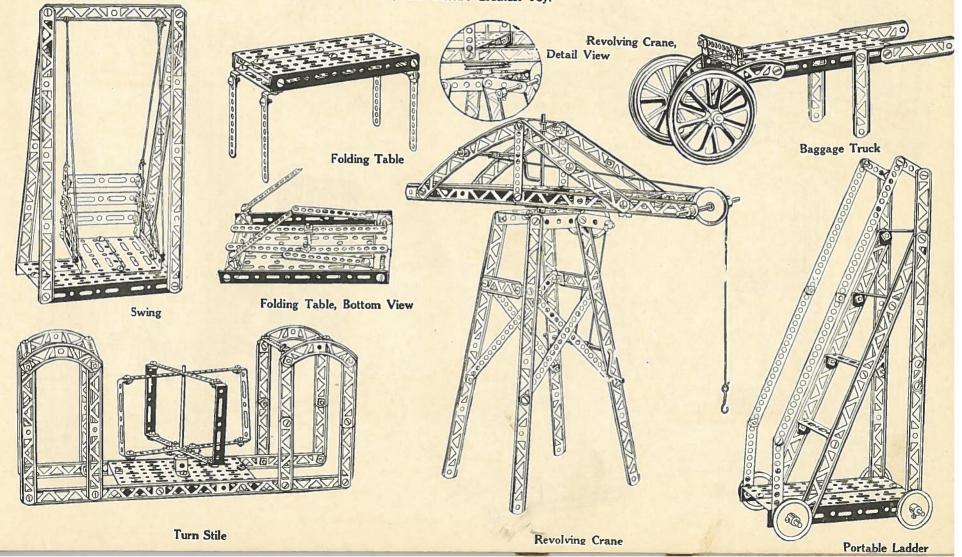
STANDARD DETAILS OF ERECTOR CONSTRUCTION

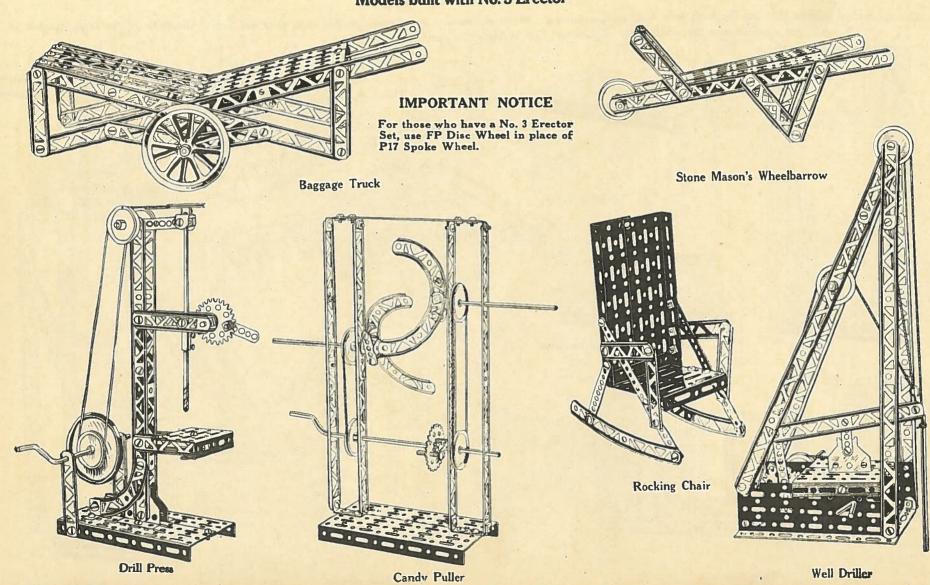
Section 2

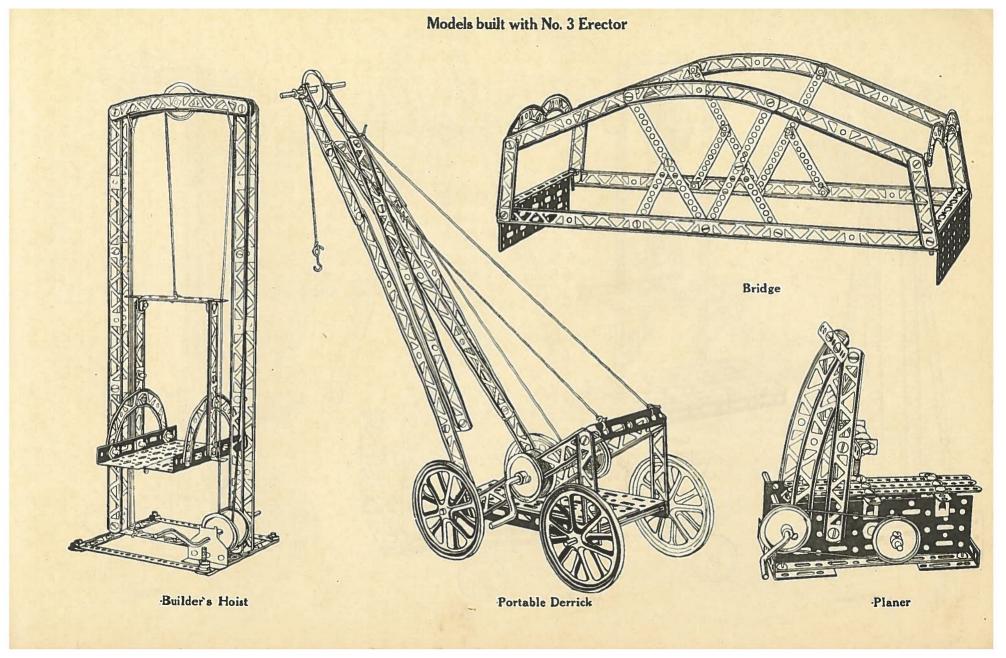


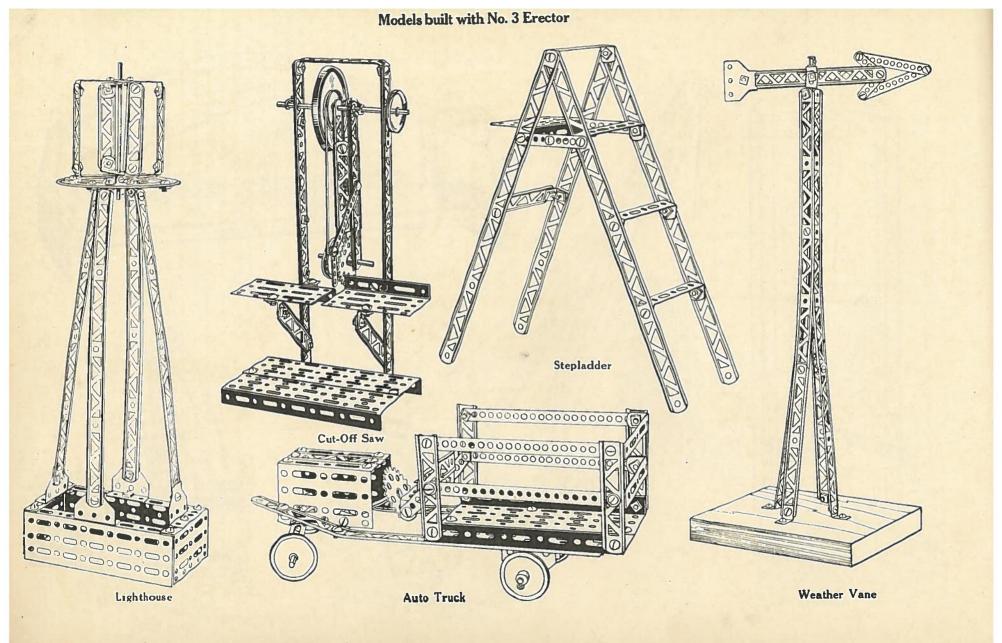


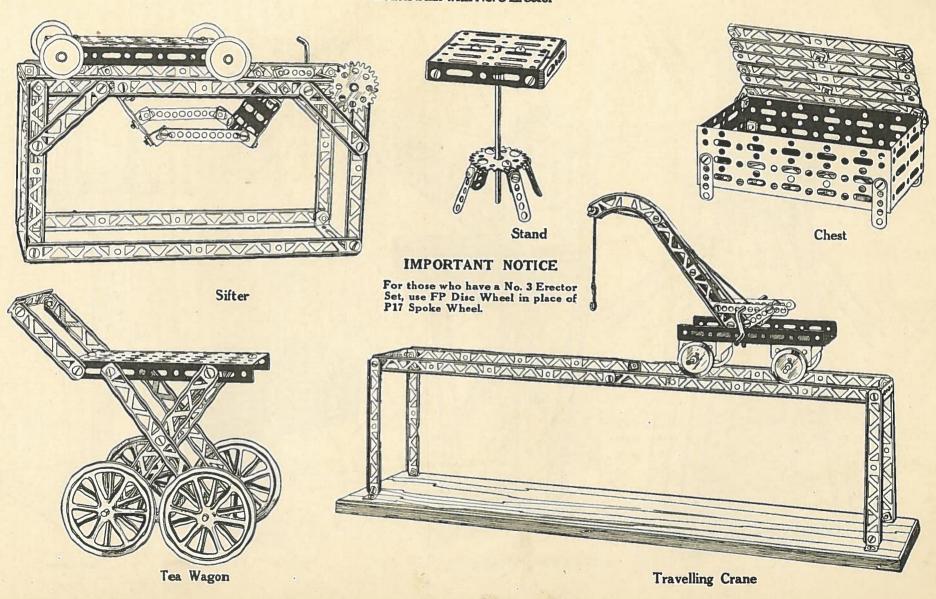
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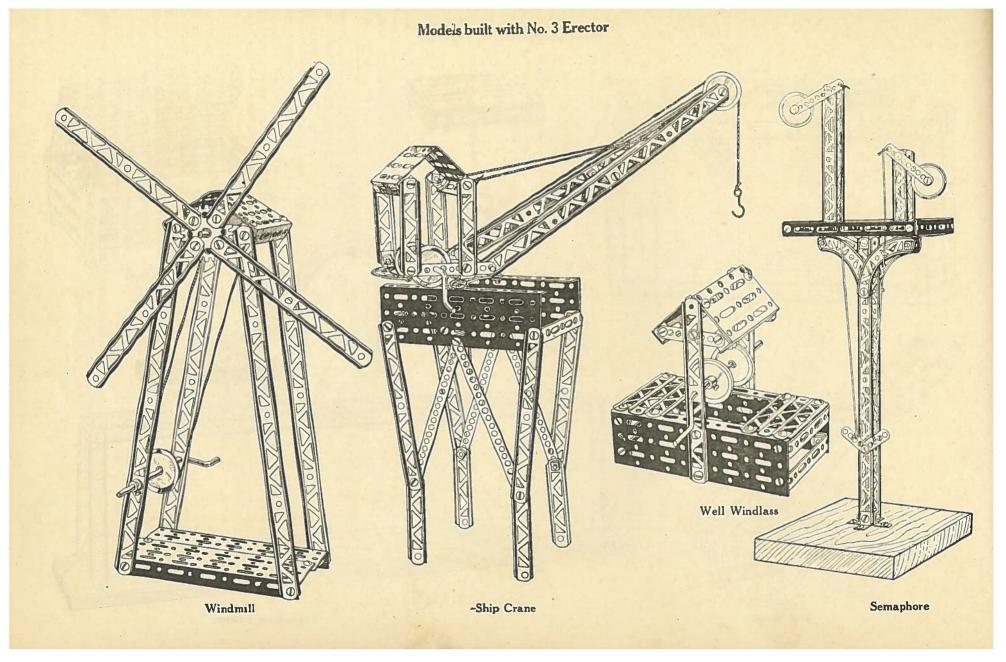


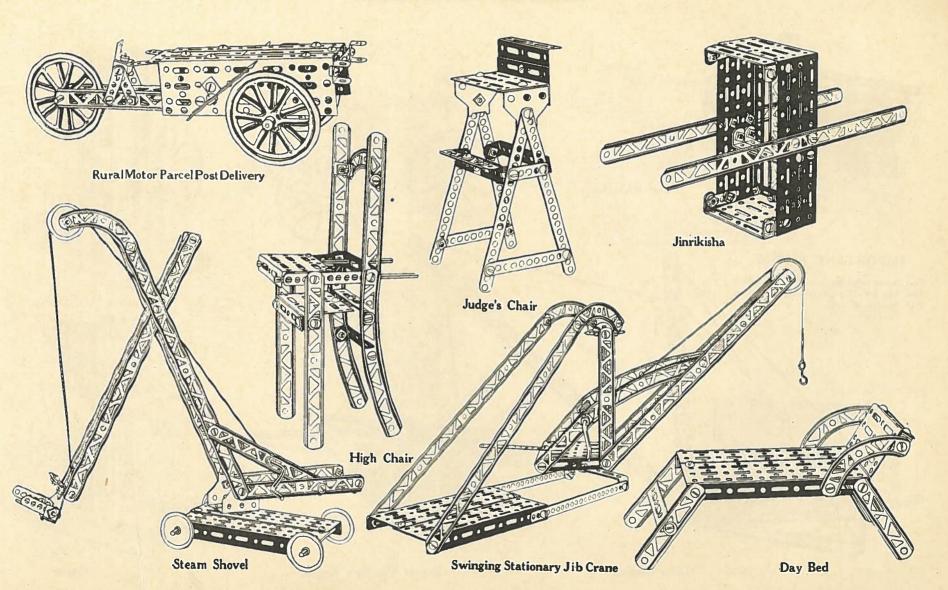


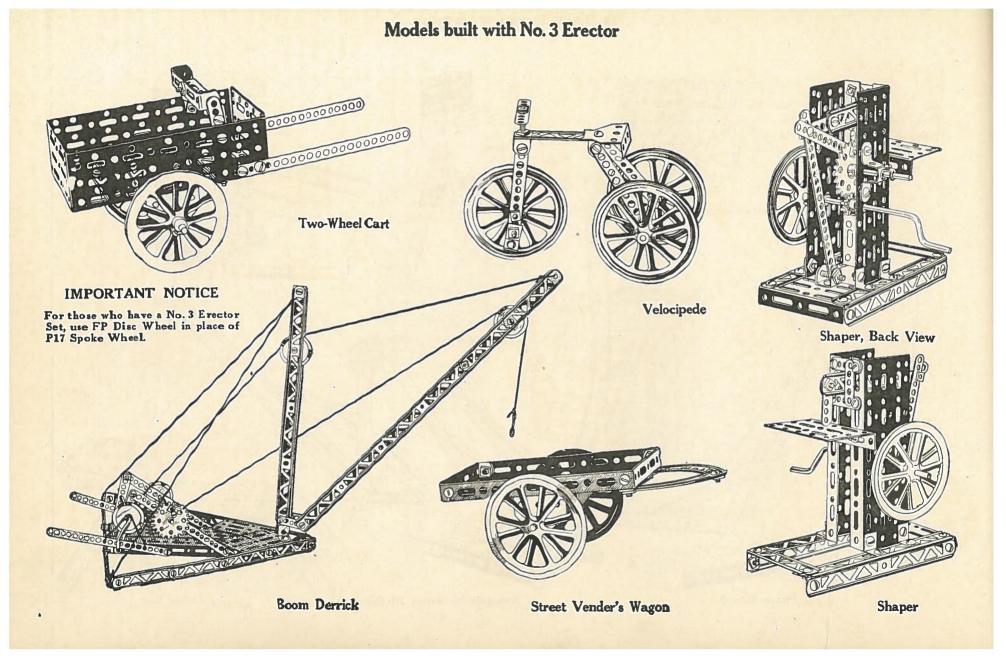


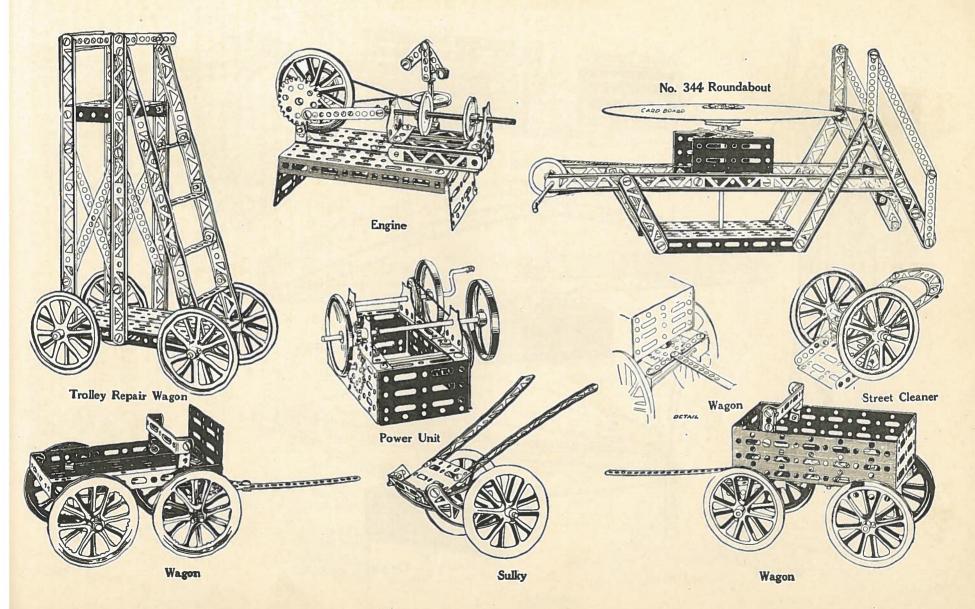


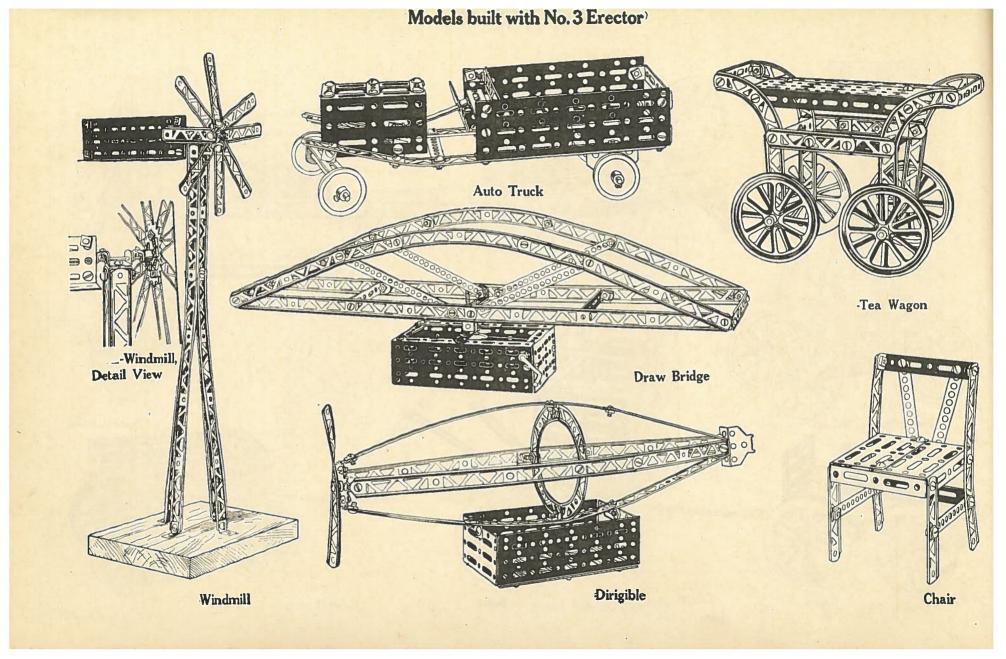


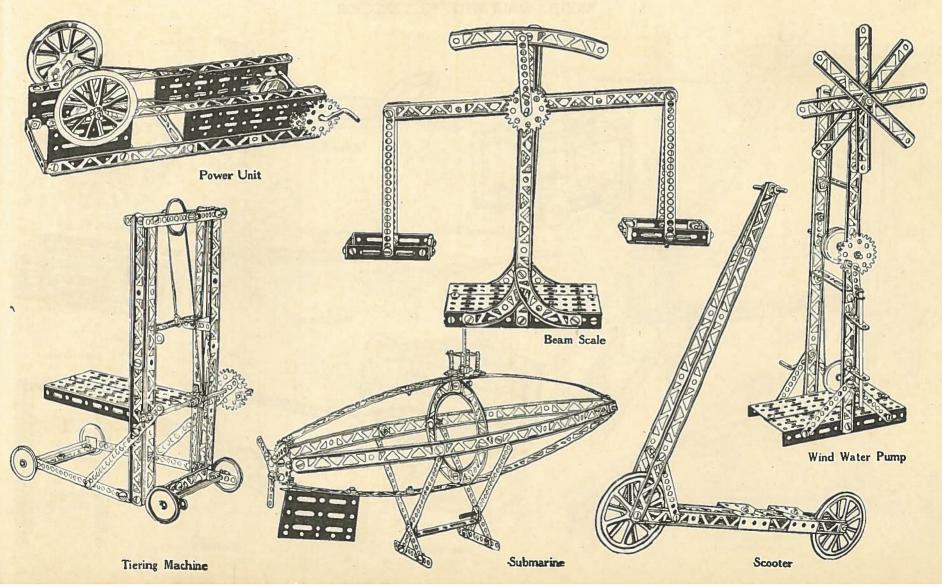




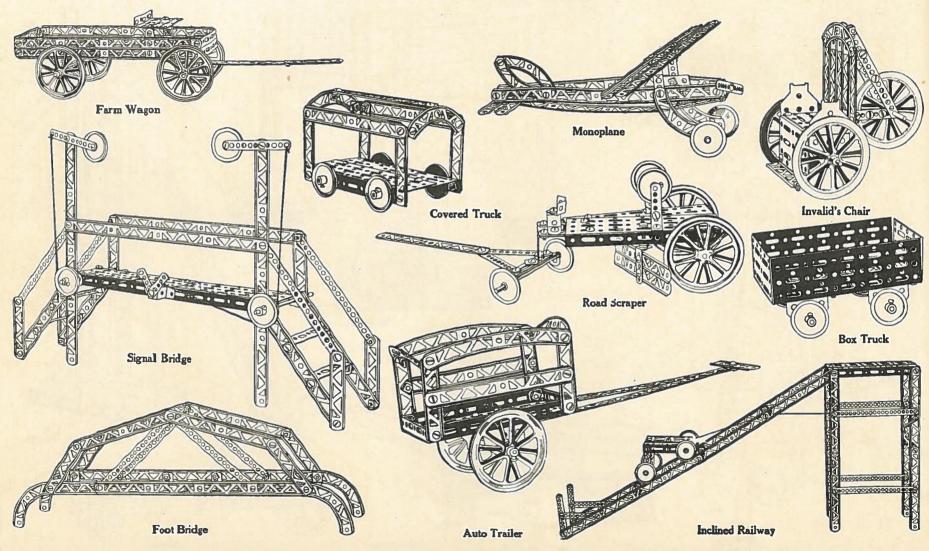




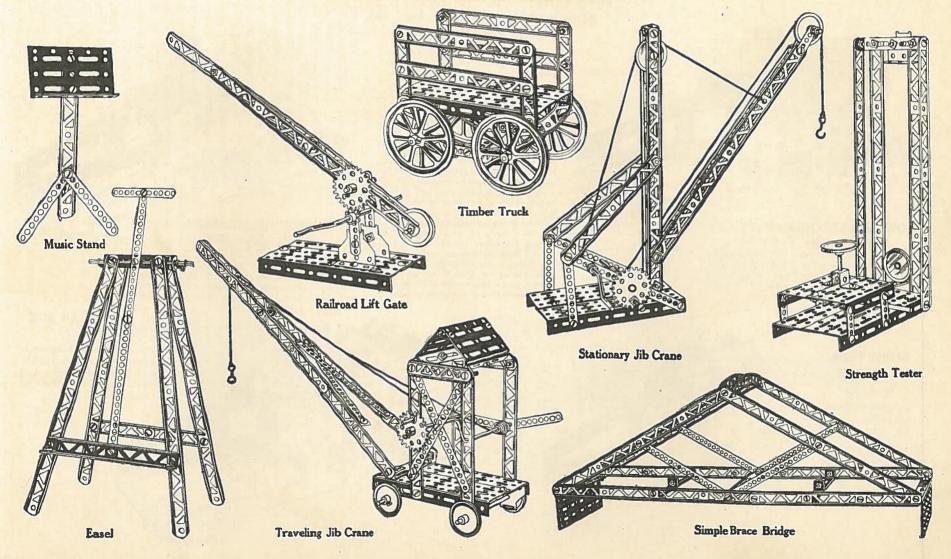


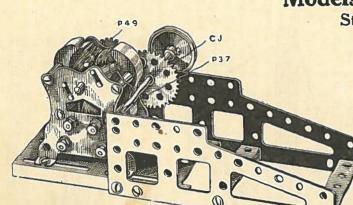


MODELS BUILT WITH NO. 3 ERECTOR



MODELS BUILT WITH NO. 3 ERECTOR





SLOW AND STRENGTH TYPE GEAR BOX

No 1 - 4's The small gear P49 is the driver and the large gear CJ is the driven. In this type the power is increased and the speed decreased It is de signed to lift heavy weights

Models Built With No. 4 Erector Standard Gear Box Section No. 4 INTRODUCTION

Gears and pulleys provide a means for transmitting power, increasing power, and regulating speed.

If power is desired, speed must be sacrificed

If speed is desired, power must be sacrificed.

The driving wheel is called the driver, and the driven wheel the driven These different styles of gear boxes are shown together to illustrate and treat practical mechanics. They also offer the builder a variety of different kinds of power from which he can select the most practical. By leaving end-play enough on one spindle of a train of gears provides a means for either release or reverse shift. With these many features and the ability to use either the P56G-110 volt Motor or P58 6 to 24 volt Motor, you will accommodate the reguirements of any particular model.

SPEED - NOT STRENGTH TYPE GEAR BOX No. 2 - 4's

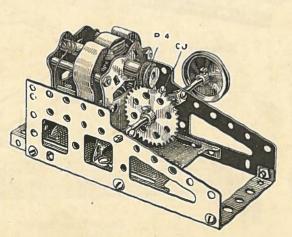
The largest gear CJ is the driver, and the small gear P49 the driven. In this type the speed is increased and the power diminished. It is designed for a gear box where high speed is wanted, not power.

HAULING TYPE GEAR BOX No. 4-4's

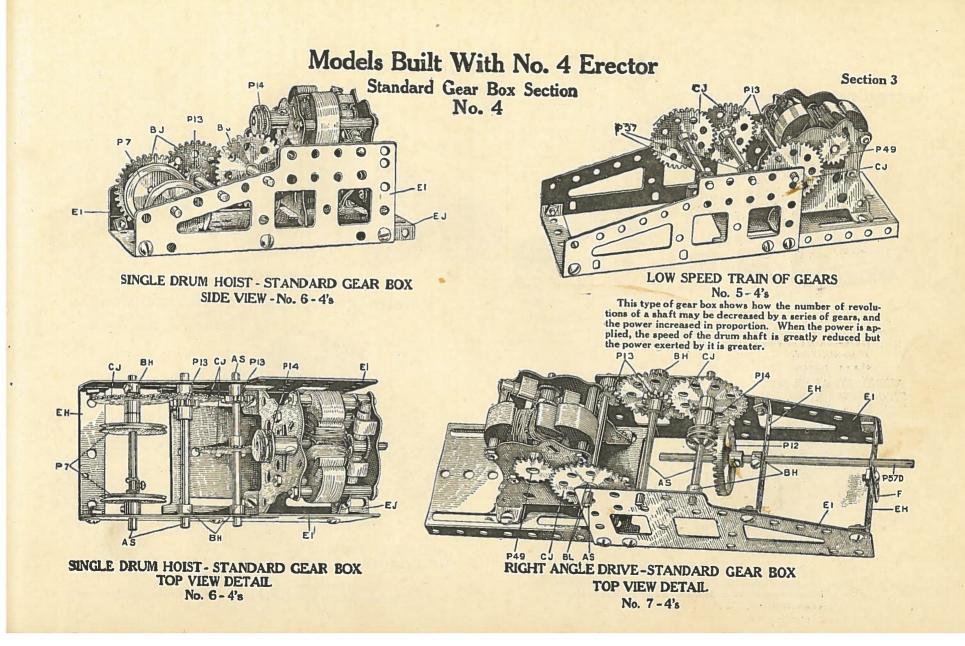
This type of gear box is designed to wind cable by means of the last shaft, the small gear P49 being the driver, and the large gear CJ the driven. You get power, not speed

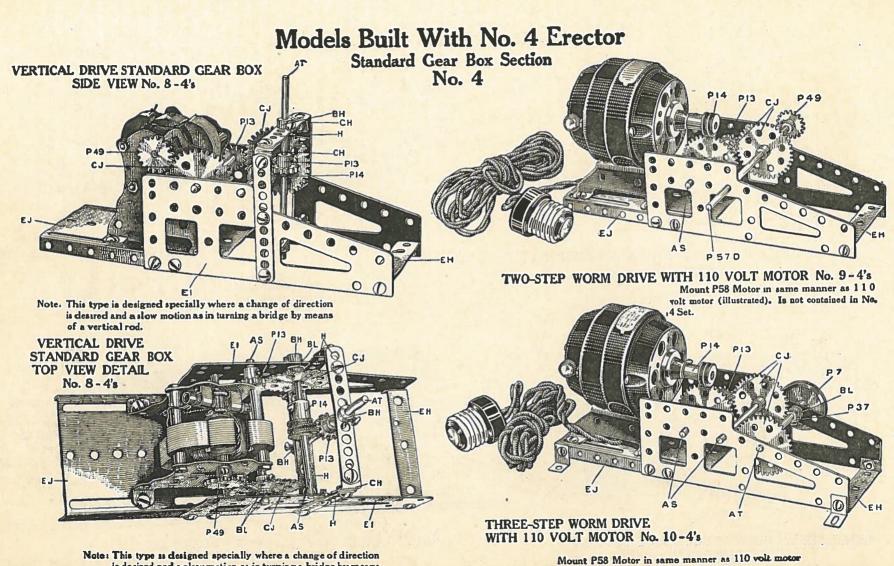
WORM TYPE GEAR BOX No 3-4's

The worm P14 is the driver and the gear CJ is the driven This type is designed for use where power is vanted, not speed

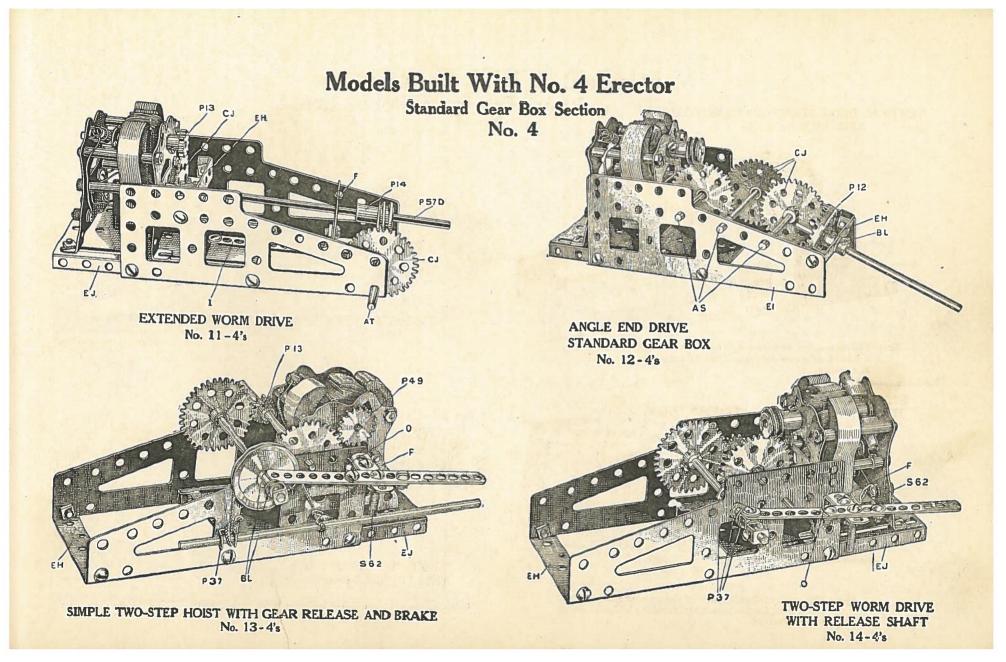


P37 This the wind cab the small the large

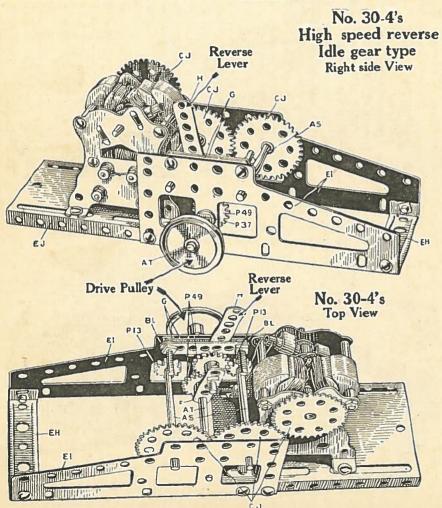


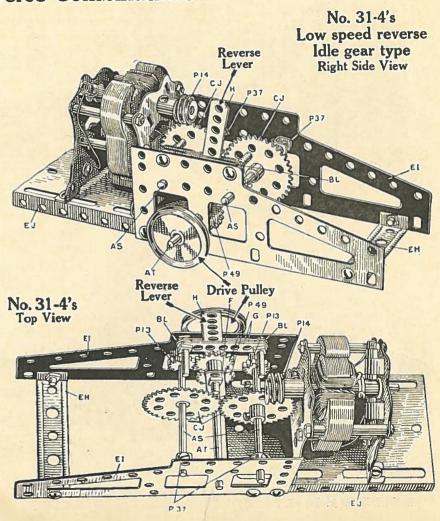


is desired and a slow motion as in turning a bridge by means of a vertical rod. Mount P58 Motor in same manner as 110 volt mo (illustrated). Is not contained in No. 4 Set.



Models Built With No. 4 Erector Standard Gear Box Reverse Combinations





Models Built With No. 4 Erector Standard Gear Box Reverse Combinations

The purpose of this section is to provide various combinations that will permit running models backward or forward. These combinations have many advantages over the reverse motor in that they provide the means of not only reversing direction but to regulate speed and power and provide a neutral point when model is idle.

No. 33-4's

High speed reverse

Shift gear type Right side view

No. 32-4's

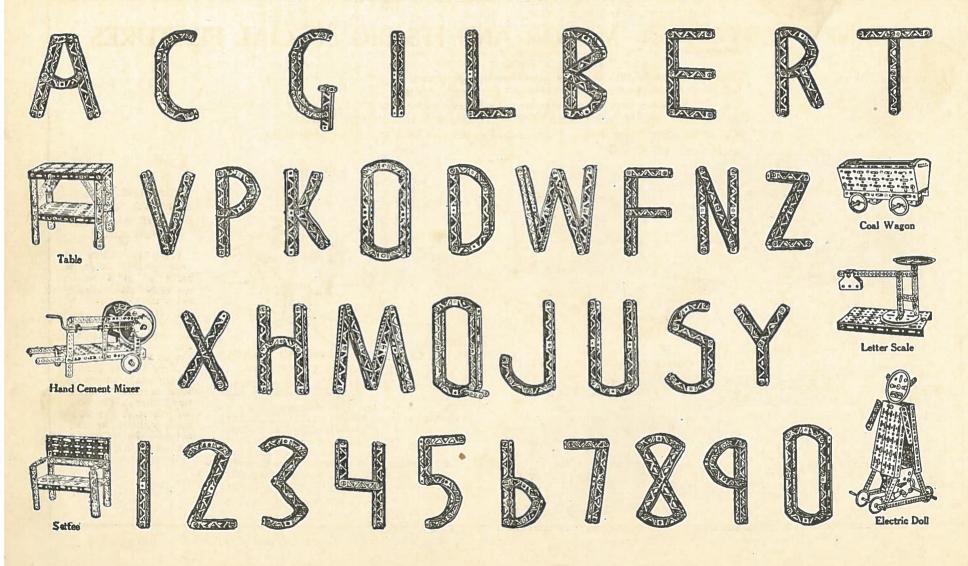
Low speed reverse

Shift gear type

Right side view

If you desire a simple motor reverse, see part B. O. in Erector Separate Parts Section, electrical accessory column, or reverse base P59 under "Motors and Hoisting Units."

P37 PIR **Drive** Pulley Drive Shaf 000 Drive Pulley Drive Shaft AS Leave end play for shifting gears Leave end play for shifting gears **Drive Pulley** P57D EH **Drive Shaft Drive Shaft Drive Pulley** No. 32-4's No. 33-4's Top View Top View Leave end play for shifting gears



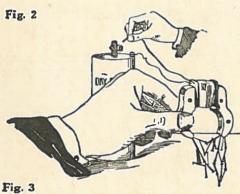
THE NEW ERECTOR MOTOR AND ITS BIG SPECIAL FEATURES

- 1st Can be taken apart for experimental purposes.
- 2nd Adapted for use with various gear combinations.
- 3rd Armature shaft same size as all shafting and axles.
- 4th Any gear or pinion can be directly attached to armature shaft.
- 5th Double drive shaft. Pulleys and gears can be attached to both sides of motor.



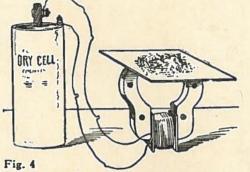
Fig. 1 EXPERIMENT 1—HOW TO TEST THE FIELD MAGNET

Connect the ends of a field magnet to the binding posts of a dry cell and then test it out with a soft iron wire, or nail, and you will find that it behaves just like a Horseshoe Magnet, except that it is much stronger. Fig. 1 shows how the connections are made.



EXPERIMENT 2-TO TRY OUT THE LIFTING POWER OF YOUR FIELD MAGNET

Connect one end of the field coil with one of the binding posts of a dry cell, connect up the other end (Fig. 2) of the field coil to the other binding post of your dry cell. Now, hold the field magnet upside down, lay the pole pieces on a pile of small nails and see how many of them the magnet will lift up, as shown on Fig. 3.



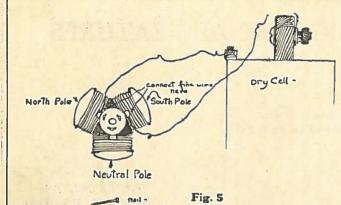
EXPERIMENT 3-HOW TO TRACE THE MAGNETIC FIELD

Connect the coil of the field magnet to the dry cell, or battery, as shown in Fig. 4. Now lay the field magnet flat on a table, or other level surface, and on the poles of it lay a business card or a sheet of glass. Sprinkle some iron filings over the card, or glass, when they will arrange themselves in curved lines between the poles, which shows how the magnetic lines of force flow from one pole to the other.

EXPERIMENT 4-HOW TO MAGNET-IZE THE BLADE OF YOUR KNIFE

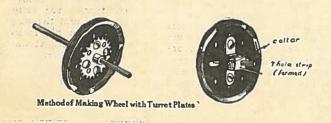
Place the blade of your pocket knife, a piece of steel watch spring, or some needles between the poles of the field magnet and then energize the latter by closing the circuit, and you will find that any or all of these steel objects will be permanently maganetized by what is called "induction," that is, the magnetic force acts through space without the magnet and the object being in actual contact with each other.

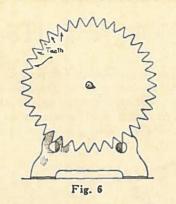
THE NEW ERECTOR MOTOR



EXPERIMENT 5-HOW TO TEST THE ARMATURE POLES FOR MAGNETISM

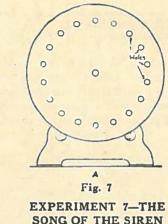
The core of the motor armature has three pole pieces and each one of these is wound with separate coil of wire. Now, the thing to do is to find out how many and which poles are magnetized when the current is passed through the coils of wires. You can test them out by twisting a piece of very fine wire around each of the connections where the ends of the armature coils are soldered to the commutator, as shown in Fig. 5. Connect two of these wires at a time with a dry cell or a battery. Now hay a little nail on the table and hold the armature over it. Try the magnetic power of each pole and you will find that two of them are magnetized and that the third one is not.





EXPERIMENT 6-THE BUZZ SAW

Cut a saw-tooth edge on a cardboard disk 3 inches in diameter, as shown in Fig. 6. Mount the disk on the shaft of your motor and set it to rotating. Now hold the edge of a business card against the rapidly moving toothed wheel, when it will give out a musical note. By cutting out a number of disks and spacing the teeth differently, various musical notes will be provided. By spacing the teeth on a disk unevenly it will make a harsh sound-that is, a noise.



(1) Punch a ring of evenly spaced holes around the edge of a disk 3 inches in diameter with a sharp-pointed nail and make a hole in the center of it, as shown at A in Fig. 7. and mount it on the shaft of vour motor. Take a rubber tube 1/4 inch in diameter and 1 foot long, make : mouthpiece of cardboard and fix the small end of it to one end of the tube. Now run your motor and then blow with the mouthpiece, when the disk will give forth a musical note, (2) Punch a ring of unevenly spaced holes around + the edge of the disk, rotate it, and blow into the tube as before, when it will give forth a curious noise.

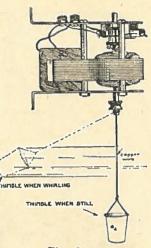
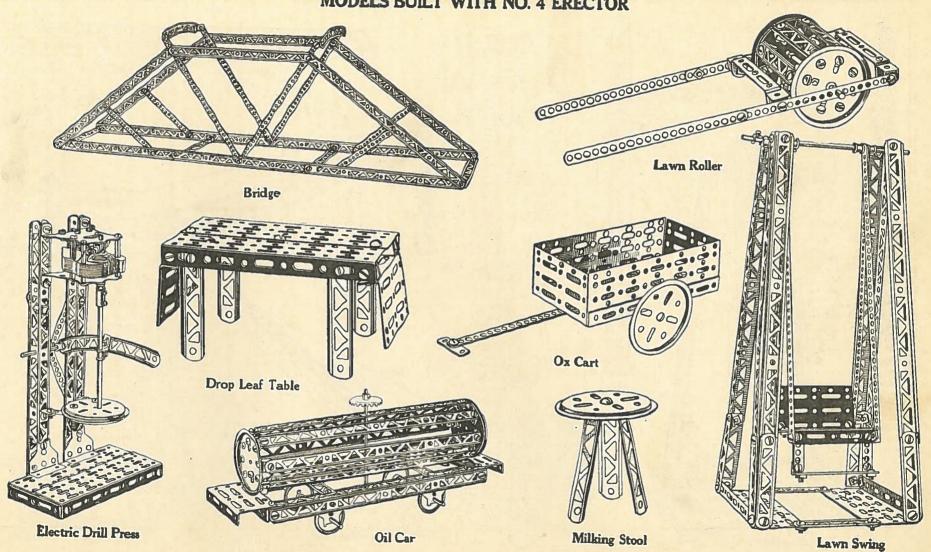
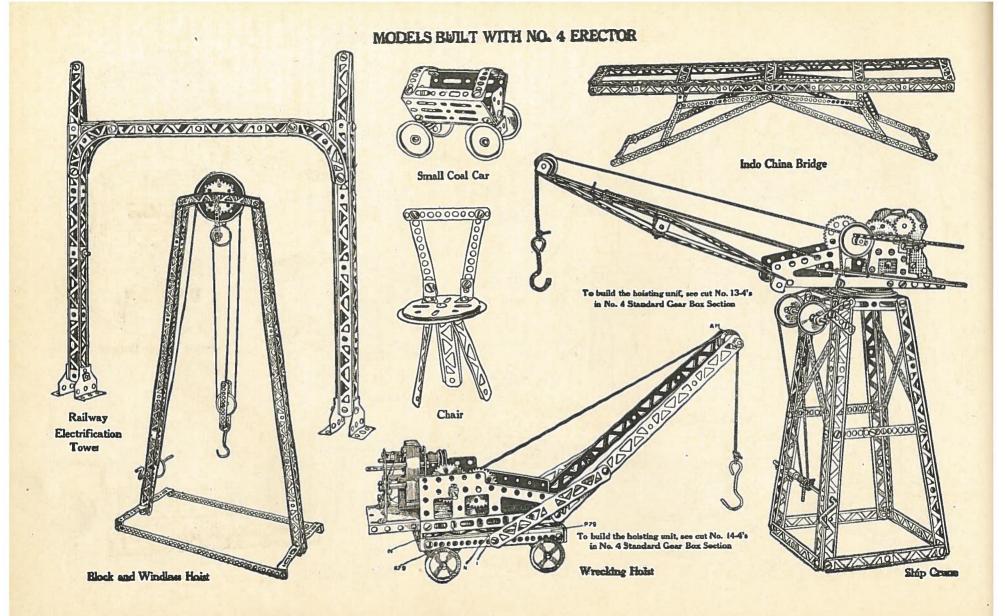
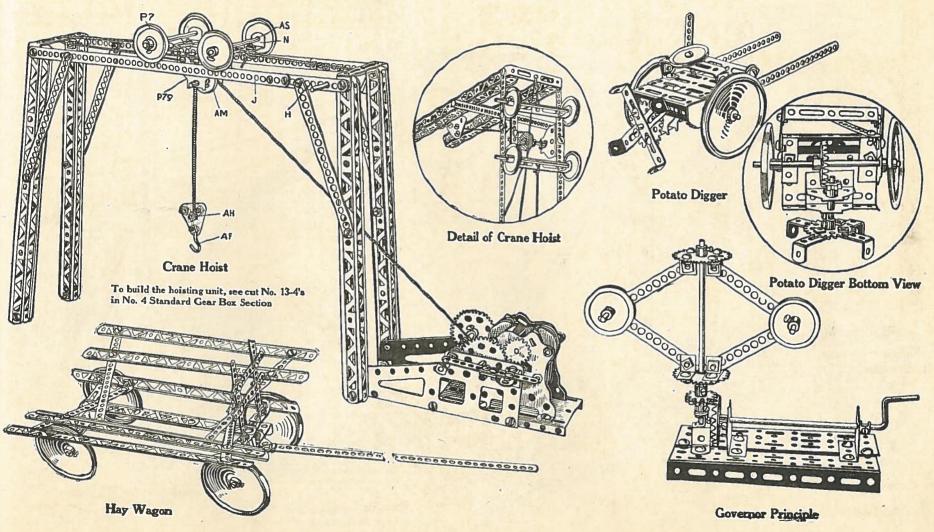


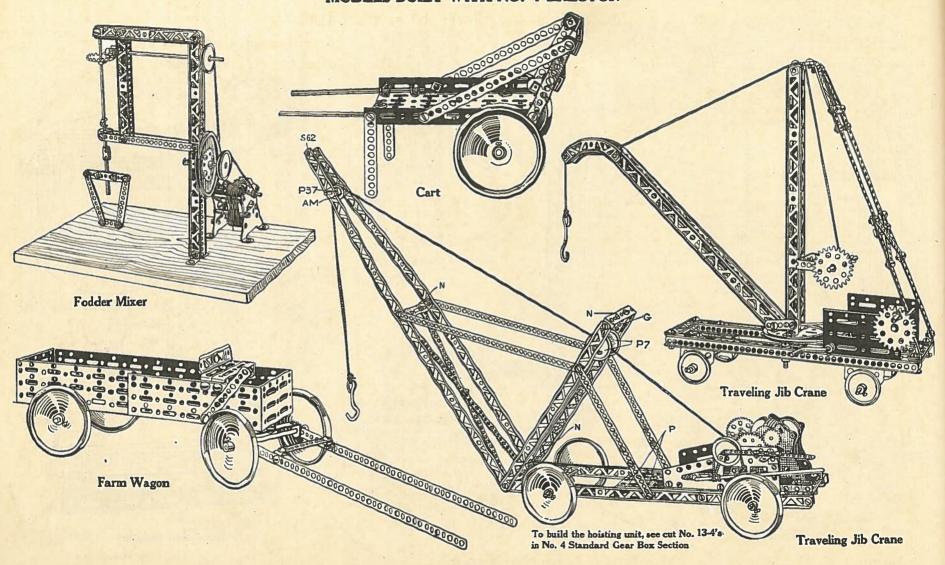
Fig. 8 EXPERIMENT 8—THE PAIL OF WATER THAT JACK CAN'T SPILL

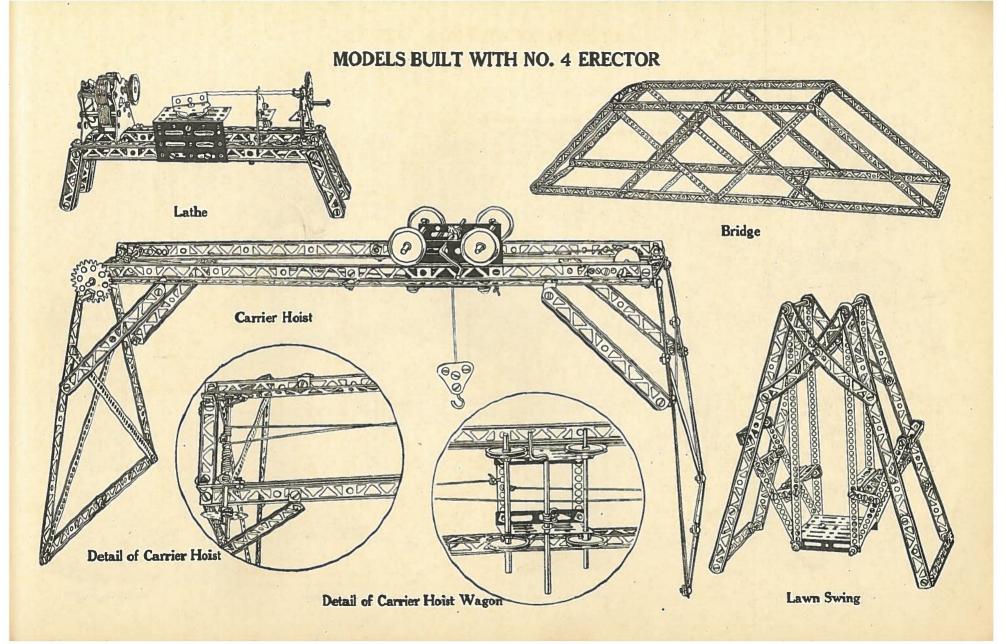
Fix a piece of No. 24 copper wire around the top of a thimble to form a bail on it as shown in Fig. 8. Suspend the little bucket thus made by a string from the end of the shaft of your motor and hold the latter so that the shaft is vertical. Fill thimble with water and start up your motor and as it gathers speed the centrifugal force will throw the little bucket out and up until it will be revolving in a horizontal plane. The water, however, will not spill out as the centrifugal force holds it in.

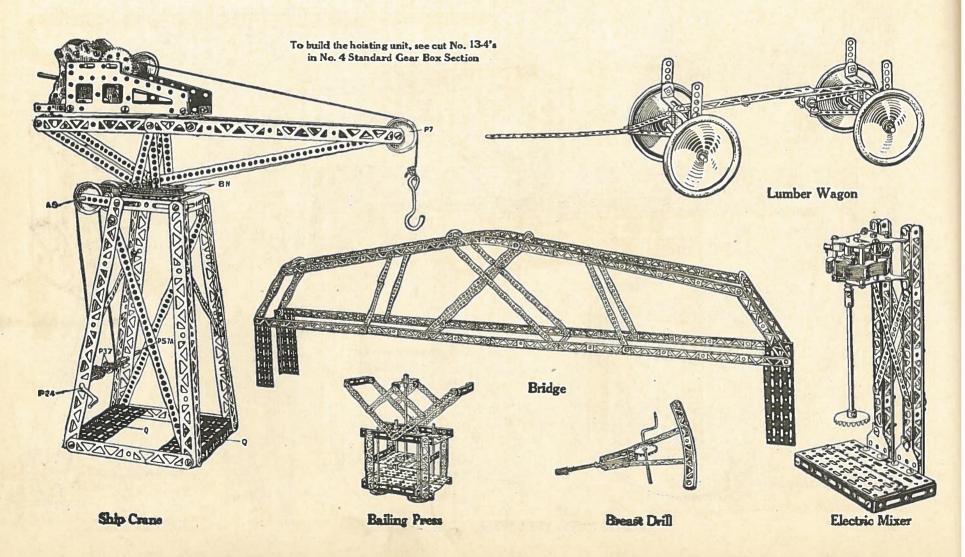




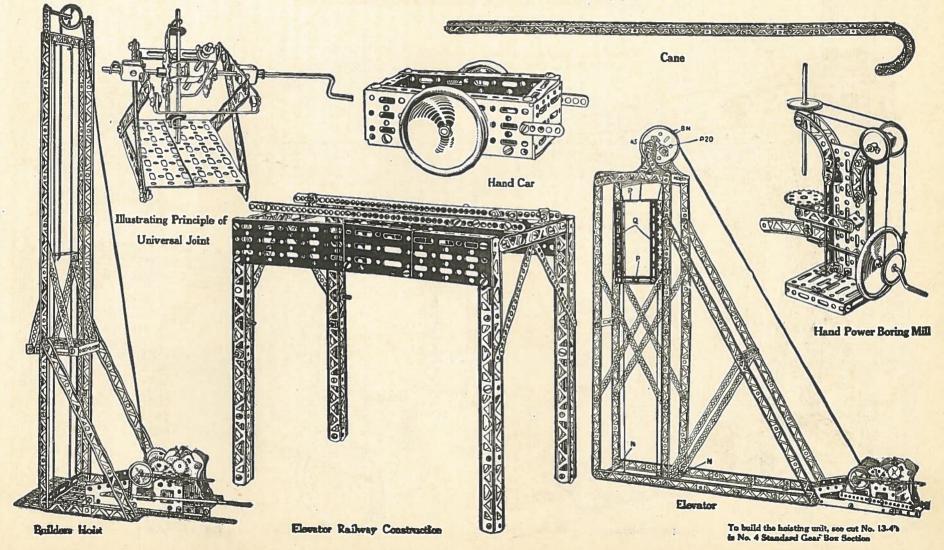


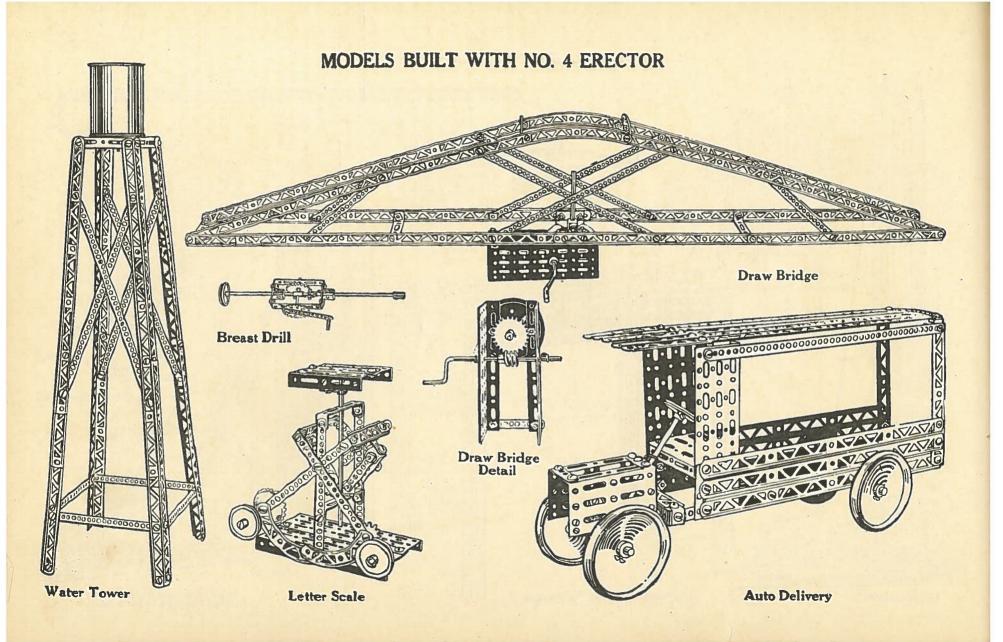


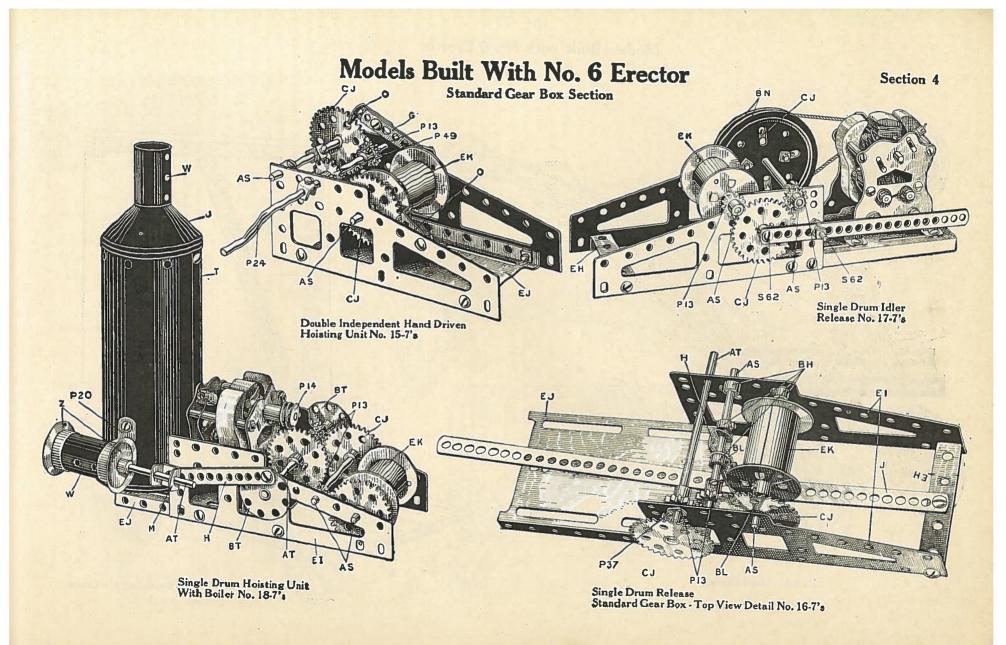




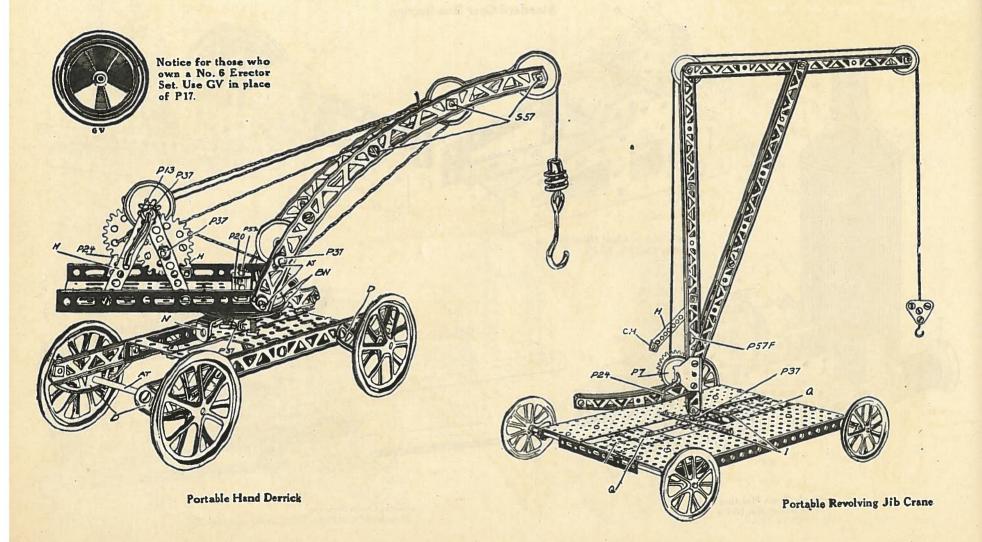
MODELS BUILT WITH NO. 4 ERECTOR

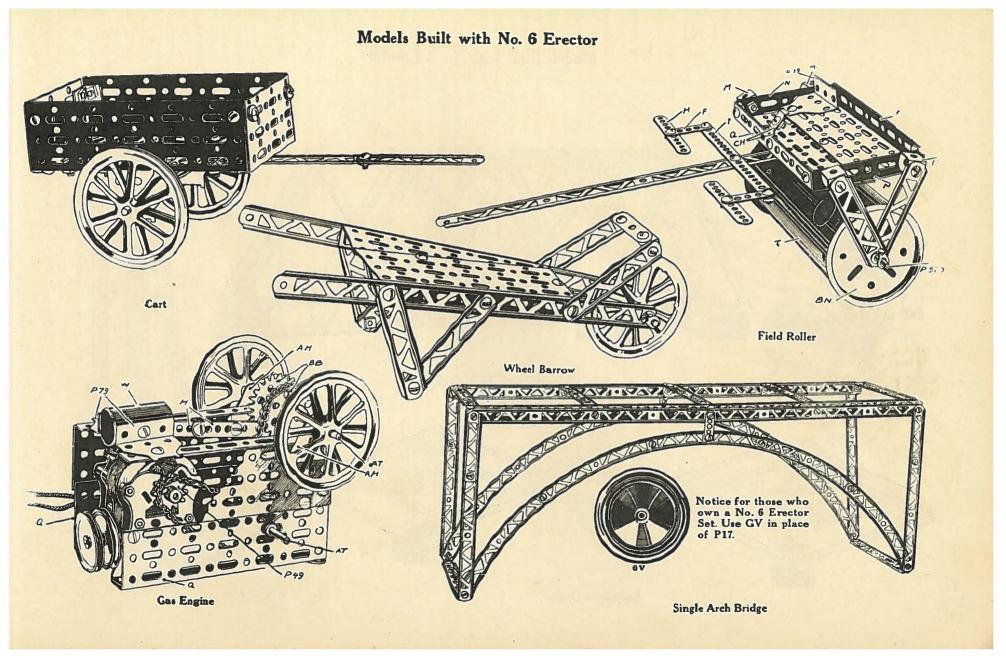




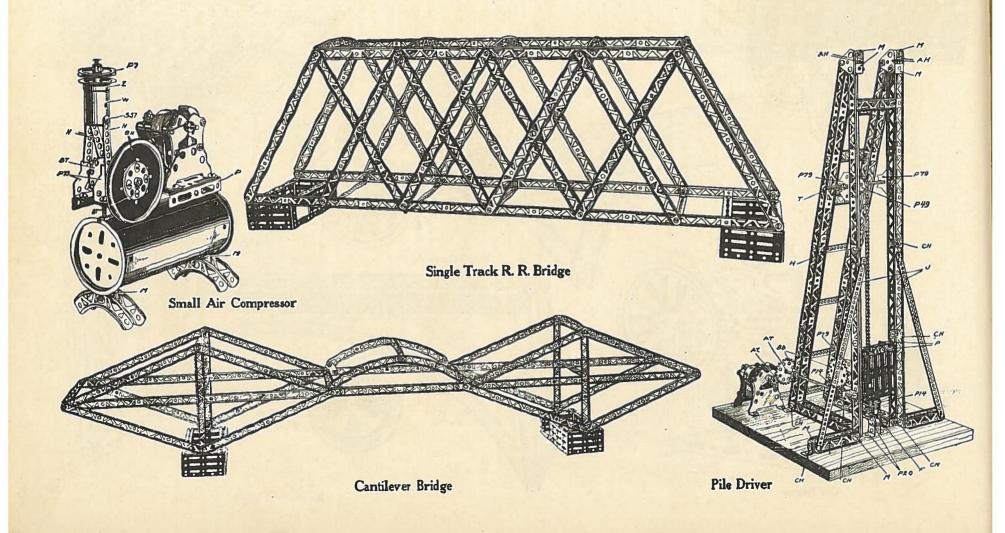


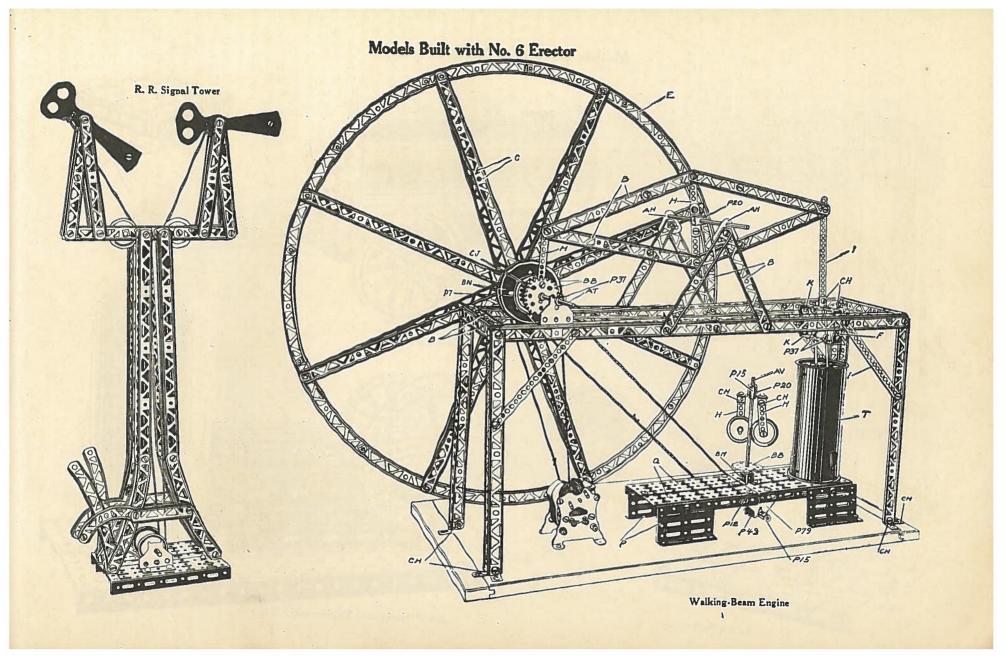
Models Built with No. 6 Erector

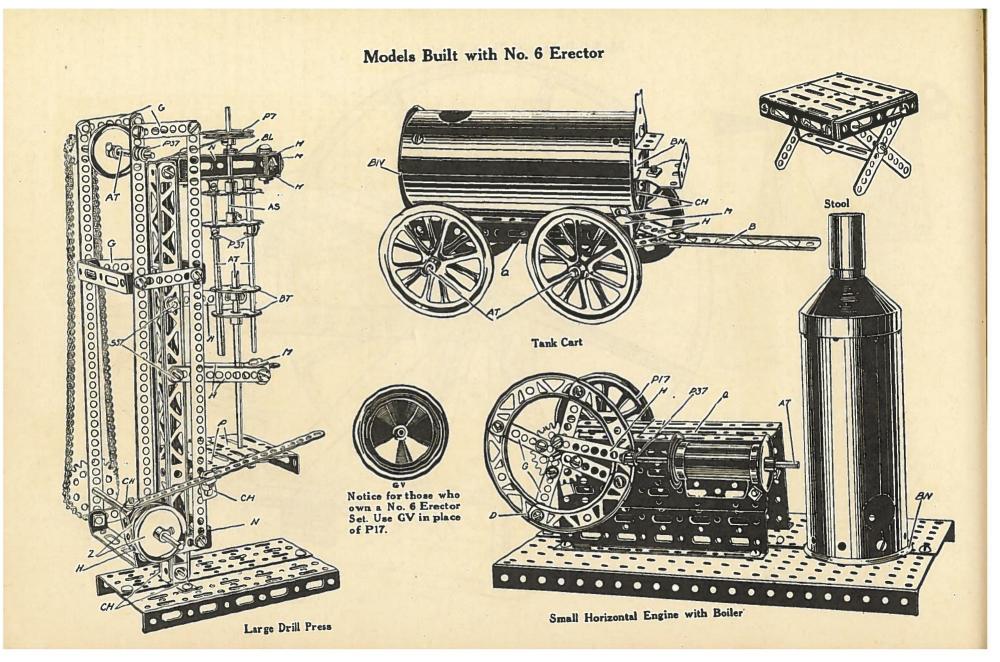


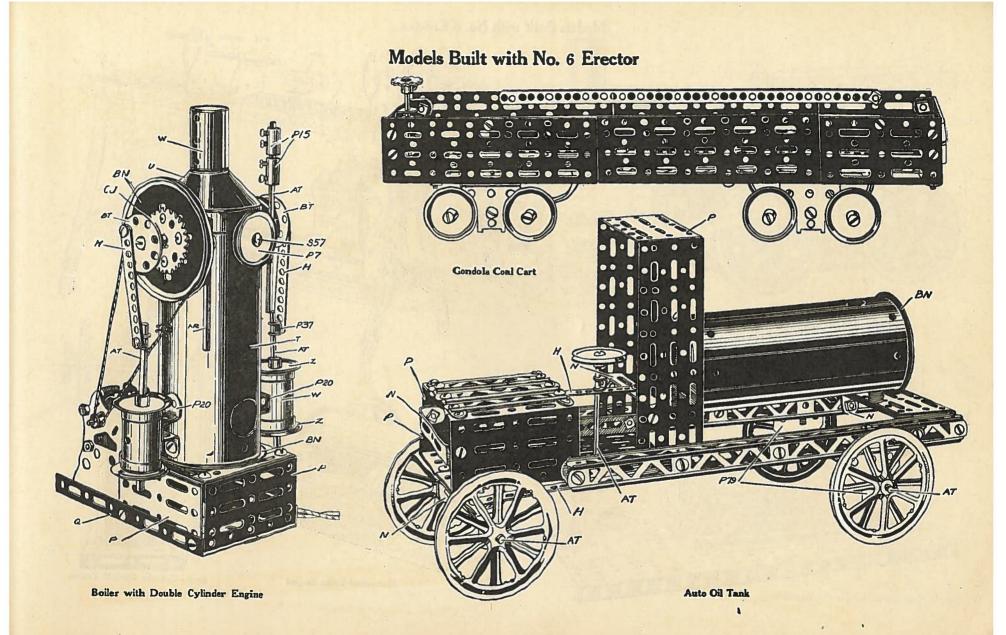


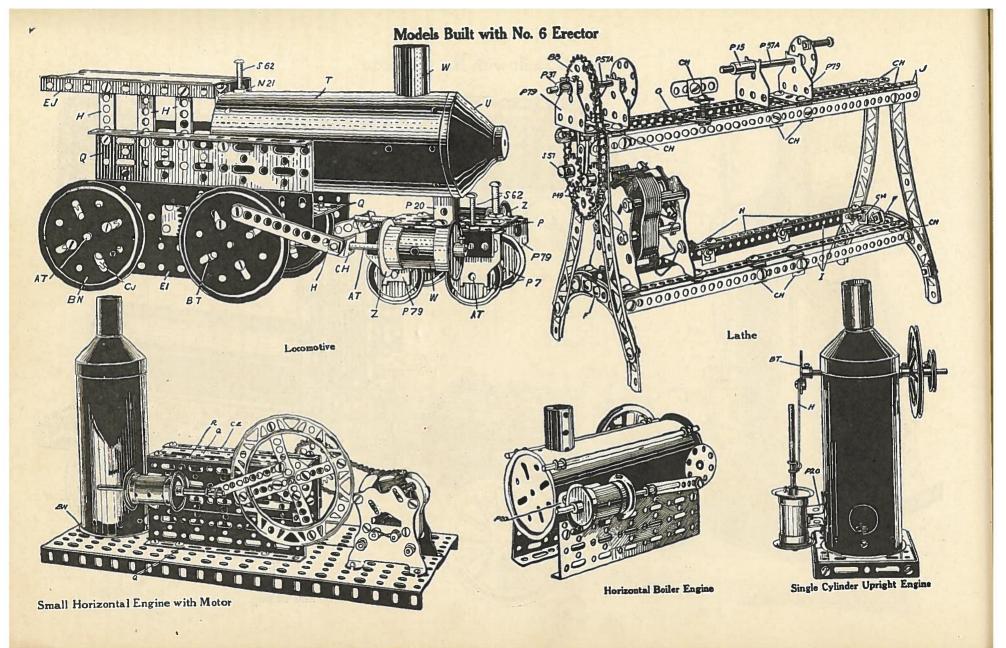
Models Built with No. 6 Erector



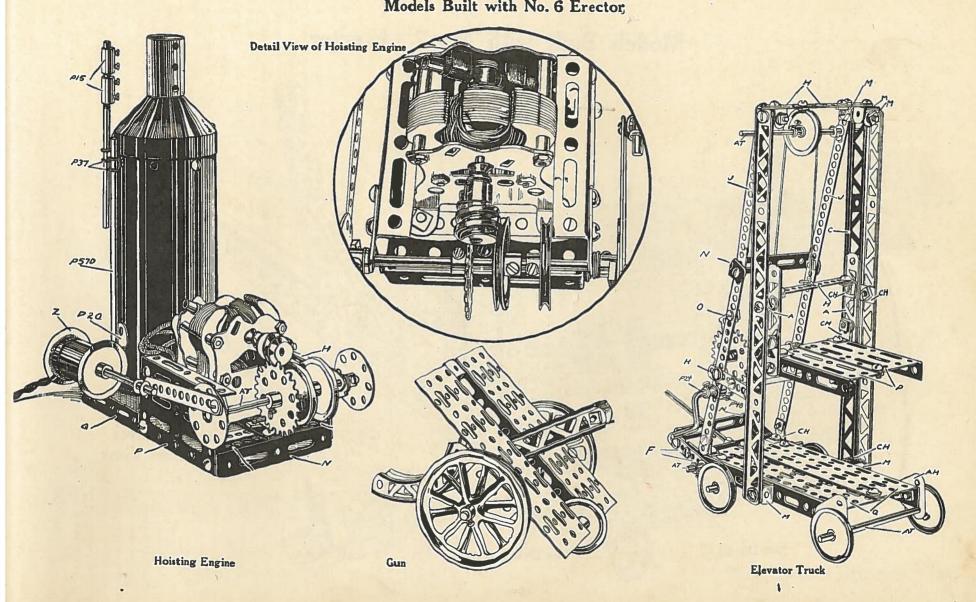




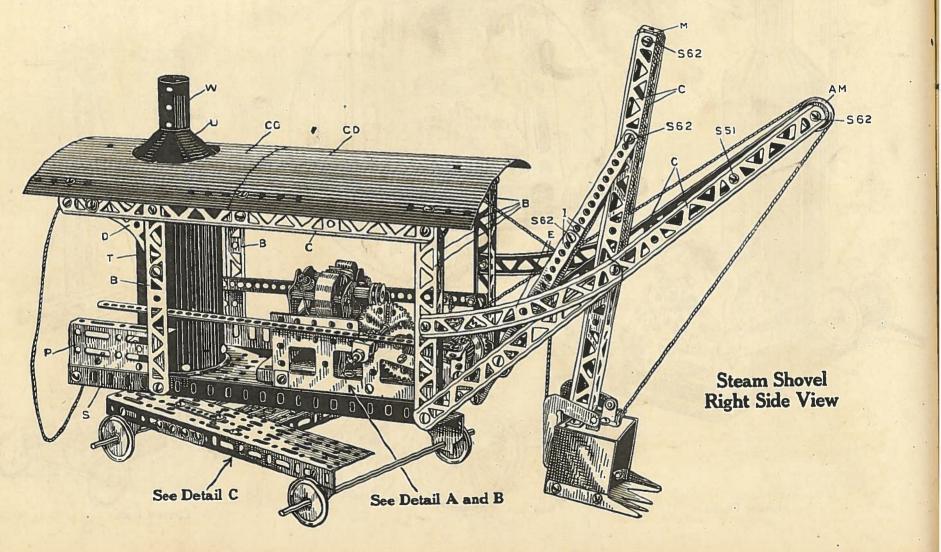


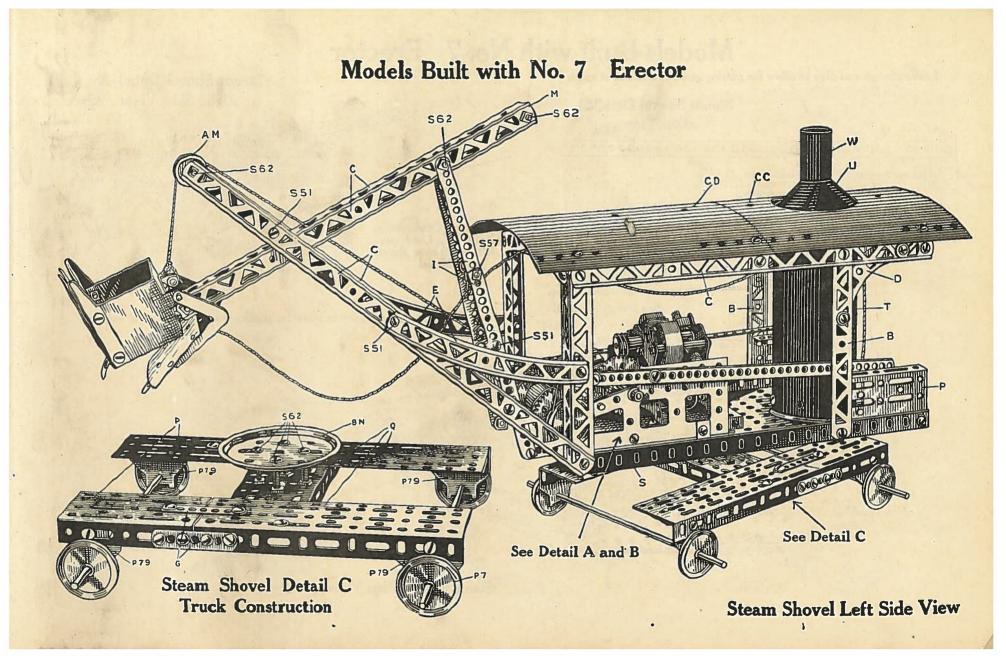


Models Built with No. 6 Erector

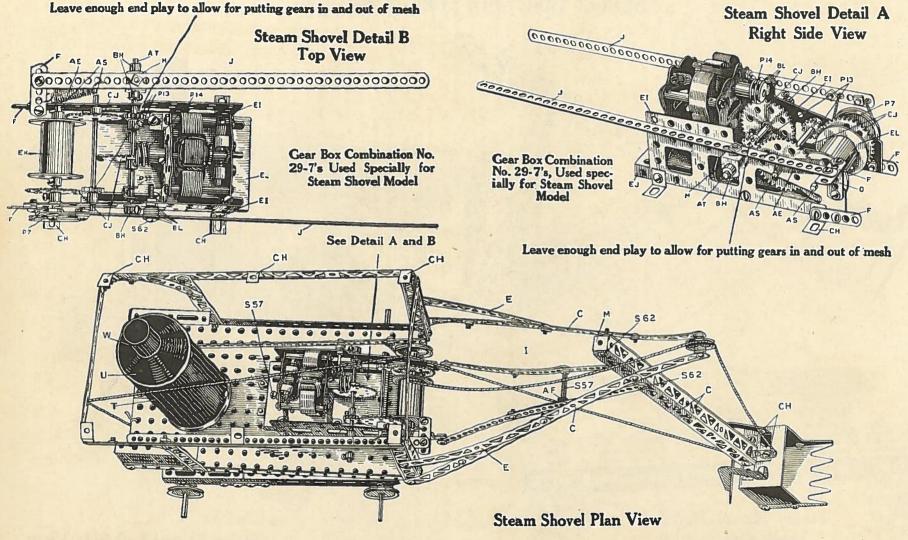


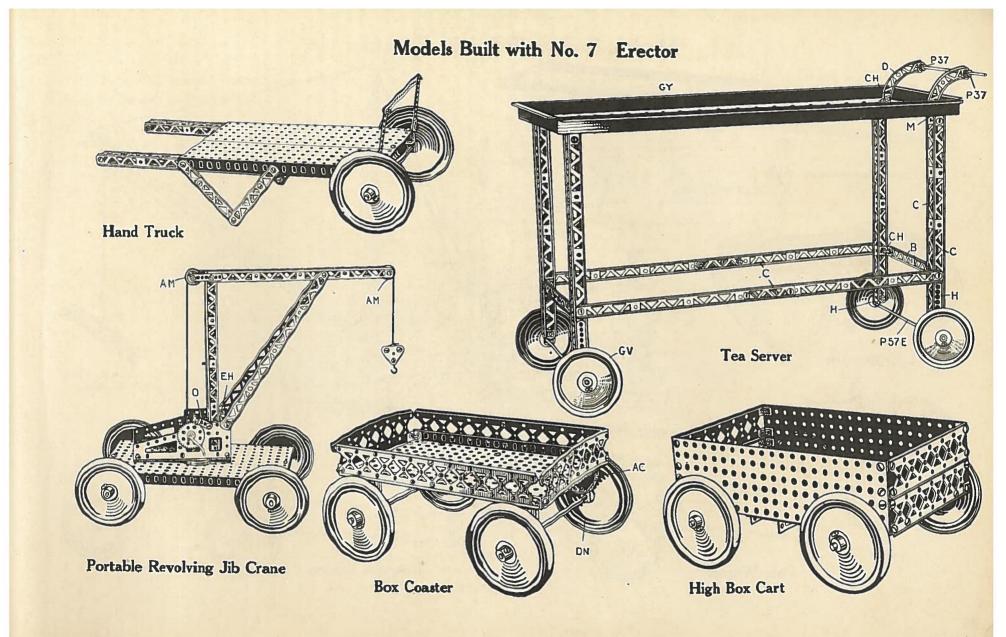
Models Built with No. 7 Erector

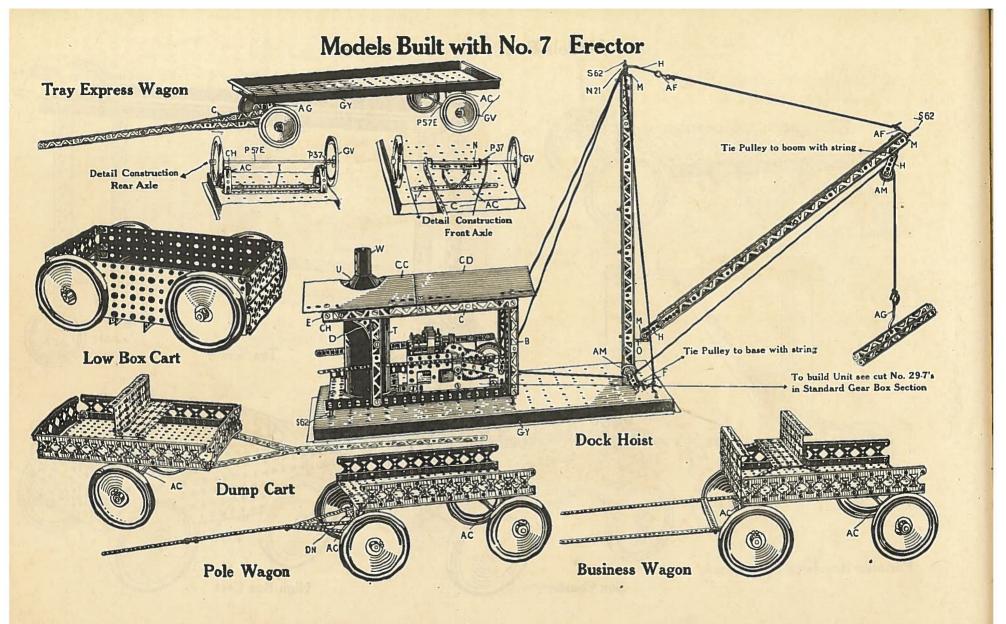




Models Built with No. 7 Erector







Models Built with No. 72 Erector

DK

DH

000

In building Chassis begin by taking four 12" Slotted Angle Strips D. P. Lap together and fasten in middle with two ¼" screws S51. By following closely the illustration in manual you will find you have made a channel iron.

Repeat this operation so that you then will have two channel irons, one for each side of chassis. The next step is to fasten loosely your fenders in place. This done, slip slots of Radiator under both fenders and make screws tight. Proceed to mount Bumper in proper place.

DH

DH

DK DI

You are then ready to assemble your front and rear axles, after which by following the cuts in manual you may mount in proper places. The Chassis will be completed after you have assembled your dash, footboard and steering column with steering wheel. No instructions are necessary to put on wheels, which completely finishes the Chassis so that you can put on any body which you have selected from your manual, to build.

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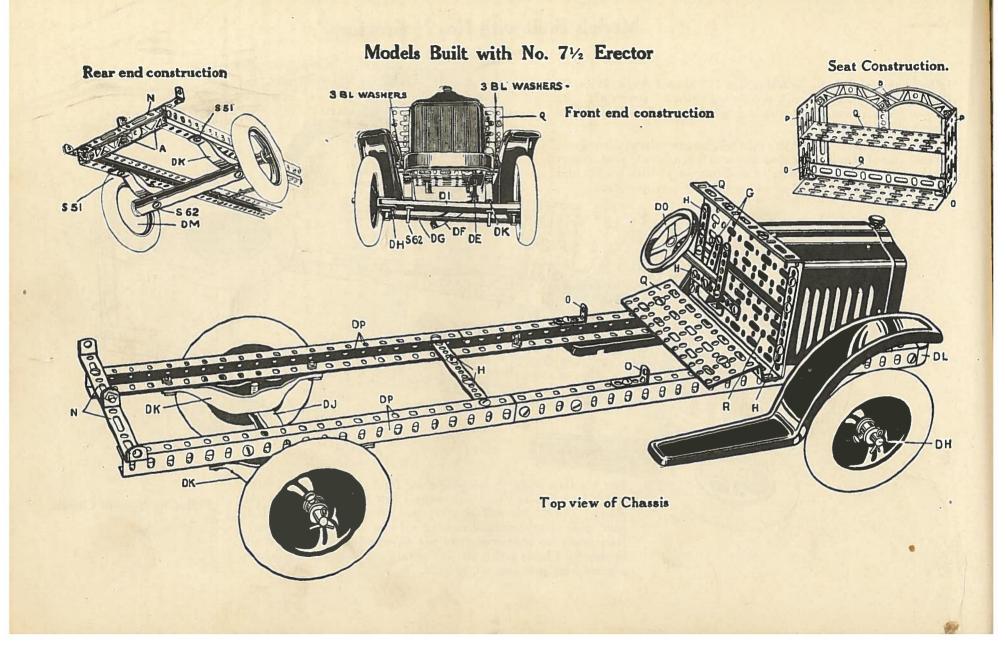
DK-

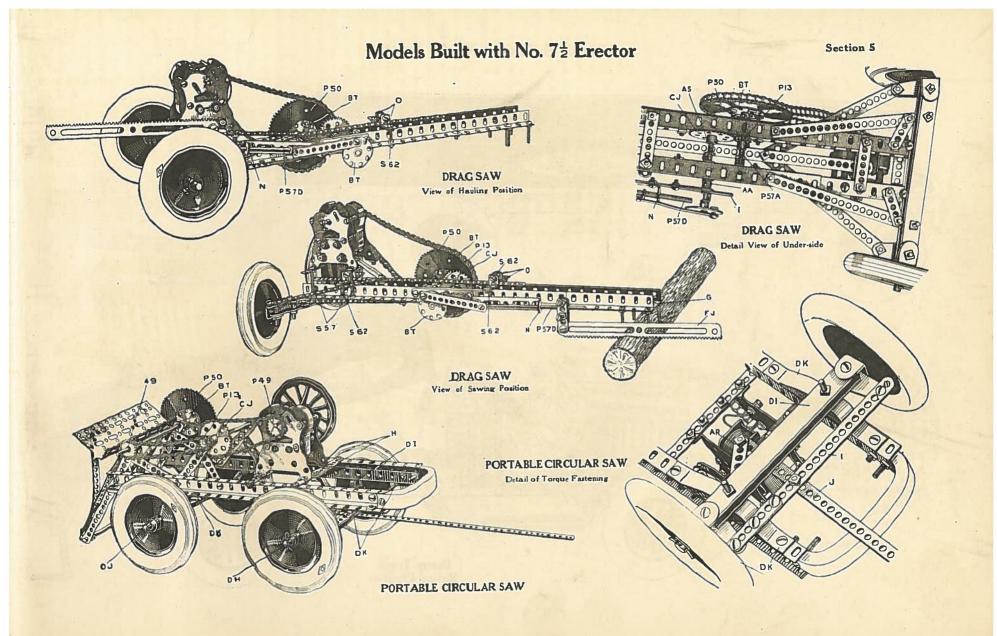
Bottom View of Chassis.

Bottom View, Front End.

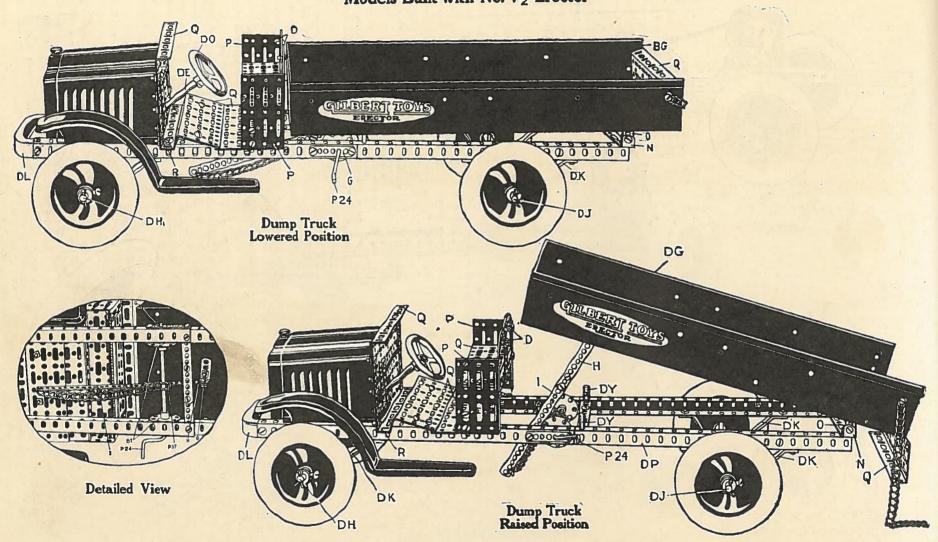
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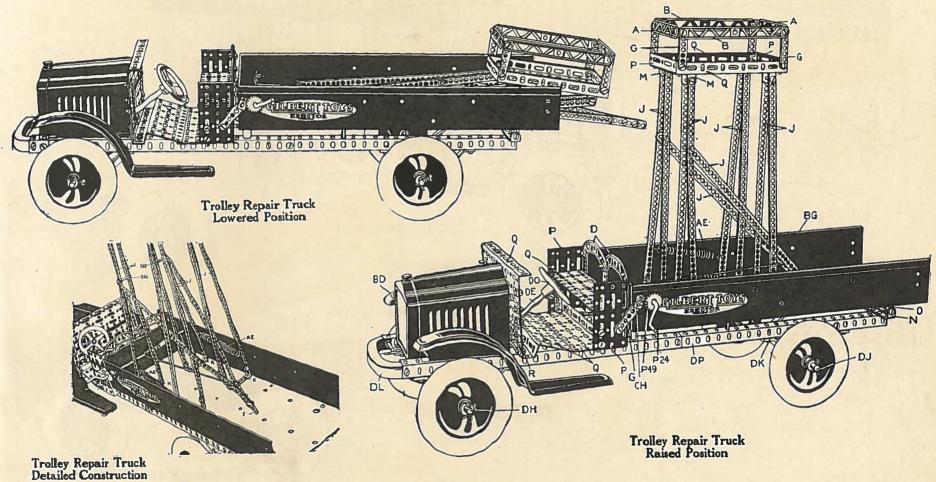




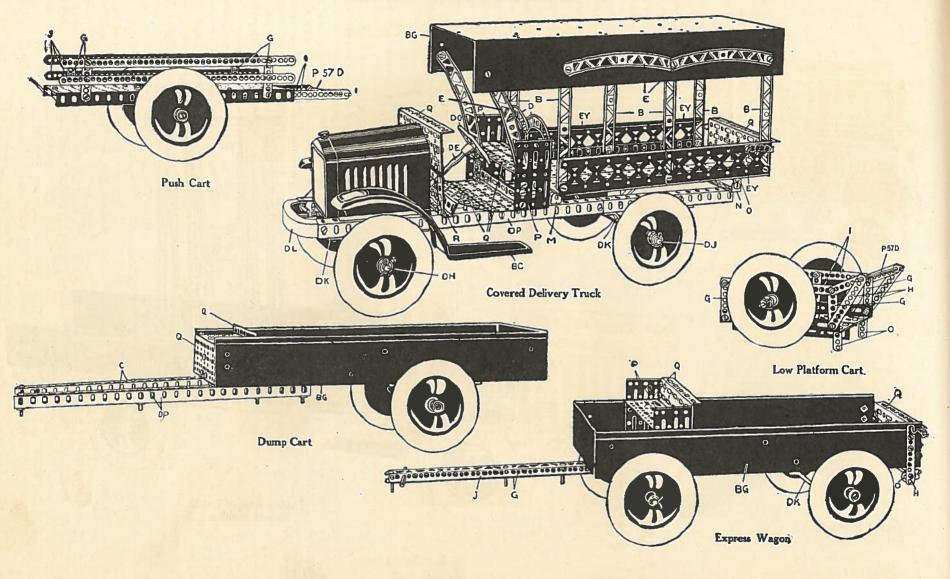
Models Built with No. 72 Erector

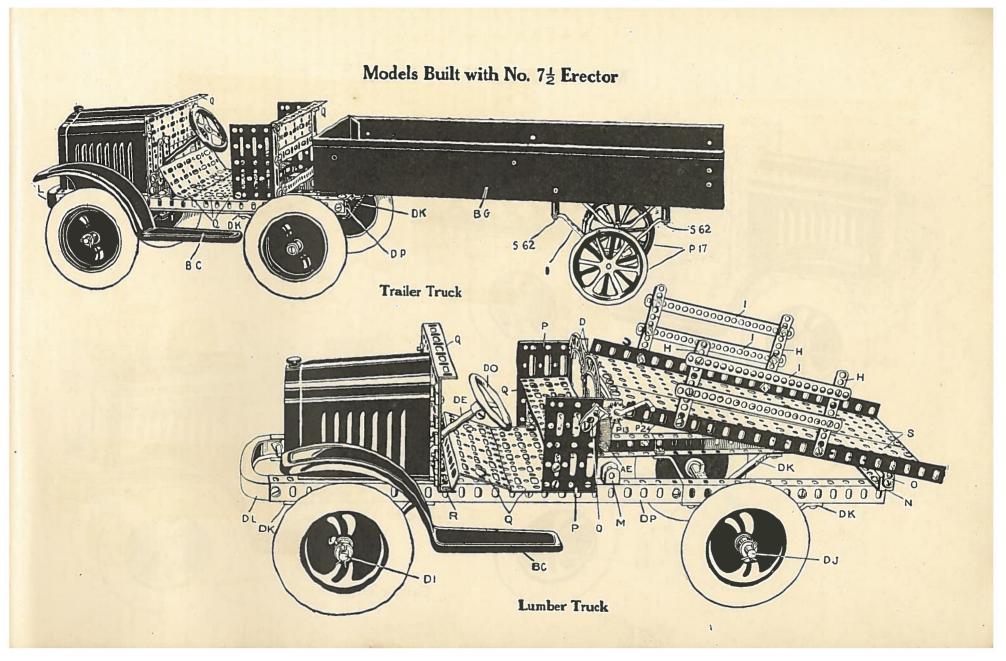


Models Built with No. 71 Erector

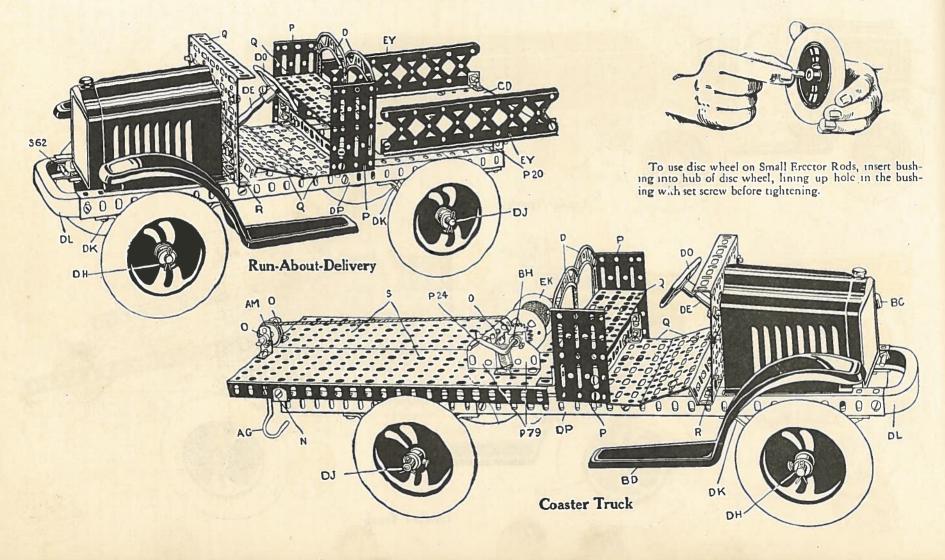


Models Built with No. 72 Erector



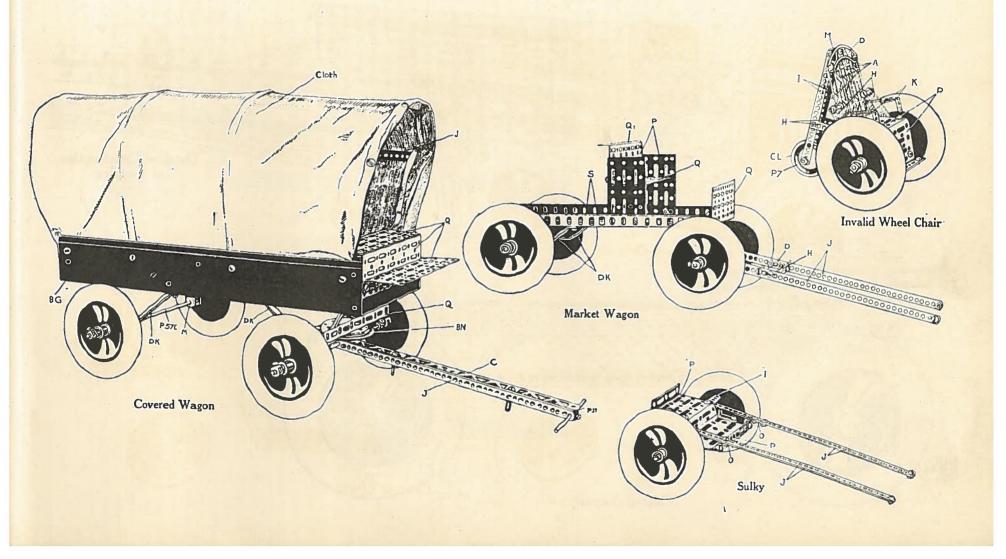


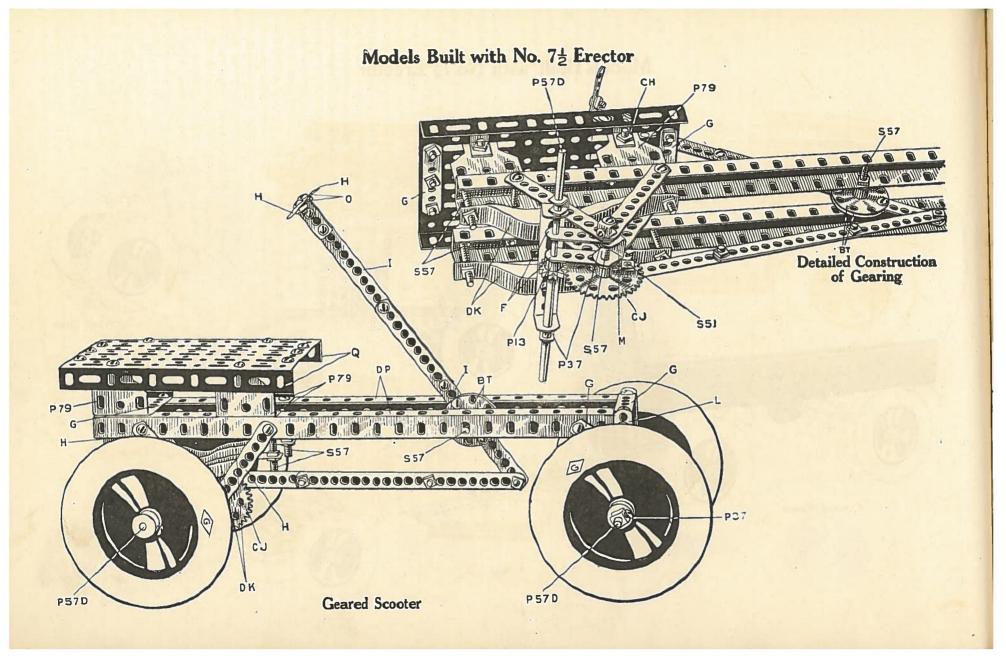
Models Built with No. 7¹/₂ Erector

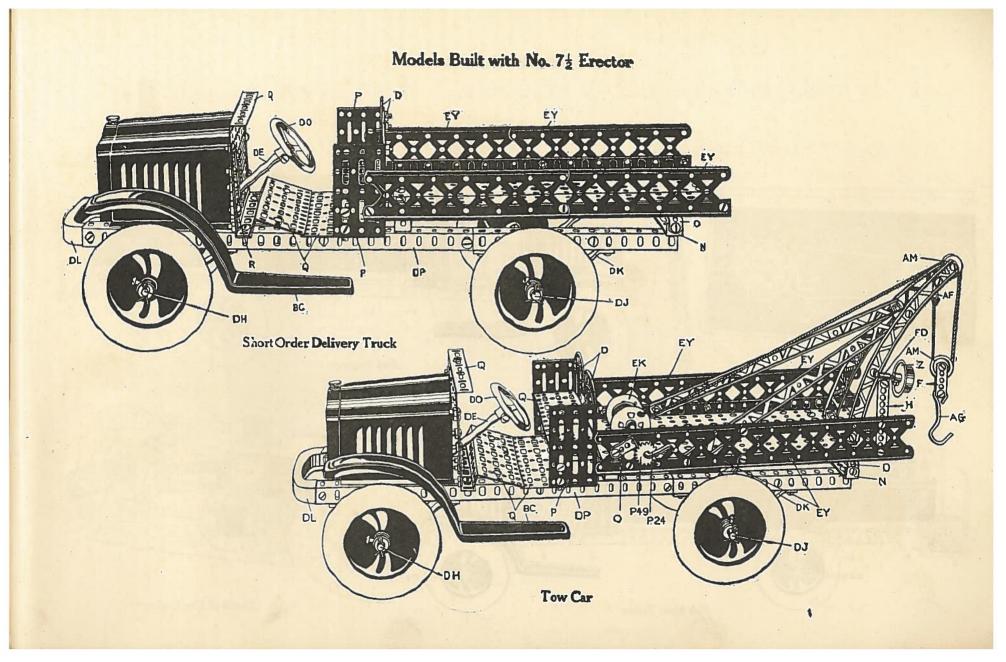


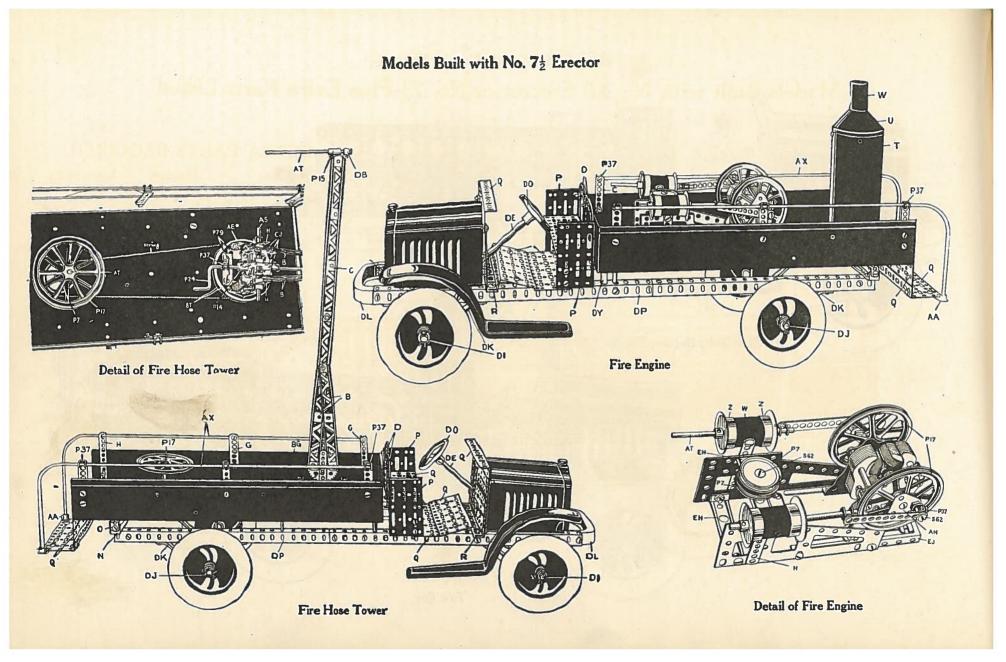
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Models Built with No.72 Erector

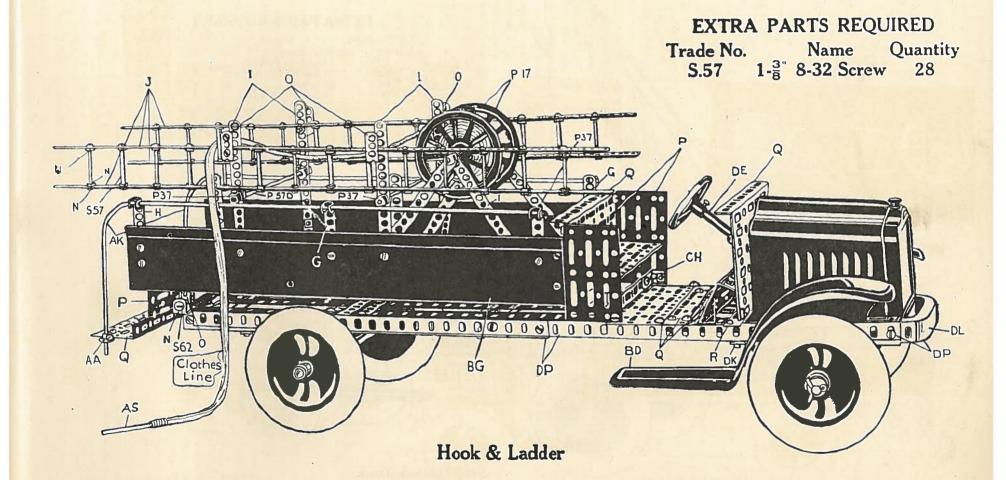


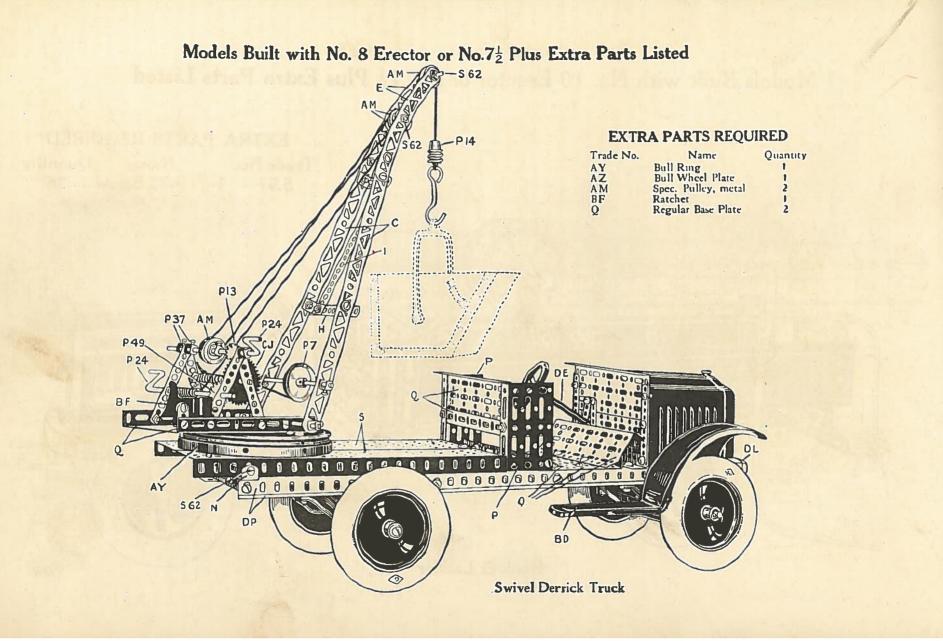






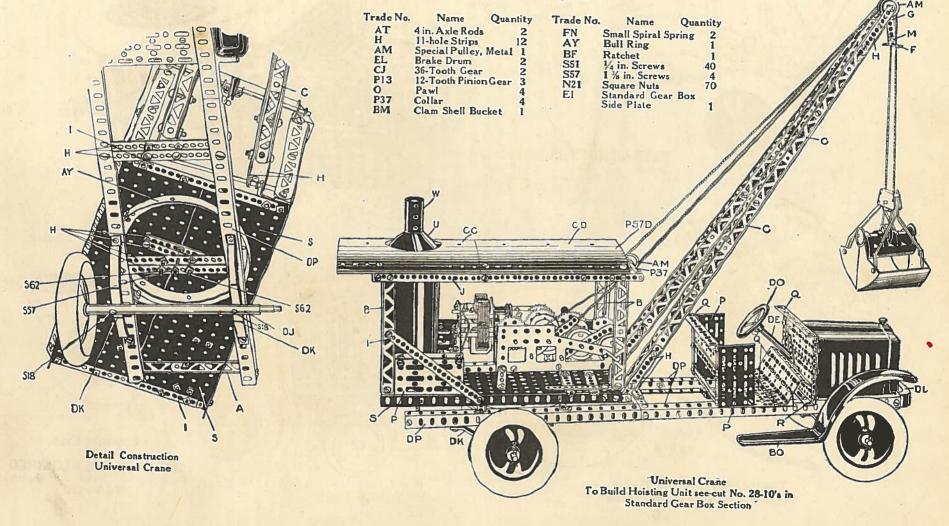
Models Built with No. 10 Erector or No. 72 Plus Extra Parts Listed

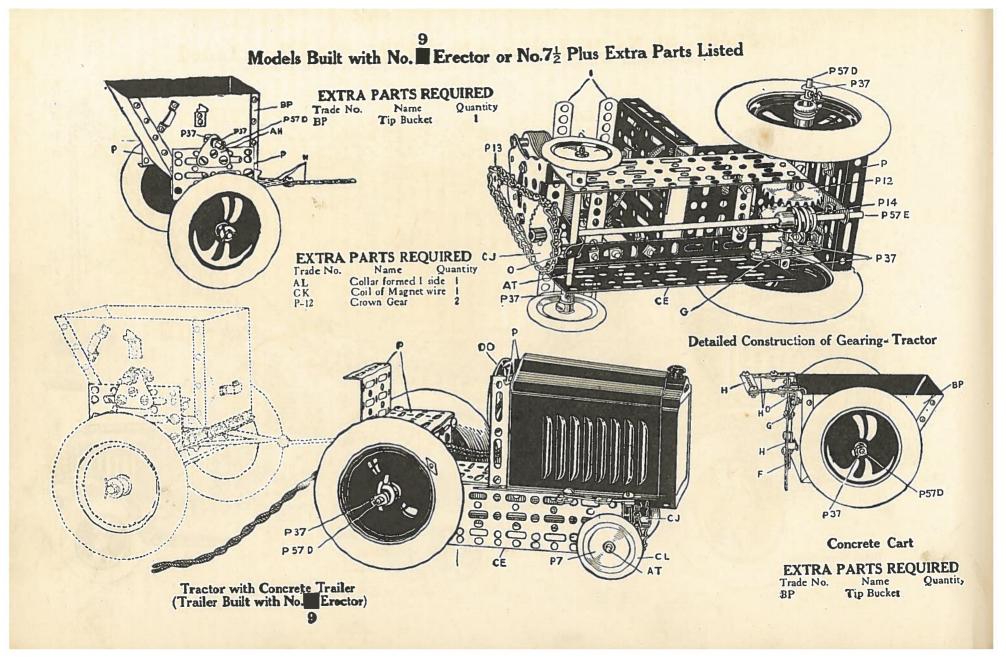




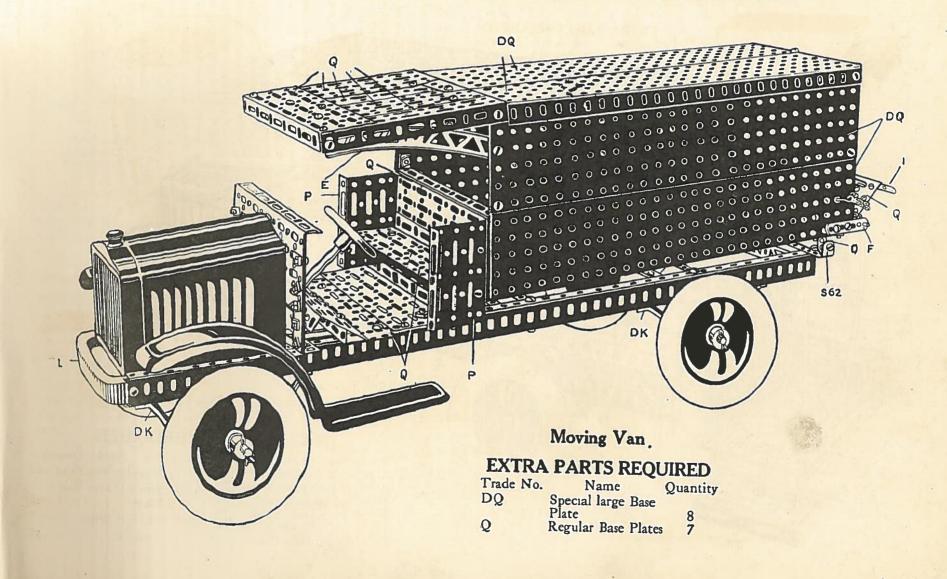
Models Built With No. 10 Erector or 71 Plus Extra Parts Listed.

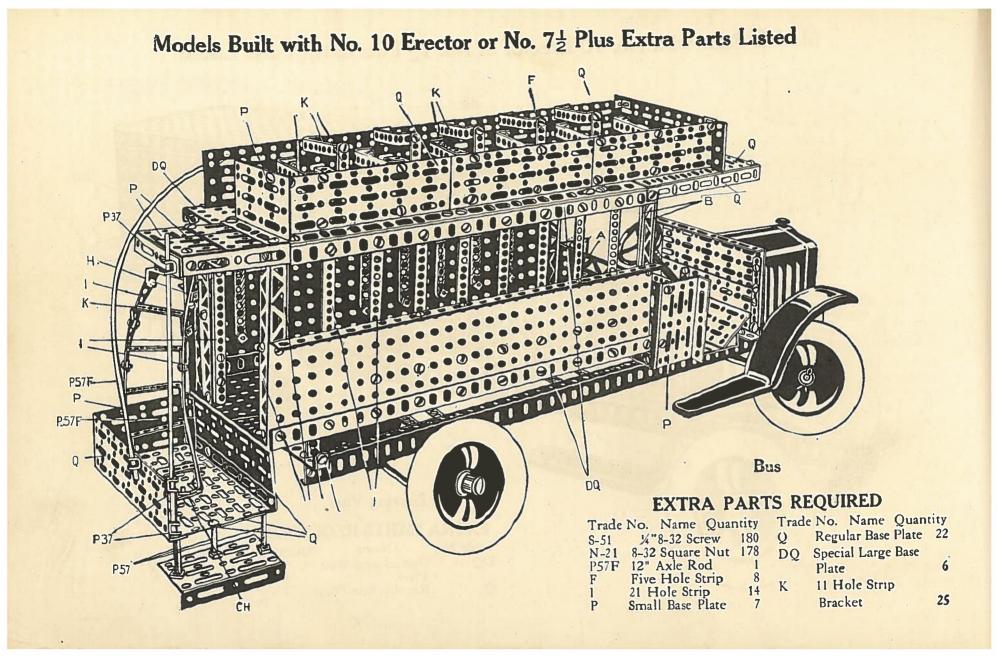
Extra Parts Required



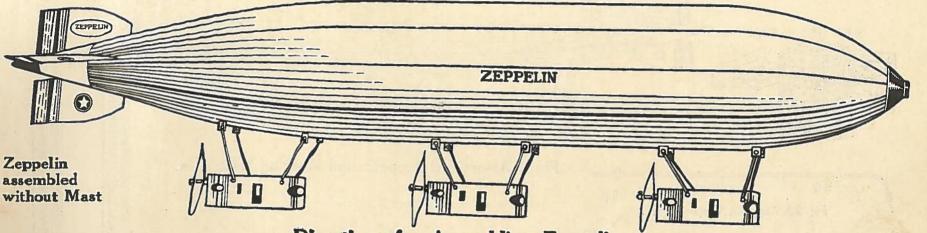


Models Built with No. 10 Erector or No. 72 Plus Extra Parts Listed





Models Built with No. 8 Erector



Directions for Assembling Zeppelin

FRAME Assemble girders and angles as in Figure 2, using small holes in angles when fastening them to the frame—bend nose girders (Fig. 3) so that ends fit between nose caps. Fasten nose caps together with bolts and nuts through side holes. Insert Zeppelin support rod and fasten in place with collar (Fig. 2). Also see Fig. 2A. Now fasten tail girders together with a piece of ordinary string (Fig. 4). Tie ring HP to inside of girders with four pieces of string. See. Fig. 2.

TO PUT ON BAG Be careful when putting bag on, to avoid tearing it. Do not put bag lacing through eyelet holes before bag has been stretched in place over frame. Pull bag over the nose towards the tail end. When you have it stretched over angles, take a knife and cut small slits in the bag, so that the angles (Fig. 1) can come through. Now you are ready to lace the bag, which should be laced from nose to tail, lacing tightly to get a nice smooth surface. Knot your string at the end of the bag, but do not cut off the ends. You will need them later.

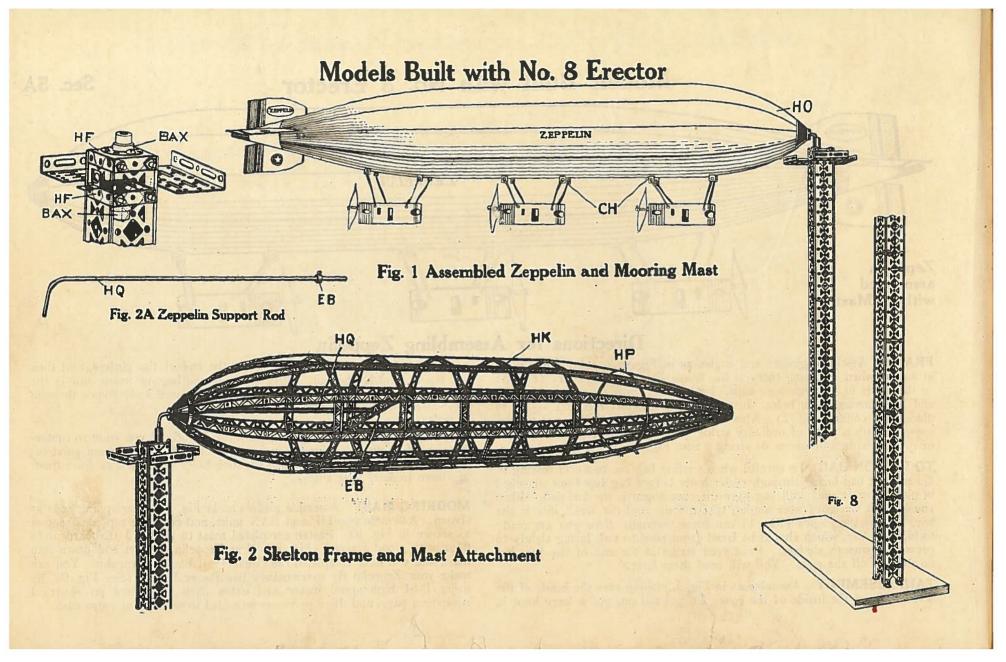
TAIL ASSEMBLY Assemble as in Fig. 5, making sure the heads of the screws are on the inside of the cone. To put tail on, put a large knot in

your lacing string, about one inch from the end of the girders, and then put string through the tail. Place tail over the bag on frame and in the right position (Fig. 1). Then pull string tight until knot comes through and catches V notch at small end of cone.

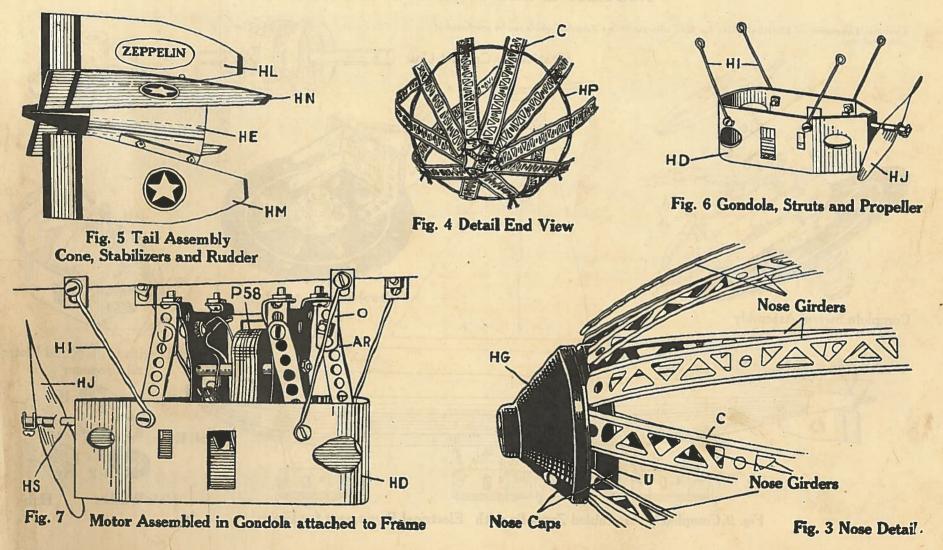
GONDOLA ASSEMBLY Assemble as in Fig. 6. If you want to motorize your Zeppelin, place motor in gondola as in Fig. 7. Fasten gondolas to angles by means of struts using the long holes in the angles for adjusting them in line. See Fig. 7.

MOORING MAST Assemble girders as in Fig. 8. Overlapping ends as shown. Assemble two HP and BAX units, and complete top construction as shown in Fig. 10. Fasten completed mast to a 2 or 3 ft. board or to floor with wood screws, (Fig. 8.) Put Zeppelin support rod down into mast, and you have completed the Great Trail Blazing Zeppelin. You can make your Zeppelin fly continuously like the real ones, (See Fig. 9), by using P-61 high speed motor and extra parts illustrated on electrical equipment page, and these parts can be added to your set at extra cost.

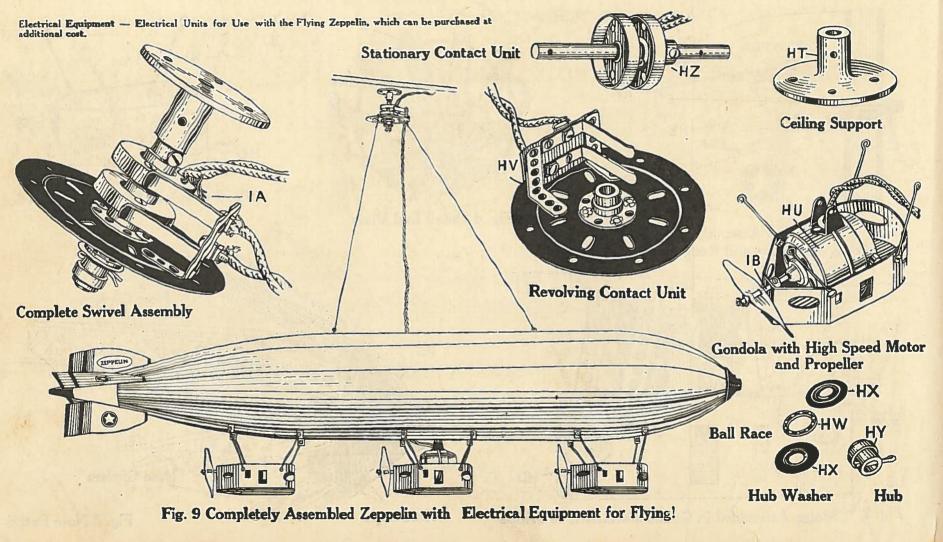
Sec. 5A

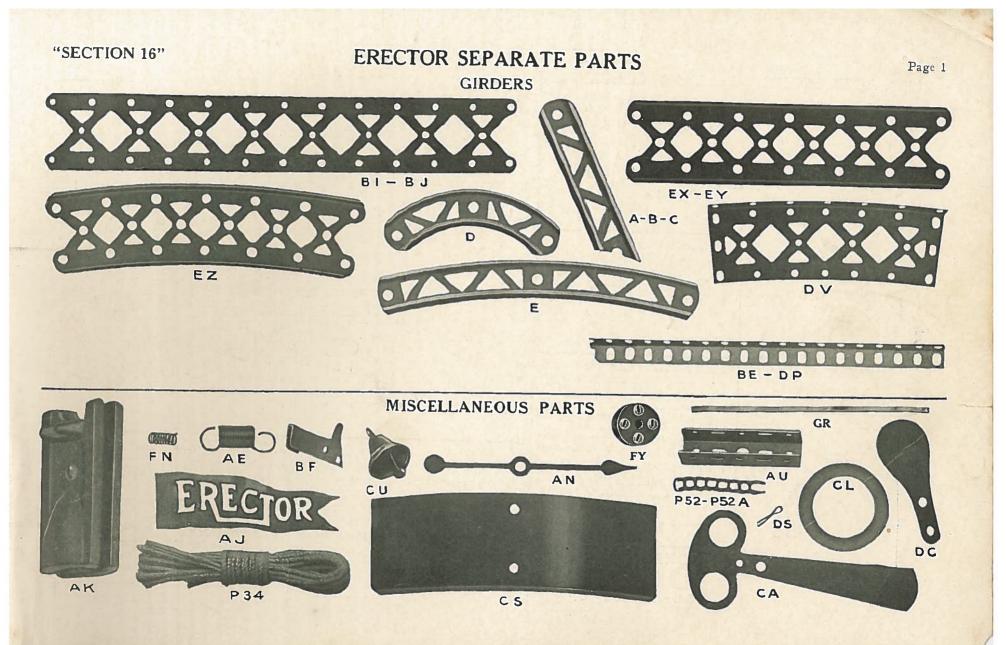


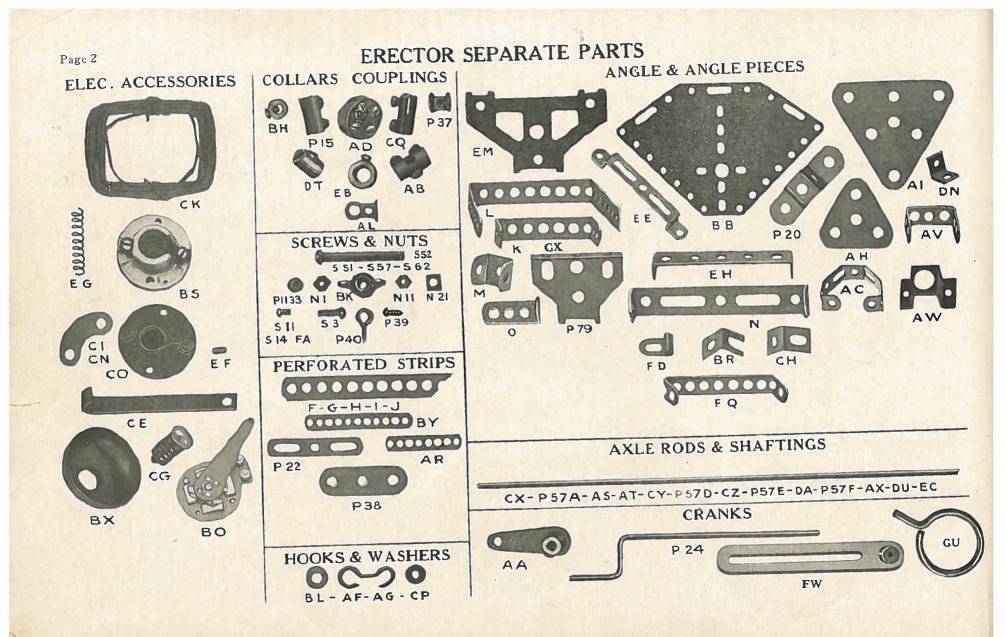
Models Built with No. 8 Erector

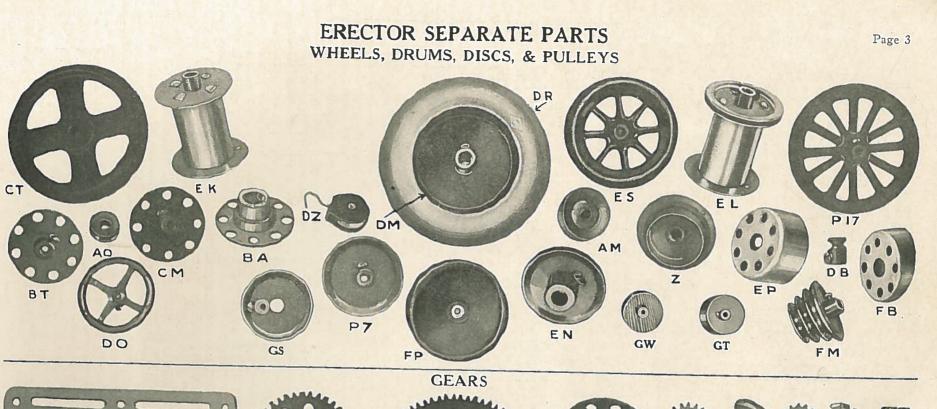


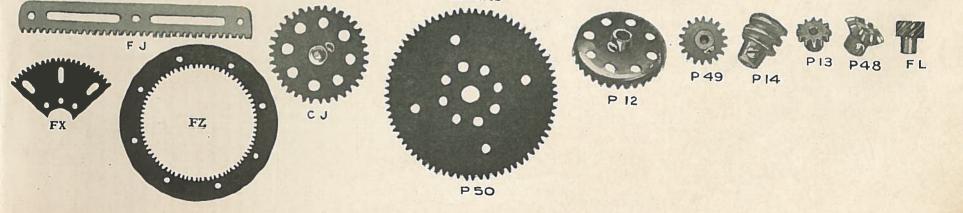
Models Built with No. 8 Erector



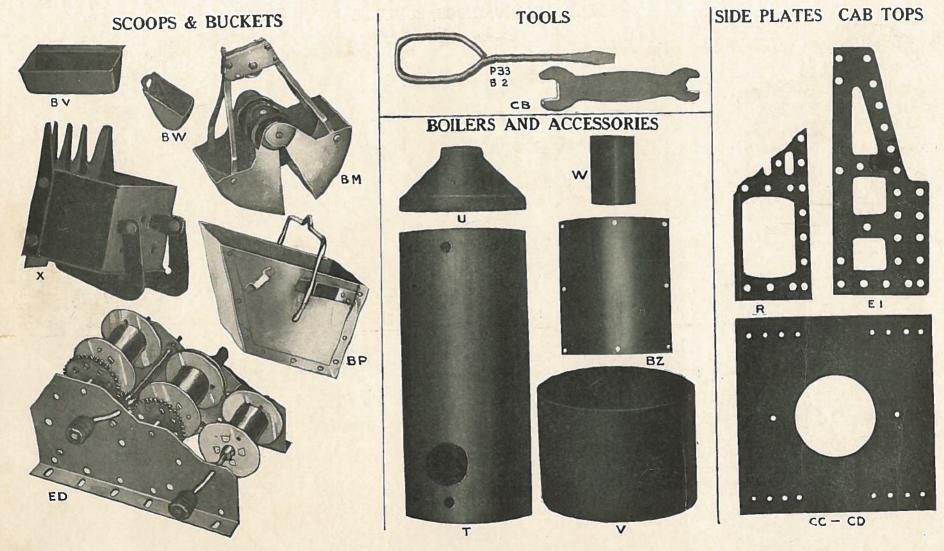






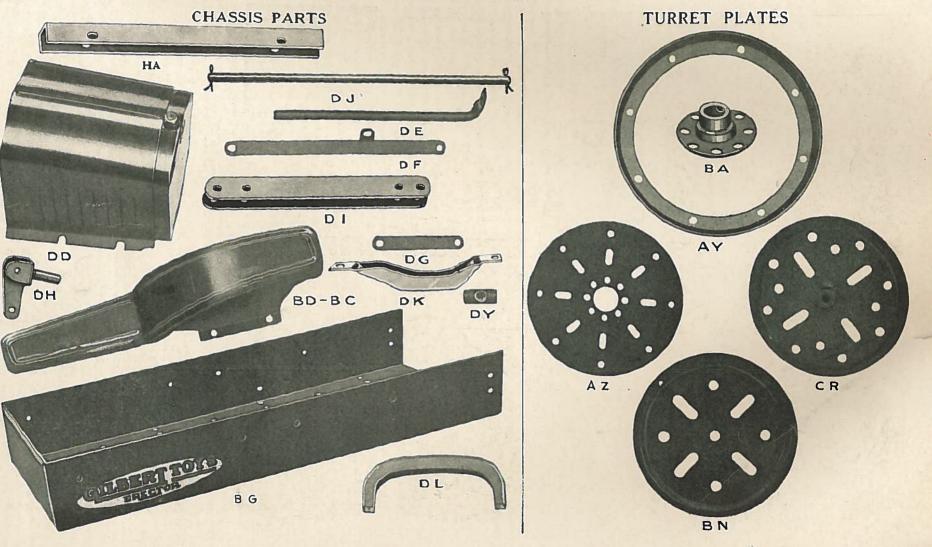


ERECTOR SEPARATE PARTS

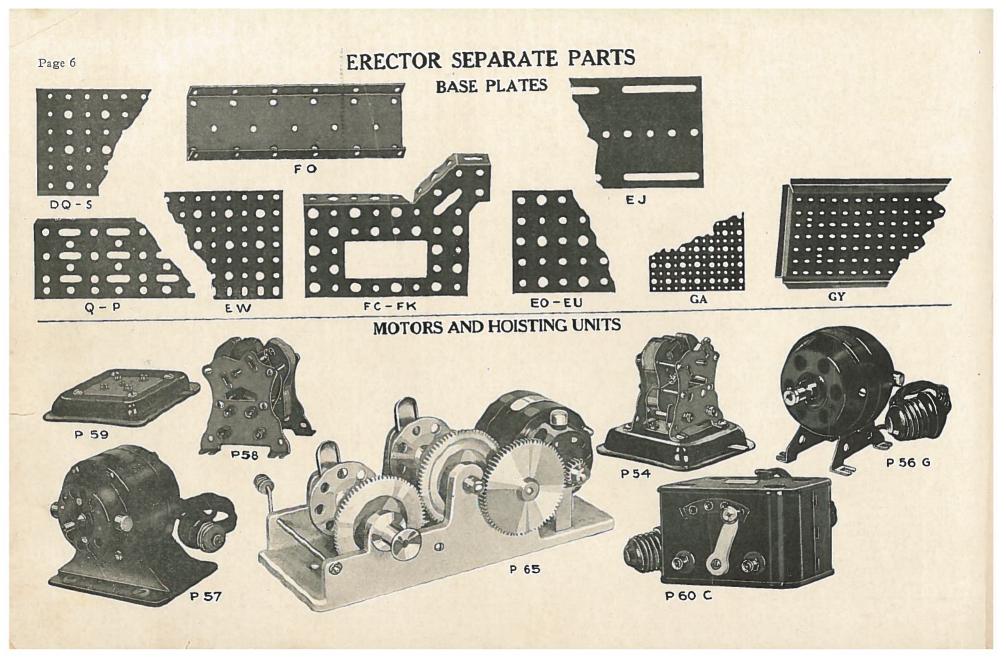


Page 4

ERECTOR SEPARATE PARTS



Page 5



Form M999-28

ERECTOR SEPARATE PARTS PRICES

Most all dealers carry Separate Erector Parts. If unable to obtain in your city send us your check for the parts you want and we will be glad to send your order direct from here if you will send us the name of your dealer.

A. C. GILBERT CO., NEW HAVEN, CONN., U. S. A:

Trade No. Name of Part Page Price	Trade No. Name of Part Page Price	Trade No. Name of Part Page Price	Trade No. Name of Part Page Price
N1 4-40 Hex Nut 2 \$.10 doz. N11 6-32 Hex Nut .2 .10 doz. N21 8-32 Square Nut .2 .05 doz. P7 Small Wheel .3 .10 ea. P12 Crown Gear .3 .10 ea. P13 12-Tooth Pinion Gear .10 ea. P14 Worm Gear .3 .20 ea. P14 Coupling .2 .10 ca.	O Pawl. Page 142e 141e P Small Base Plate—5 hole. .05 ea. P Small Base Plate—5 hole. .10 ea. Q Regular Base Plate—11 hole. .15 ea. R Dash Plate.	BT Pierced Disc	DX Twisted Cord (not illustrated05 ft. DY Bushing
P17 Red Wheel-large	W Stack 4	CC CD " A (without large hole) 4	EE Double Angle Bracket2
P48 Mitre Gear	AG Large Hook	CL Small Rubber Tire1 1	EN 1/4 in. Special Pulley
P57D 6 in. Axle	AR 8 Hole Strip	CV (Discontinued) CW (Discontinued) CX 1 in. Axle Rol	FA 1¼ in. x 8-32 Screw
S-3 36 in x 4-40 Terminal Screw	BA B. W. Cntr (with Hub) 3 & 5	DE Steering Column 5 10 ea. DF Tie Rod. 5 10 ea. DG Drag Link 5 05 ea. DI Steering Knuckle 5 10 ea. DI Front Axle 5 10 ea. 10 ea. DI Front Axle 5 10 ea. 10 ea. DI Rear Axle 5 10 ea. 10 ea. DK Flat Spring 5 10 ea. 15 ea. DN Bumper 5 10 ea. 25 ca DN Bearing Right Angle 2 2 for .05 DO Steering Wheel with Hub.d. 15 ca	FO Double Angle Base Plate.6
F 5 Hole Strip	BK 8.32 Wing Nut	DP12 in. Slotted Angle Strip1 6 for .50DQSpecial Large Base Plate(28 holes)	

ERECTOR SEPARATE PARTS PRICES (Continued)

ade l	No. Name of Part Page Price	Trade No. Name of Part	Page	Price	Trade No.	Name of Part	Page	Price	Trade No.	Name of Part	Page	Price
WKCZA RSFJVWX YA2	Slotted Crank,							•				
									No. 1 E. No. 3 E No. 4 E. No. 6 E No. 7 E No. 7 V	ULAR ERECTOI rector Manual rector Manual rector Manual rector Manual Srector Manual Srector Manual		.25 e .25 e .25 e .25 e .25 e
									No. 9 E No. 10 E EREC No. 3005	rector Manual rector Manual TOR ACCESSOF Erector Electrica set Manual Sig Girder Set Mar frector Airplane 1	Y MANUA	.75 e 1.00 e ALS .25 e

Hello boys! FERRIS WHEEL Built from No. B ERECTOR

The Ferris Wheel pictured herewith is built out of the B Erector Accessory Set. It stands 3 ft. 31/2 in. high, circle is 2 ft. 11 in. in diameter. If you now own a regular Erector Set, the B Set will build this Ferris Wheel and many other interesting models out of the big channel straight and curved girders. There are over 100 big girders in this Set. If you do not own a regular Erector Set, the B Accessory Set is a complete set in itself, and will entertain you for days. There is no motor packed in this set. If you own a regular Erector Set, use the motor you have. If you do not own an Erector Set, you can give action to the models you build by securing the famous Polar Cub 110 volt motor, P56G, that operates on any house current. For those who do not have 110 volt current, the P58 standard Erector motor will operate the models in this set.

