

Manual of Instructions

Section 1

MANY
MODELS
ILLUSTRATED
ERECTOR SETS
BUILD THE
MOST MODELS



THE NEW ERECTOR

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

OTHER
MANUALS
FOR LARGER
SETS

MANUALS
FREE WITH
ALL SETS

No. 1—No. 3—No. 4
No. 7—No. 77

25c Each

SEPARATELY

No. 7½ 50c—No. 8 75c

No. 10 and 12 \$1.00

No. A 35c

No. B 35c

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

IN ENGLAND

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

THE WORLD'S GREATEST TOY FOR BOYS.



Hello 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.

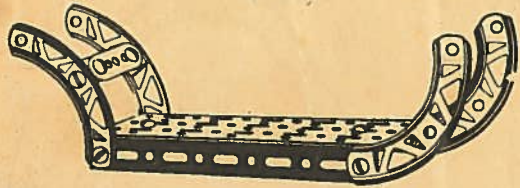
I know you are going to have lots of fun with Erector.

Your Friend,

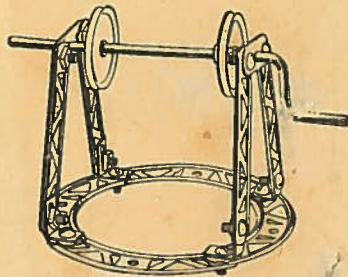
A.C. Gilbert

Models Built with No. 1 Erector

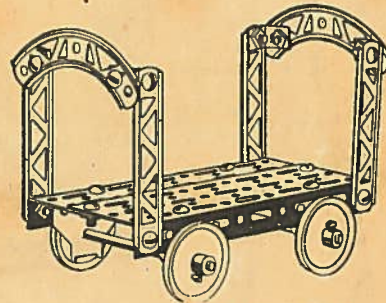
The number of models that can be built with Erector is unlimited. While we show a great many in this book, they are only indications of the large number of different varieties and the adaptability of Erector, The World's Greatest Toy. 250 smaller models illustrated in 0 and No. 000 Manual sent free upon request.



Sled



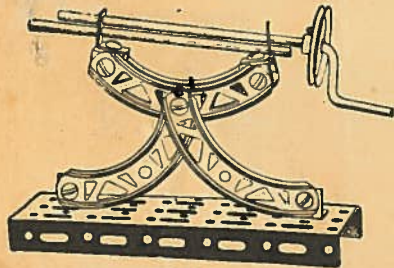
Well Windlass



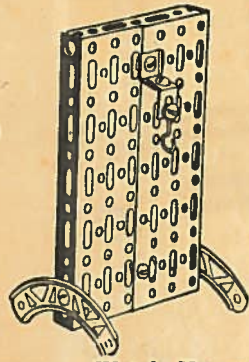
Factory Truck



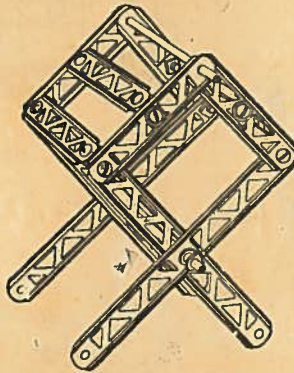
Arch



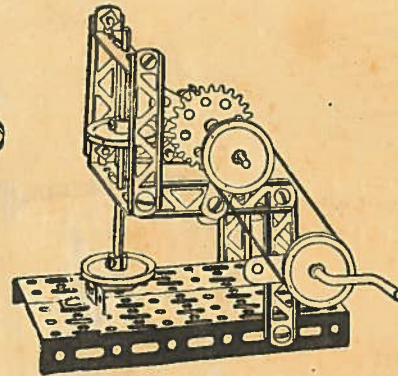
Machine Gun



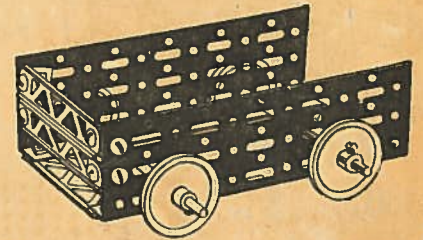
Watch Hanger



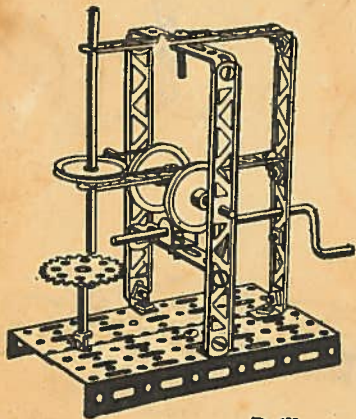
Clothes Dryer



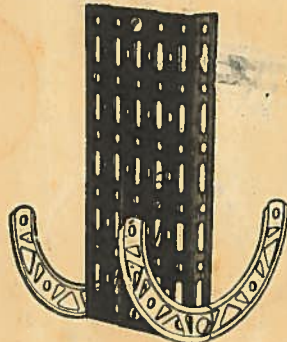
Trip Hammer



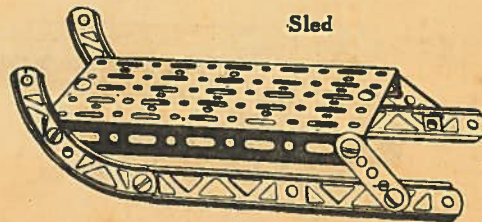
Push Truck



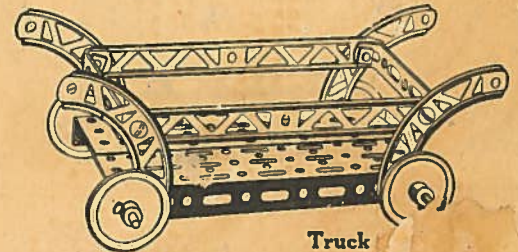
Drill



Rocking Sign

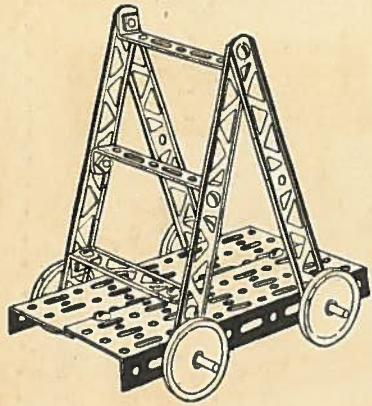


Sled



Truck

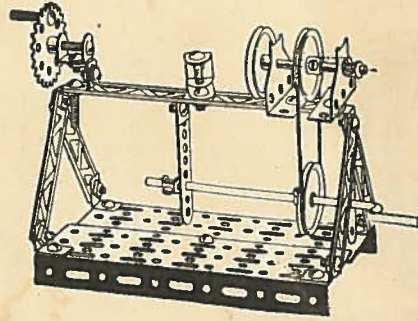
Models Built with No. 1 Erector



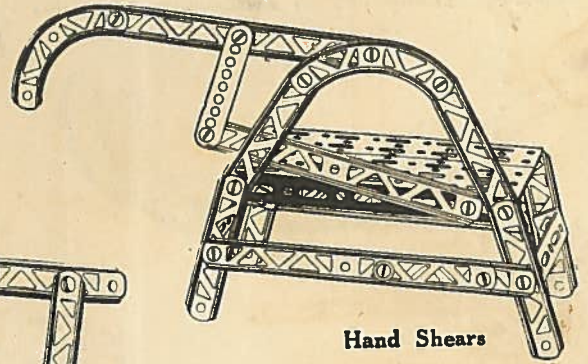
Truck Ladder



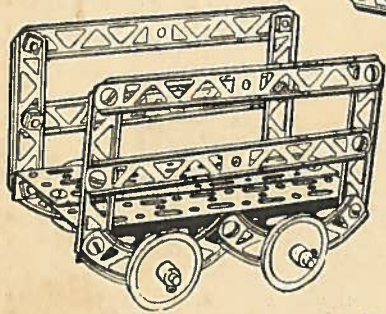
Potato Cutter



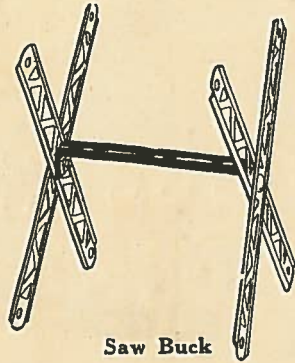
Lathe



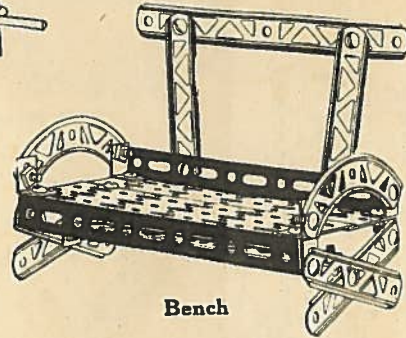
Hand Shears



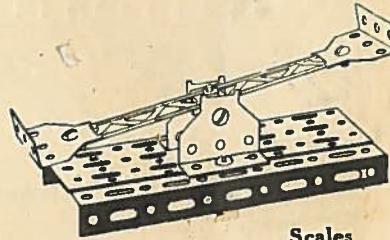
Baggage Truck



Saw Buck



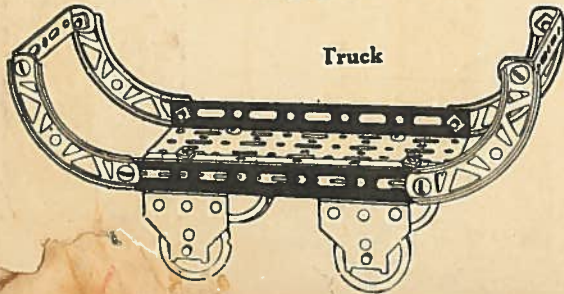
Bench



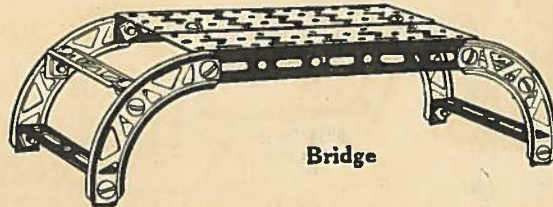
Scales



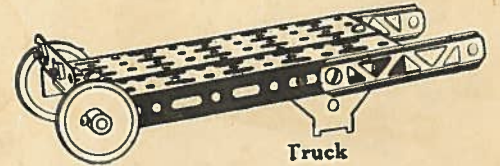
Anchor



Truck

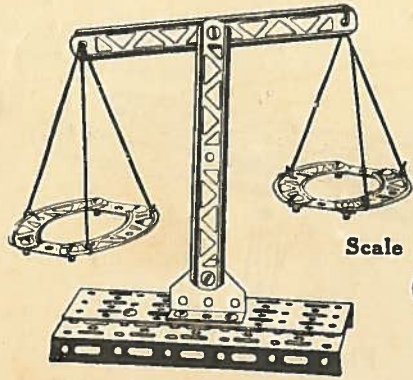


Bridge

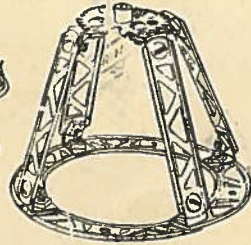


Truck

Models Built with No. 1 Erector



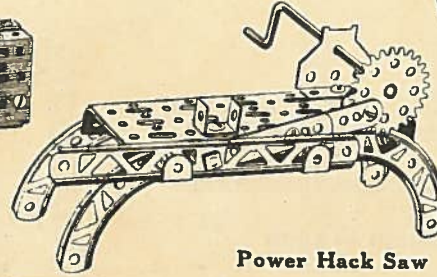
Scale



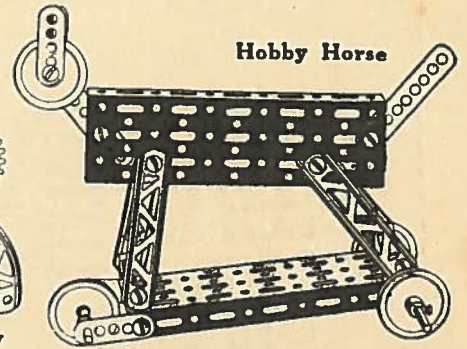
Lamp Shade



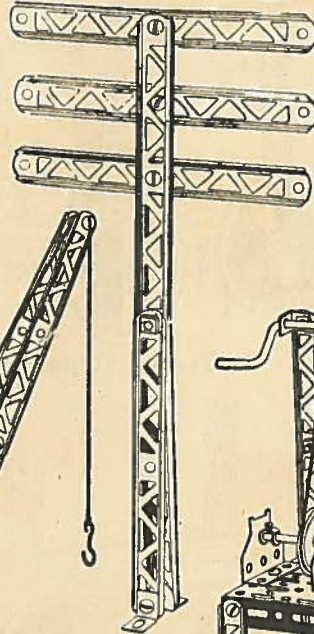
Suit Case



Power Hack Saw



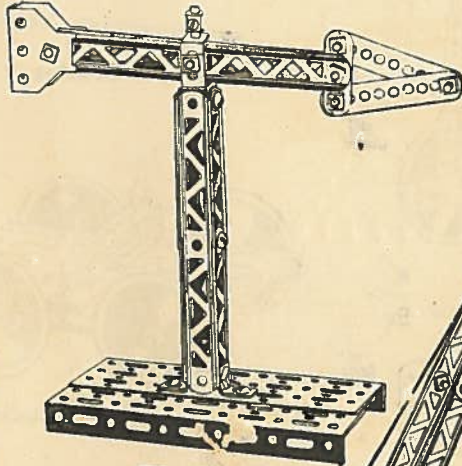
Hobby Horse



Telegraph Pole



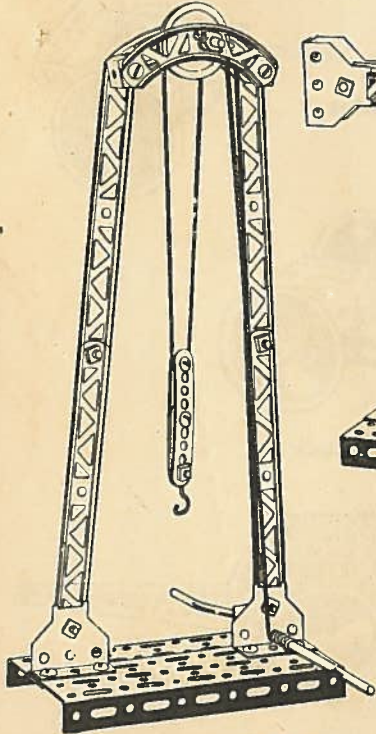
Table



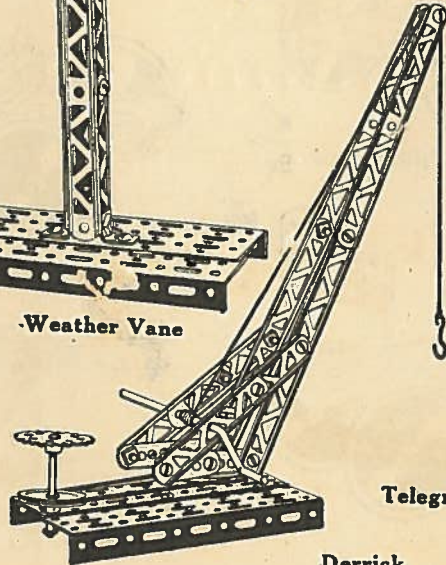
Weather Vane



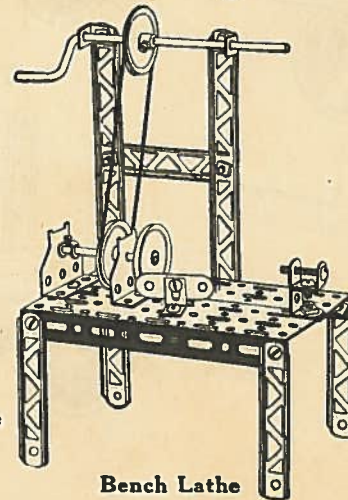
Day Bed



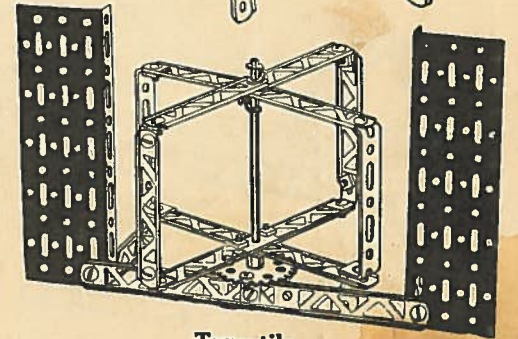
Hoist



Derrick

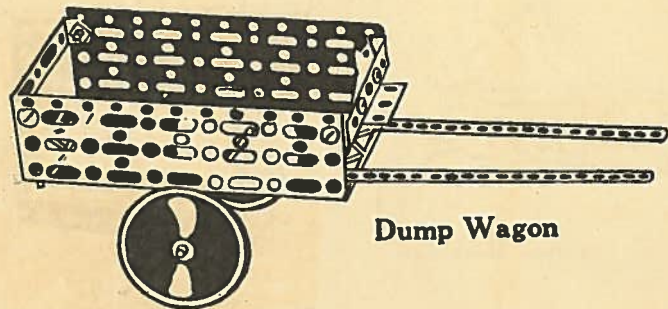


Bench Lathe

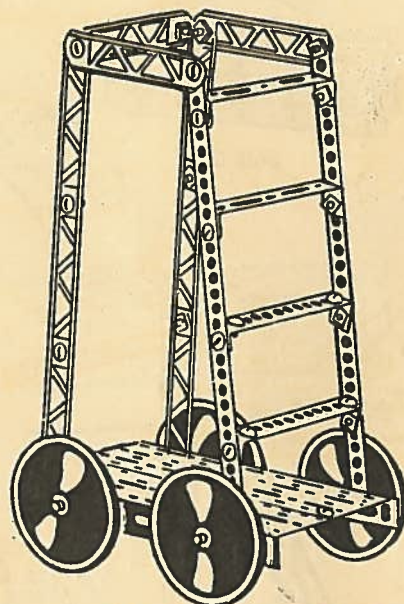


Turnstile

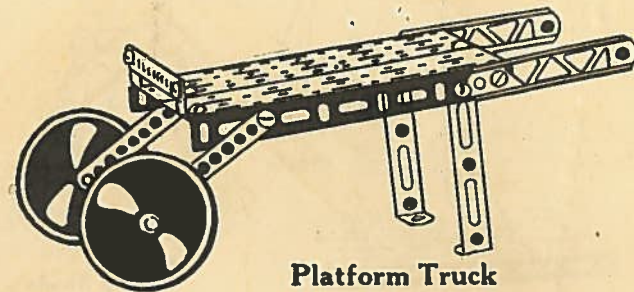
Models Built with No. 1 Erector.



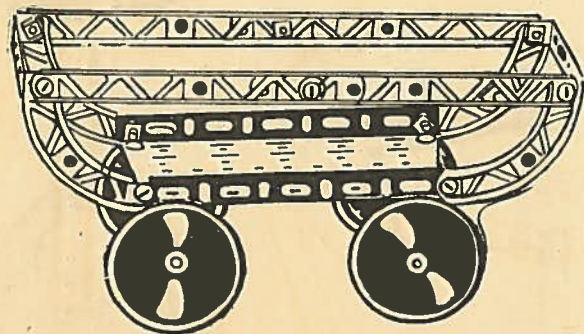
Dump Wagon



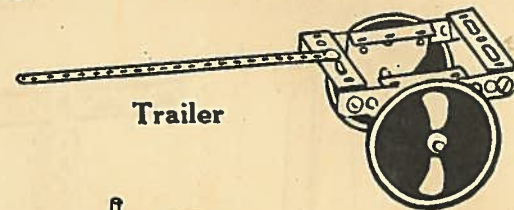
Trolley Repair Tower



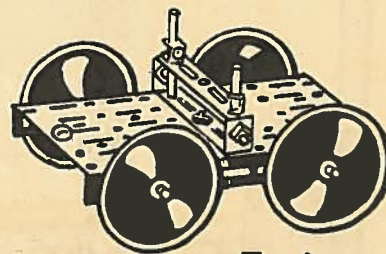
Platform Truck



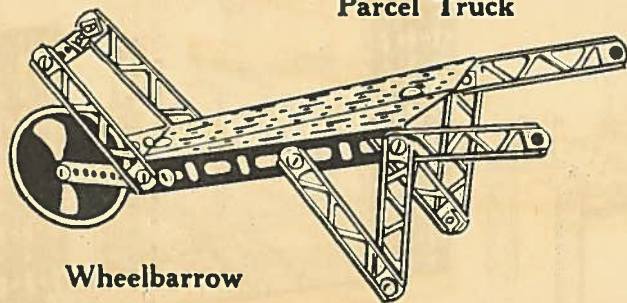
Parcel Truck



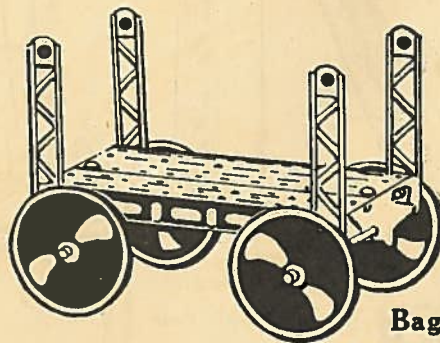
Trailer



Truck



Wheelbarrow

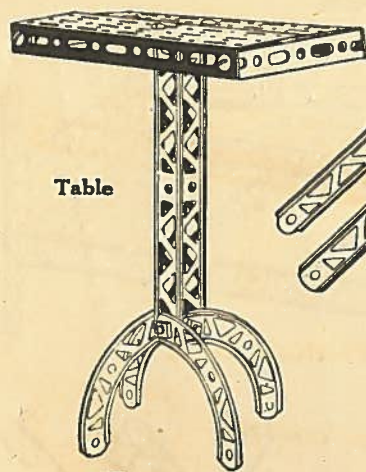


Baggage Truck

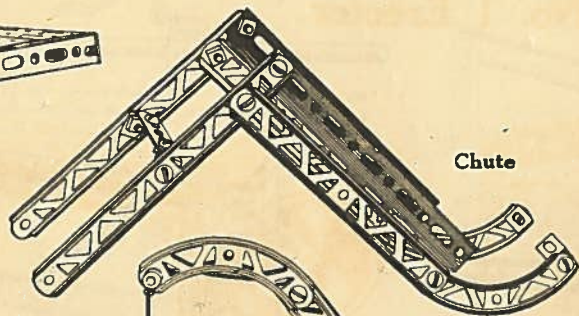


Cannon

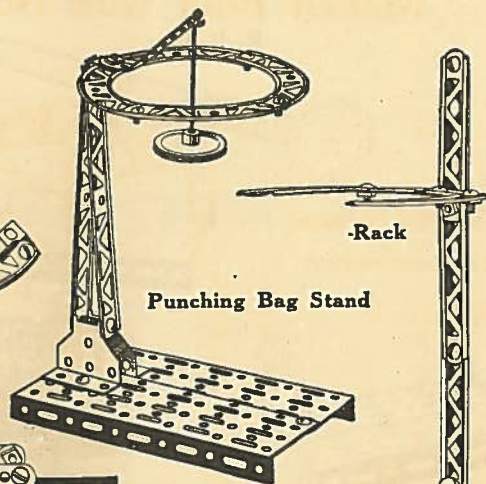
Models Built with No. 1 Erector



Table

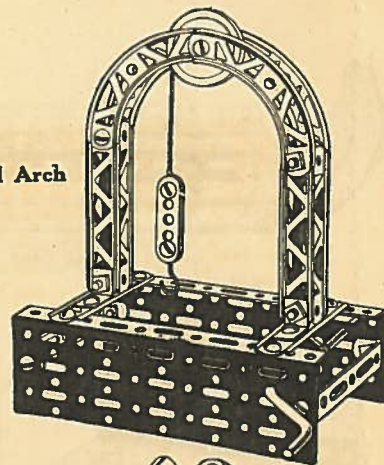


Chute

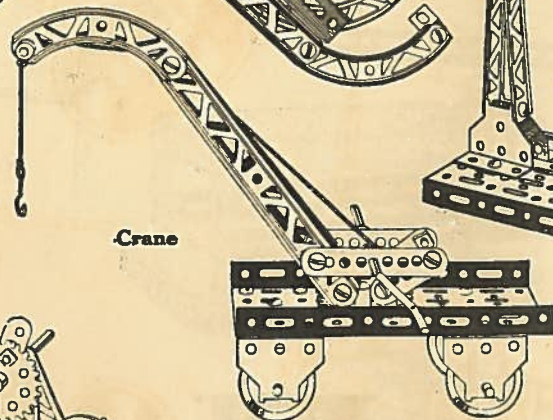


Punching Bag Stand

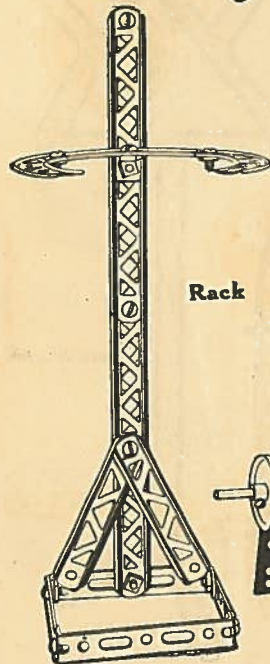
Rack



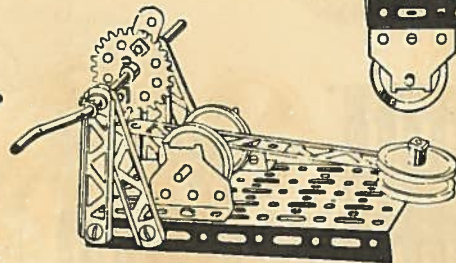
Well Arch



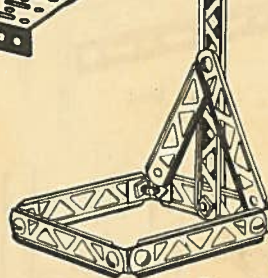
Crane



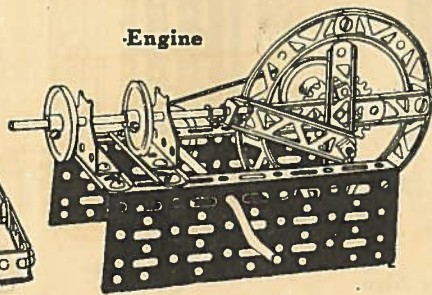
Rack



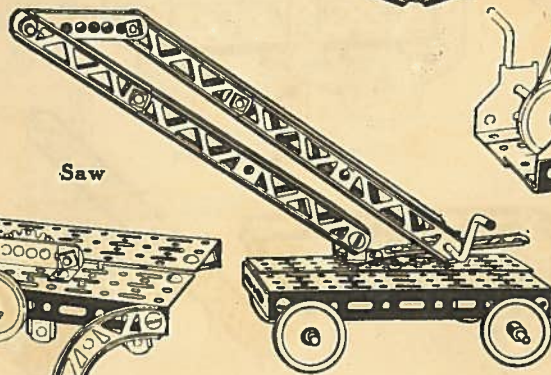
Trip Hammer



Wind Mill

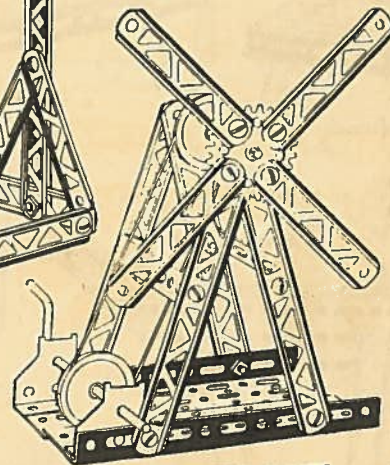


Engine



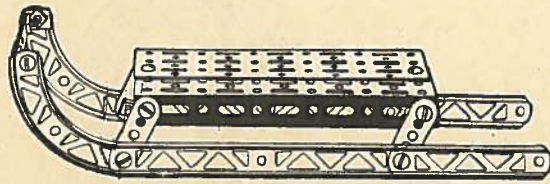
Saw

Crane

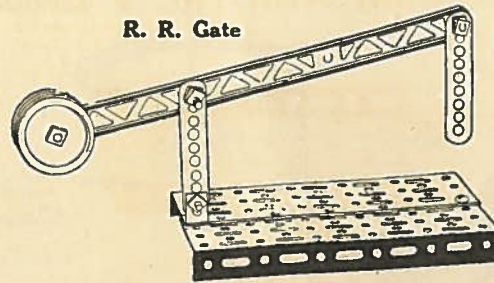


Mail Bag Hanger

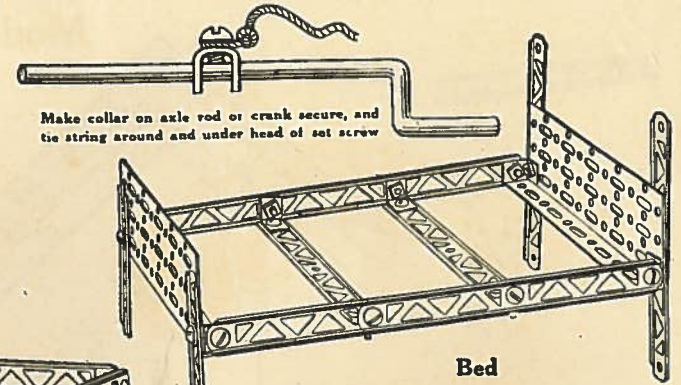
Models Built with No. 1 Erector



Seat Sled



R. R. Gate

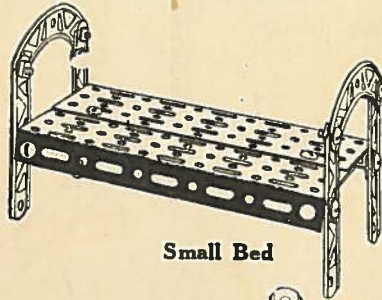


Make collar on axle rod or crank secure, and tie string around and under head of set screw

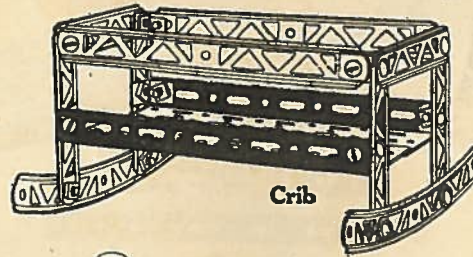
Bed



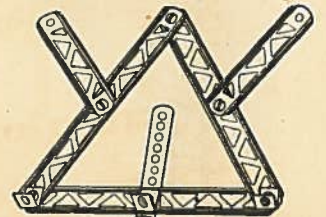
Bench



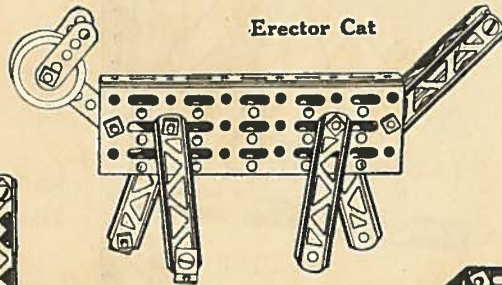
Small Bed



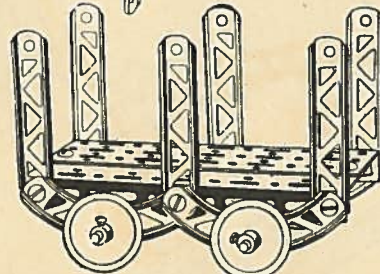
Crib



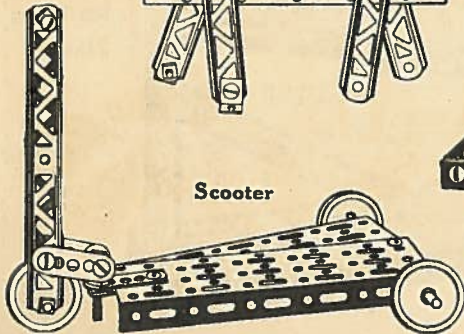
Music Stand



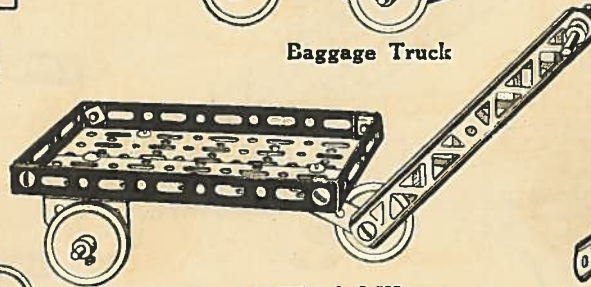
Erector Cat



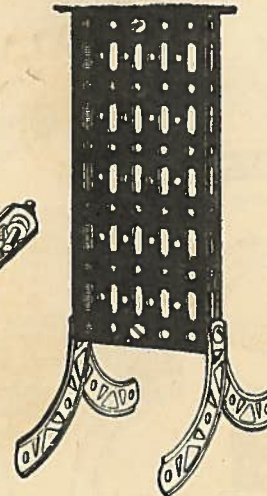
Baggage Truck



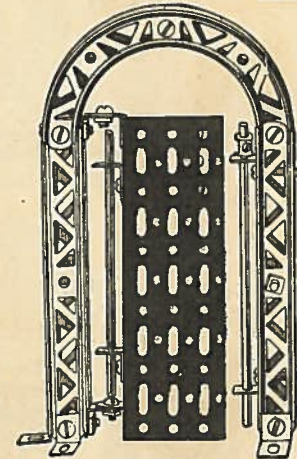
Scooter



3-Wheeled Wagon

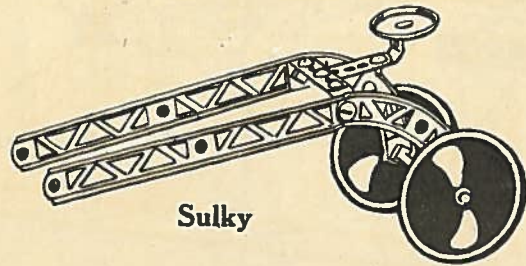


Stationary Sign

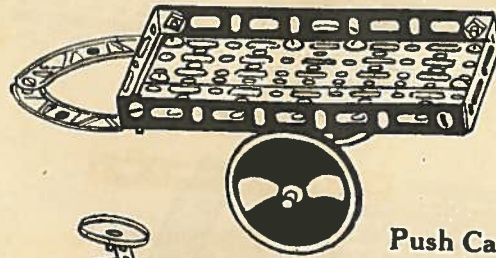


Arch Gate

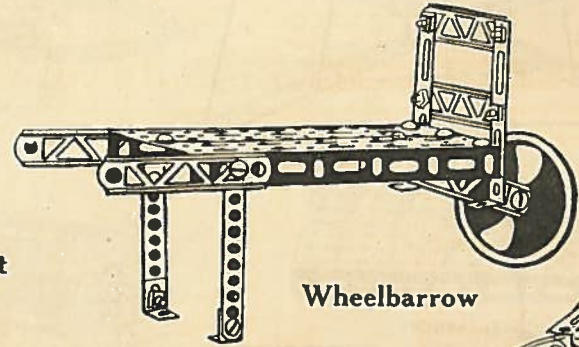
Models Built with No. 1 Erector.



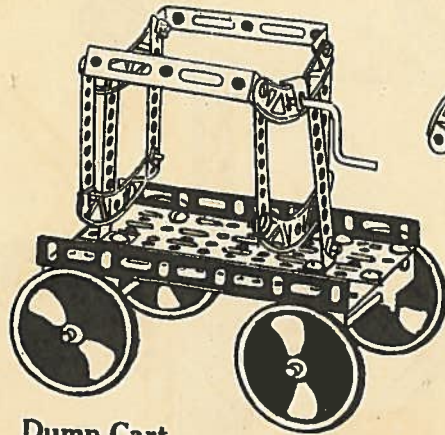
Sulky



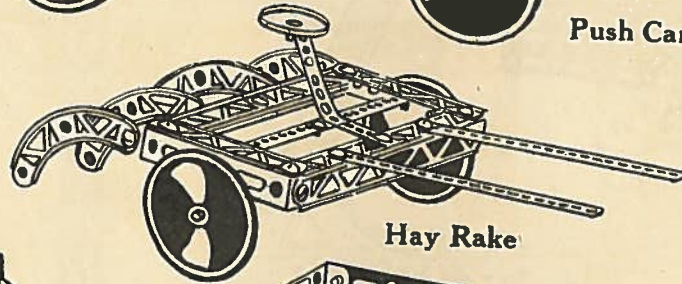
Push Cart



Wheelbarrow



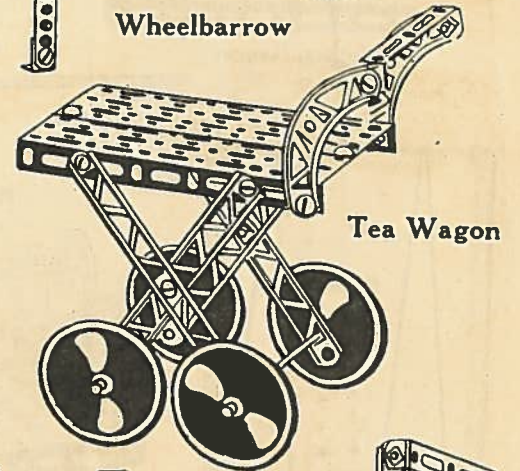
Dump Cart



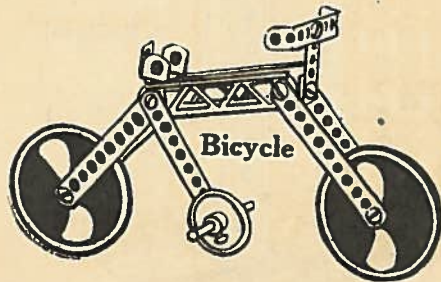
Hay Rake



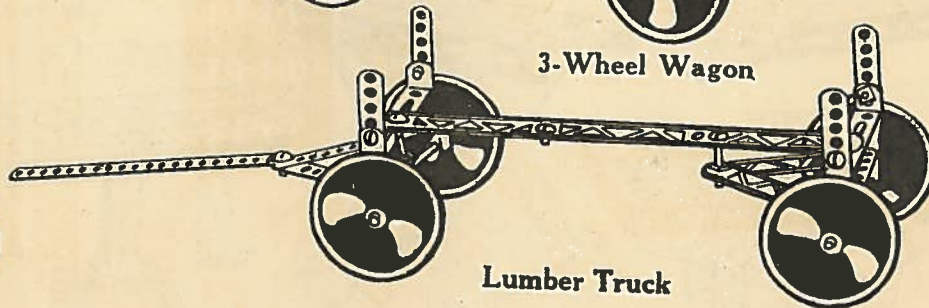
3-Wheel Wagon



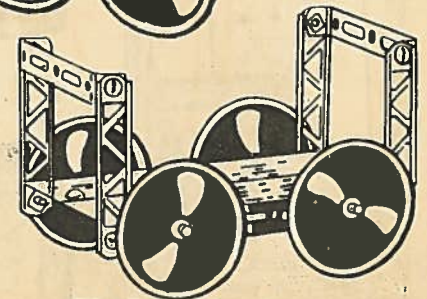
Tea Wagon



Bicycle

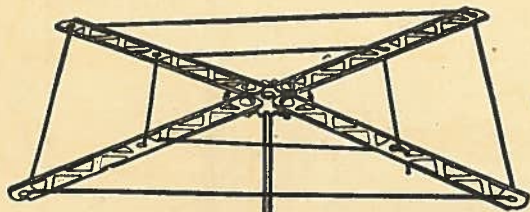


Lumber Truck

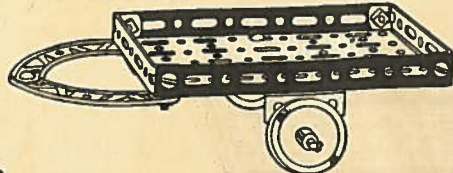


Platform Truck

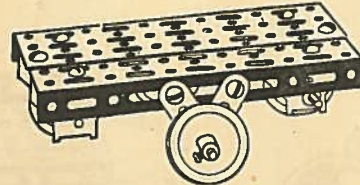
Models Built with No. 1 Erector



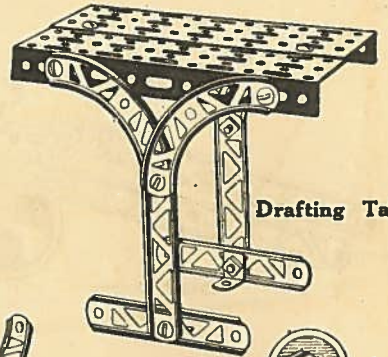
Clothes Hanger



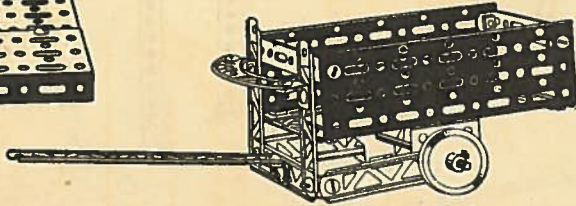
Push Cart



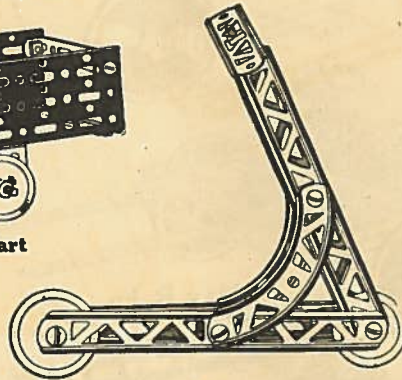
Truck



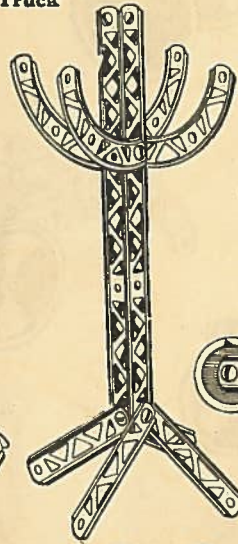
Drafting Table



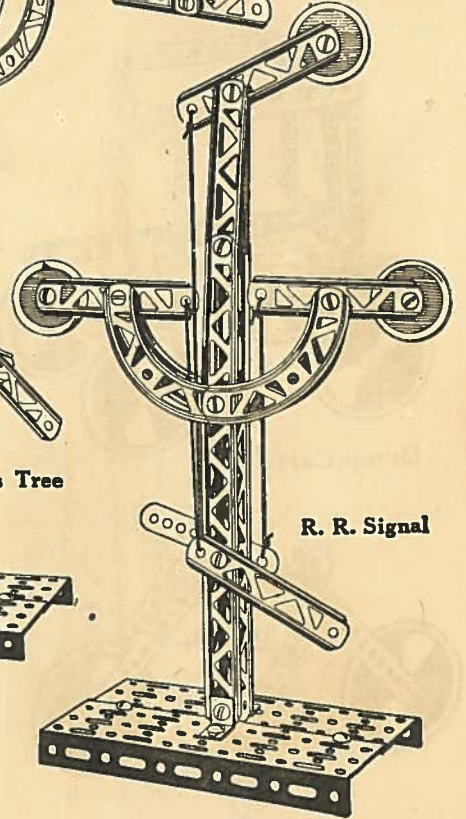
Dump Cart



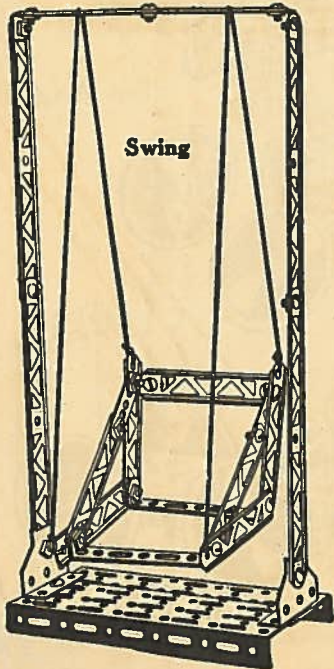
Scooter



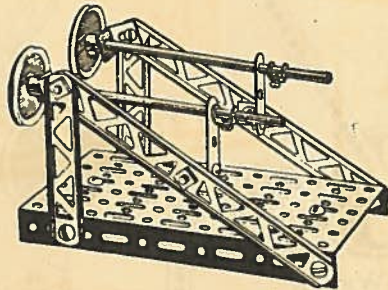
Clothes Tree



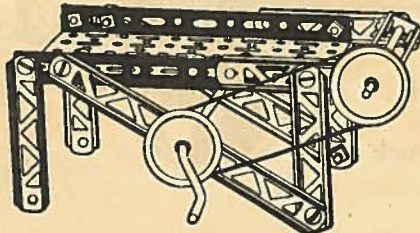
R. R. Signal



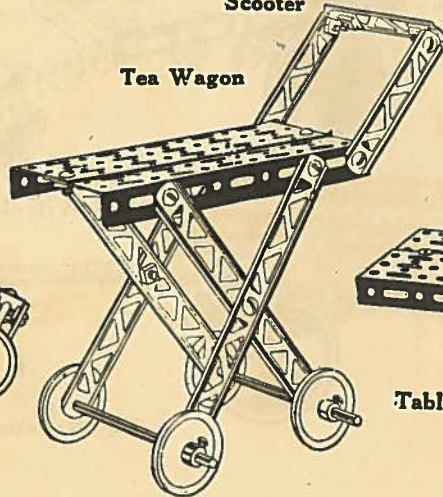
Swing



Chopper

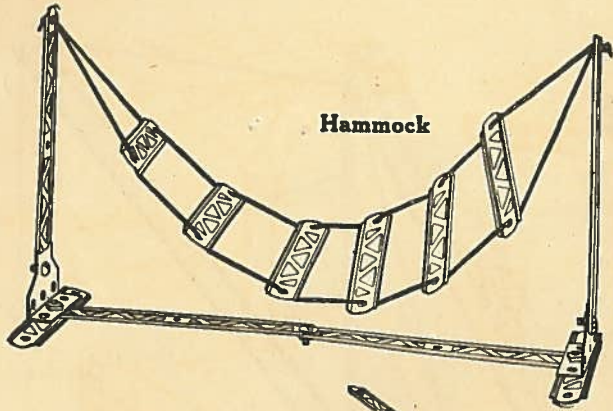


Tea Wagon

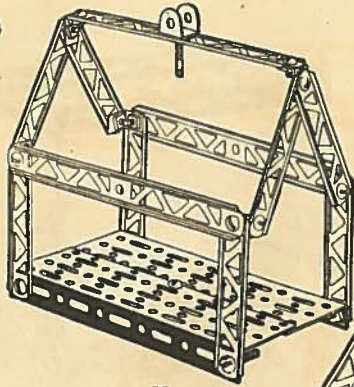


Table

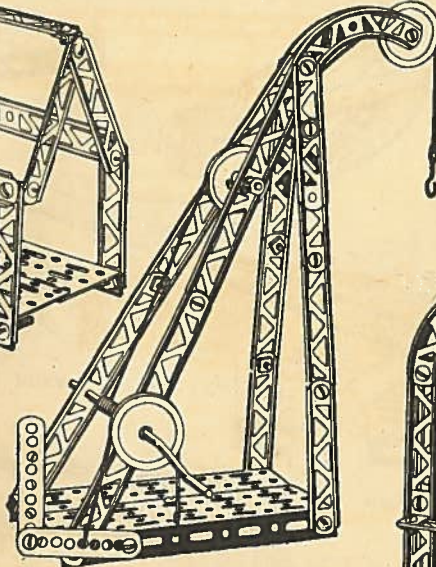
Models Built with No. 1 Erector



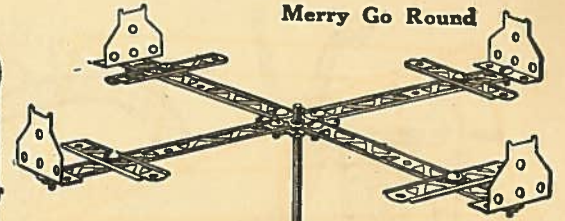
Hammock



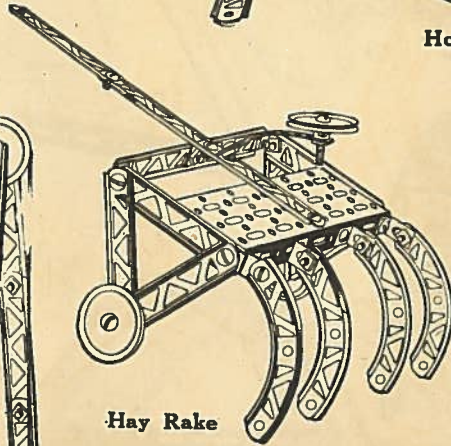
House



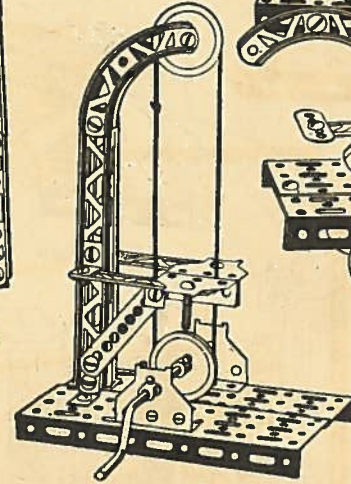
Hoist Derrick



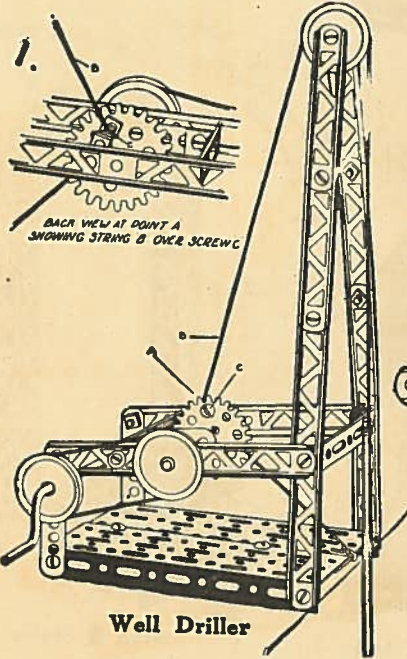
Merry Go Round



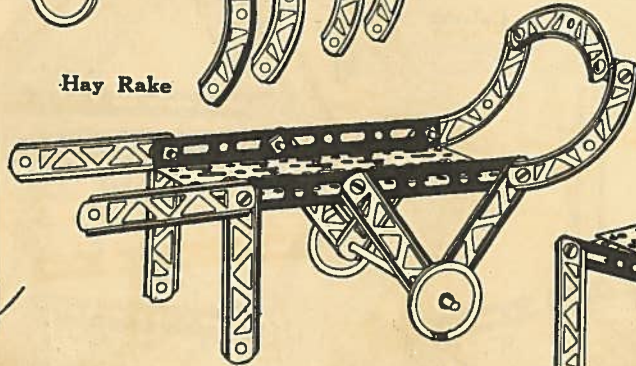
Hay Rake



Hand Car



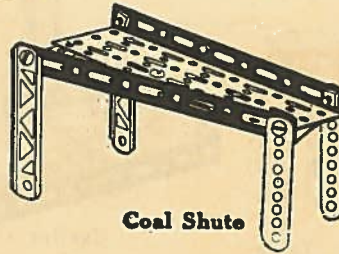
Well Driller



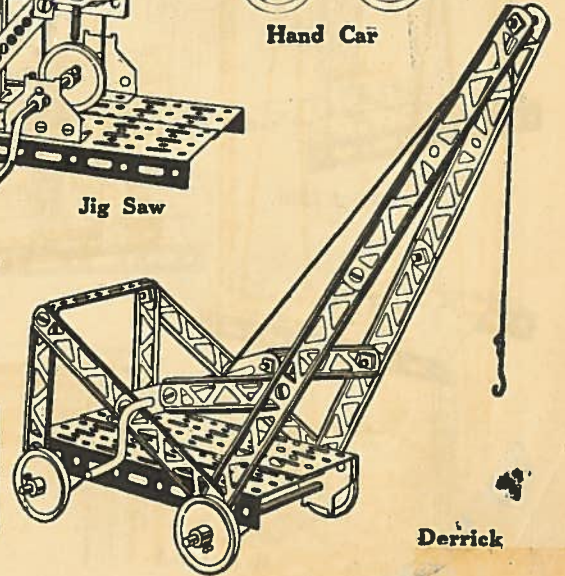
Truck



Stool



Coal Shute



Derrick

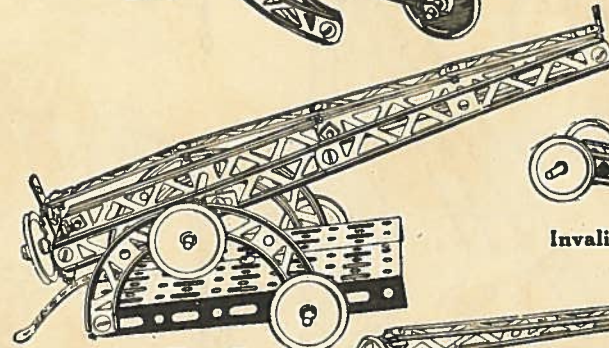
Models Built with No. 1 Erector



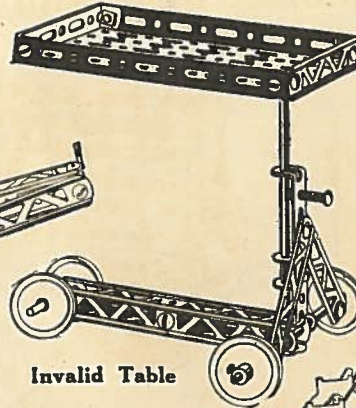
Wind Mill



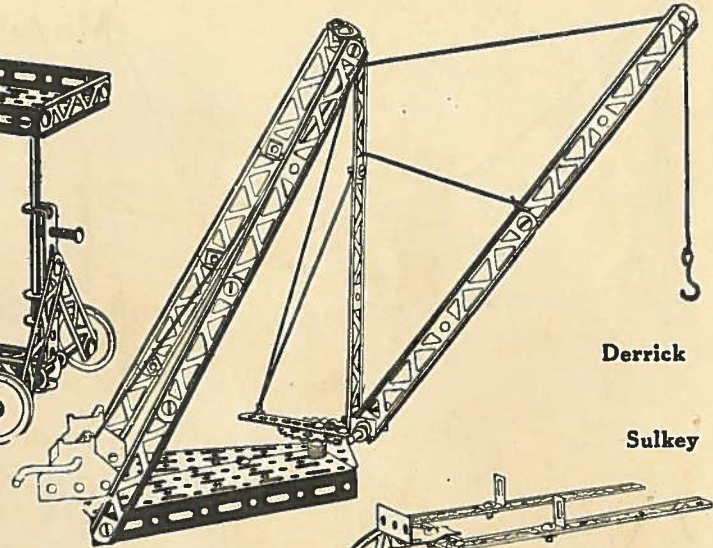
Plow



Siege Gun

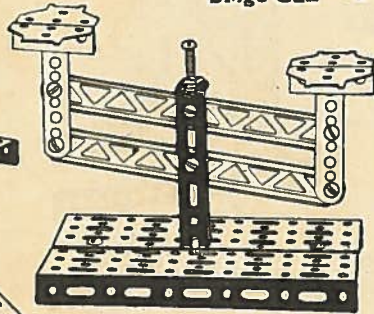


Invalid Table

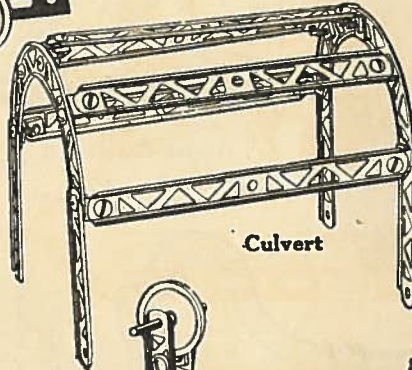


Derrick

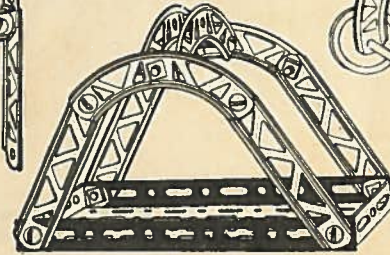
Sulkey



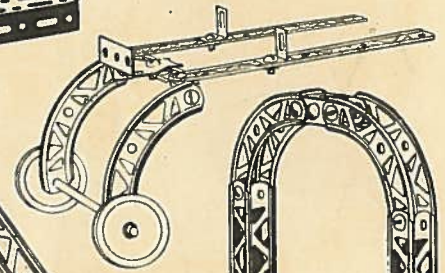
Scales



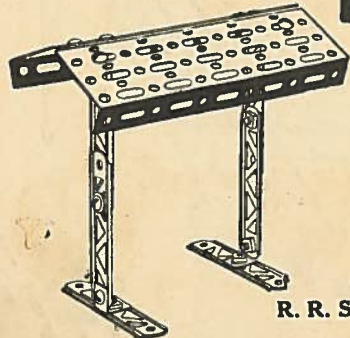
Culvert



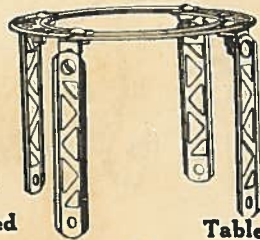
Basket



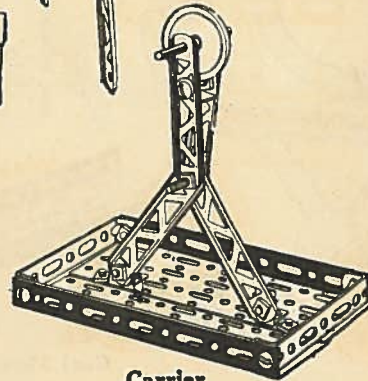
Arch & Stairs



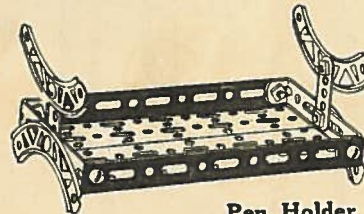
R. R. Shed



Table



Carrier

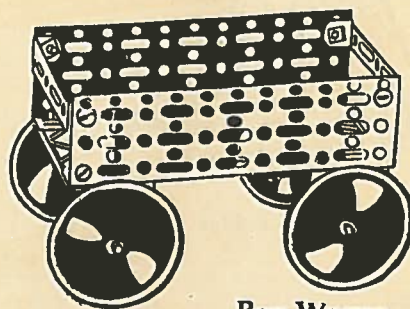


Pen Holder

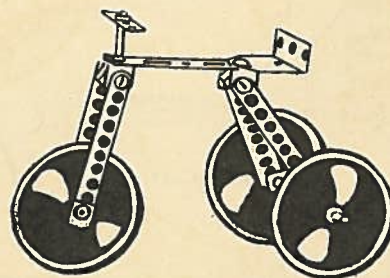
Models Built with No. 1 Erector.



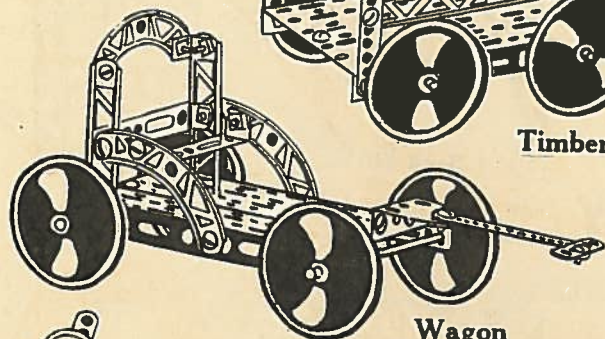
Timber Truck



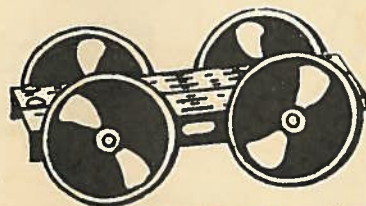
Box Wagon



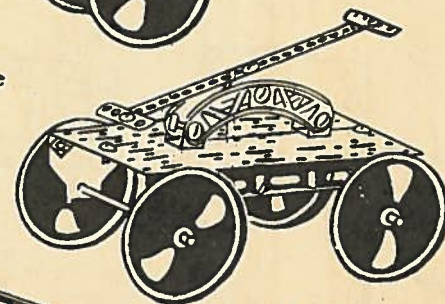
Velocipede



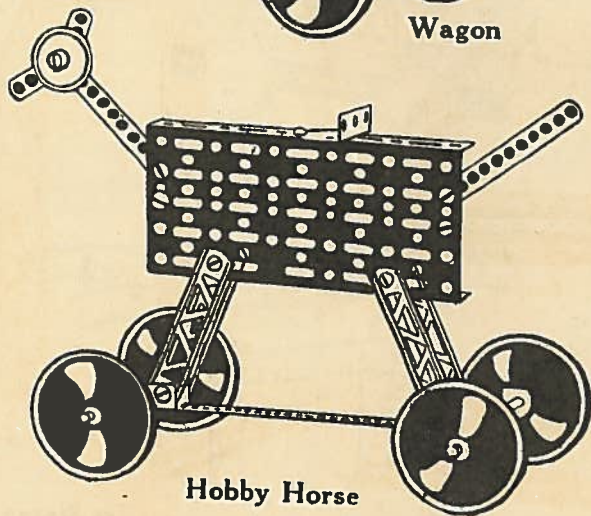
Wagon



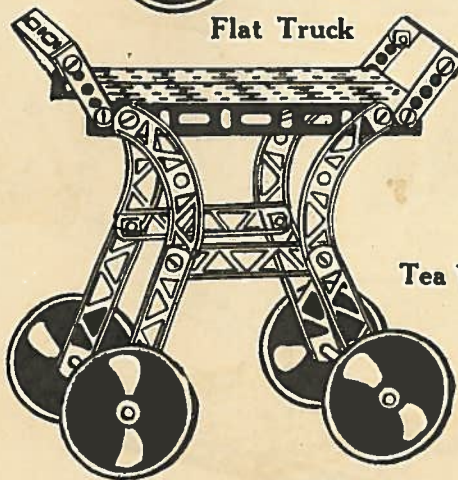
Flat Truck



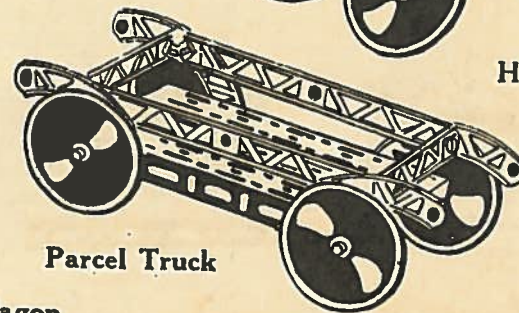
Hand Car



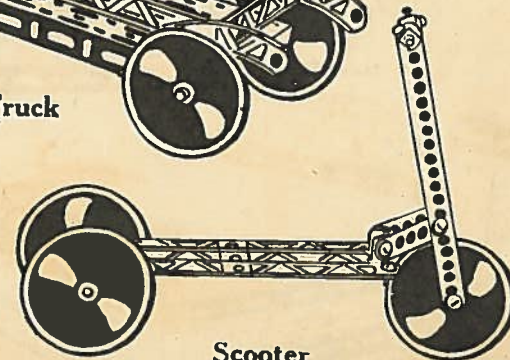
Hobby Horse



Tea Wagon

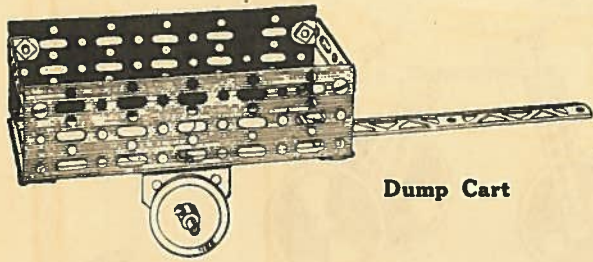


Parcel Truck

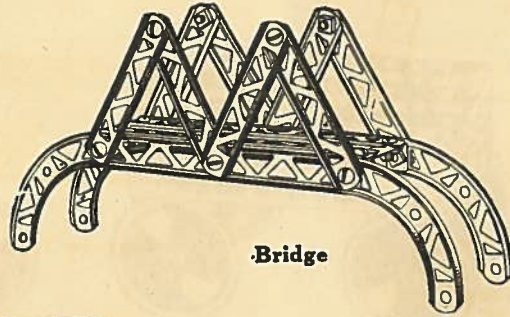


Scooter

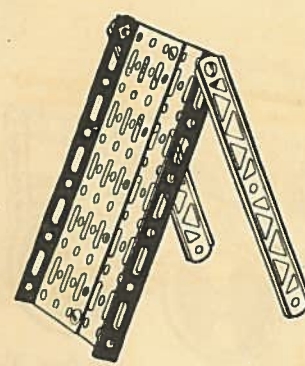
Models Built with No. 1 Erector



Dump Cart



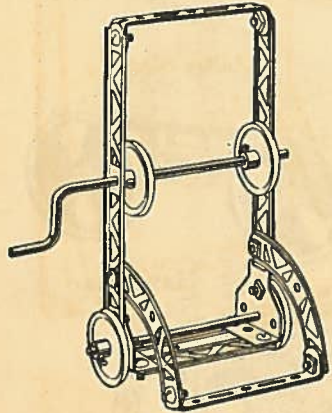
Bridge



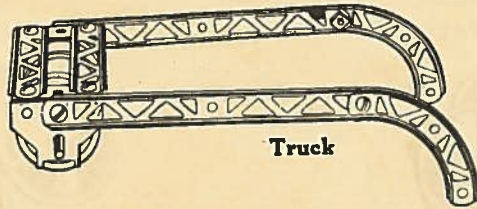
Sand Sifter



Chair



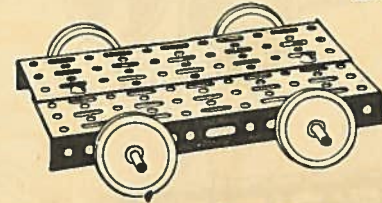
Hose Rack



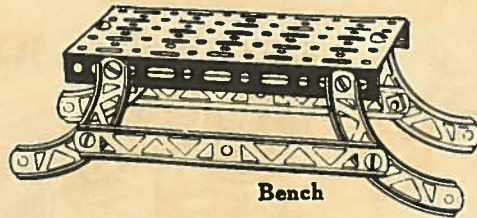
Truck



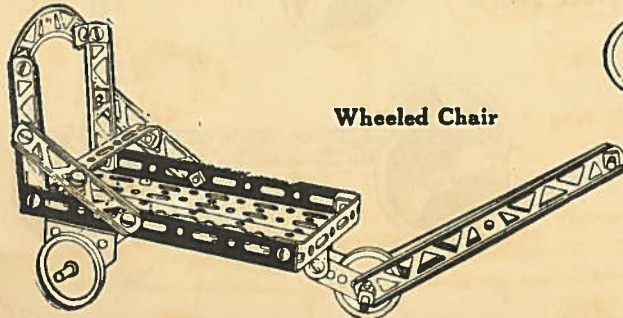
Bookkeeper Desk



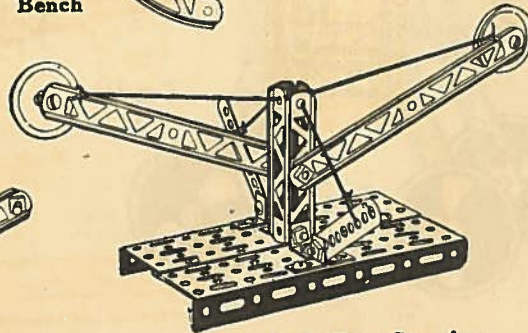
Low Truck



Bench



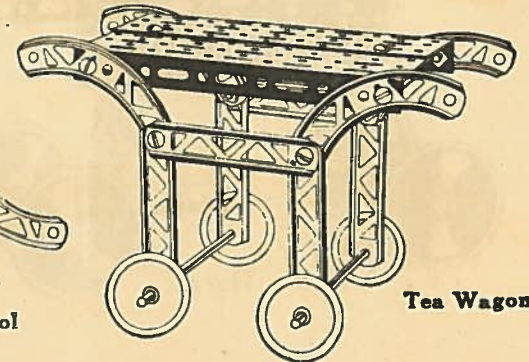
Wheeled Chair



R. R. Gate Crossing



Stool

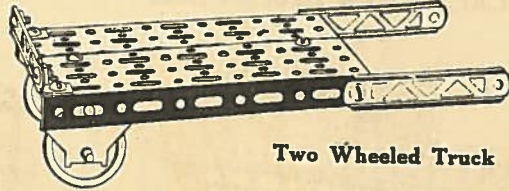
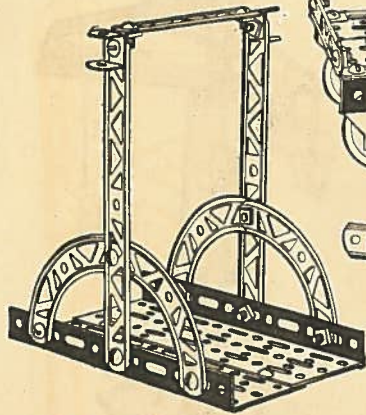


Tea Wagon

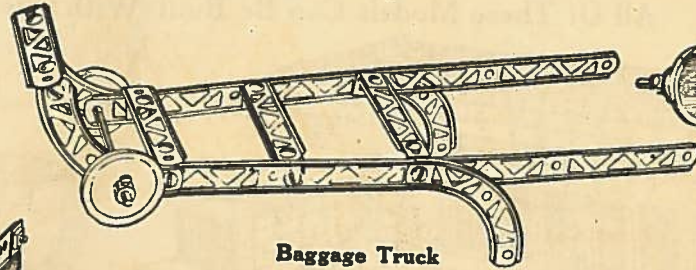
Models Built with No. 1 Erector

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

Elevator Car



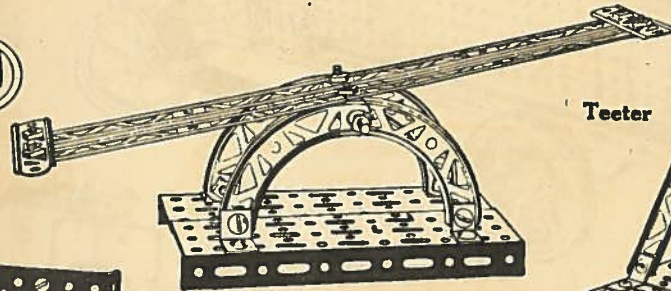
Two Wheeled Truck



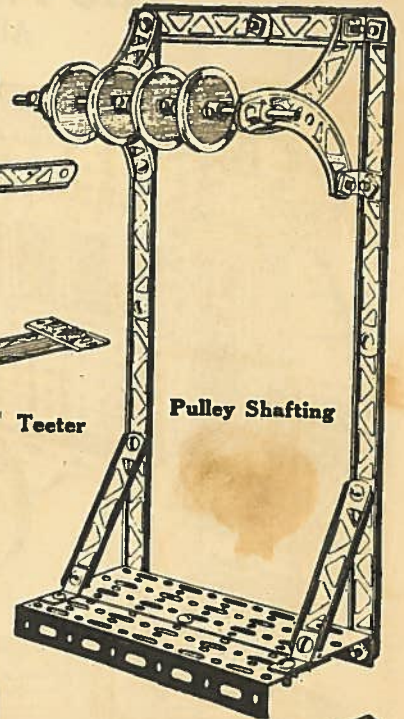
Baggage Truck



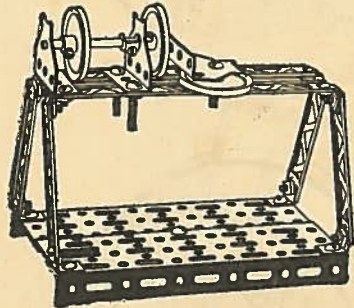
High Baggage Truck



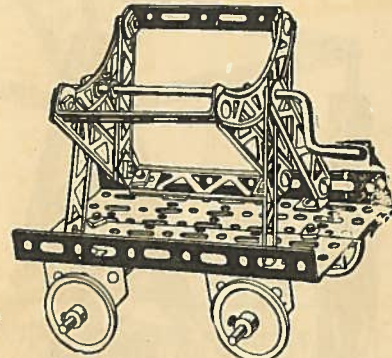
Teeeter



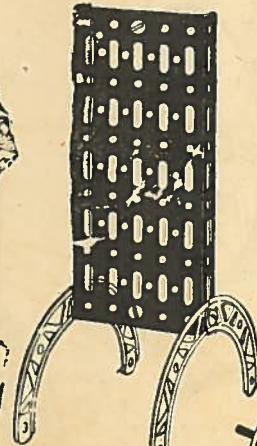
Pulley Shafting



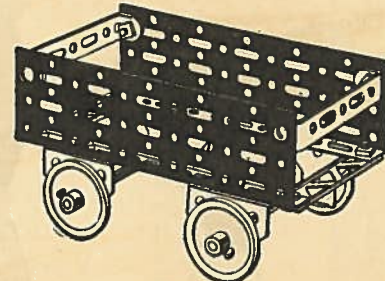
Lathe



Dump Cart



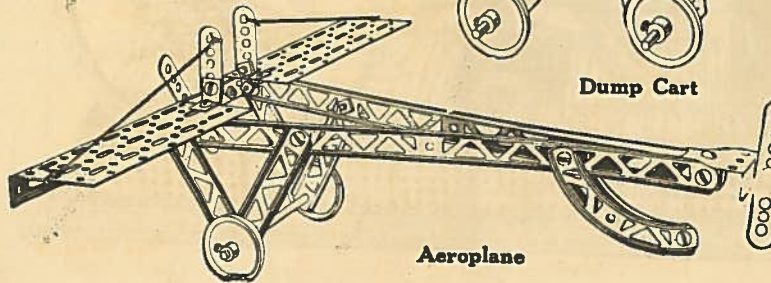
Sign



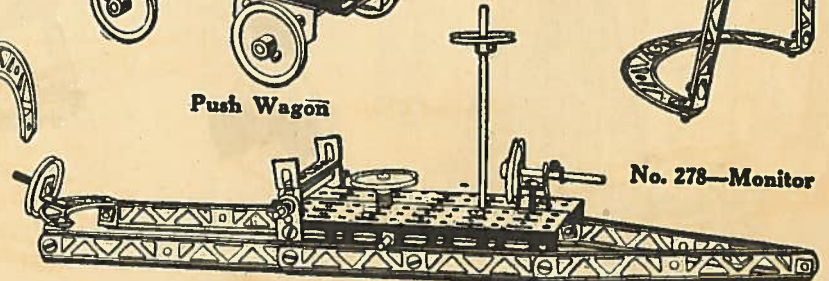
Push Wagon



Book End



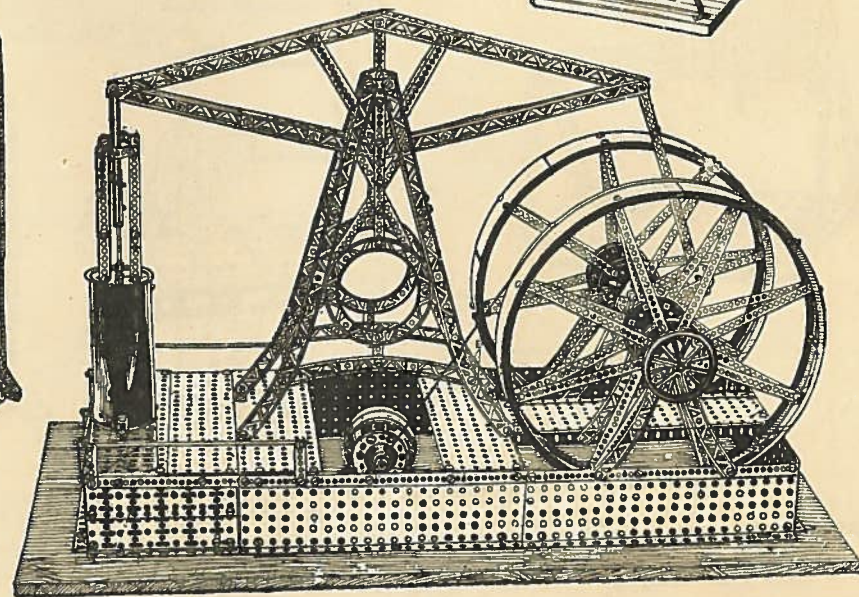
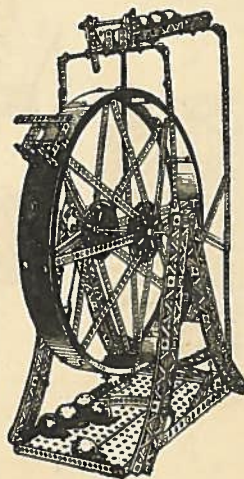
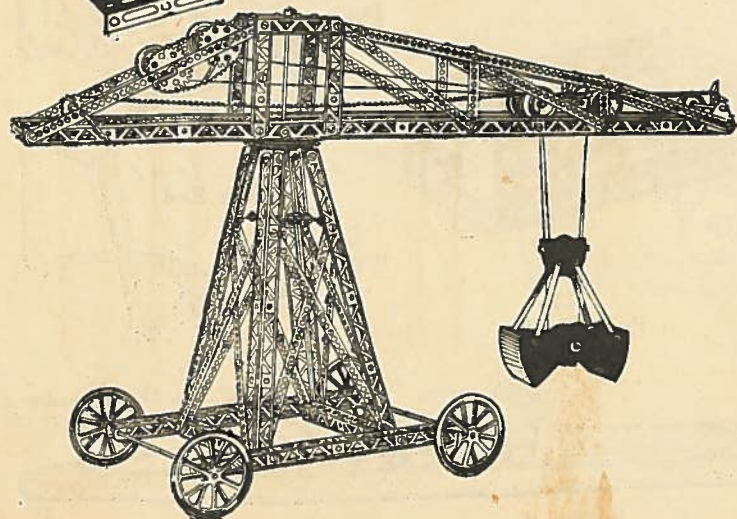
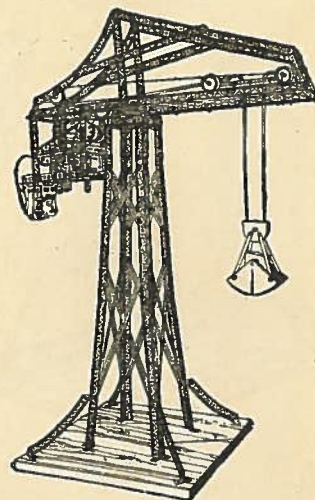
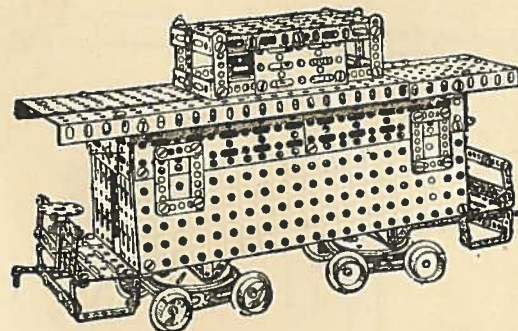
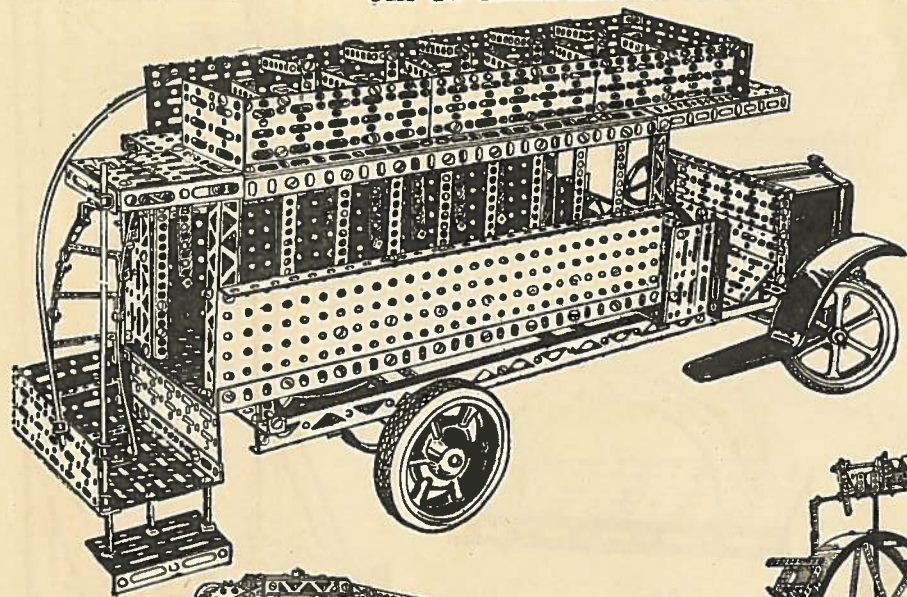
Aeroplane

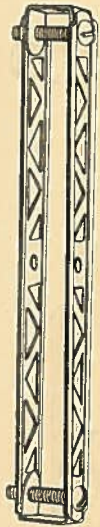


No. 278—Monitor

The New Erector Builds These Wonderful Models

All Of These Models Can Be Built With The Larger New Erector Sets





Parallel Beam



use washers to prevent screw from protruding too far beyond girder



10 in. Square Girder



Fastening Strips to Pierced Gear



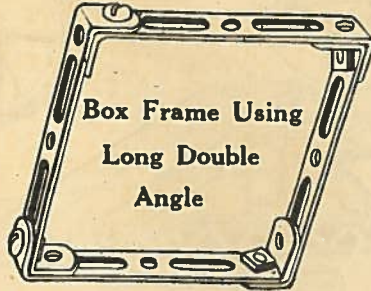
How Channel Keeps Angle in Position



5 in. Square Girder



A



Box Frame Using Long Double Angle



B



C



Method of fastening Double Angles to Pierced



Showing method of making bearings for axle



2 1/2 in. Square Girder



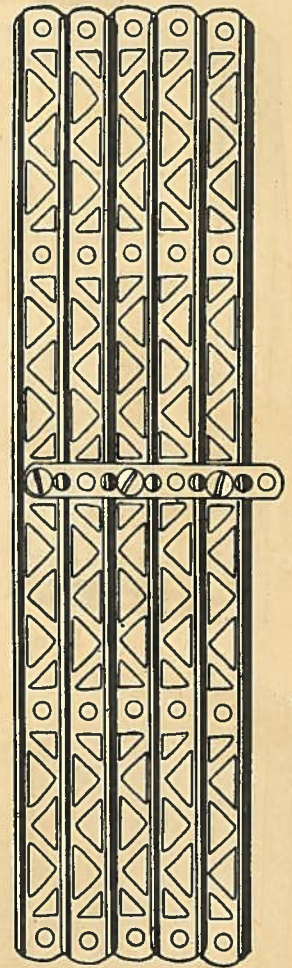
2 1/2 in. I-beam



D



Angle Iron

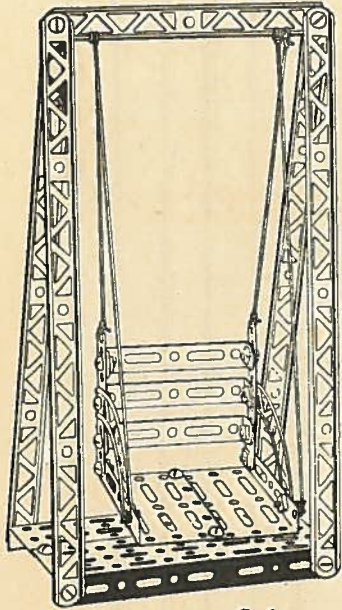


Flooring Construction

To construct a Square Girder commence by putting a long screw through center holes of two girders, as in A; then separate the two, take another girder pushing it down into the grooves or channels, as in B. Having assembled the three sides, take the fourth girder and likewise insert it into the grooves or channels, as in C; then slide it down until the two are flush, which makes a square column girder.

Models built with No. 3 Erector

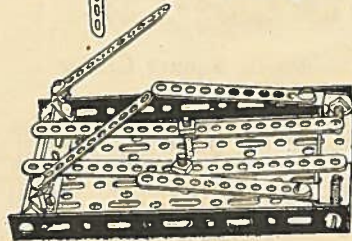
The number of models that can be built with Erector is unlimited. While we show a great many in this book they are only indications of the large number of different varieties and the adaptability of Erector, The World's Greatest Toy. Models from No. 1 to 50 built with No. 0 Set, and models 51 to 278 built with No. 1 Set, descriptions upon request.



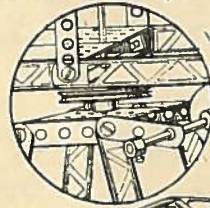
Swing



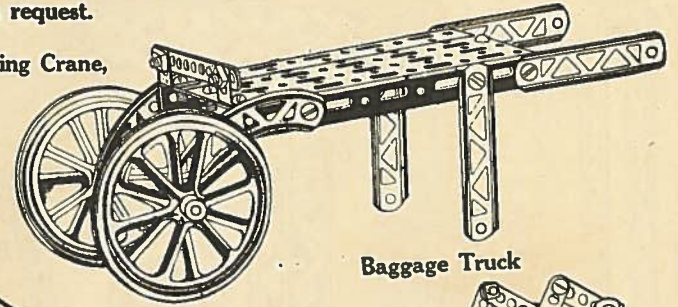
Folding Table



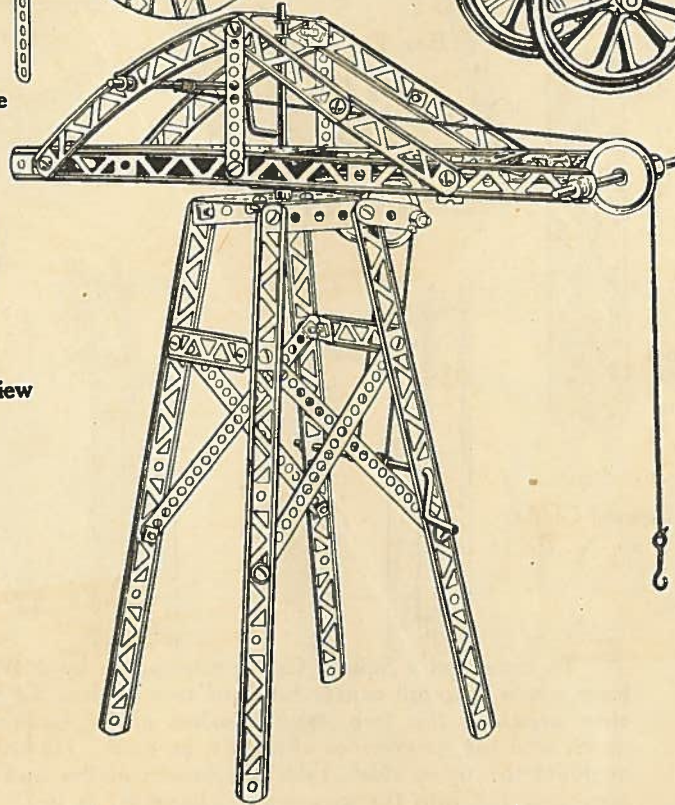
Folding Table, Bottom View



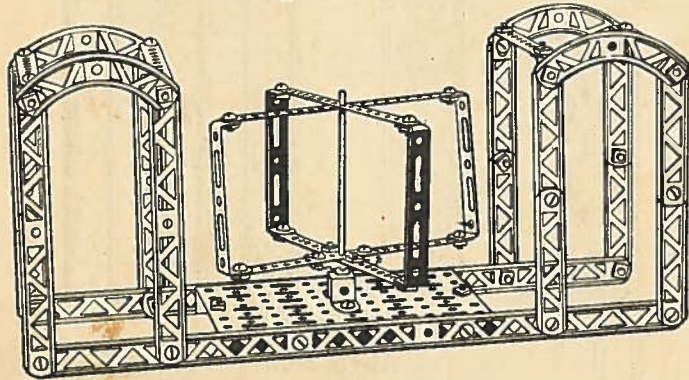
Revolving Crane,
Detail View



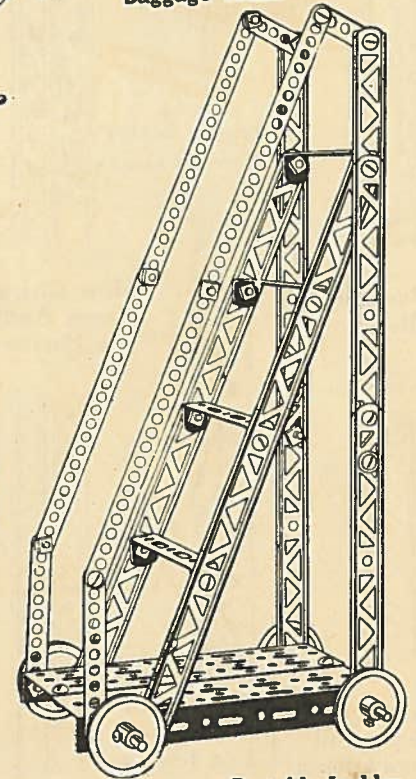
Baggage Truck



Revolving Crane

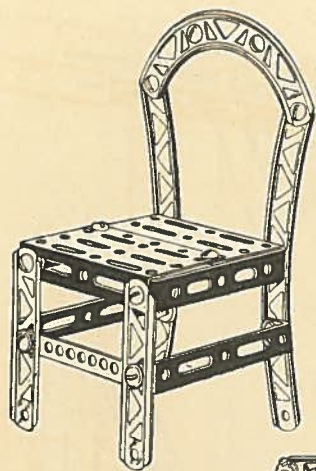


Turn Stile

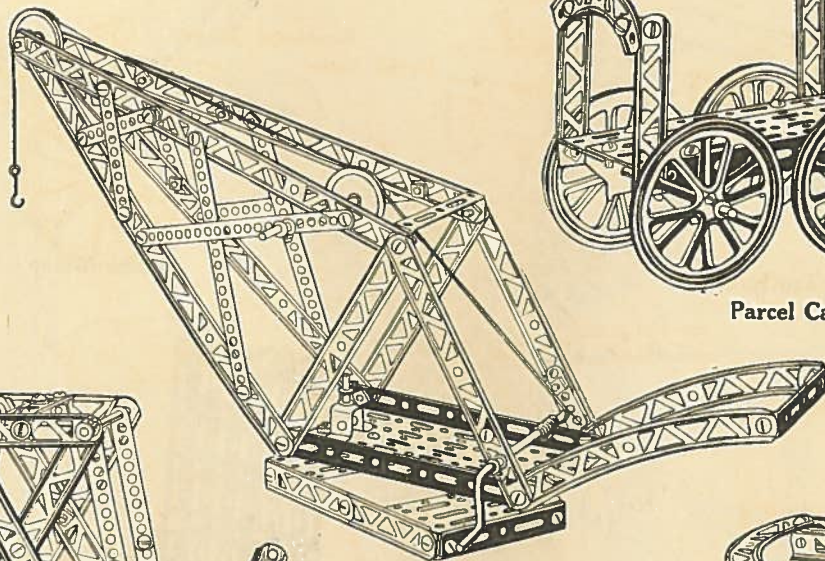


Portable Ladder

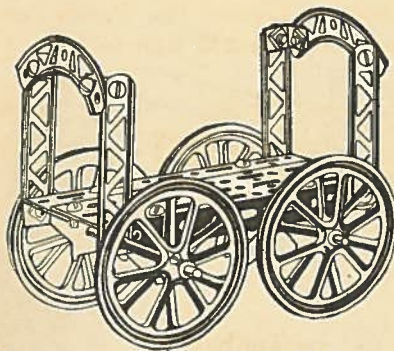
Models built with No. 3 Erector



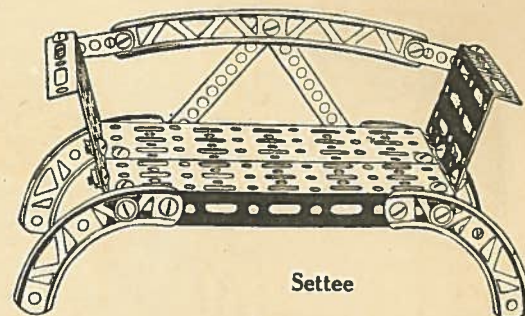
Chair



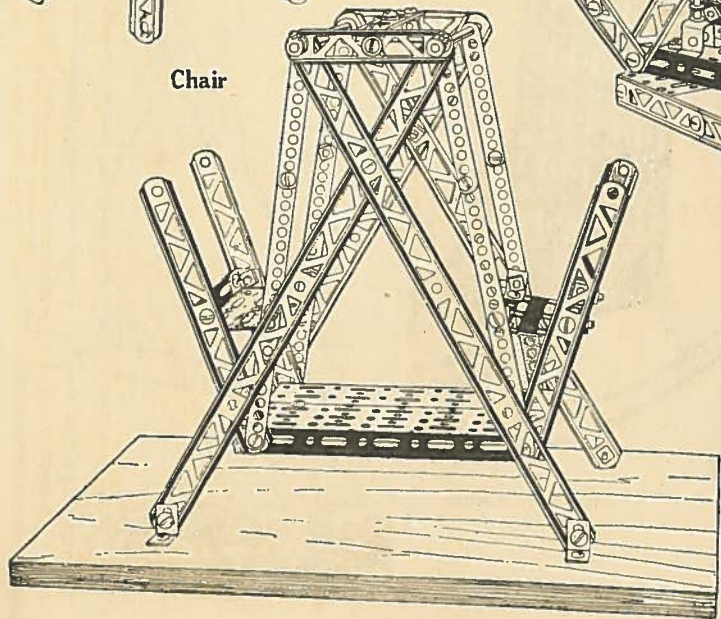
Swivel Crane



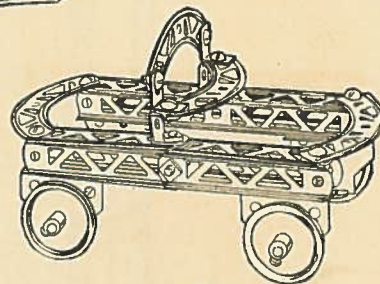
Parcel Carrier



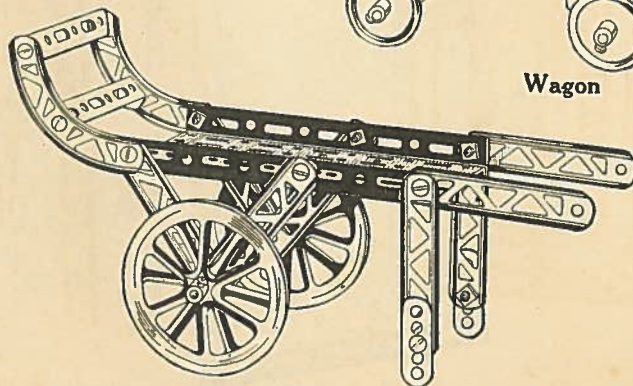
Settee



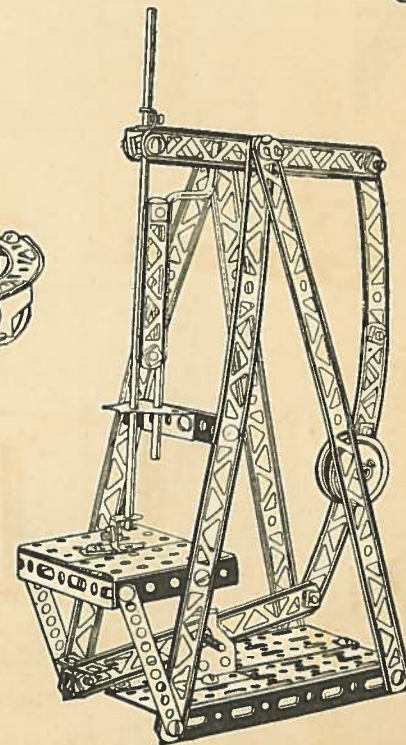
Lawn Swing



Wagon

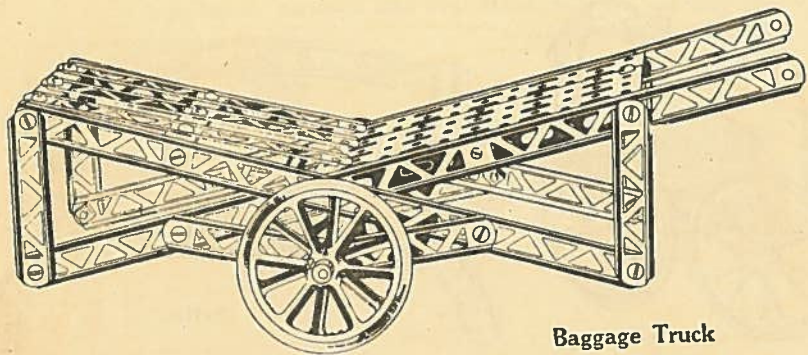


Hand Baggage Truck

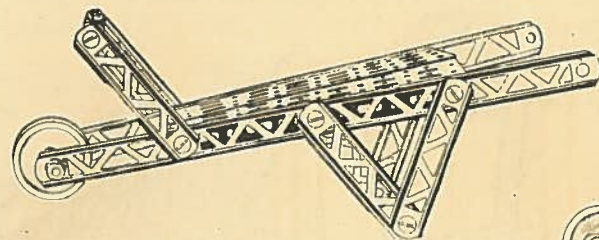


Foot Punch Press

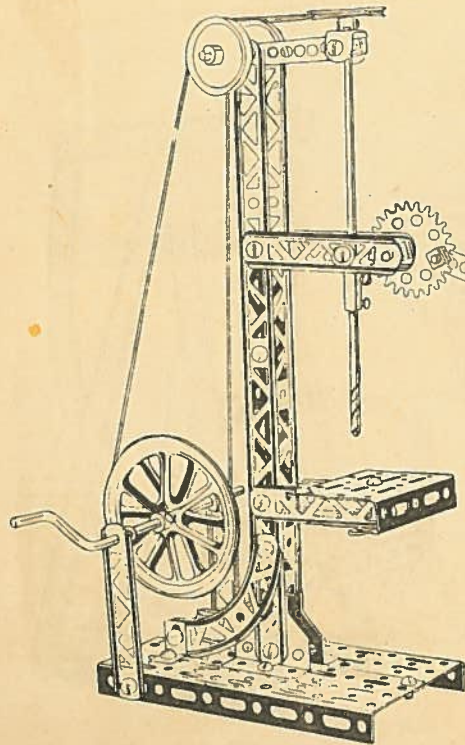
Models built with No. 3 Erector



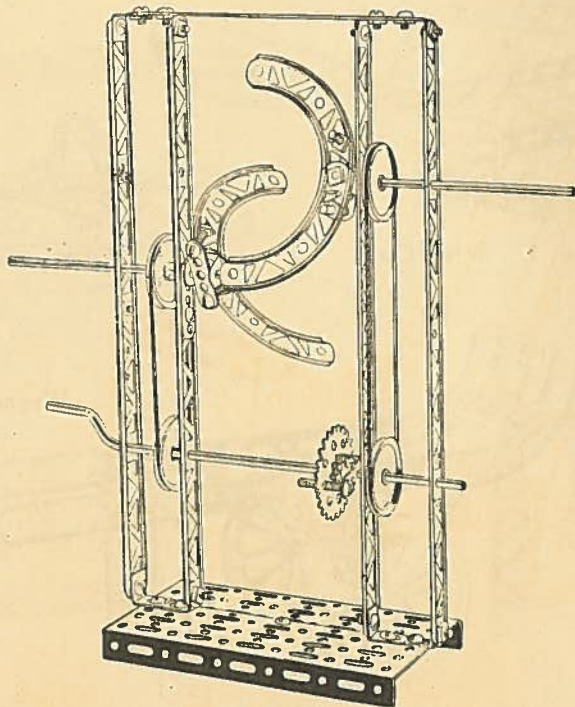
Baggage Truck



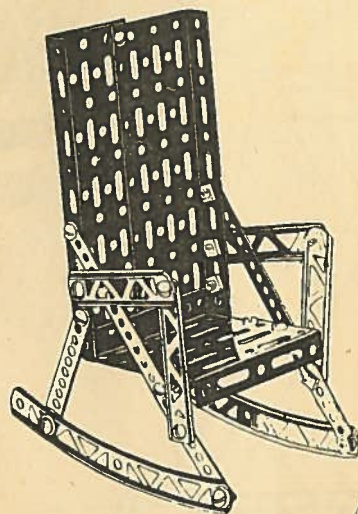
Stone Mason's Wheelbarrow



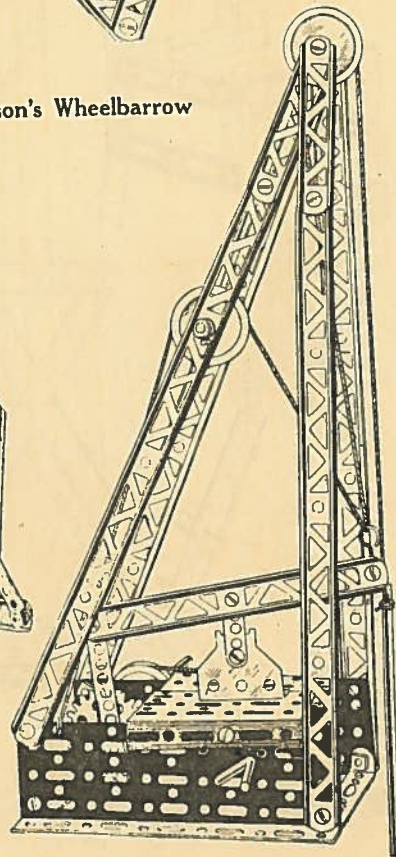
Drill Press



Candy Puller

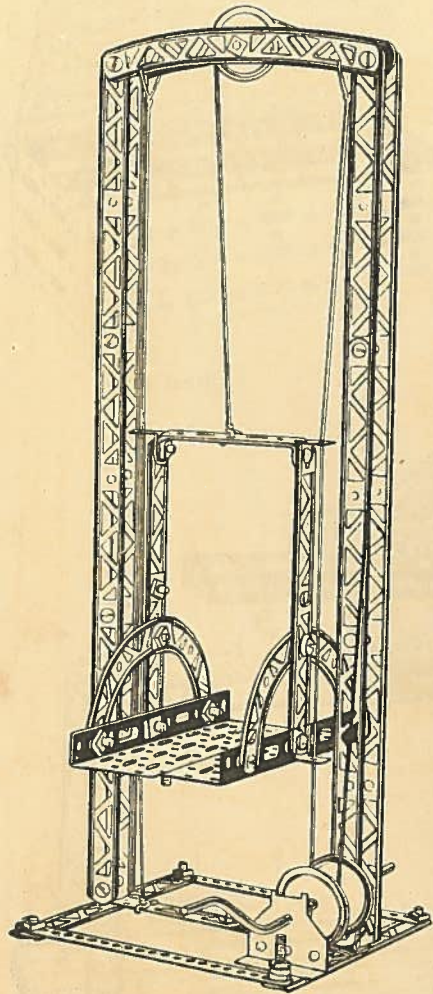


Rocking Chair

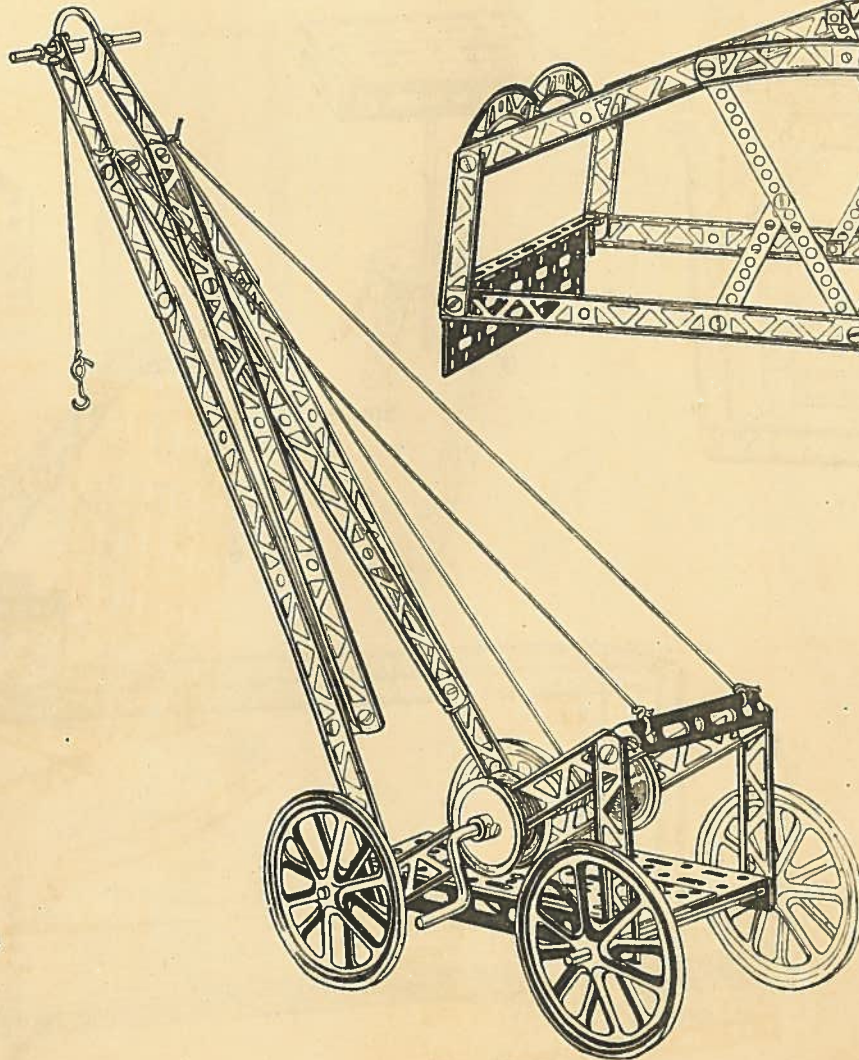


Well Driller

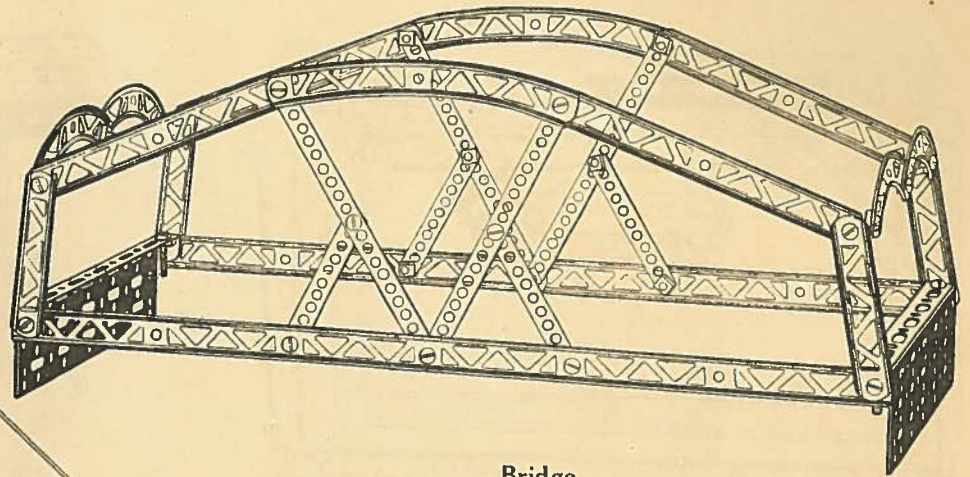
Models built with No. 3 Erector



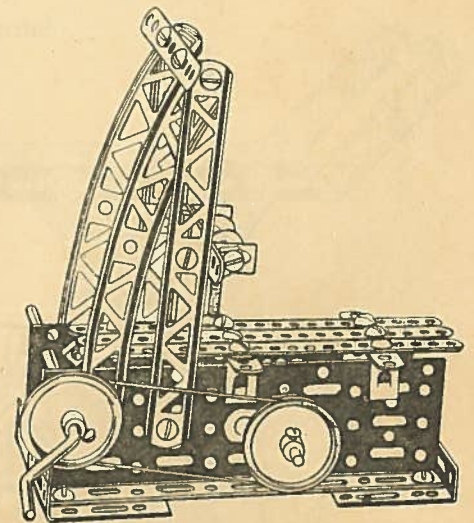
Builder's Hoist



Portable Derrick

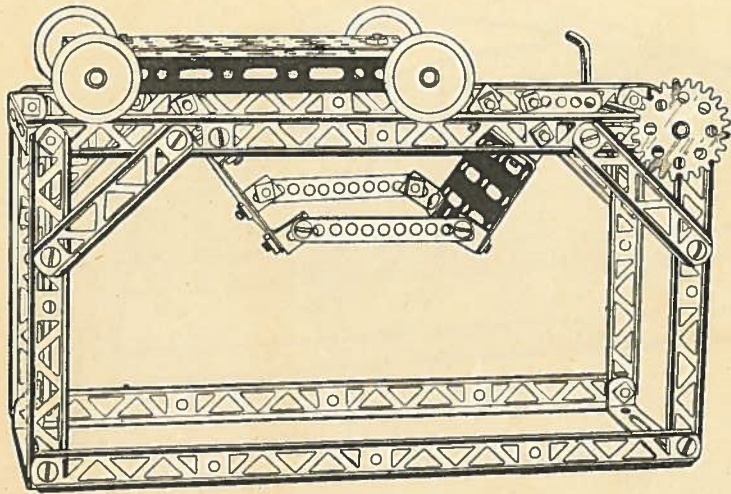


Bridge

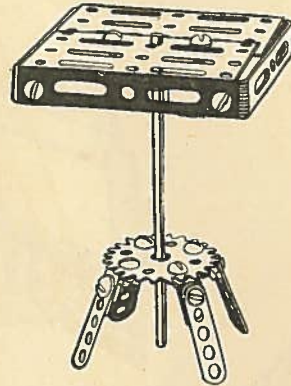


Planer

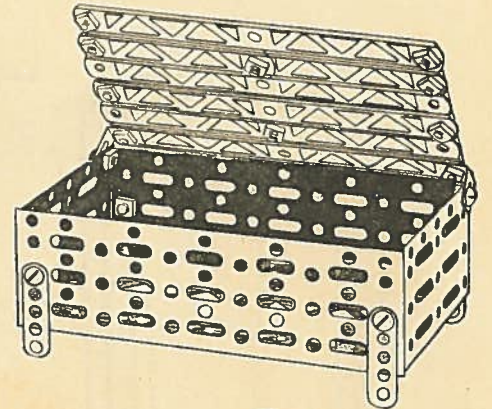
Models built with No. 3 Erector



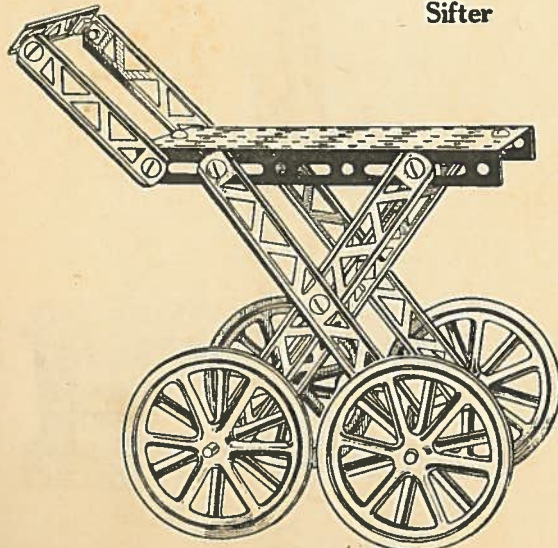
Sifter



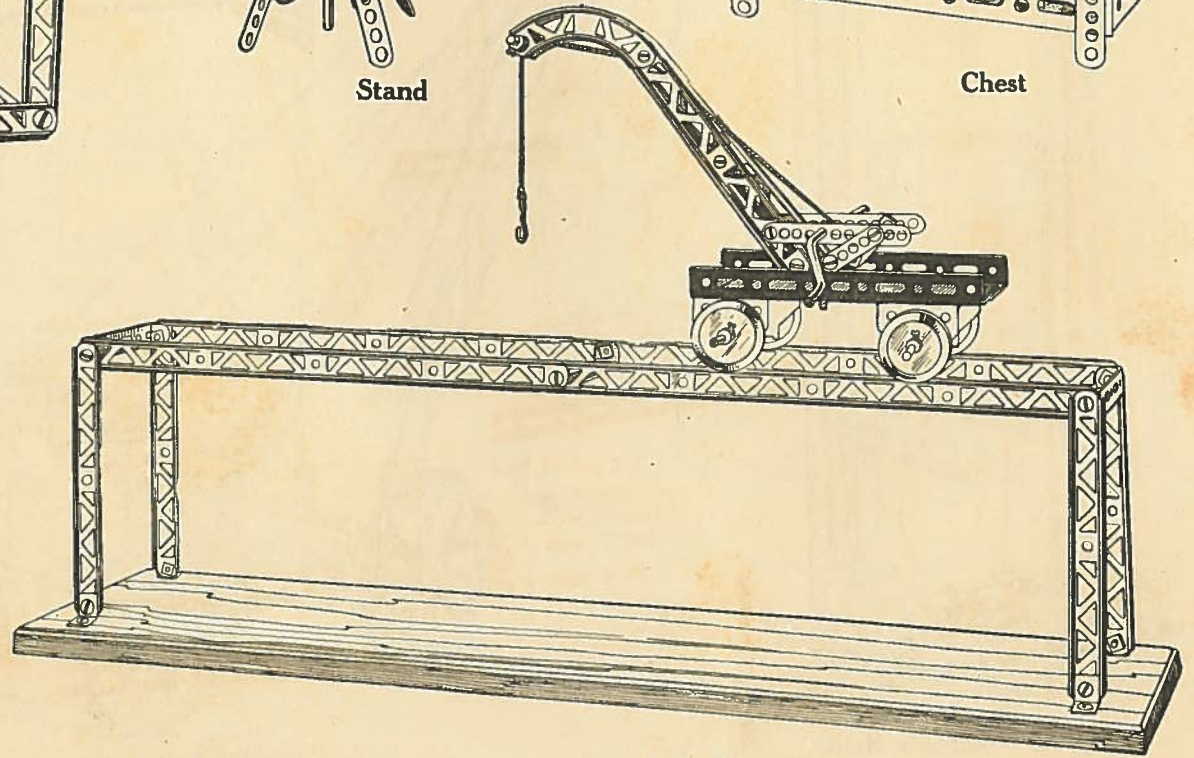
Stand



Chest

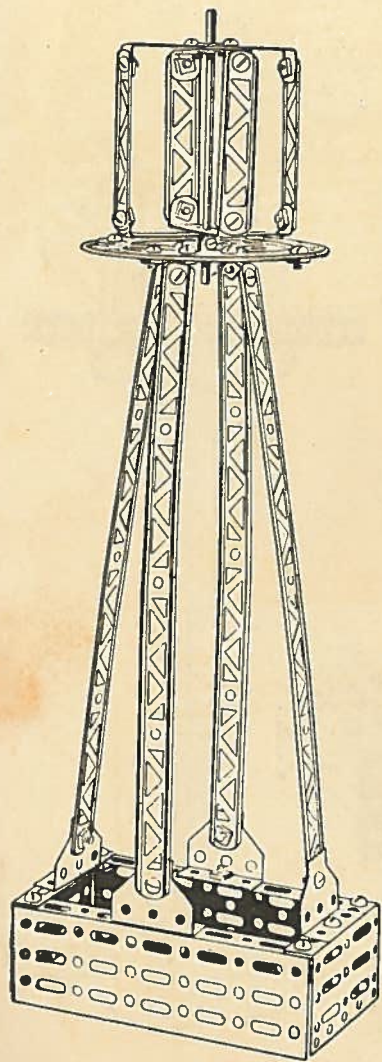


Tea Wagon

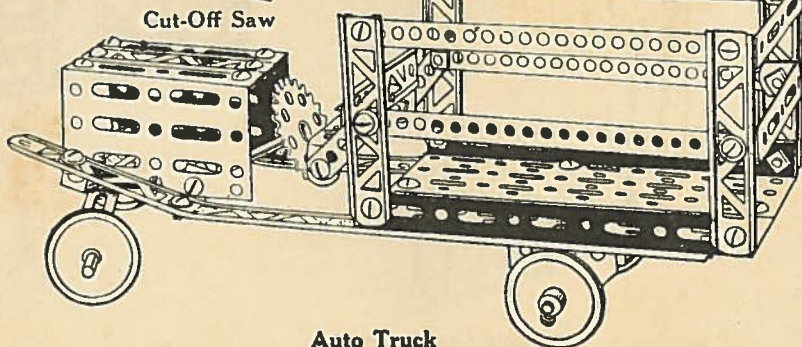
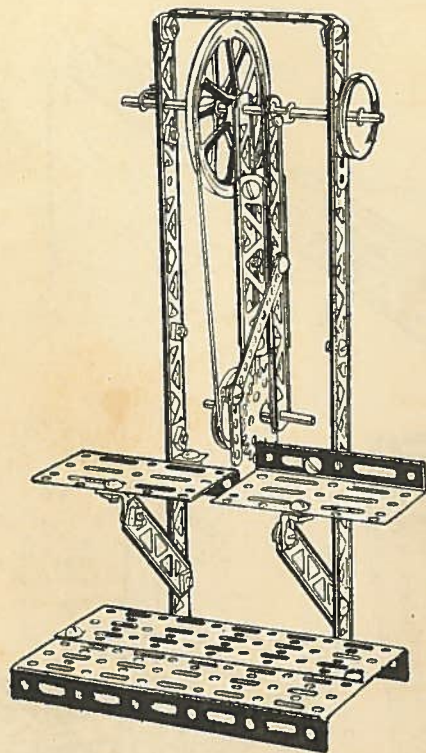


Travelling Crane

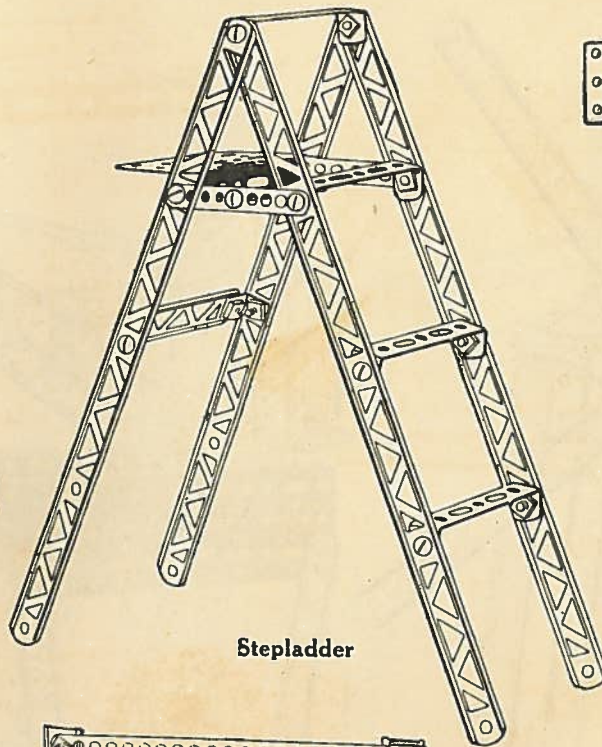
Models built with No. 3 Erector



Lighthouse



Auto Truck

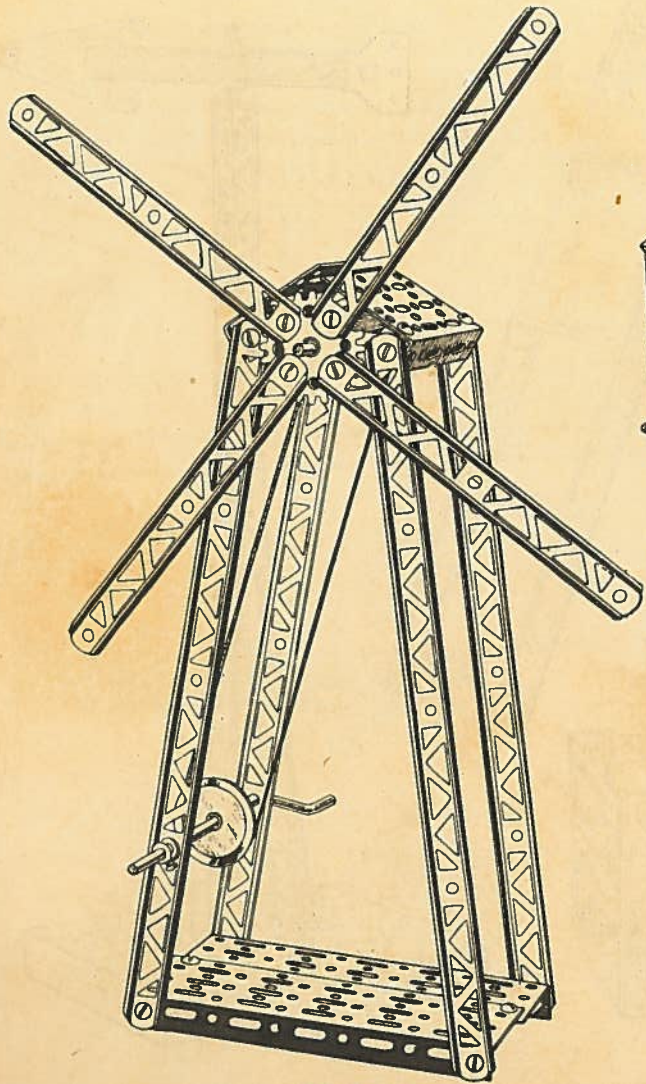


Stepladder

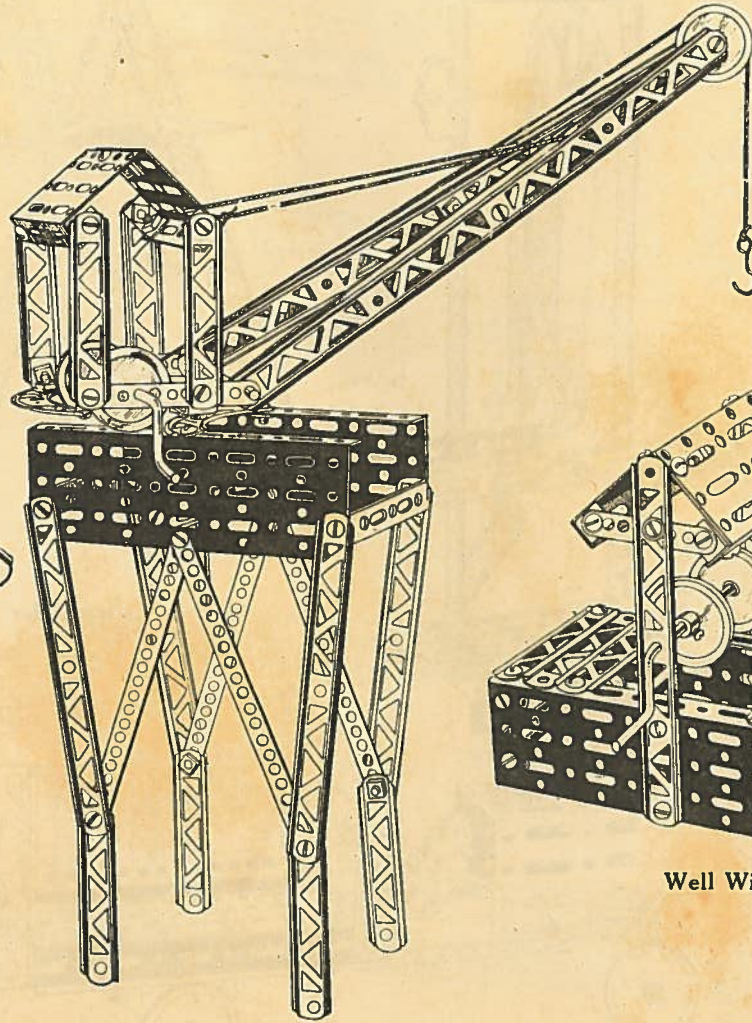


Weather Vane

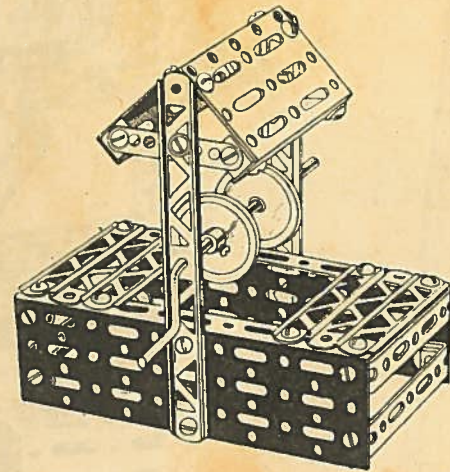
Models built with No. 3 Erector



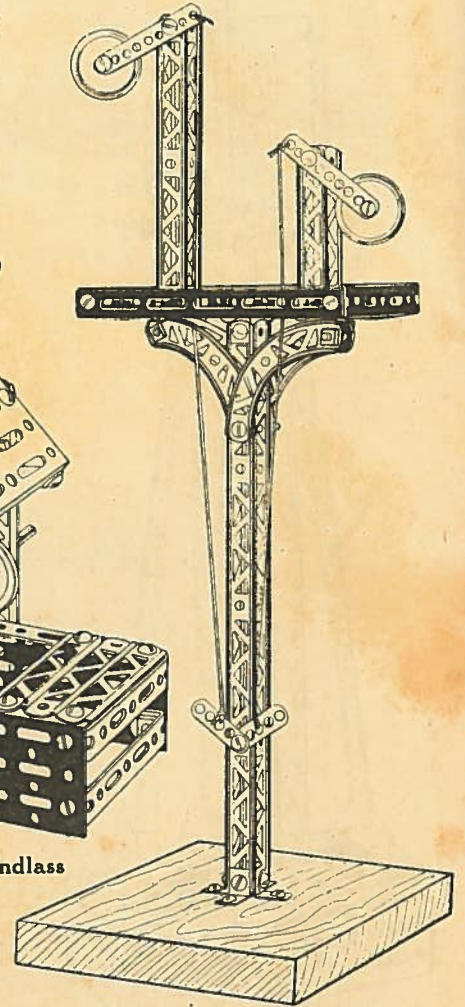
Windmill



-Ship Crane

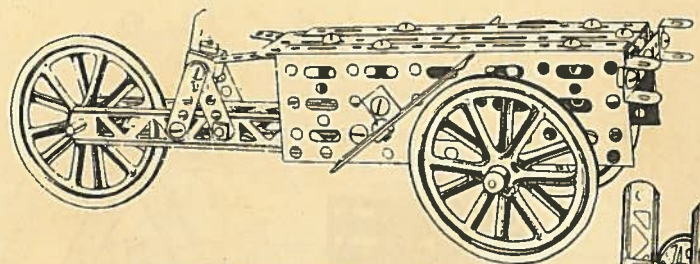


Well Windlass

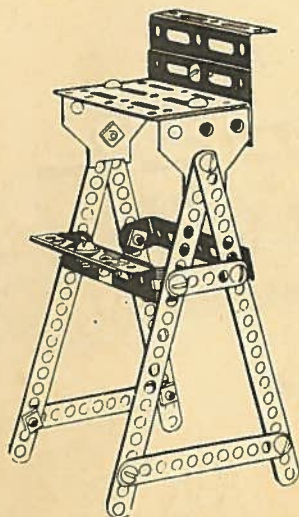


Semaphore

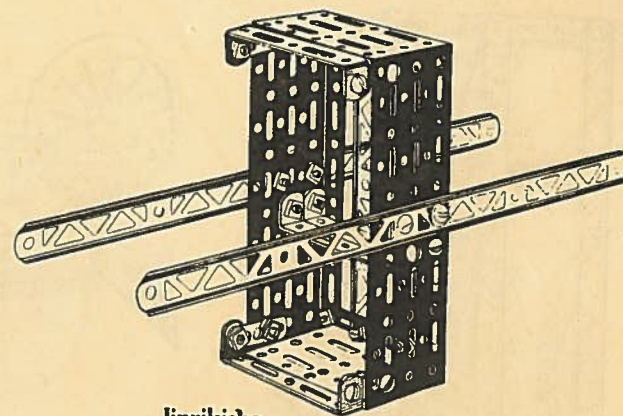
Models built with No. 3 Erector



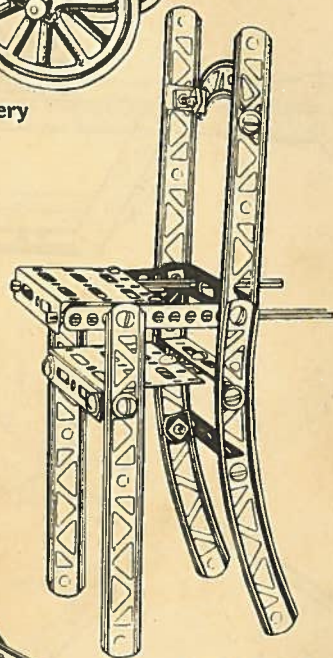
Rural Motor Parcel Post Delivery



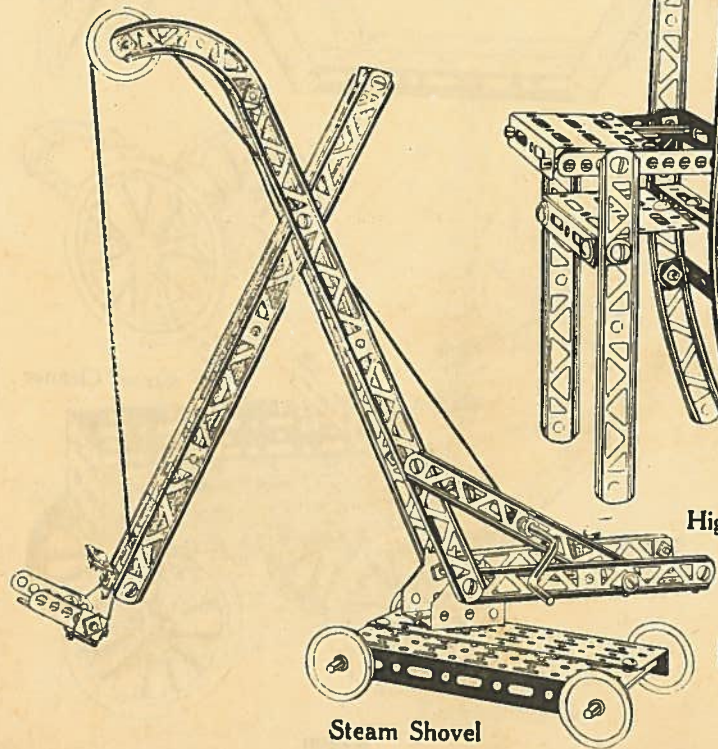
Judge's Chair



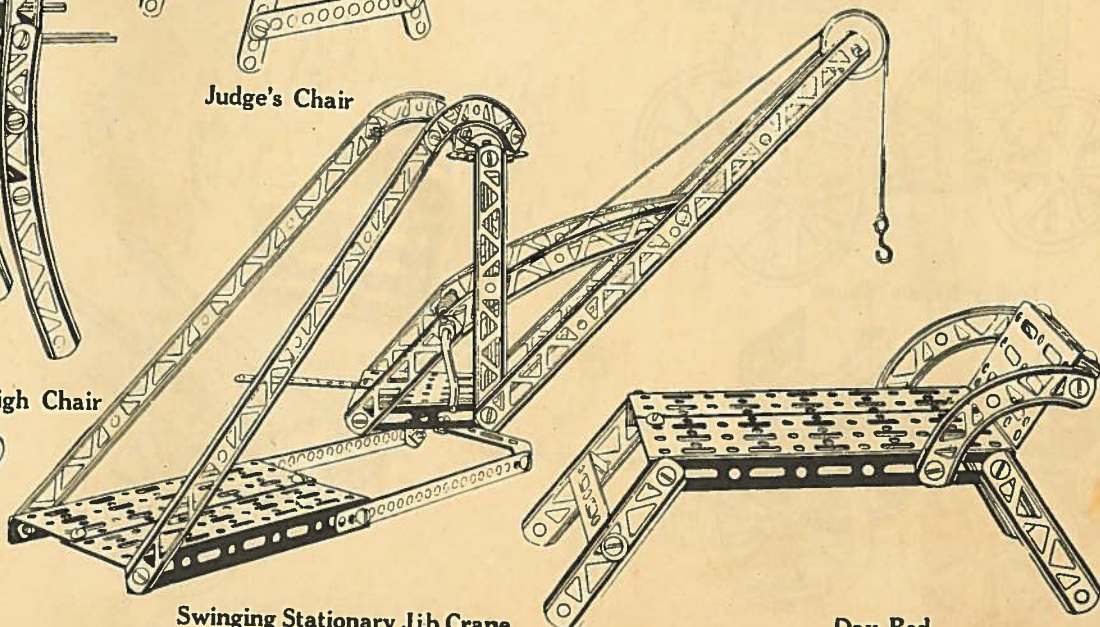
Jinrikisha



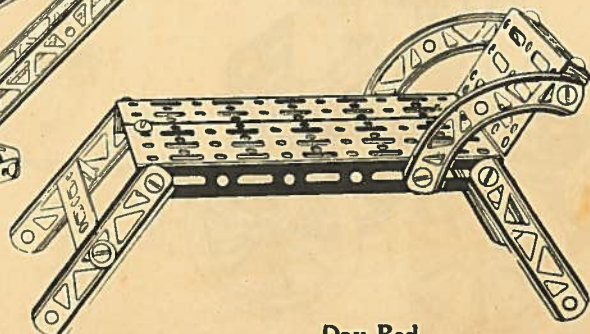
High Chair



Steam Shovel

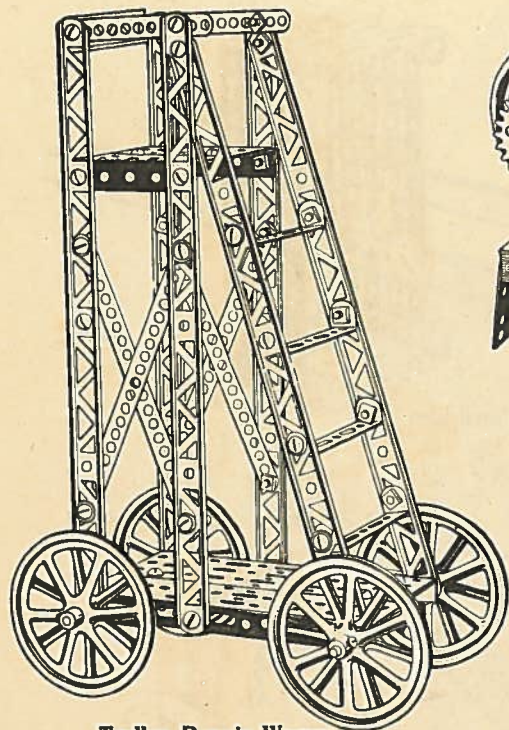


Swinging Stationary Jib Crane

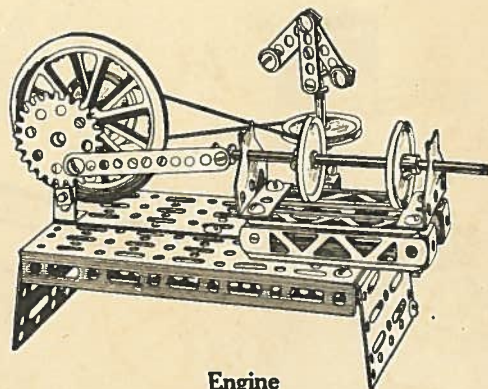


Day Bed

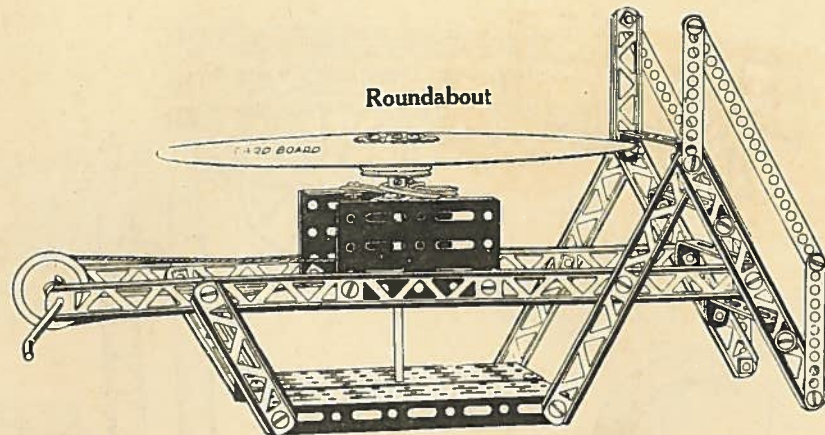
Models built with No. 3 Erector



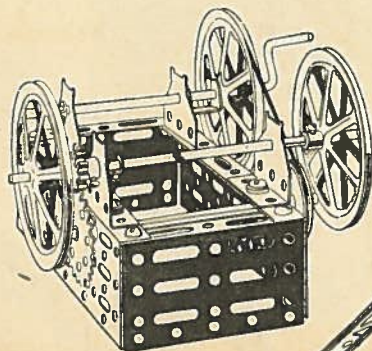
Trolley Repair Wagon



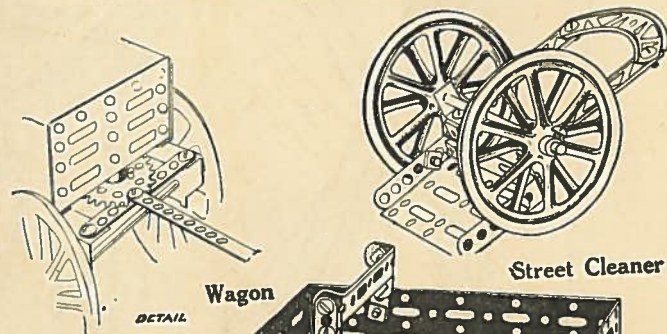
Engine



Roundabout

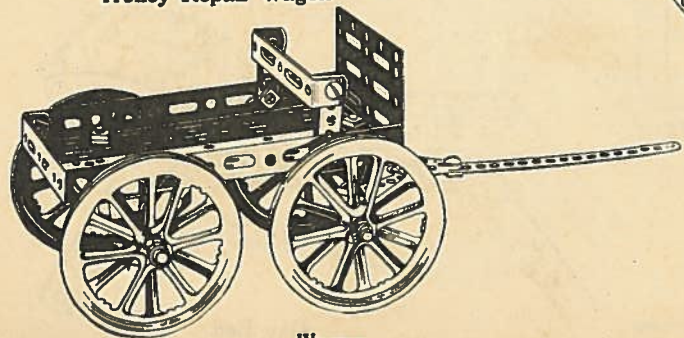


Power Unit

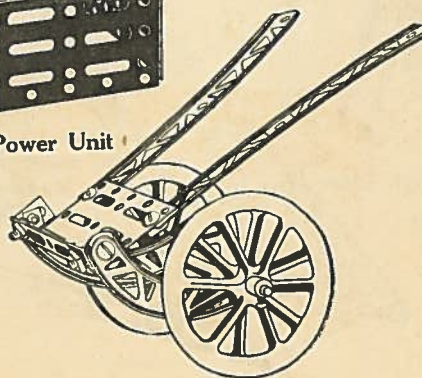


Street Cleaner

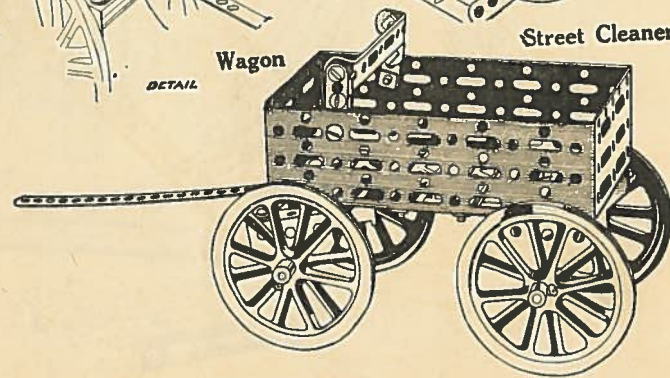
Wagon



Wagon

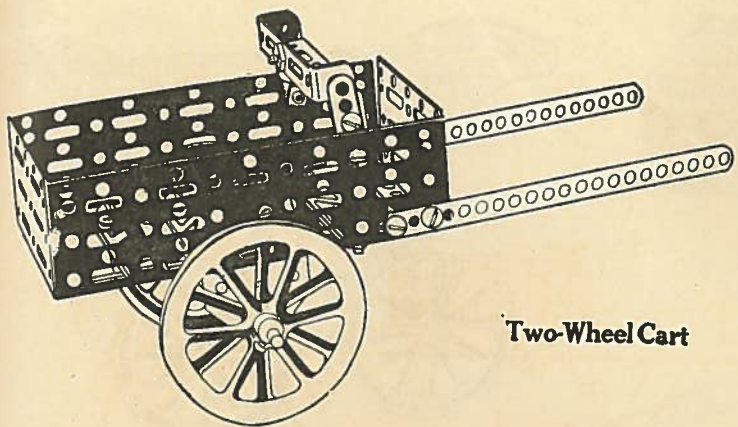


Sulky

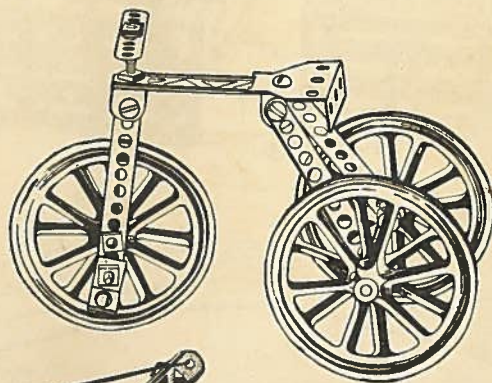


Wagon

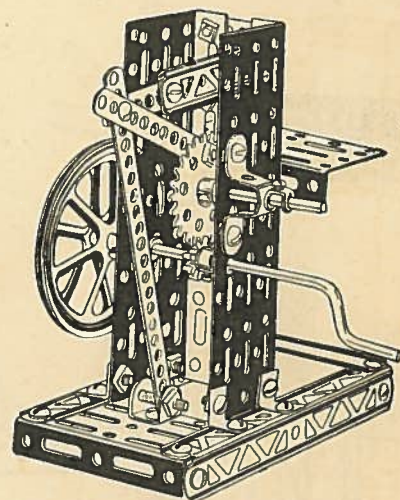
Models built with No. 3 Erector



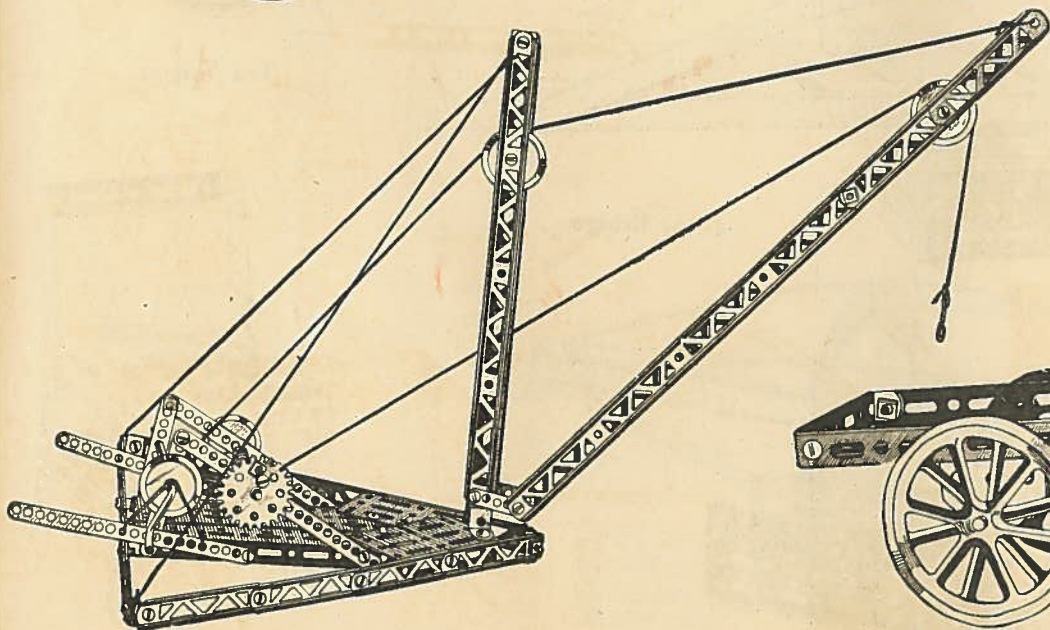
Two-Wheel Cart



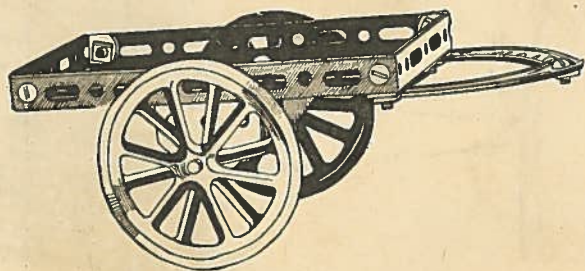
Velocipede



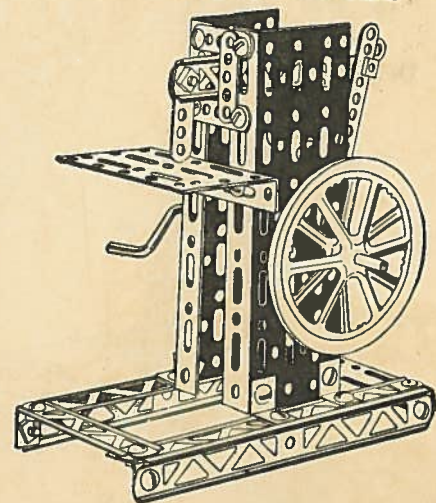
Shaper, Back View



Boom Derrick

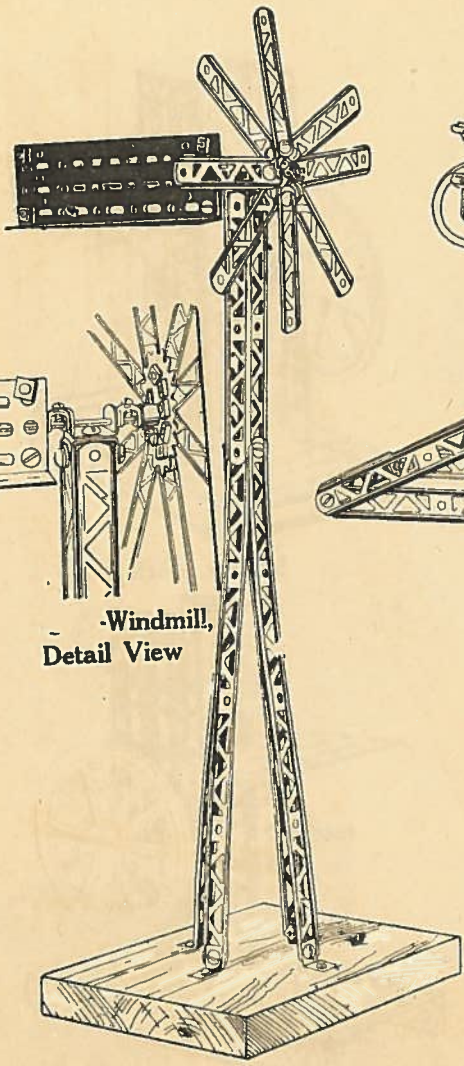


Street Vender's Wagon



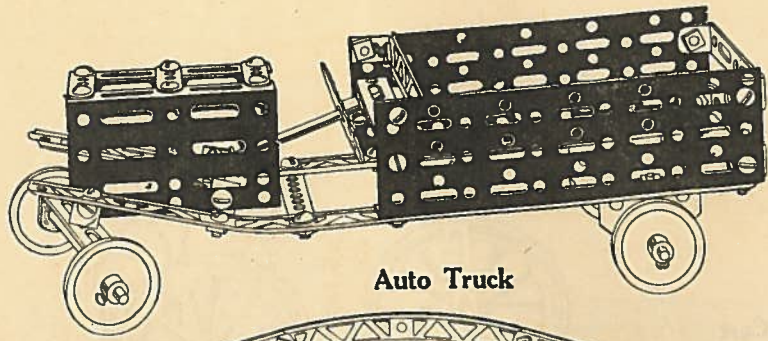
Shaper

Models built with No. 3 Erector

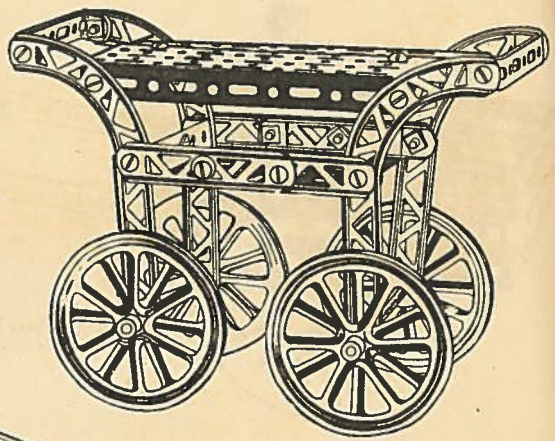


-Windmill,
Detail View

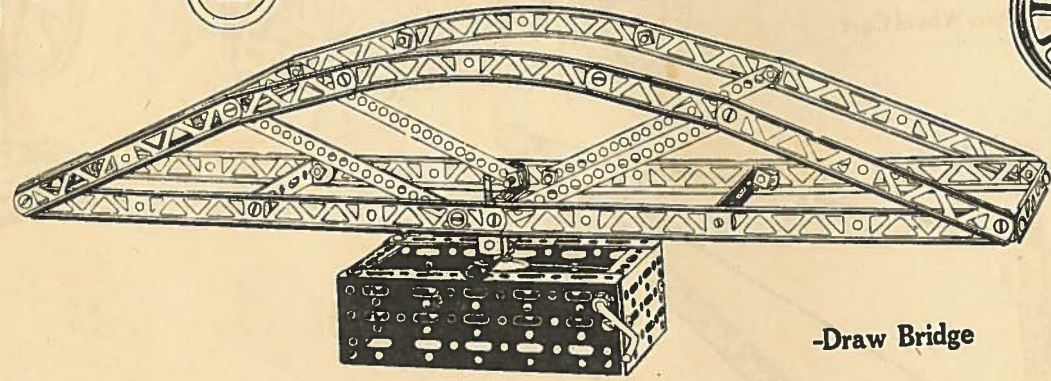
-Windmill



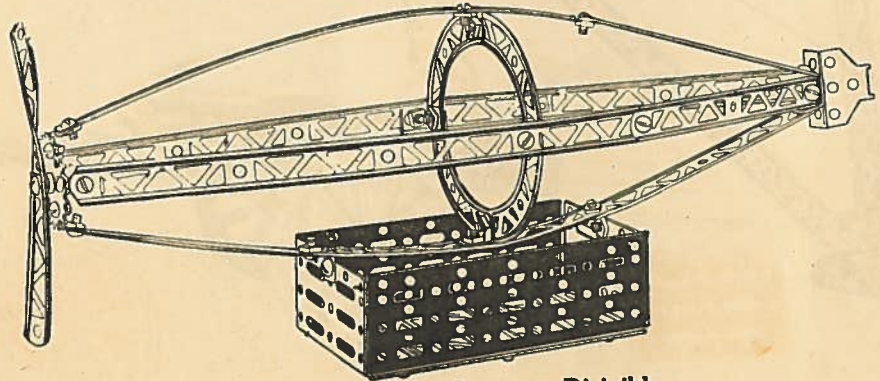
Auto Truck



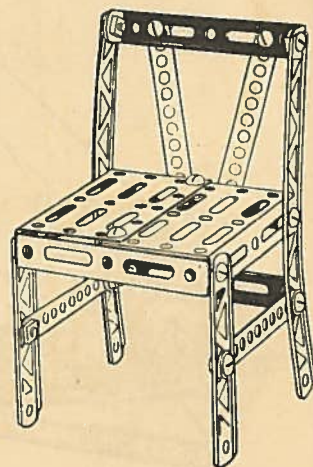
-Tea Wagon



-Draw Bridge

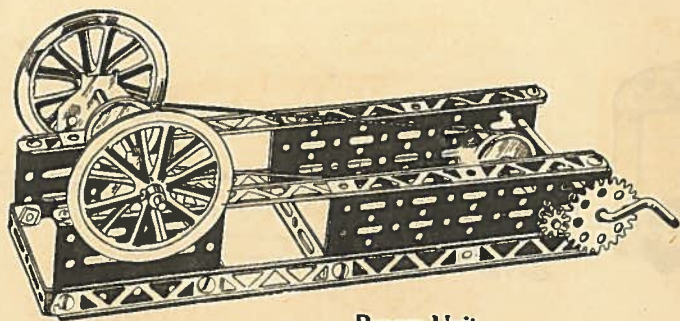


-Dirigible

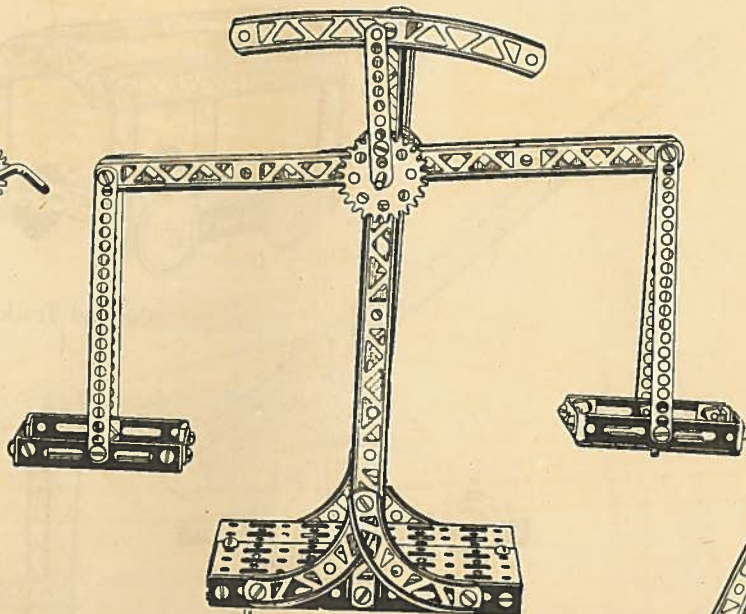


Chair

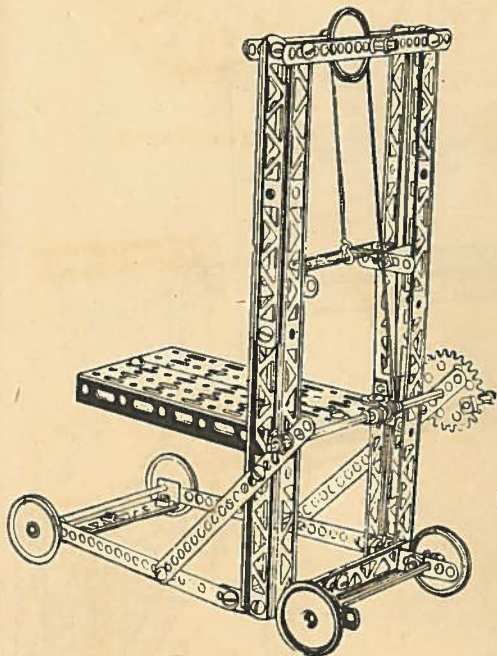
Models built with No. 3 Erector



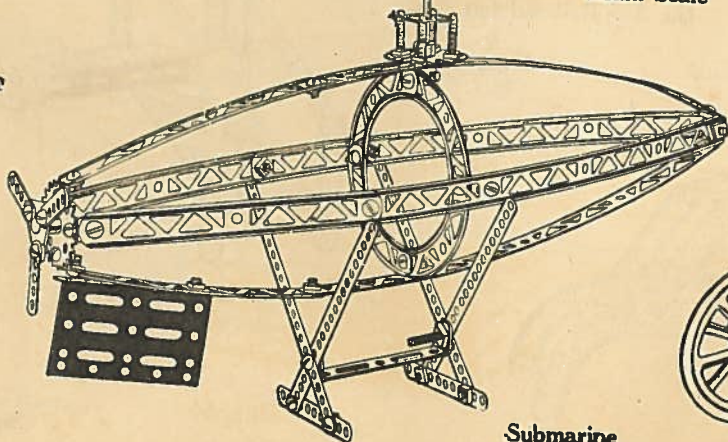
Power Unit



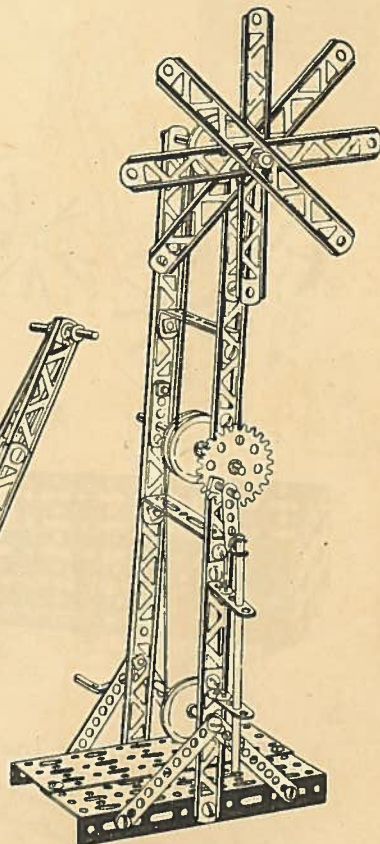
Beam Scale



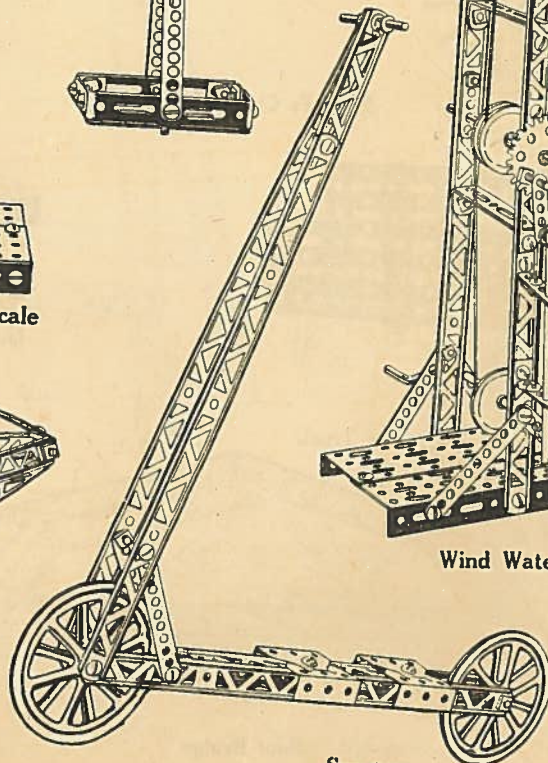
Tying Machine



Submarine

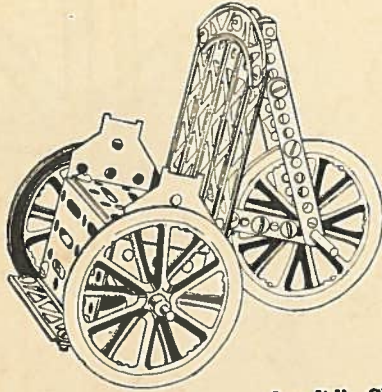


Wind Water Pump

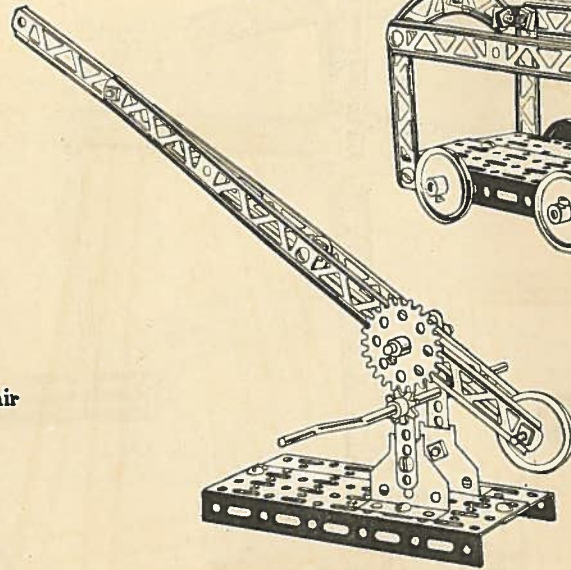


Scooter

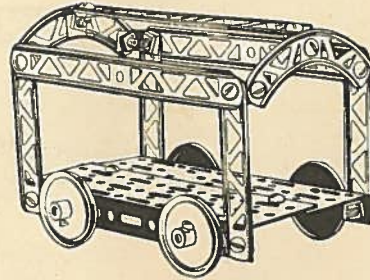
Models built with No. 3 Erector



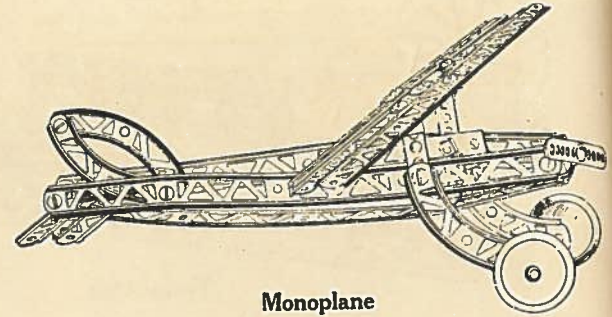
Invalid's Chair



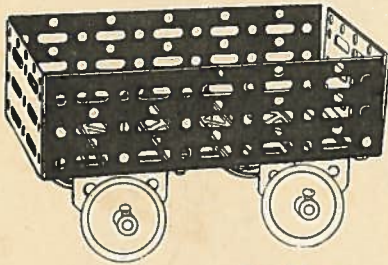
No. 307 Railroad Lift Gate



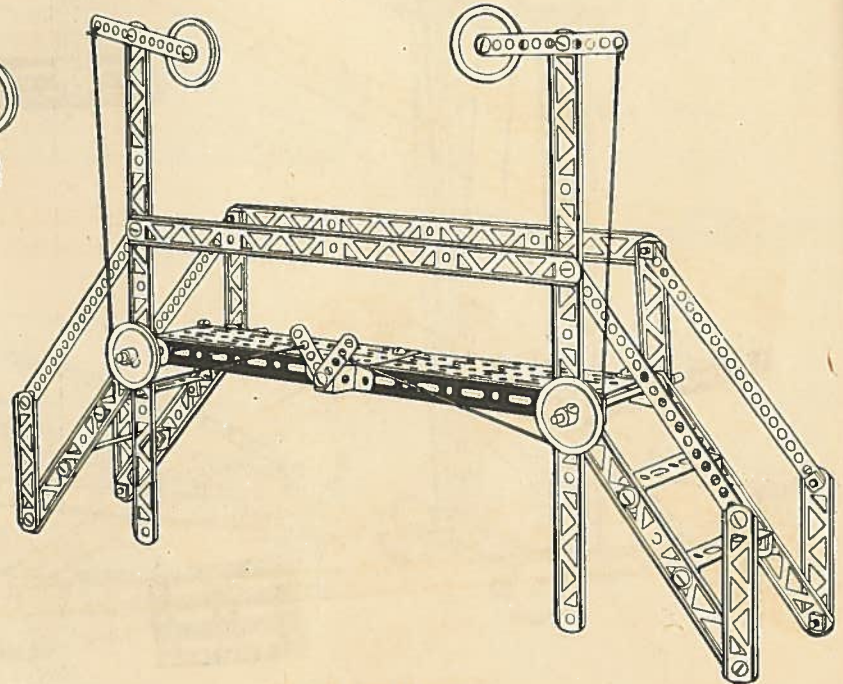
Covered Truck



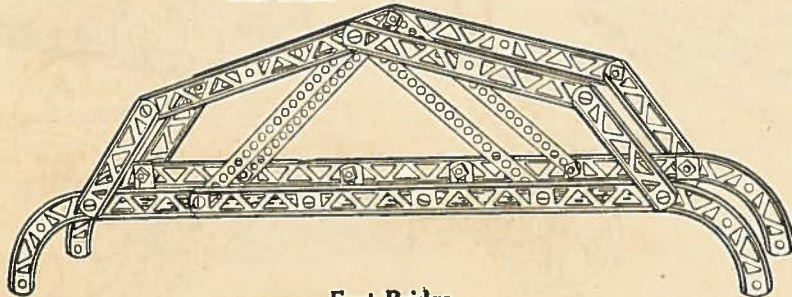
Monoplane



Box Truck

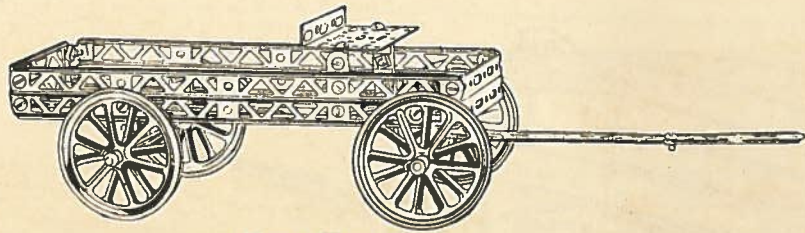


Signal Bridge

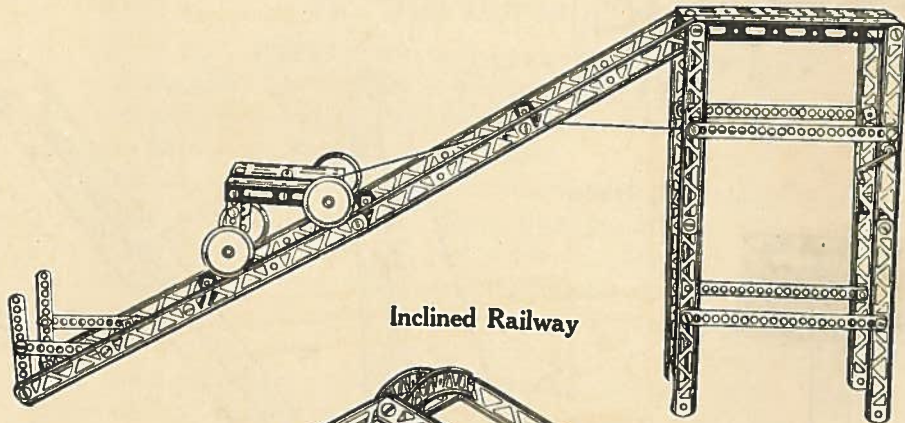


Foot Bridge

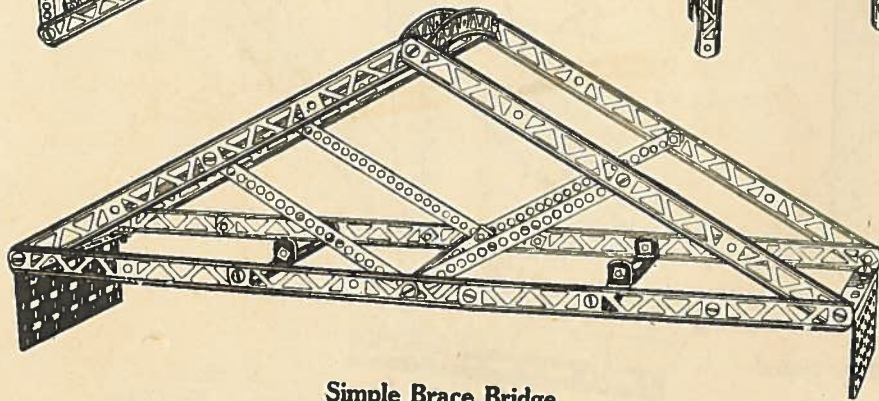
Models built with No. 3 Erector



Farm Wagon



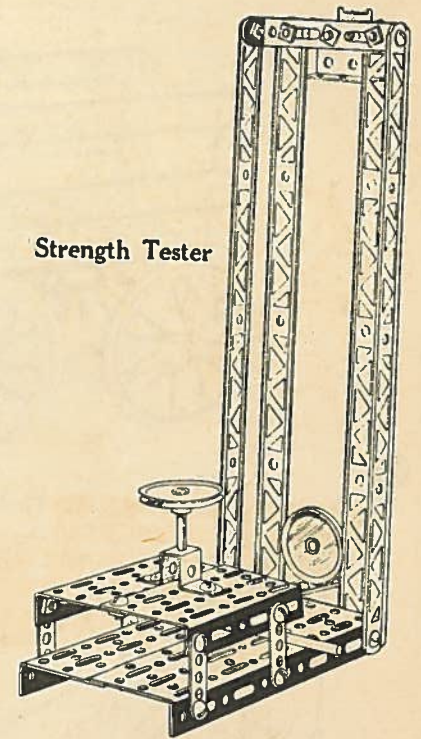
Inclined Railway



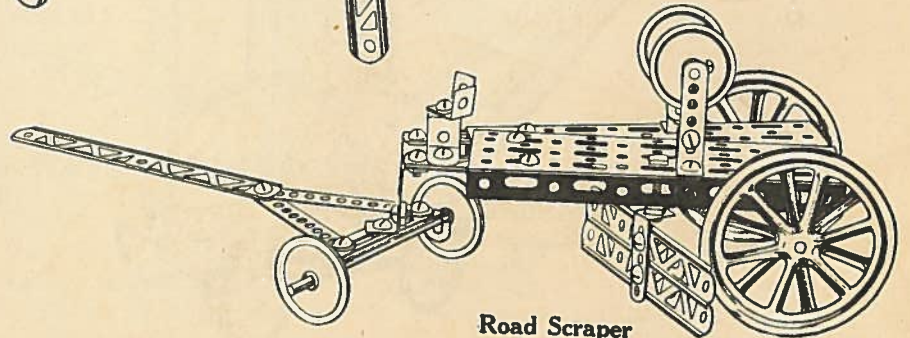
Simple Brace Bridge



Easel

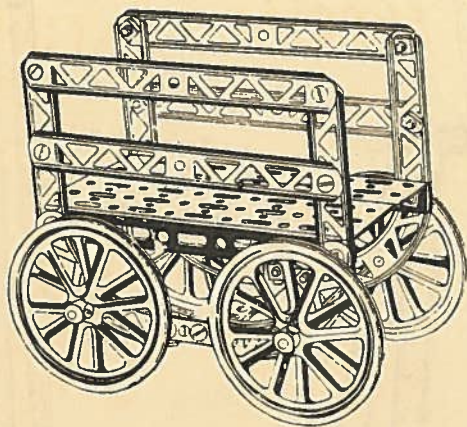


Strength Tester

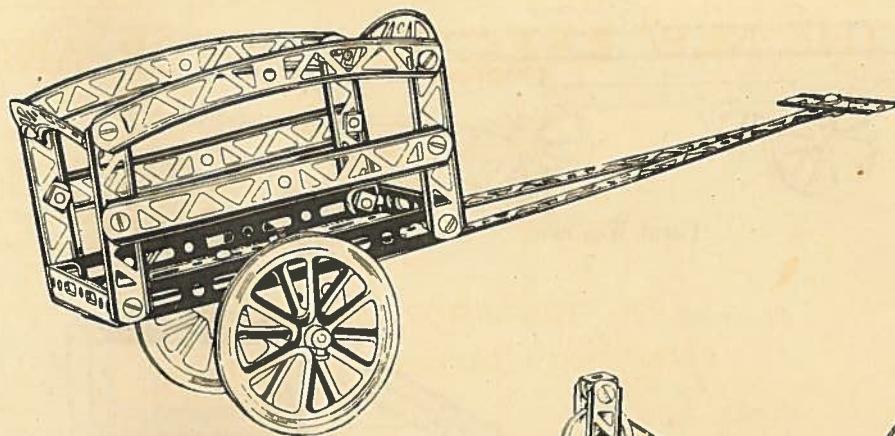


Road Scraper

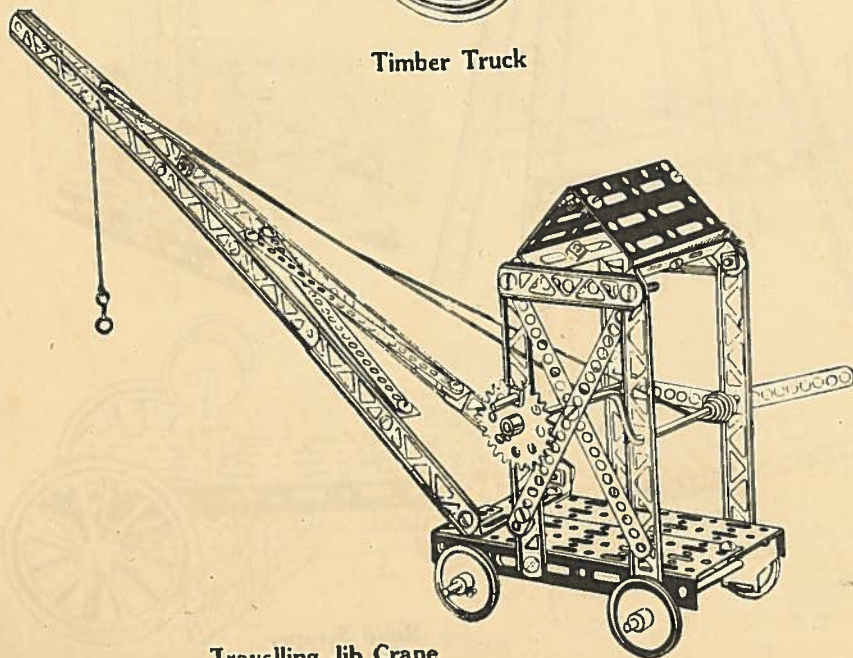
Models built with No. 3 Erector



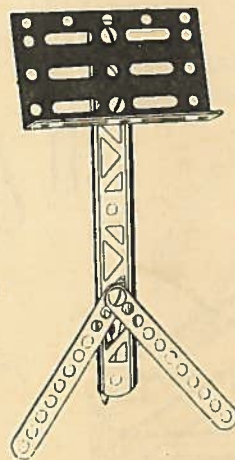
Timber Truck



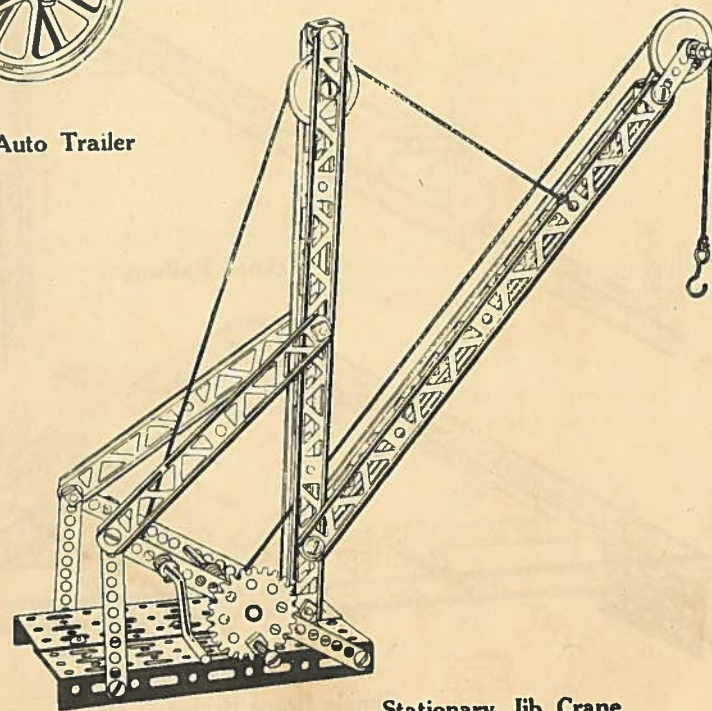
Auto Trailer



Travelling Jib Crane



Music Stand



Stationary Jib Crane

THE NEW **ERECTOR** MOTOR AND ITS BIG SPECIAL FEATURES

Section 3

- 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.

ERECTOR MOTOR ASSEMBLY

EXPERIMENT 1—PARTS OF YOUR MOTOR:

All the parts of your motor are shown and named in Fig. 1. By referring to these parts you will readily understand the instructions given below, which tell you how to put your motor together.

The illustrations on this in the following pages explain how to assemble the powerful Erector motor. These illustrations are all so clear, it is not necessary to write any further instructions. I am quite sure you will have no difficulty in assembling and disassembling this motor, so that it will operate and run your models and do many interesting experiments in electricity.

There is one point I want to caution you on particularly, and that is, be sure the terminal screws are insulated from the motor side. There is a cross section showing how to obtain perfect insulation. (See Fig. 5). Follow this carefully. If screws are not insulated thoroughly, you get a short circuit and motor will not function. Remember also that all joints in electrical apparatus must be clean and tight or the current will not flow.

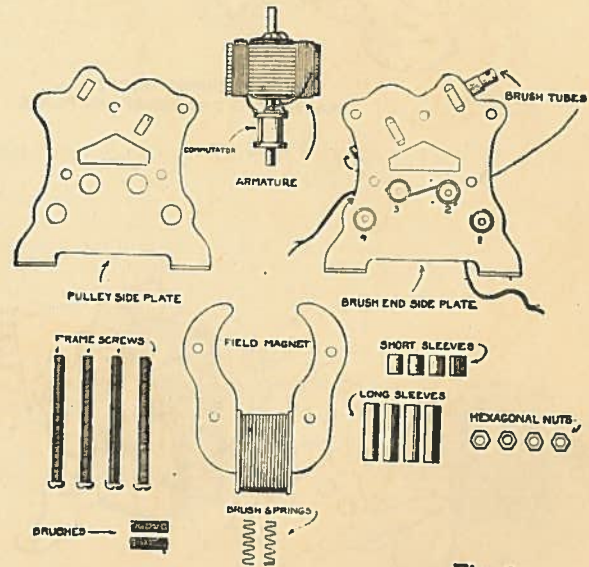


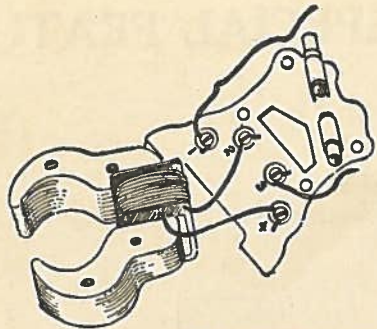
Fig. 1

THE A. C. GILBERT COMPANY, NEW HAVEN, CONNECTICUT, U. S. A.

IN ENGLAND

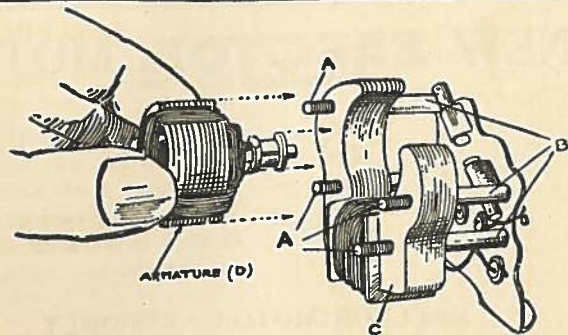
The A. C. Gilbert Company,
109 Kingsway,
London, W. C. 2.

THE NEW ERECTOR MOTOR



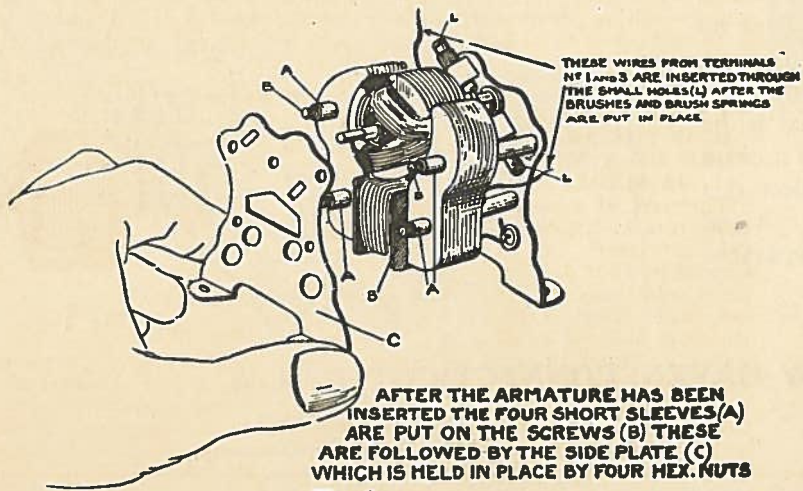
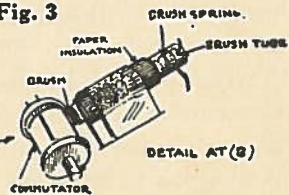
HOW TO CONNECT FIELD
MAGNET TO THE BRUSH SIDE PLATE

Fig. 2



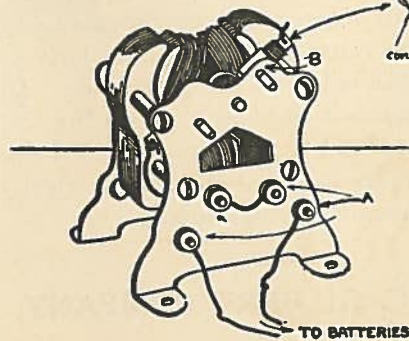
THE TWO BRASS AND TWO STEEL SCREWS 'A' ARE INSERTED IN THE BRUSH SIDE PLATE. THE BRASS AND STEEL SLEEVES ARE PUT IN PLACE AS SHOWN AT 'B'. THEN SLIP THE FIELD MAGNET 'C' OVER THE PROJECTING SCREWS. THE ARMATURE 'D' IS INSERTED AS SHOWN ABOVE

Fig. 3



AFTER THE ARMATURE HAS BEEN INSERTED THE FOUR SHORT SLEEVES (A) ARE PUT ON THE SCREWS (B) THESE ARE FOLLOWED BY THE SIDE PLATE (C) WHICH IS HELD IN PLACE BY FOUR HEX. NUTS

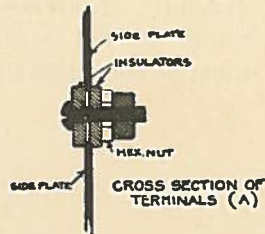
Fig. 4



BE SURE TO FASTEN ALL WIRES BETWEEN INSULATORS AND NUTS. DO NOT LET WIRE TOUCH MOTOR SIDE PLATE.

MOTOR ASSEMBLED READY TO RUN

Fig. 5



CROSS SECTION OF
TERMINALS (A)

THE NEW ERECTOR MOTOR

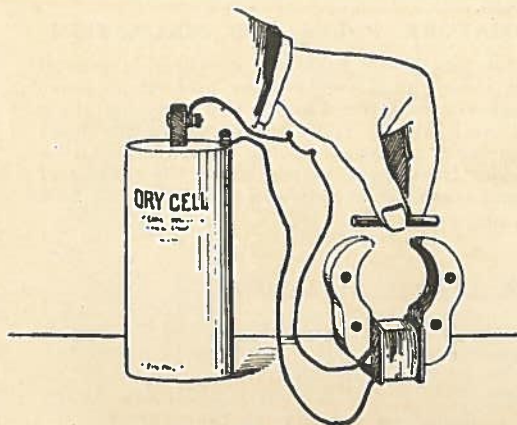


Fig. 6

EXPERIMENT 2—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. 6 shows how the connections are made.

EXPERIMENT 3—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. 7) 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 in Fig. 8.

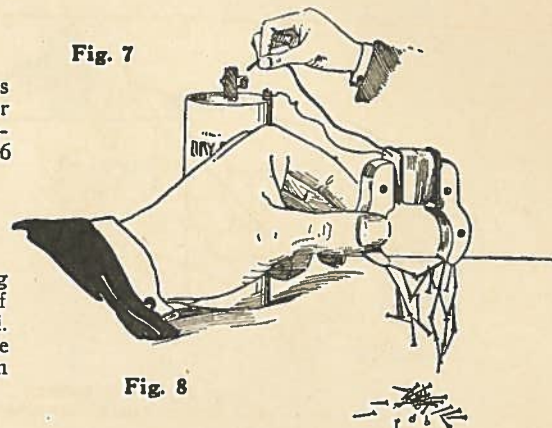


Fig. 8

EXPERIMENT 4—HOW TO TRACE THE MAGNETIC FIELD

Connect the coil of the field magnet to the dry cell, or battery, as shown in Fig. 9. 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.

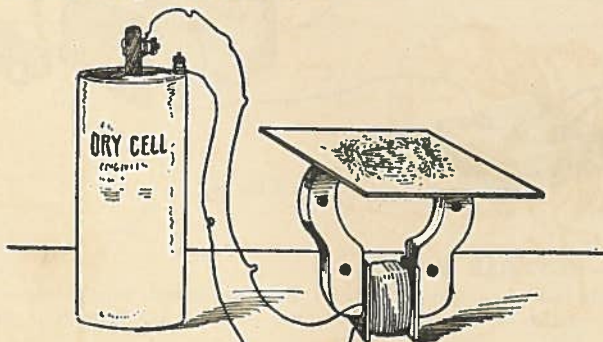


Fig. 9

EXPERIMENT 5—HOW TO MAGNETIZE 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 magnetized 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.

EXPERIMENT 6—HOW THE ARMATURE OF A MOTOR IS MADE:

The part of a motor that rotates is called the armature. It is formed by four distinct parts, and these are (1) the shaft; (2) the core, which is built up of 12 plates, or laminations of soft iron; (3) the windings, or coils of insulated wire wound on the pole pieces of the core; and (4) the commutator, which is formed of three brass segments insulated from each other by means of hard fiber checks. The coils are connected to the segments of the commutator, as shown at A in Fig. 10, and the armature complete is shown at B.

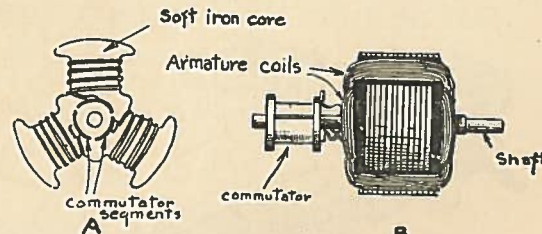


Fig. 10

THE NEW ERECTOR MOTOR

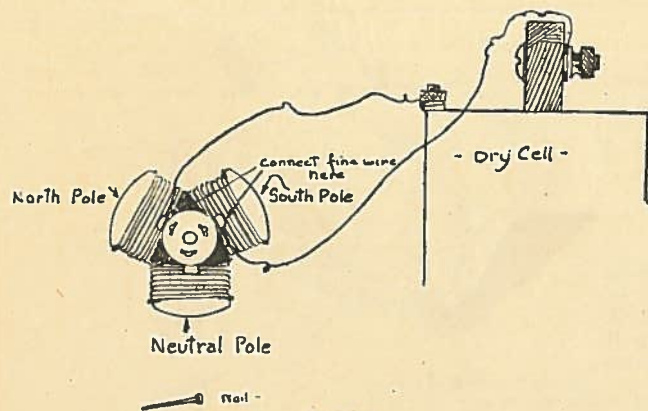


Fig. 11

EXPERIMENT 7—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. 11. Connect two of these wires at a time with a dry cell or a battery. Now lay 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 8—ERECTOR MOTOR AND ITS ATTACHMENTS:

This motor is included with the Famous No. 4 and Super Erector No. 7, and the Nos. 8 and 10 sets. Battery current. It requires from one to four dry cells, according to power required. If used on storage battery, two or four volts, or one four-volt battery will do.

It is better to use an Erector Transformer, since 90% of the current is 110 volts, Alternating Current, and the Erector Transformer is designed to operate on that current. It will give you more power than batteries and in the long run save you money. The New Transformer, as illustrated in Fig. 12, embodies all the latest designs, including rheostat on side. This is an accessory and does not come with sets but can be purchased separately.

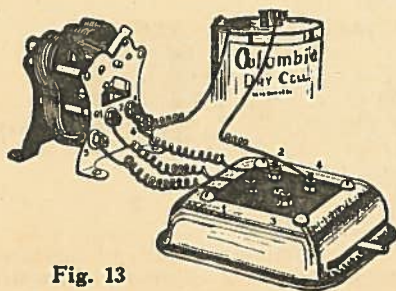


Fig. 13

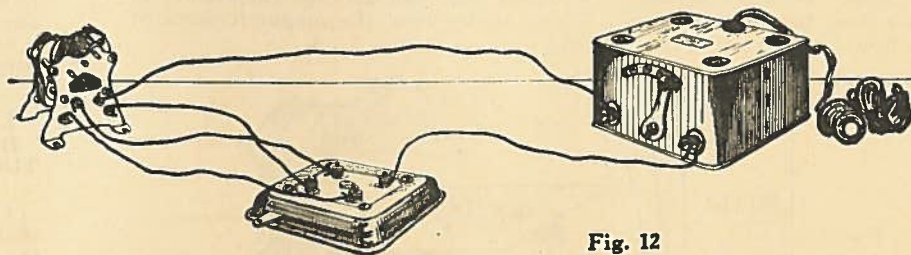


Fig. 12

EXPERIMENT 9—REVERSE BASE:

The Reverse Base P59 is an accessory and is not included with sets, but can be purchased separately. The purpose of the Reverse Base is to change the direction that the motor will run so that you can operate your model either forward or backward. (See Fig. 13).

THE NEW ERECTOR MOTOR

EXPERIMENT 10—HOW TO CHANGE THE SPEED OF YOUR MOTOR

To make your motor run at varying speeds, what you need to do is to connect a rheostat, as an adjustable, or variable resistance is called, in the circuit between the motor and the dry cell, or battery, as shown in Fig. 14. Now by cutting in or out more or less resistance by means of the rheostat, a smaller or a larger amount of current will flow through the circuit and your motor will run slower or faster accordingly.

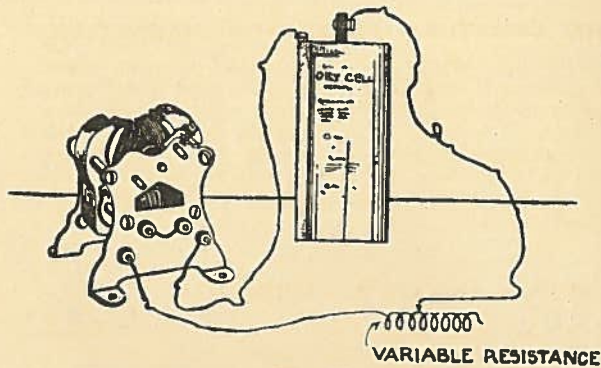


Fig. 14

EXPERIMENT 11—HOW TO MAKE A WIRE RHEOSTAT:

Drive ten brads or tacks in a pine board about 5 inches wide and 10 inches long and drive them down until the heads project about $\frac{1}{4}$ inch. Now take a piece of No. 30 iron wire, or better, because it has a higher resistance, a piece of German silver wire of the same size, and twist one end around one of the end tacks, then carry it to

the corresponding tack at the other end and so on until the last tack is reached, where you twist the other end of the wire fast. Fig. 15 shows how the rheostat is made. To vary the resistance, all you have to do is to clip the clip on to various parts of the wire.

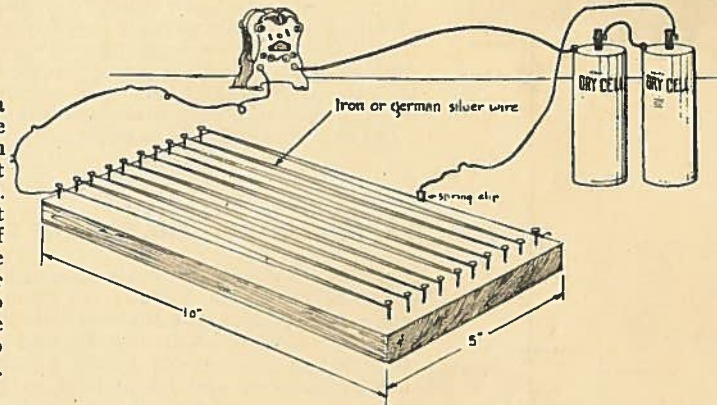


Fig. 15

SOME MYSTO EXPERIMENTS WITH YOUR MOTOR

EXPERIMENT 12—THE DISAPPEARING COLORS:

Cut a disk out of pasteboard 3 inches in diameter. Divide it into three equal spaces, as shown in Fig. 16. Cut out and paste on three colors of tissue paper, namely, red, green, and violet; then place the disk on the shaft of your motor and switch on the current. When the disk is rotating fast enough the colors will blend into one and you will not be able to see any of them.

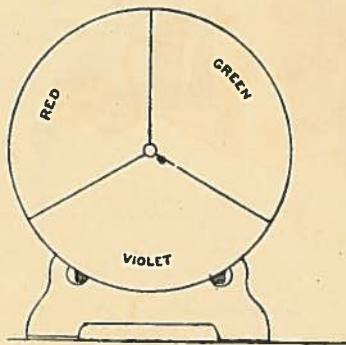


Fig. 16

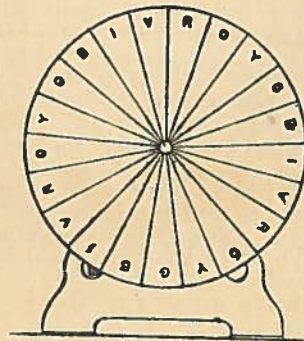


Fig. 17

HOW MANY COLORS MAKE WHITE:

By dividing the disk into 21 spaces and pasting on red, orange, yellow, green, blue, indigo, and violet pieces of tissue paper, as shown in Fig. 17, and then rotating the disk with your motor, the many-colored surface will appear to be white. If the disk takes on a gray color when it is rotating, it is because the colors of the tissue paper are not exactly the right shade.

THE NEW ERECTOR MOTOR

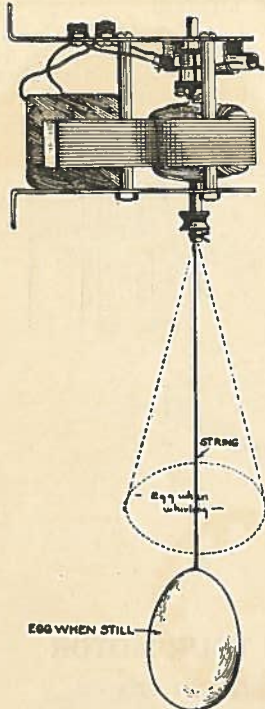


Fig. 20

EXPERIMENT 15—THE ROLY-POLY EGG:

Here is a trick with an egg that Columbus didn't know anything about. Take a fresh egg (and be sure it is fresh) and make a hole about $\frac{1}{8}$ inch in diameter at both ends; this done, carefully blow out the contents and then fasten a thread to one end of the shell with a drop of sealing wax and tie the other end of the thread to the shaft of your motor. Hold the latter so that the shaft is vertical and slowly start up the motor, when the centrifugal force will make the egg whirl about its shortest diameter and so bring it to a horizontal position as shown in Fig. 20.

EXPERIMENT 13—THE BUZZ SAW:

Cut a saw-tooth edge on a cardboard disk 3 inches in diameter, as shown in Fig. 18. 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.

EXPERIMENT 14—THE SONG OF THE SIREN:

(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. 19, and mount it on the shaft of your motor. Take a rubber tube $\frac{1}{4}$ inch in diameter and 1 foot long, make a mouth-piece 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.

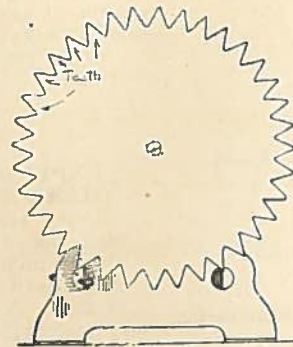


Fig. 18

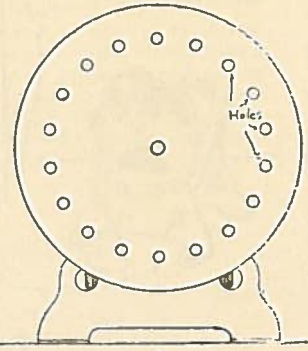


Fig. 19

EXPERIMENT 16—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. 21. 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.

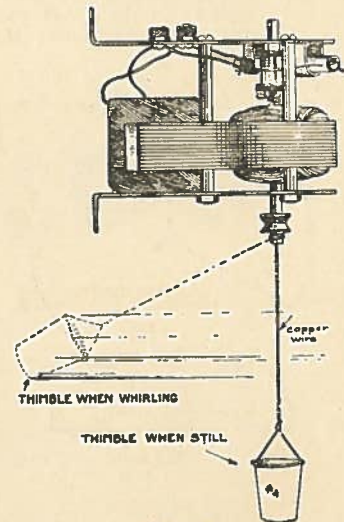


Fig. 21

THE NEW ERECTOR MOTOR

EXPERIMENT 17—HOW A STEAM ENGINE GOVERNOR WORKS:

Stick ends of two strings to two marbles with a bit of sealing wax and then fasten the ends of a thin rubber band, which you have cut in two, to the marbles with sealing wax, as shown in Fig. 22. Tie the free ends of the strings to the end of the motor shaft and start up your motor. When the motor is not running, the marbles will, of course, hang down, but when they begin to rotate they will rise against the action of the rubber strand.

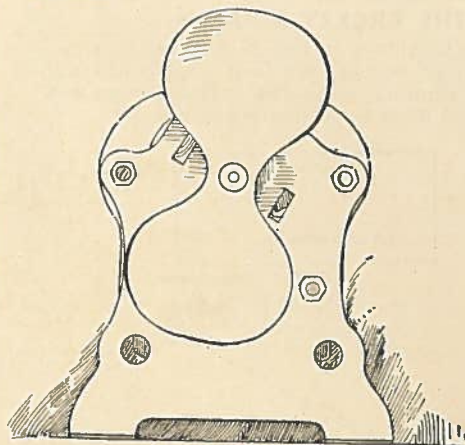


Fig. 25

EXPERIMENT 19—AN ELECTRIC FAN:

Screw a two-bladed fan on the shaft of your motor, as shown in Fig. 25. Switch on the current and be cool. Be sure to get the fan on the right way or it will blow the air toward the motor instead of away from the motor.

EXPERIMENT 18—HOW TO MAKE BLACK LINES APPEAR TO BE COLORED:

Draw a circle on a piece of pasteboard 3 inches in diameter. Cut it out and paste a piece of black paper over half of it and a piece of white paper over the other half of it. Now draw a series of arcs, that is, parts of circles, on the white part, as shown in Fig. 23. Mount the disk on the motor shaft, put a rheostat (see Experiment 11) in circuit with the battery and motor and cut in enough resistance to make the latter run slowly. Throw a strong light on the disk when the black lines will seem to be colored. The colors appear to be different to different people and by rotating the disk in the opposite direction the colors will apparently change. This is known as Benham's color effect.



Fig. 23

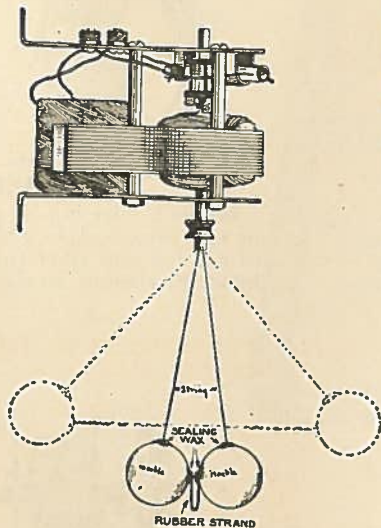


Fig. 22

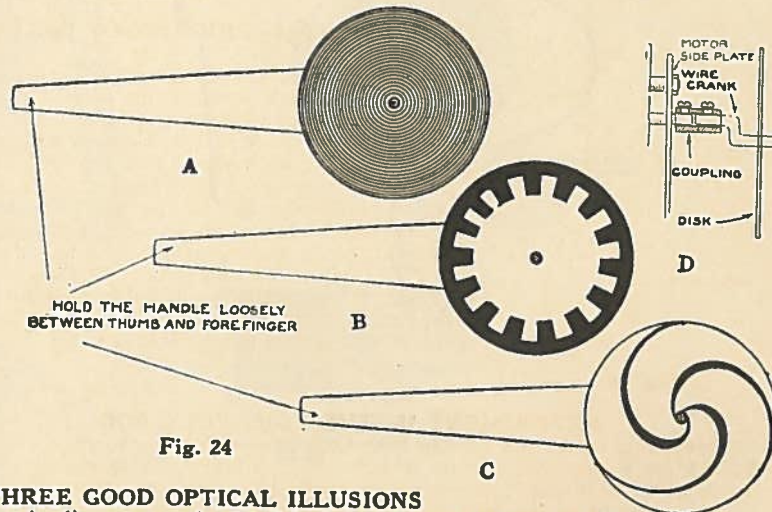


Fig. 24

EXPERIMENT 20—THREE GOOD OPTICAL ILLUSIONS

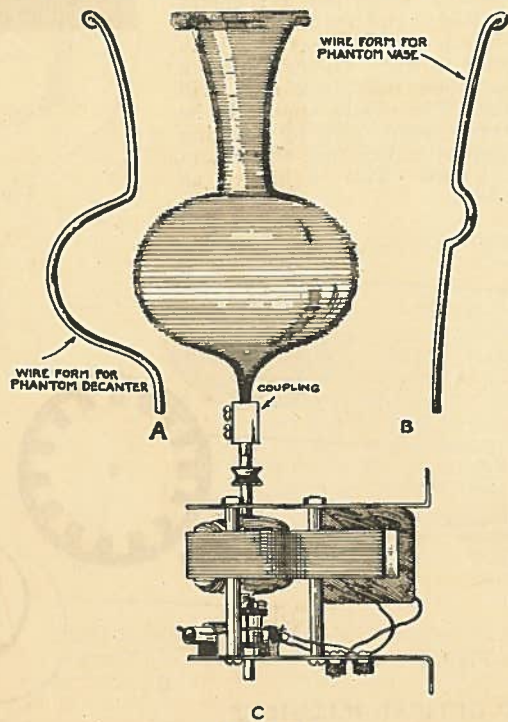
Cut out three disks of cardboard 2 inches in diameter and with 3-inch handles to them as shown at A, B, and C in Fig. 24, and punch a small hole in the center of each one. Now screw the shaft coupling to the shaft of your motor and screw a wire crank in the other end of the shaft coupling as at D.

Now slip one of the disks on the end of the crank, hold the handle between your thumb and forefinger loosely and run your motor very slowly when it will give the disk a rising motion. The circles on the first disk will seem to turn in the direction that the motor shaft is rotating. The internal teeth on the second disk will apparently turn in the opposite direction to that in which the shaft is rotating, while the spirals on the third disk will appear to turn first one way and then the other.

THE NEW ERECTOR MOTOR

EXPERIMENT 21—THE PHANTOM VASES:

Screw the coupling of your motor on the shaft and set the motor on end so that the shaft is vertical and pointing up. Now take half



C
Fig. 26

a dozen pieces of iron wire $\frac{1}{8}$ inch in diameter and 3 inches long and bend them in various shapes, as shown at A and B in Fig. 26. Screw one of the bent wires in the coupling as at C, and start up your motor slowly; due to the persistency of vision, it will take on the shape of a vase, but it will be very phantom-like indeed.

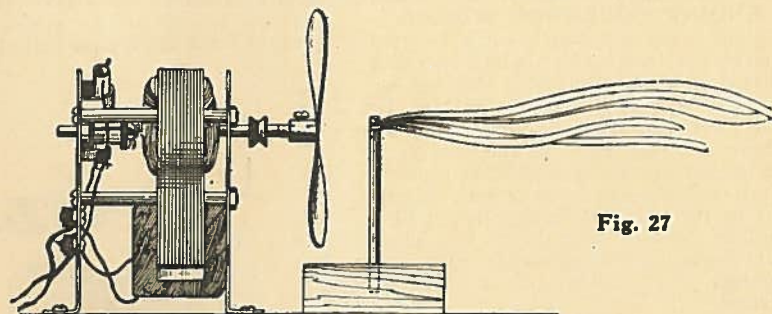


Fig. 27

EXPERIMENT 22—THE BREEZY RIBBONS:

Mount a wire in a wood block, as shown in Fig. 27, and fasten three or four tissue-paper ribbons about 5 inches long to it. Set it in front of the fan and start the motor running, when the breeze set up will blow the ribbons straight out and keep them floating in the air.

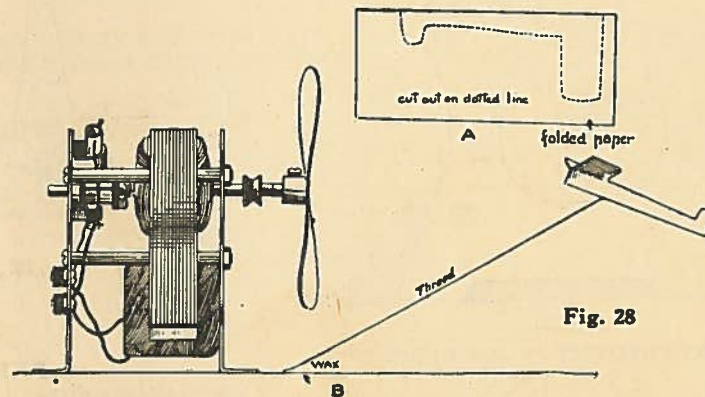


Fig. 28

EXPERIMENT 23—THE FLYING AIRPLANE:

Make an airplane $1\frac{1}{2}$ inches long by folding over a piece of thin paper, cutting it out as shown at A in Fig. 28, pasting together the folded part and spreading out the wings. Tie one end of a silk thread about 5 inches long to the airplane and fix the other end to the table, with a bit of wax, close to the fan and in a line with the center of it when it will soar away — without getting anywhere.

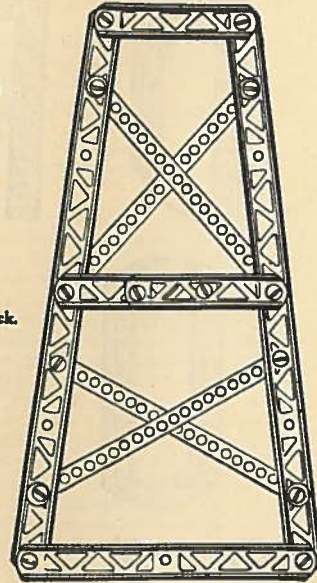
STANDARD DETAILS OF ERECTOR CONSTRUCTION



Pulley Block.



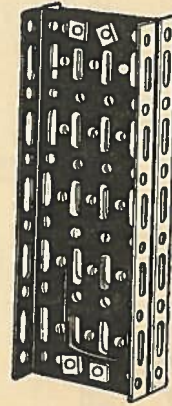
Pulley Block.



Trestle Bracing.



Hook Block.

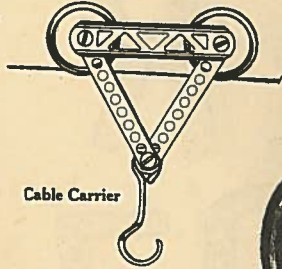


I-Beam



Block Principle.

I-Beam.



Cable Carrier



Method of Making Wheel with Turret Plates



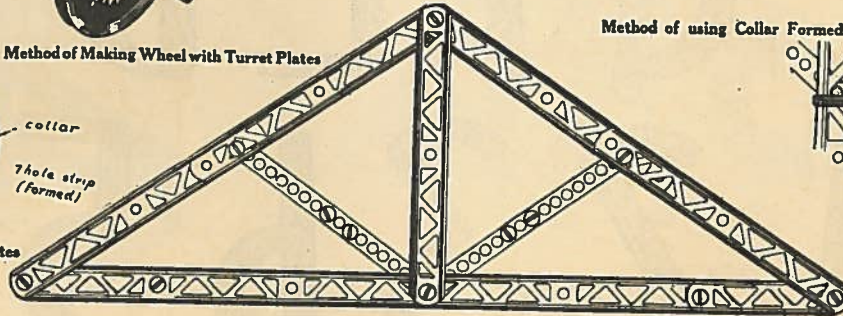
Method of Making Wheel with Turret Plates

collar

Hole strip (formed)

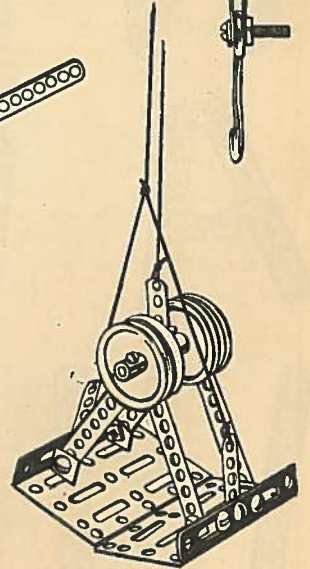
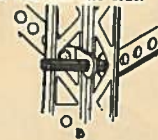
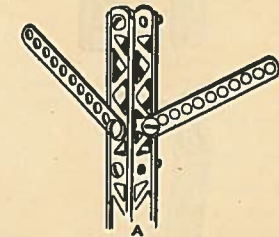


Method of using Coupling



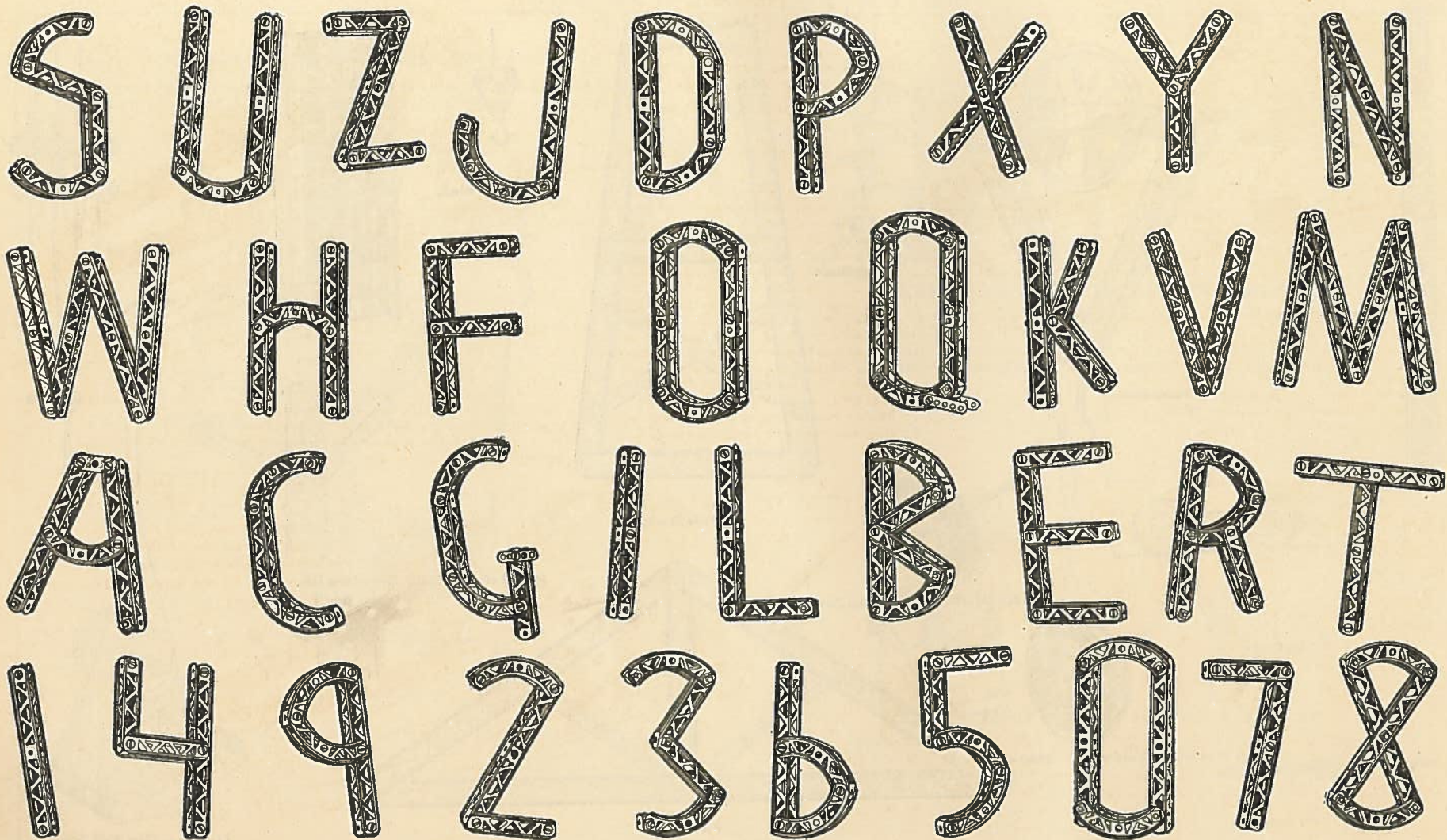
Roof Truss.

Method of using Collar Formed one side.



Principle of Clam Shell Scoop

MODELS BUILT WITH No. 4 ERECTOR



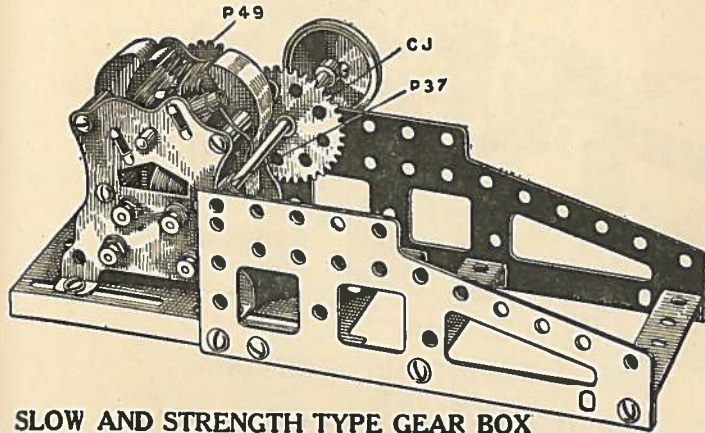
Standard Gear Box Section No. 4 INTRODUCTION

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.

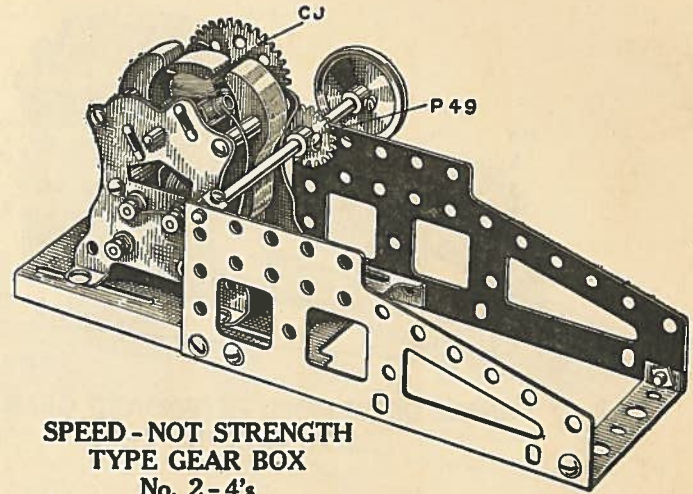
The driving wheel is called the driver, and the driven wheel the driven. These different styles of gear boxes are shown together to illustrate and treat practical mechanics. They also offer the builder a variety of different kinds of power from which he can select the most practical. By leaving end-play 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 requirements of any particular model.



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 designed to lift heavy weights.



SPEED - NOT STRENGTH TYPE GEAR BOX

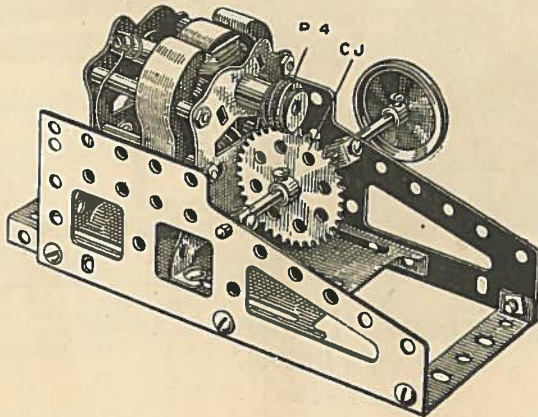
No. 2-4's

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.

WORM TYPE GEAR BOX

No. 3-4's

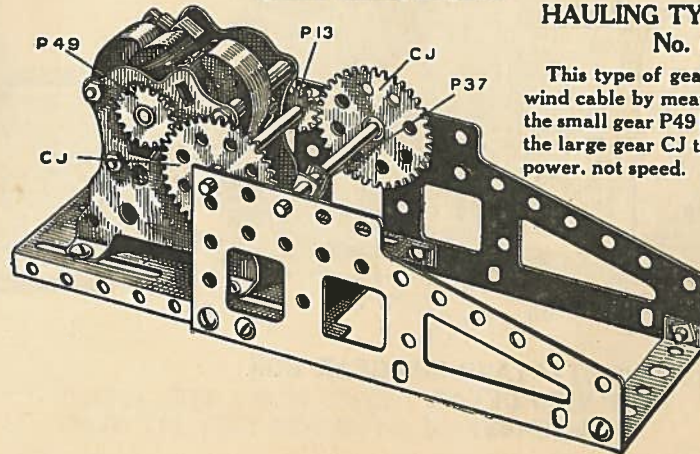
The worm P14 is the driver and the gear CJ is the driven. This type is designed for use where power is wanted, not speed.



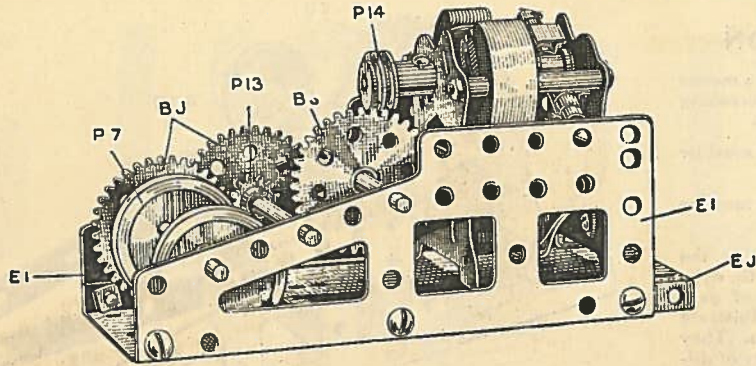
HAULING TYPE GEAR BOX

No. 4-4's

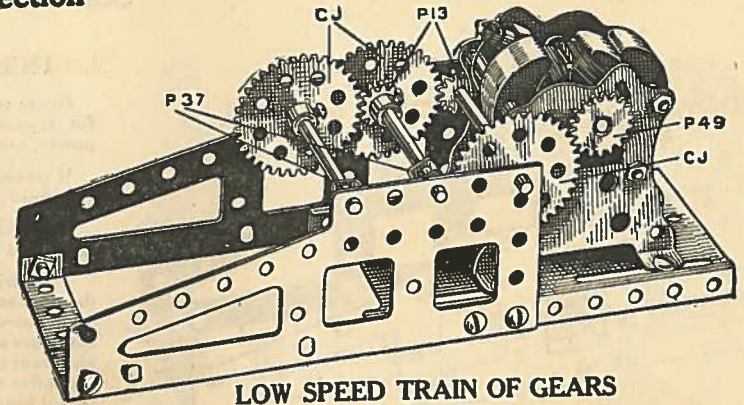
This type of gear box is designed to wind cable by means of the last shaft, the small gear P49 being the driver, and the large gear CJ the driven. You get power, not speed.



Standard Gear Box Section No. 4

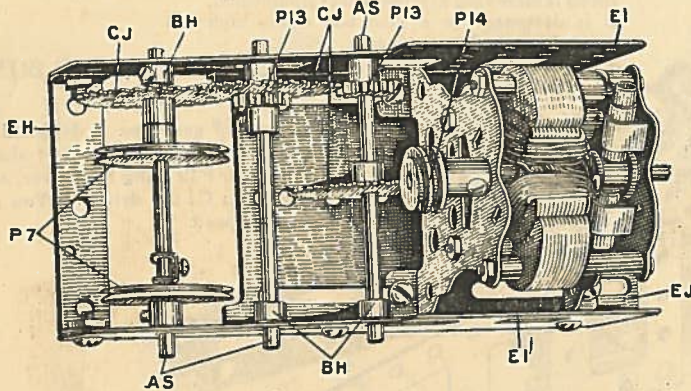


SINGLE DRUM HOIST - STANDARD GEAR BOX
SIDE VIEW - No. 6-4's

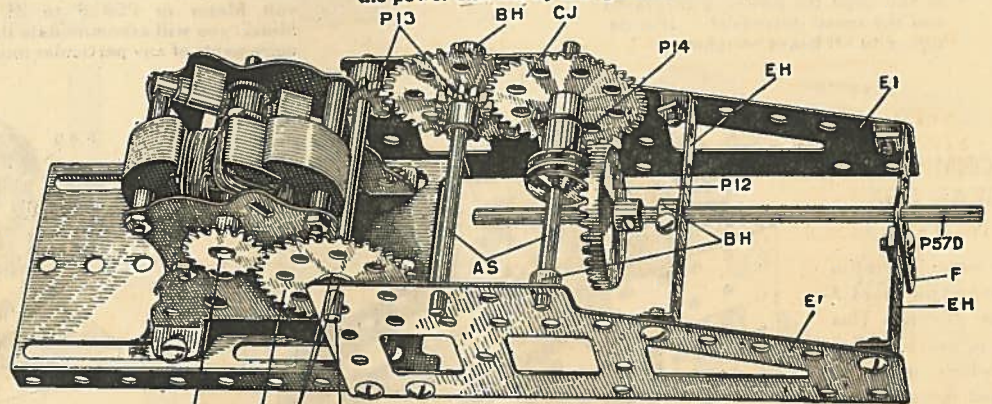


LOW SPEED TRAIN OF GEARS
No. 5-4's

This type of gear box shows how the number of revolutions of a shaft may be decreased by a series of gears, and the power increased in proportion. When the power is applied, the speed of the drum shaft is greatly reduced but the power exerted by it is greater.



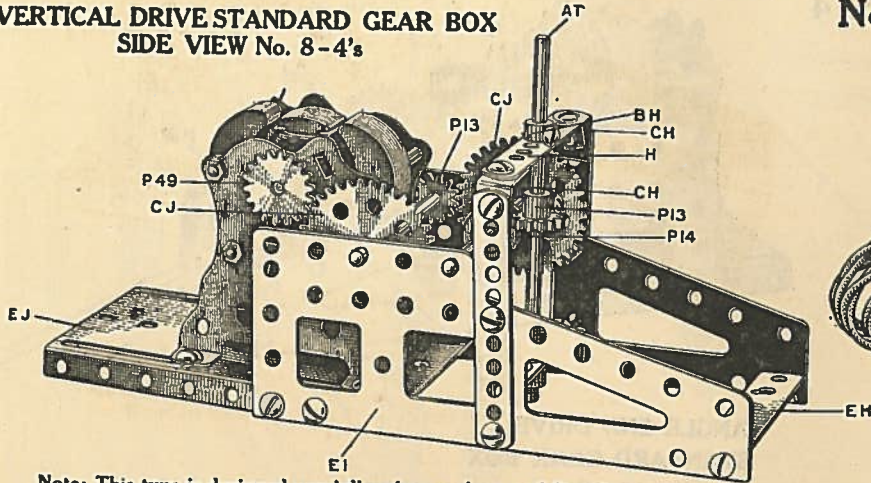
SINGLE DRUM HOIST - STANDARD GEAR BOX
TOP VIEW DETAIL
No. 6-4's



RIGHT ANGLE DRIVE - STANDARD GEAR BOX
TOP VIEW DETAIL
No. 7-4's

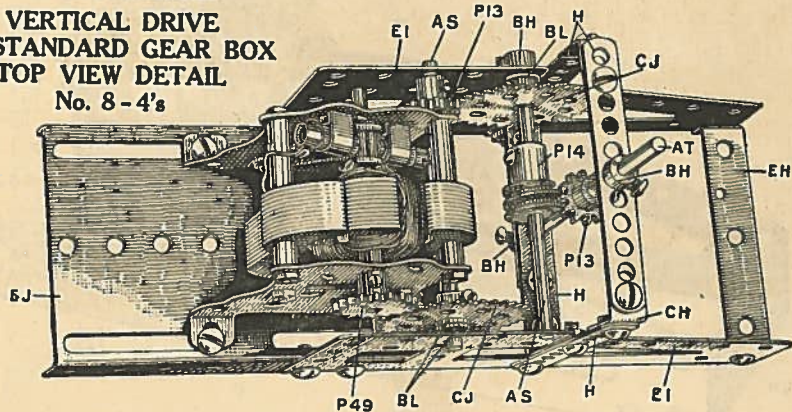
Standard Gear Box Section No. 4

**VERTICAL DRIVE STANDARD GEAR BOX
SIDE VIEW No. 8-4's**

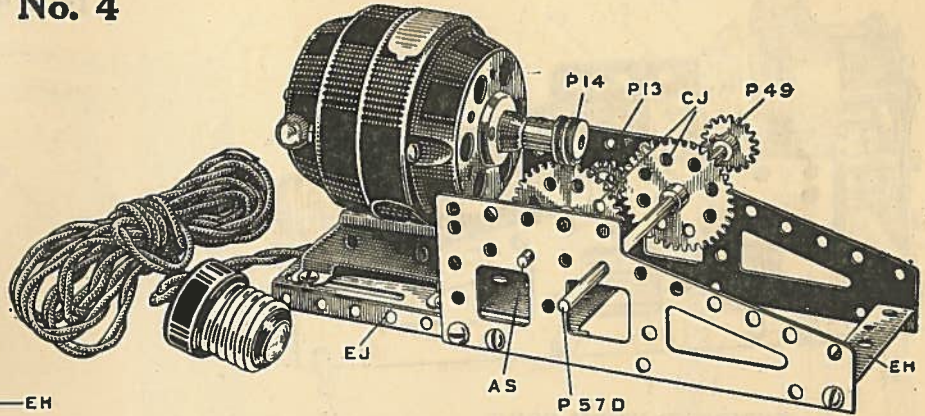


Note: This type is designed specially where a change of direction is desired and a slow motion as in turning a bridge by means of a vertical rod.

**VERTICAL DRIVE
STANDARD GEAR BOX
TOP VIEW DETAIL
No. 8-4's**

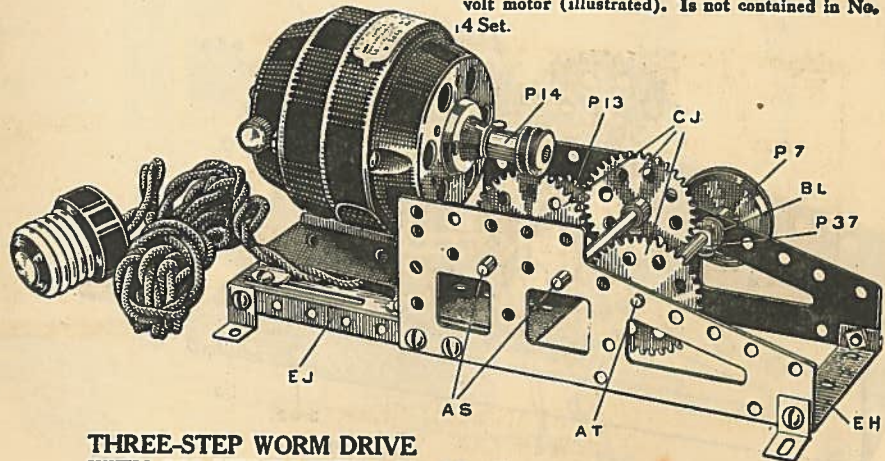


Note: This type is designed specially where a change of direction is desired and a slow motion as in turning a bridge by means of a vertical rod.



TWO-STEP WORM DRIVE WITH 110 VOLT MOTOR No. 9-4's

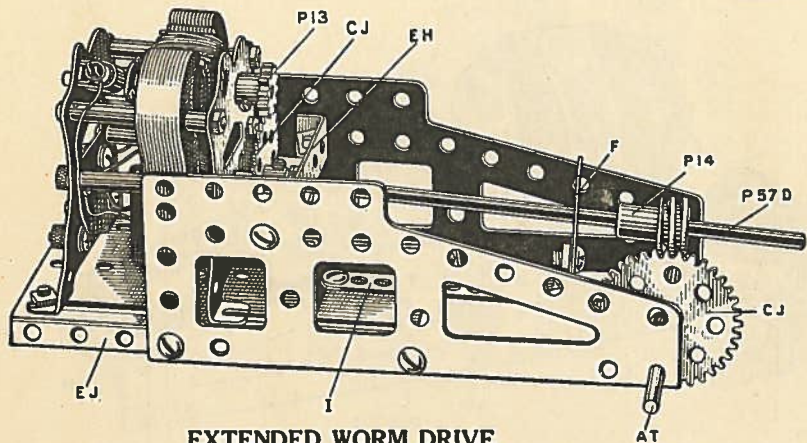
Mount P58 Motor in same manner as 110 volt motor (illustrated). Is not contained in No. 4 Set.



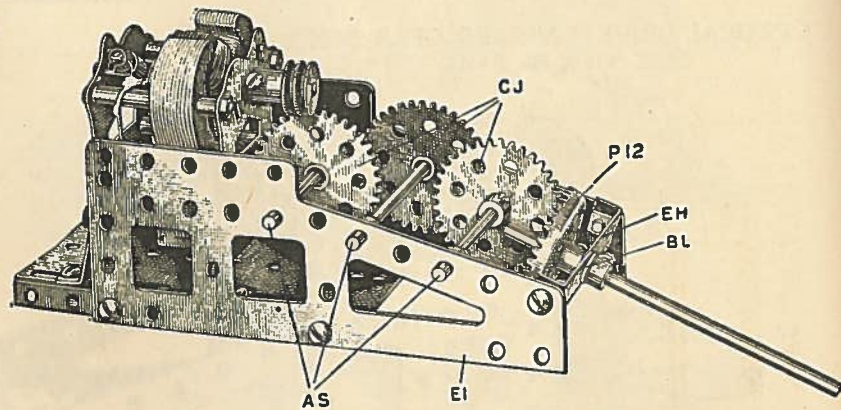
**THREE-STEP WORM DRIVE
WITH 110 VOLT MOTOR No. 10-4's**

Mount P58 Motor in same manner as 110 volt motor (illustrated). Is not contained in No. 4 Set.

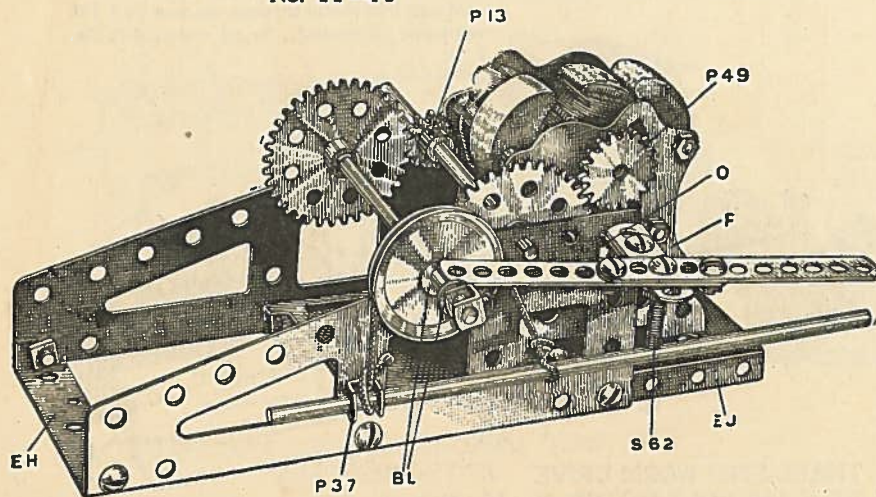
Standard Gear Box Section
No. 4



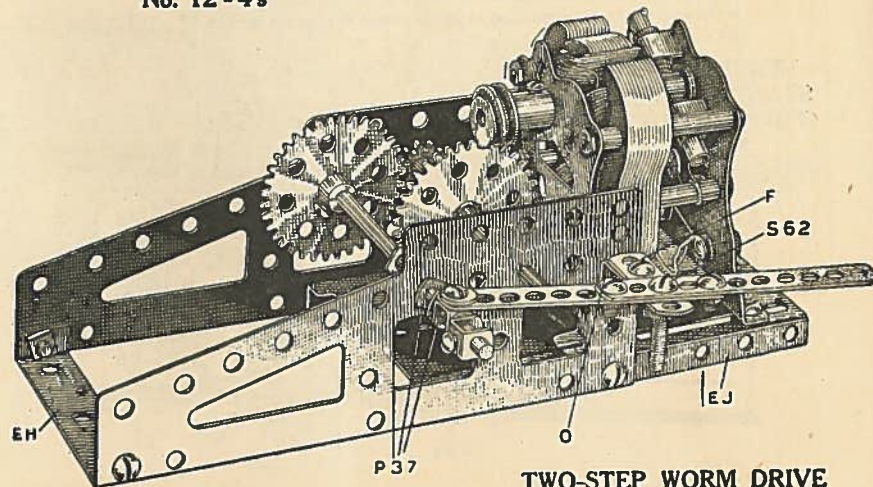
EXTENDED WORM DRIVE
No. 11-4's



ANGLE END DRIVE
STANDARD GEAR BOX
No. 12-4's

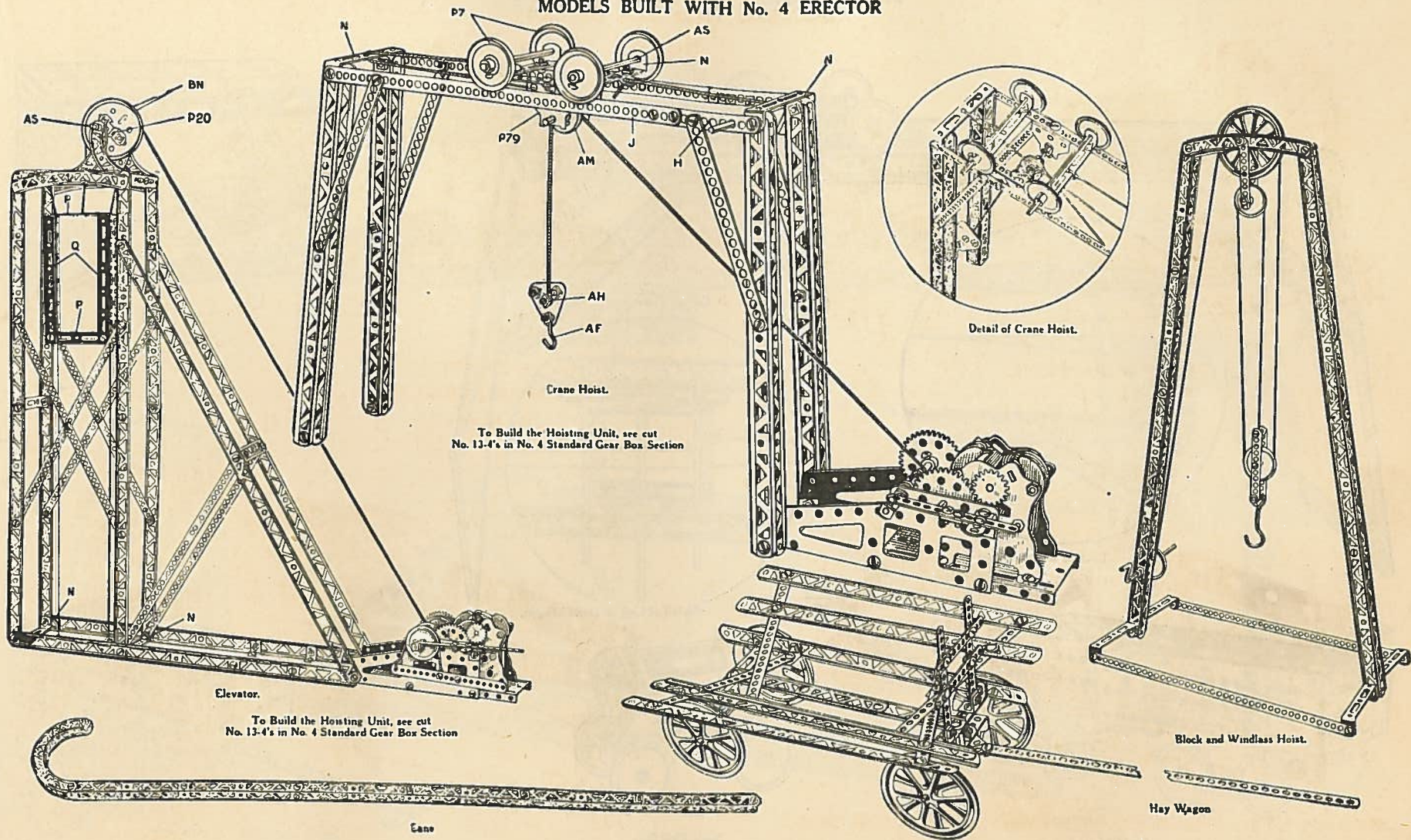


SIMPLE TWO-STEP HOIST WITH GEAR RELEASE AND BRAKE
No. 13-4's



TWO-STEP WORM DRIVE
WITH RELEASE SHAFT
No. 14-4's

MODELS BUILT WITH No. 4 ERECTOR



Crane Hoist.

Detail of Crane Hoist.

To Build the Hoisting Unit, see cut No. 13-4's in No. 4 Standard Gear Box Section

Elevator.

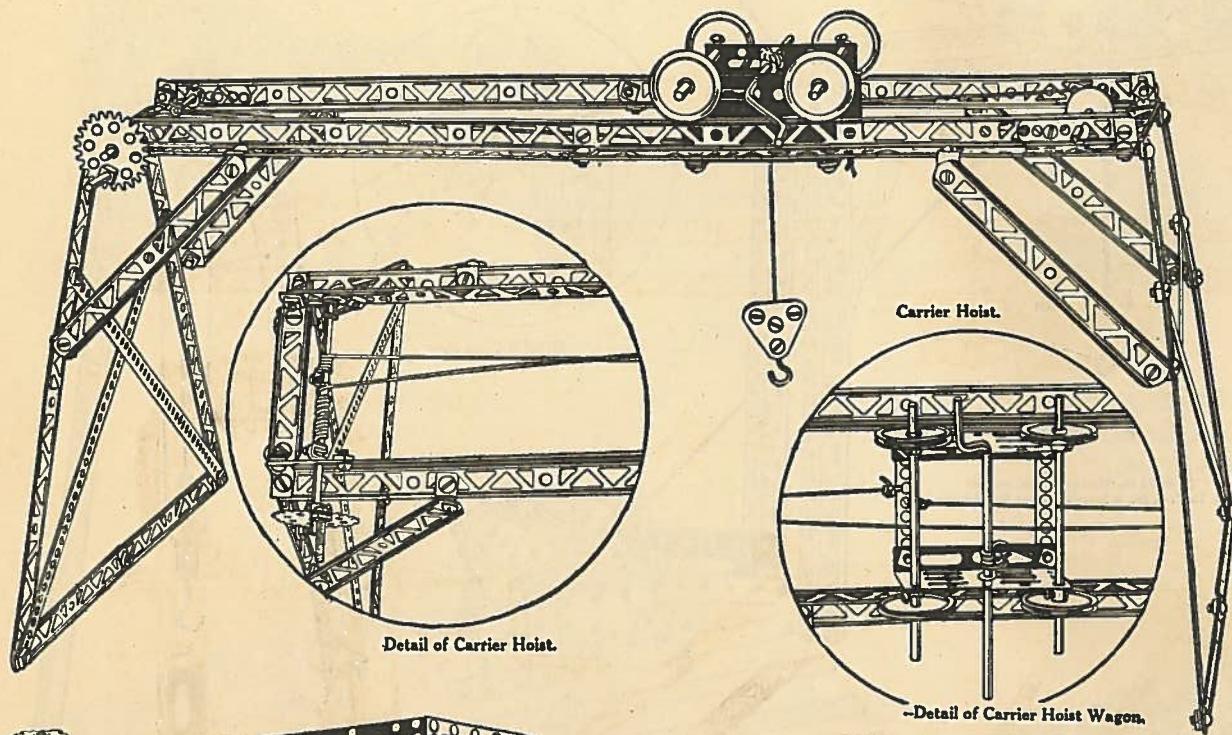
To Build the Hoisting Unit, see cut No. 13-4's in No. 4 Standard Gear Box Section

Block and Windlass Hoist.

Hay Wagon

Cane

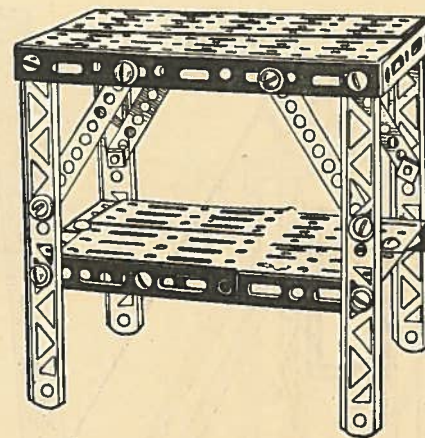
MODELS BUILT WITH No. 4 ERECTOR



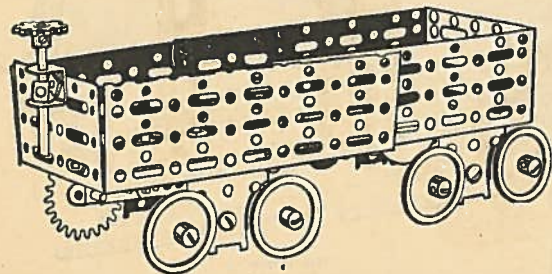
Detail of Carrier Hoist.

Carrier Hoist.

Detail of Carrier Hoist Wagon.



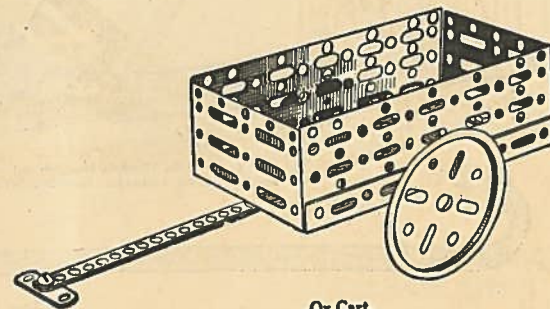
Table



Coal Car.

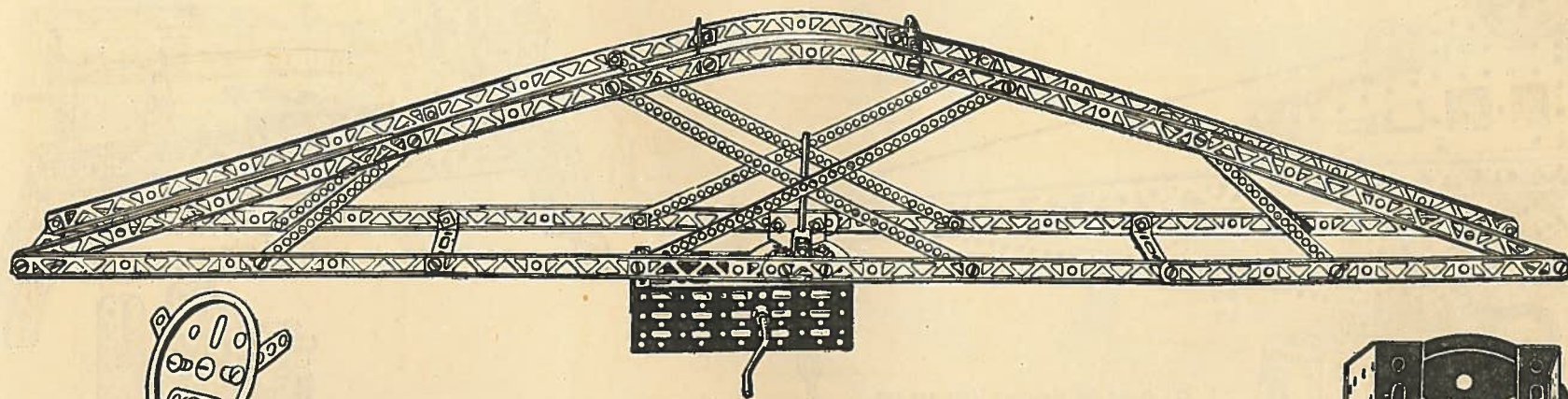


Small Coal Car.



Ox Cart.

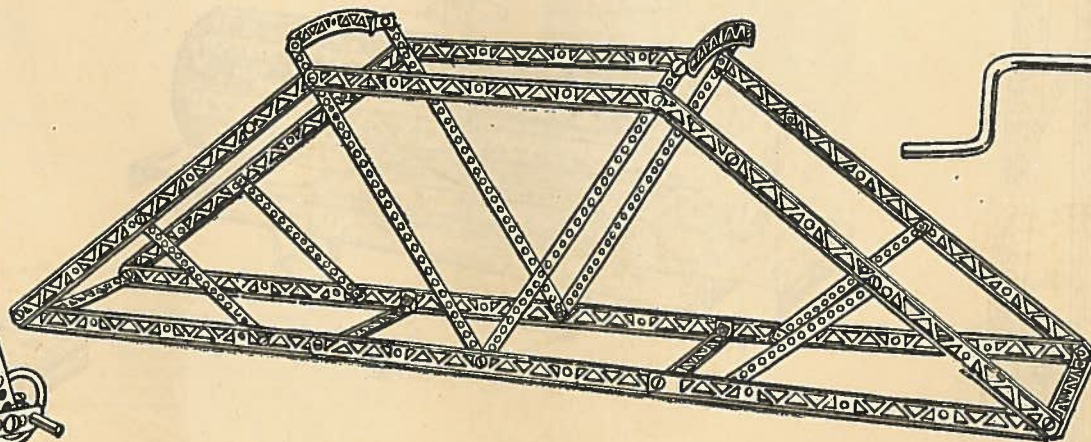
MODELS BUILT WITH NO. 4 ERECTOR



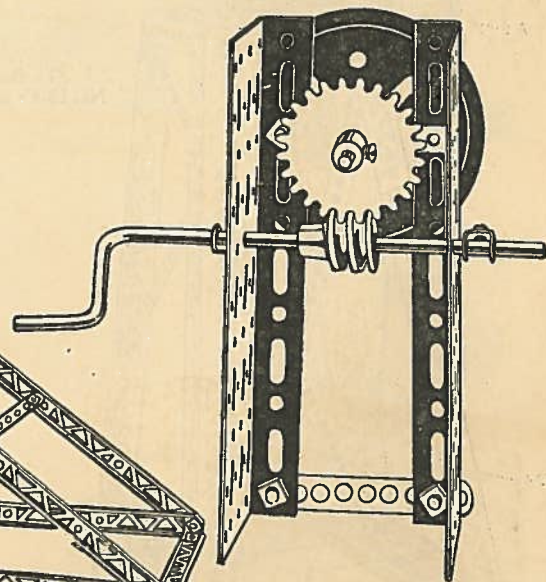
Draw Bridge



Electric Doll

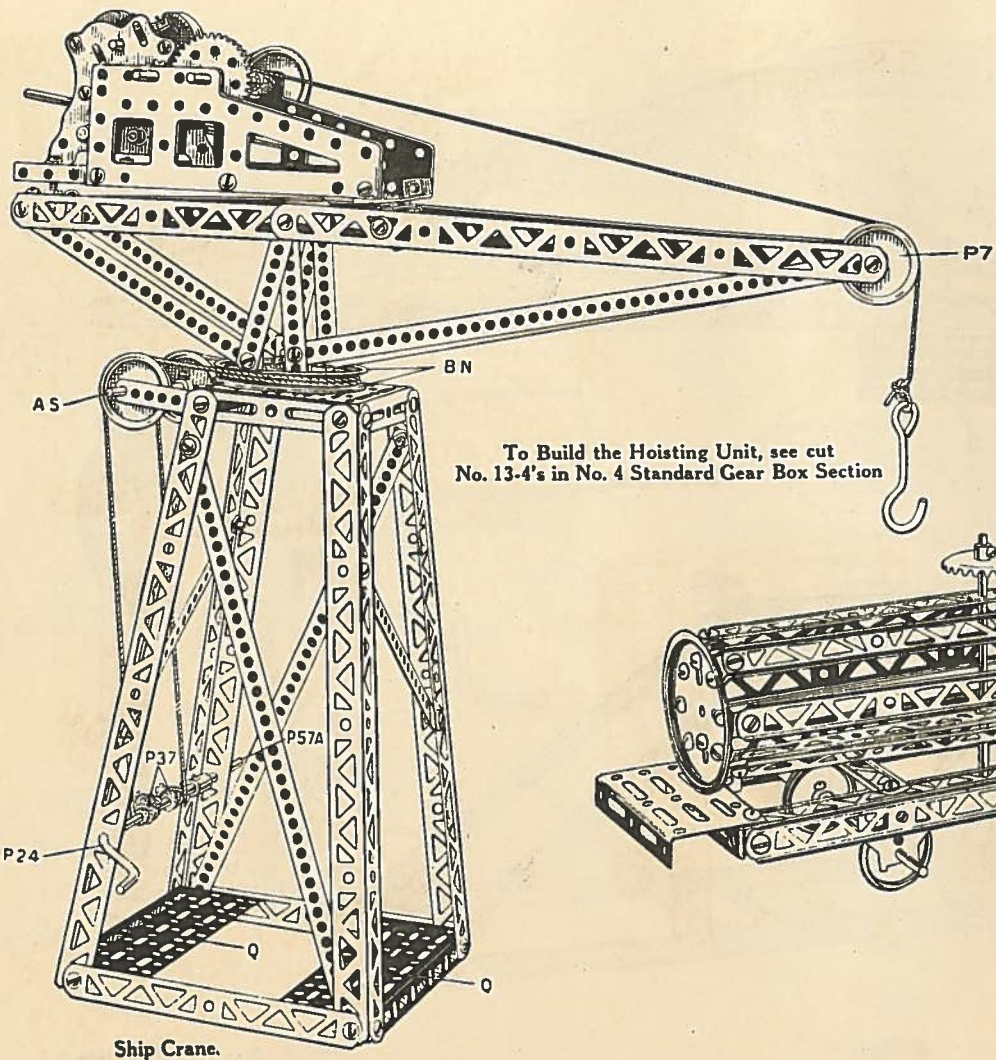


Bridge

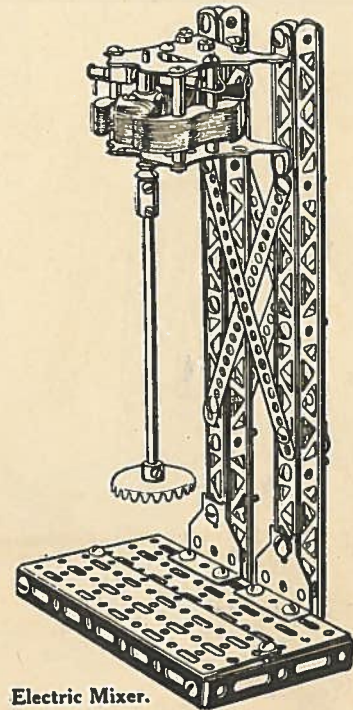
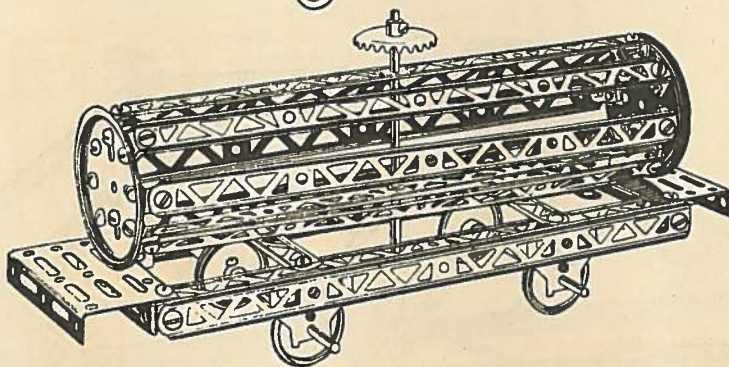
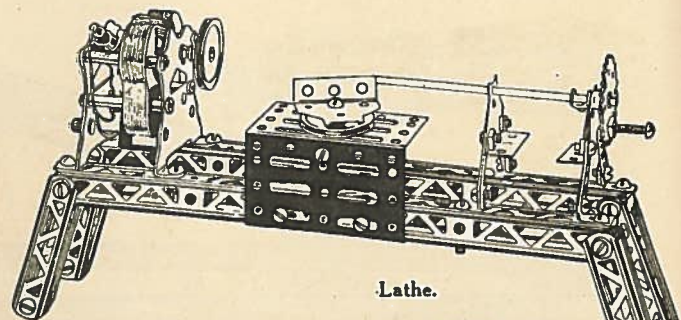


Draw Bridge Detail

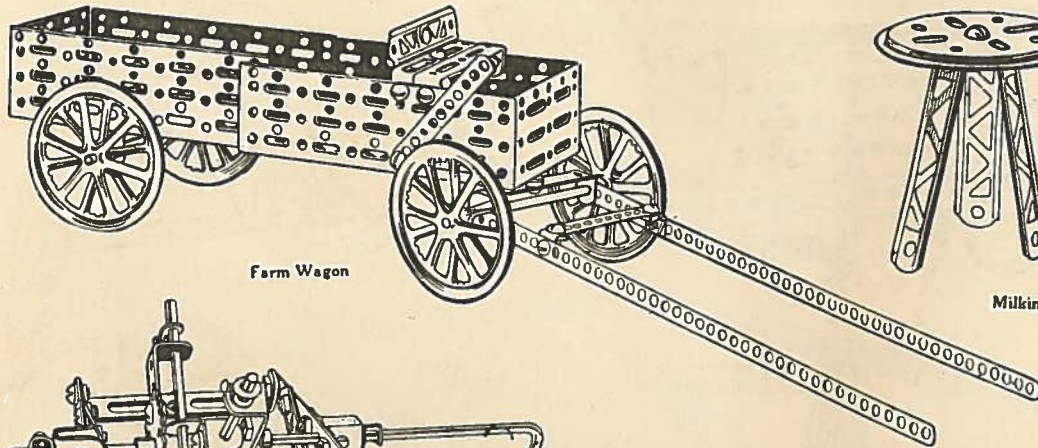
MODELS BUILT WITH No. 4 ERECTOR



To Build the Hoisting Unit, see cut No. 13-4's in No. 4 Standard Gear Box Section

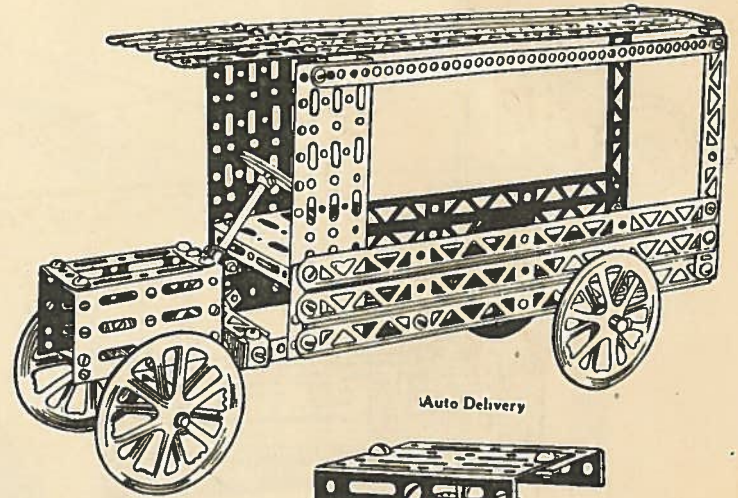


MODELS BUILT WITH No. 4 ERECTOR

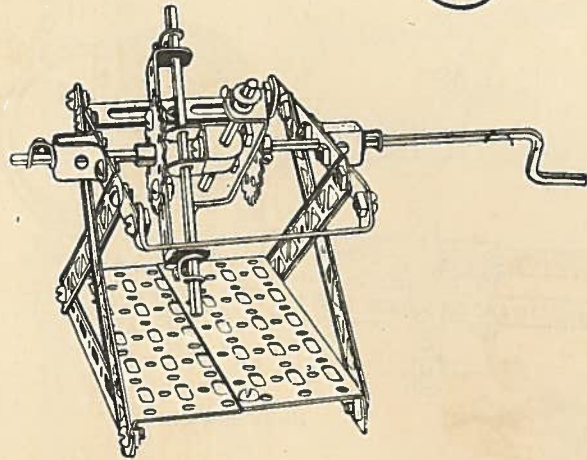


Farm Wagon

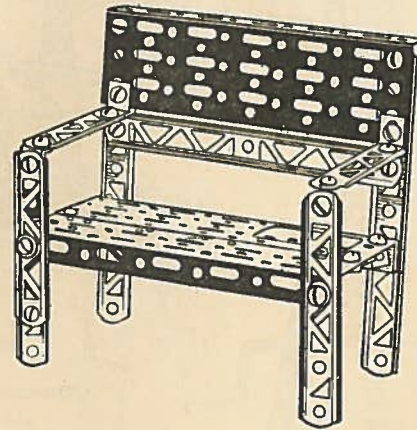
Milking Stool



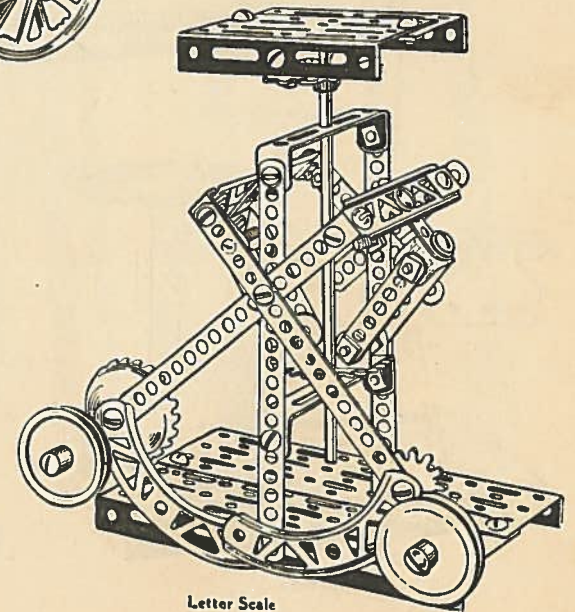
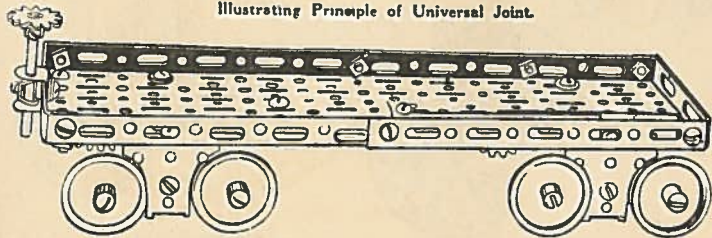
Auto Delivery



Illustrating Principle of Universal Joint.

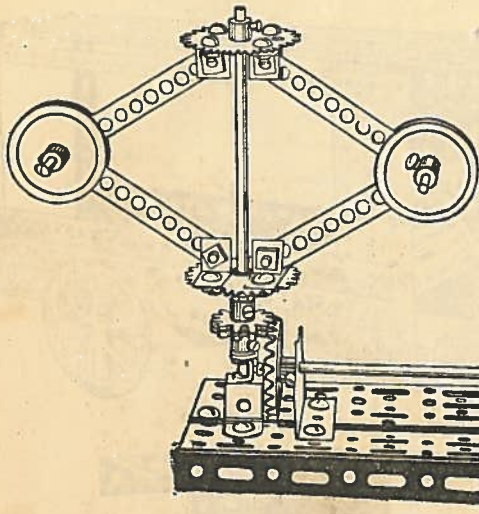


Settee

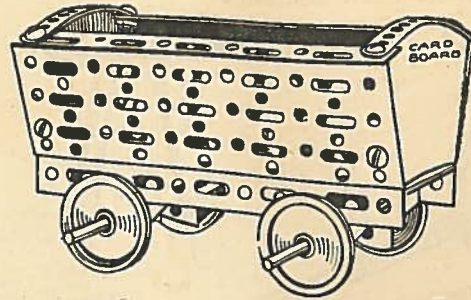


Letter Scale

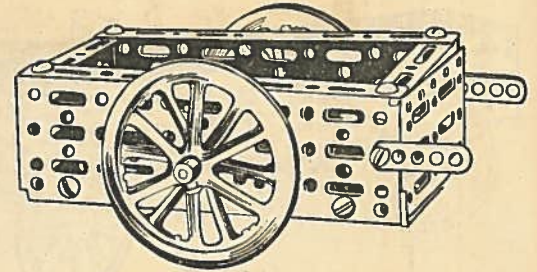
MODELS BUILT WITH No. 4 ERECTOR



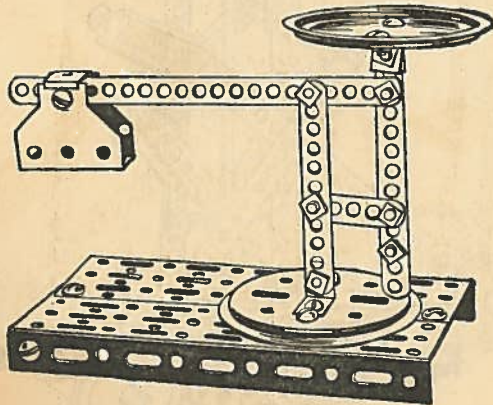
Governor Principle.



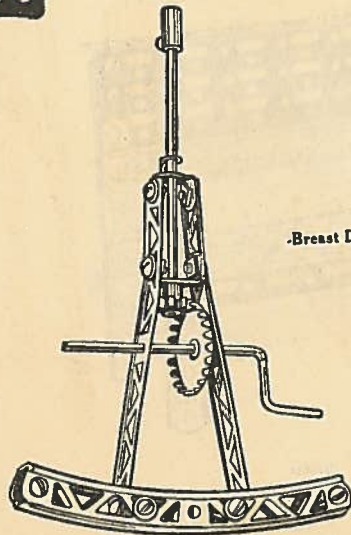
Coal Wagon.



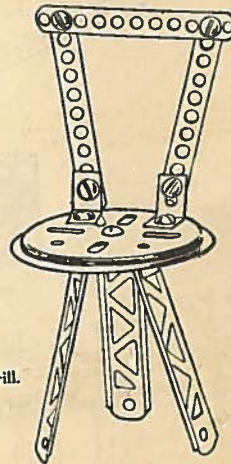
Hand Cart.



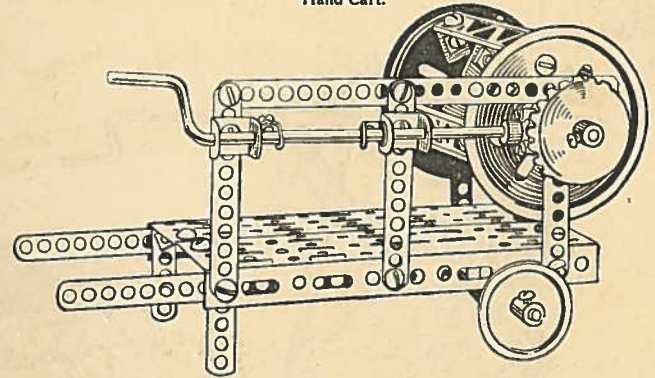
Letter Scale.



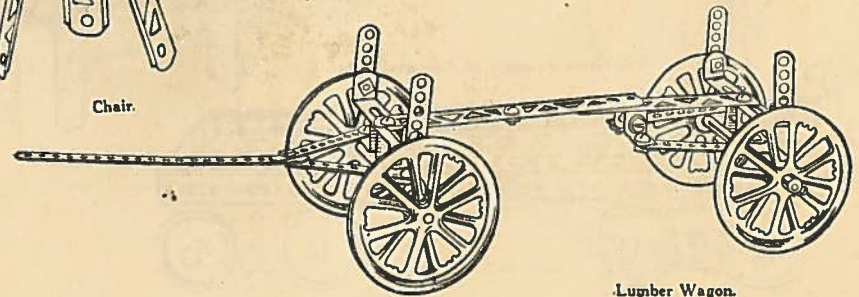
Breast Drill.



Chair.

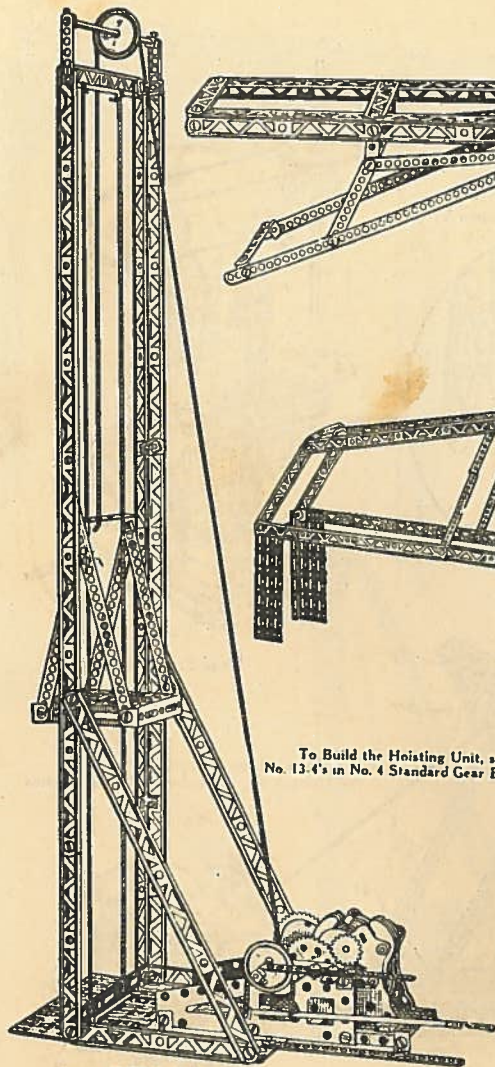


Hand Cement Mixer.



Lumber Wagon.

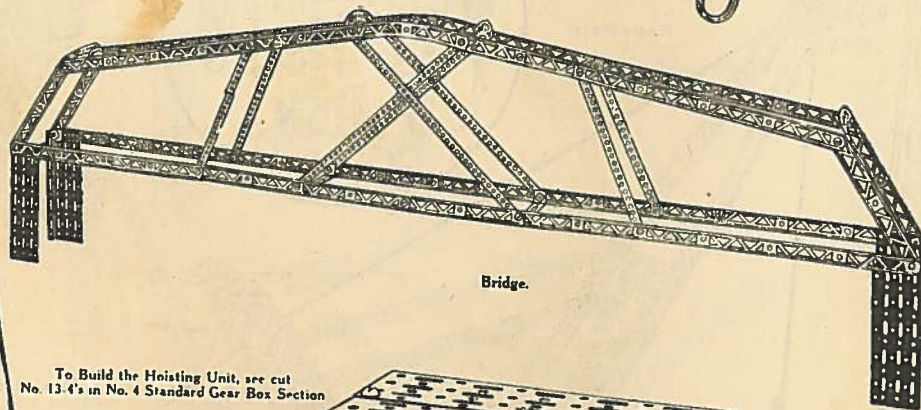
MODELS BUILT WITH No. 4 ERECTOR



Builder's Hoist

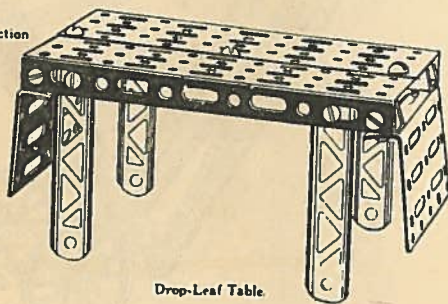


Indo China Bridge.

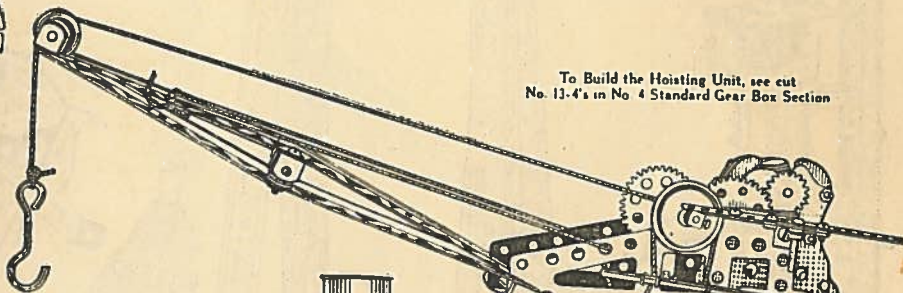


Bridge.

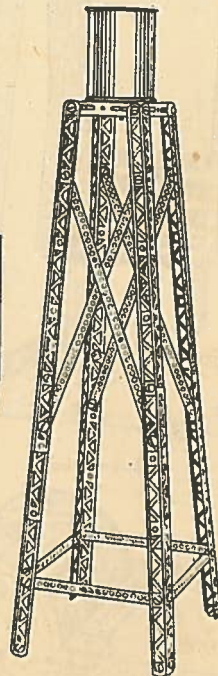
To Build the Hoisting Unit, see cut
No. 13-4's in No. 4 Standard Gear Box Section



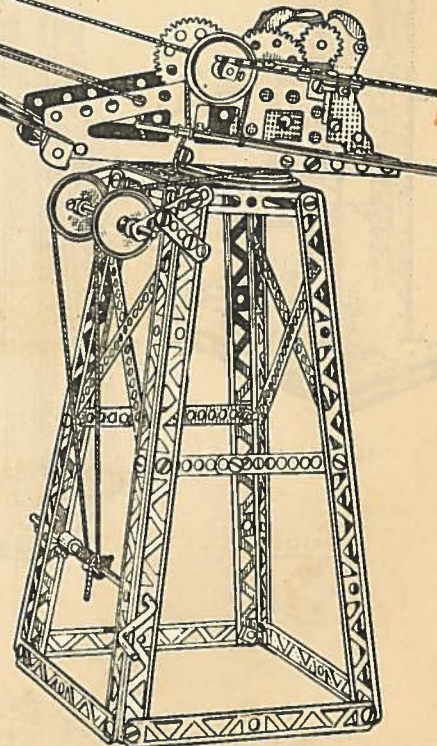
Drop-Leaf Table.



To Build the Hoisting Unit, see cut
No. 13-4's in No. 4 Standard Gear Box Section

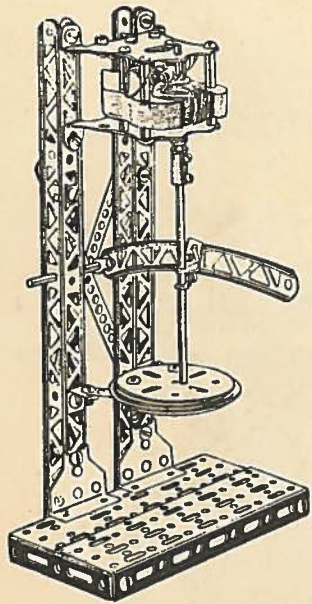


Water Tower.

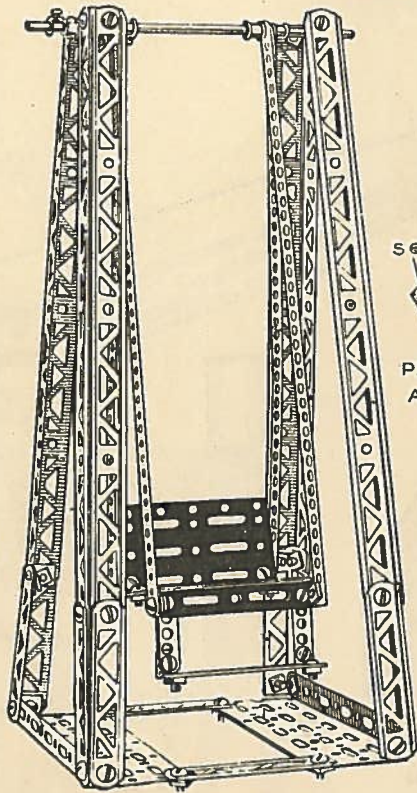


Ship Crane.

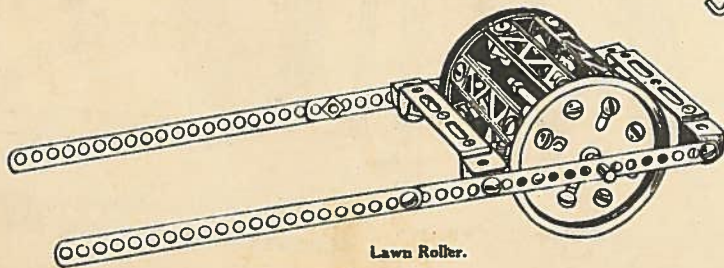
MODELS BUILT WITH No. 4 ERECTOR



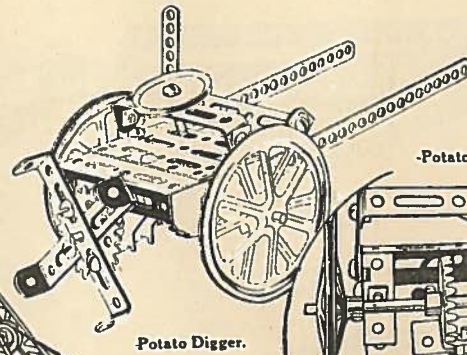
Electric Drill Press.



Lawn Swing.

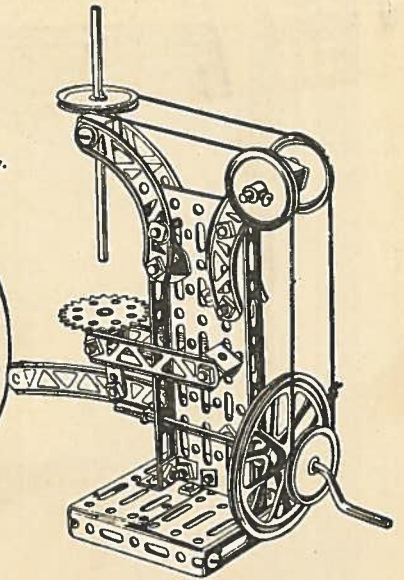
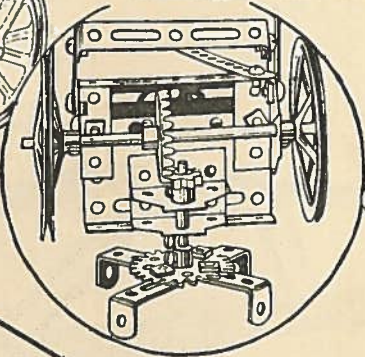


Lawn Roller.



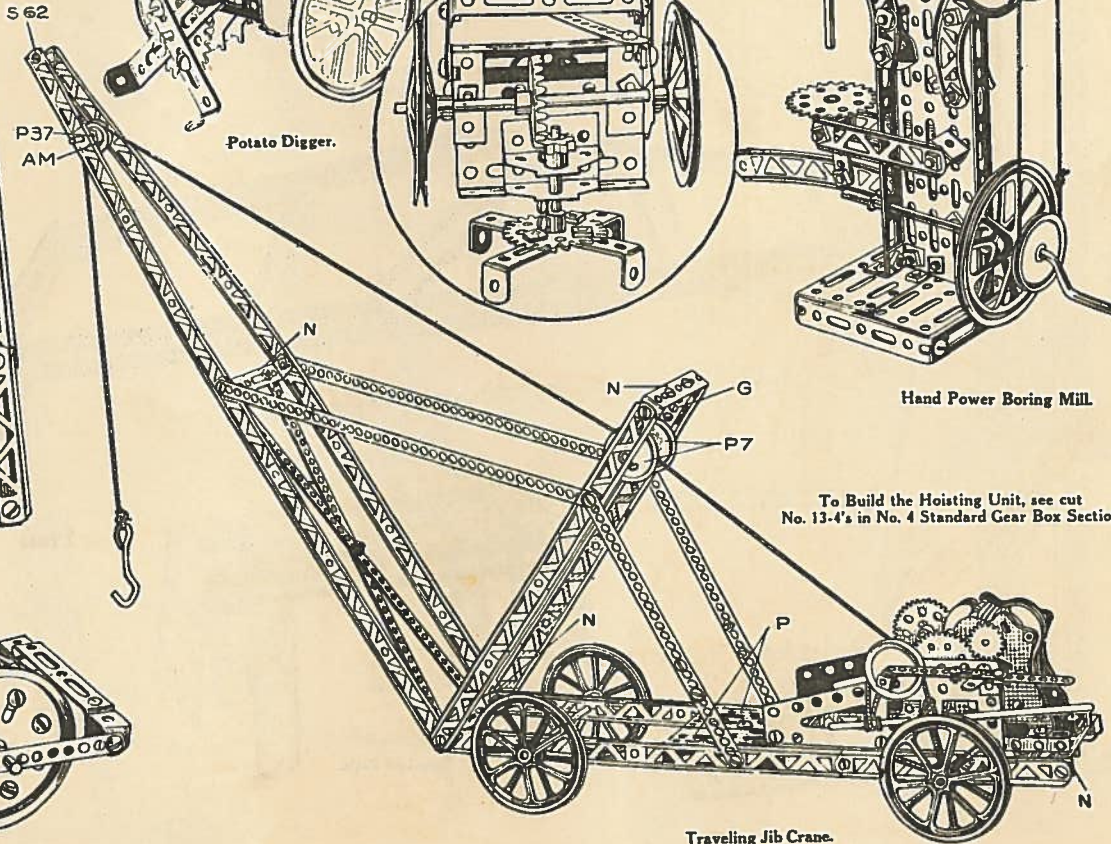
Potato Digger.

Potato Digger, Bottom View.



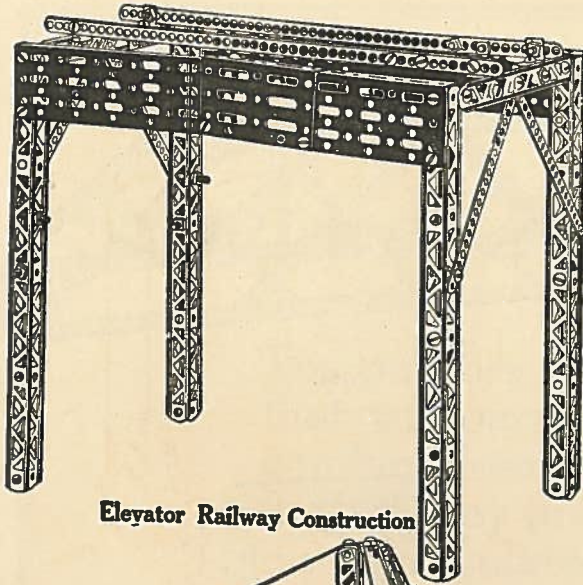
Hand Power Boring Mill

To Build the Hoisting Unit, see cut No. 13-4's in No. 4 Standard Gear Box Section

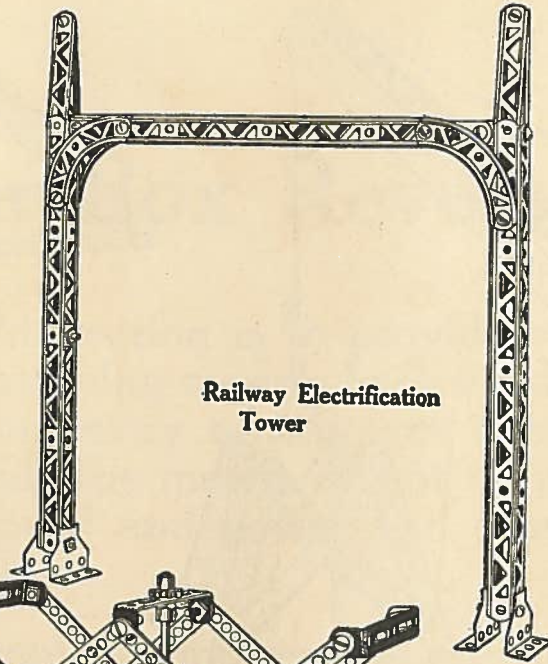


Traveling Jib Crane.

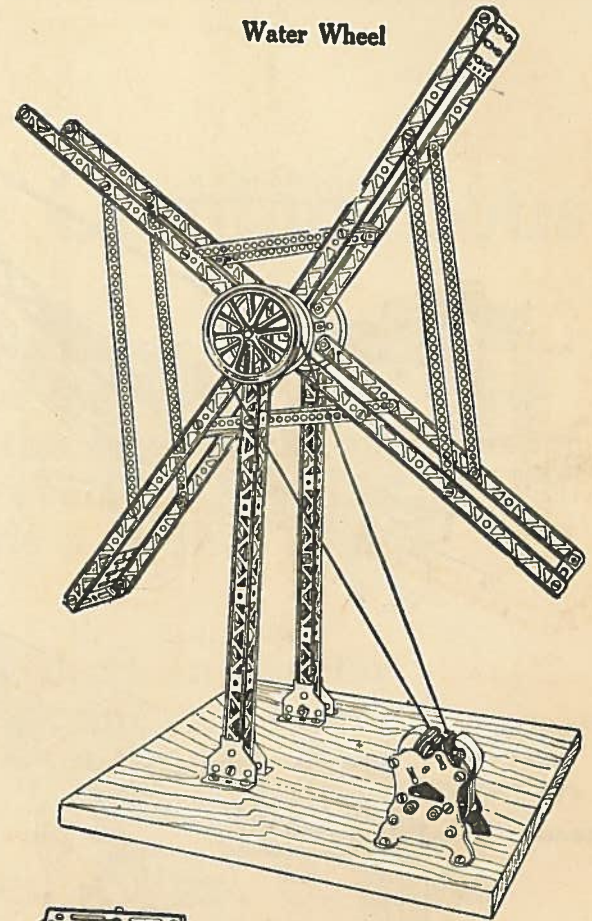
MODELS BUILT WITH No. 4 ERECTOR



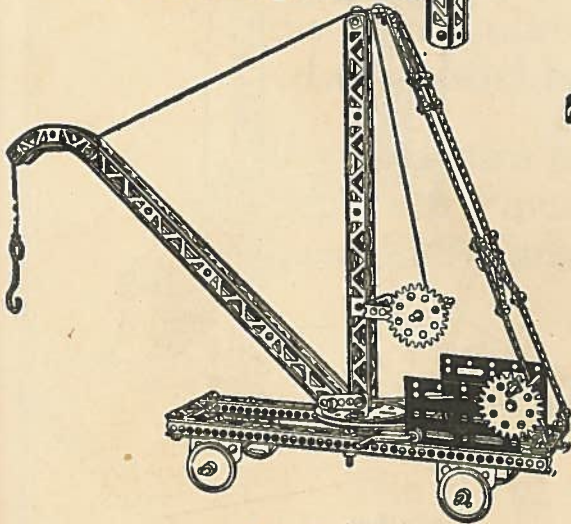
Elevator Railway Construction



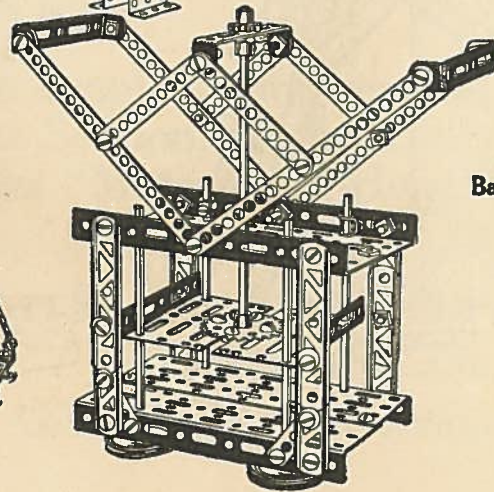
Railway Electrification Tower



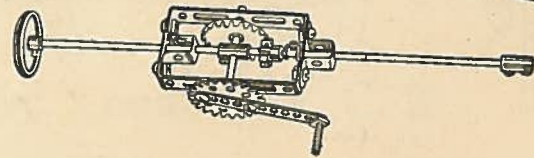
Water Wheel



Traveling Jib Crane



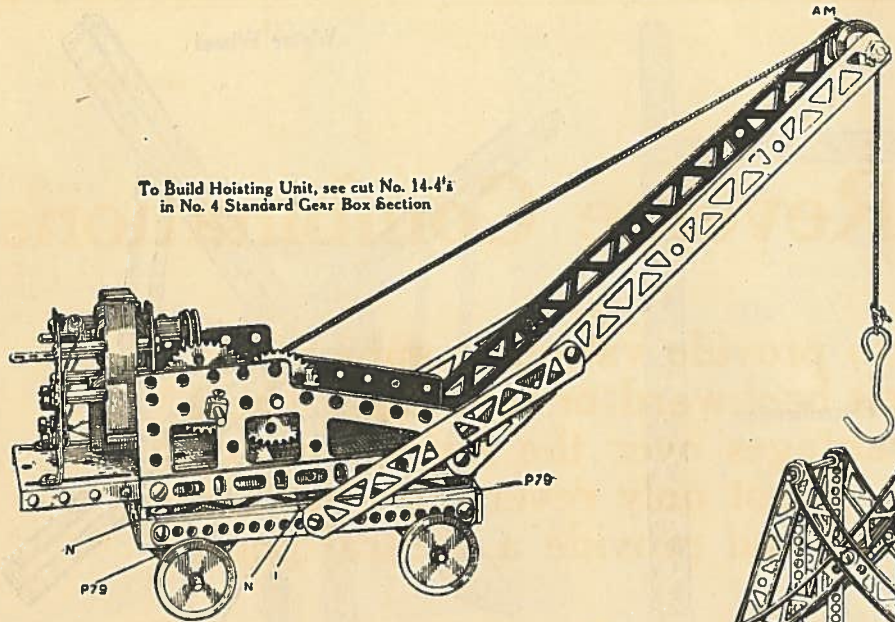
Baling Press



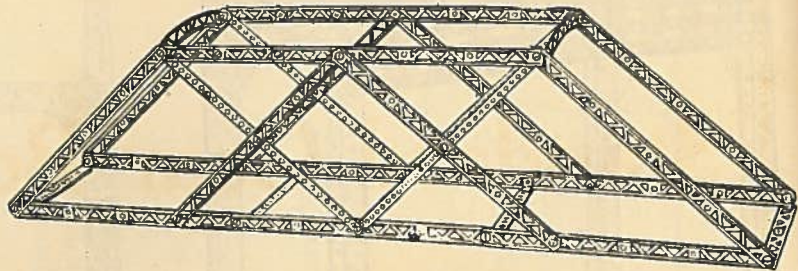
Breast Drill

MODELS BUILT WITH No. 4 ERECTOR

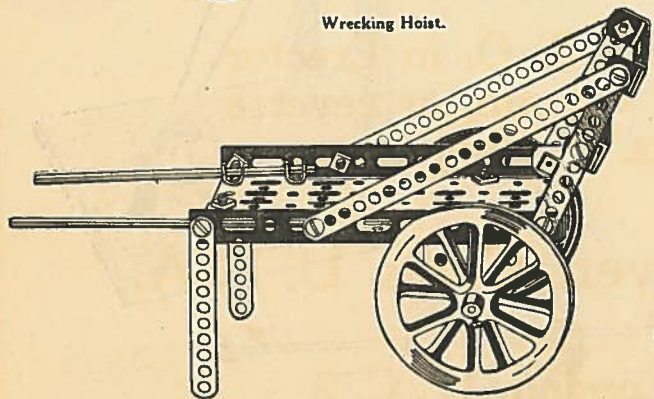
To Build Hoisting Unit, see cut No. 14-4's
in No. 4 Standard Gear Box Section



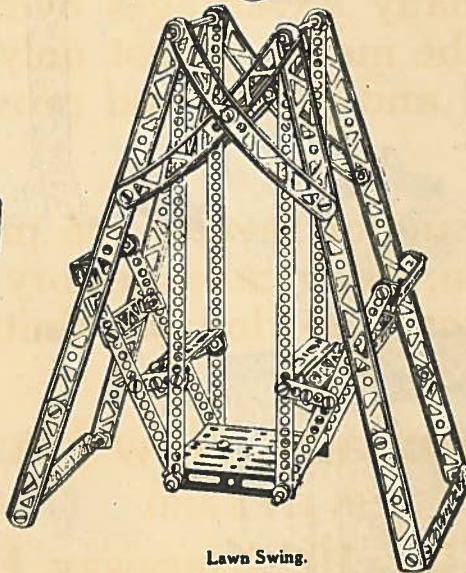
Wrecking Hoist.



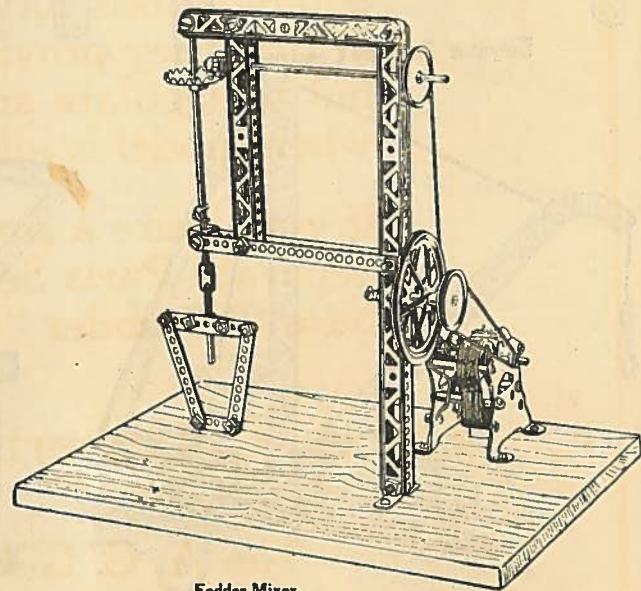
Bridge.



Cart.



Lawn Swing.



Fodder Mixer.

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.

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."

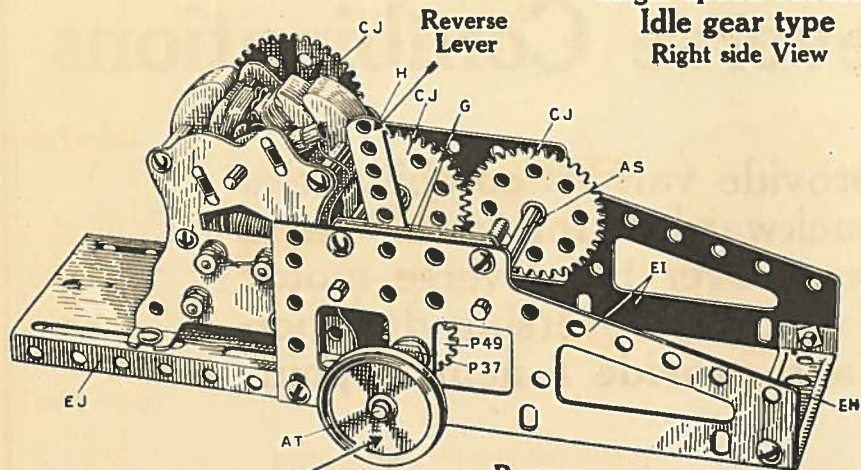
The A. C. Gilbert Company, New Haven, Conn. U. S. A.

IN ENGLAND

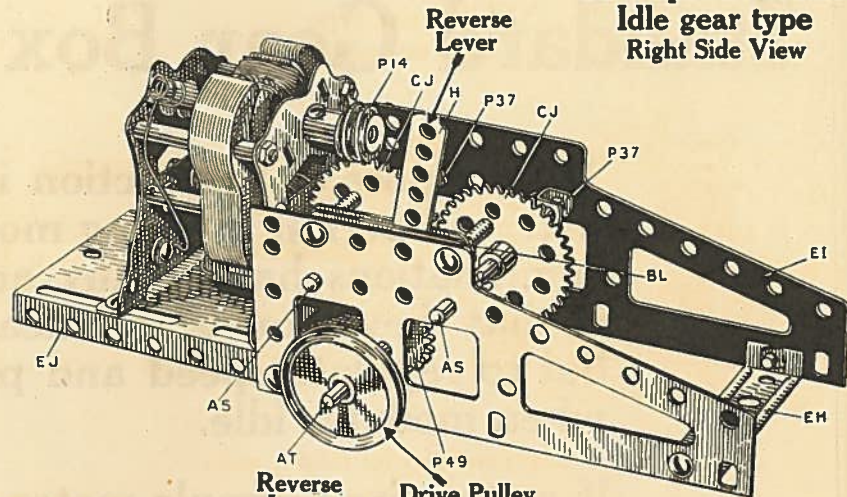
The A. C. Gilbert Co., 109 Kingsway, London, W. C. 2

Standard Gear Box Reverse Combinations

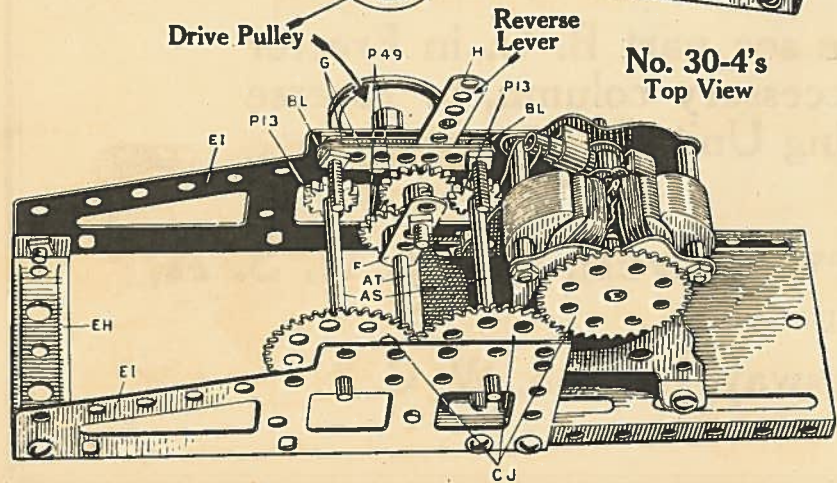
No. 30-4's
High speed reverse
Idle gear type
Right side View



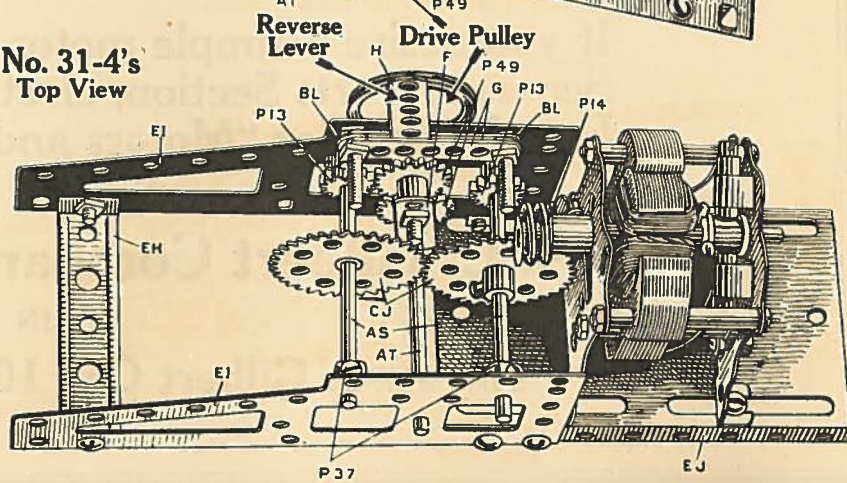
No. 31-4's
Low speed reverse
Idle gear type
Right Side View



Drive Pulley
Reverse Lever
No. 30-4's
Top View

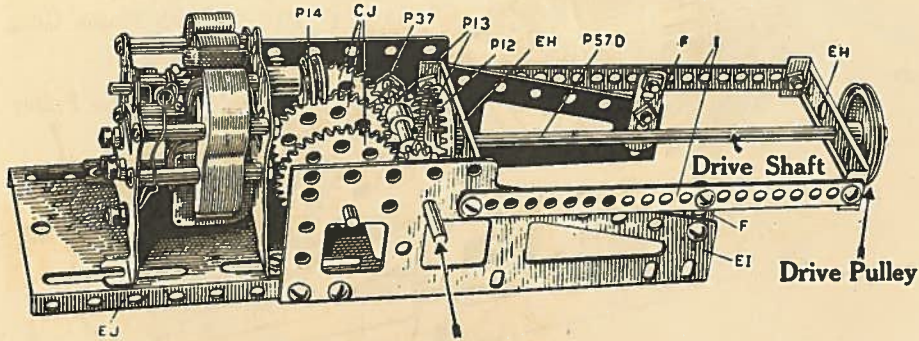


No. 31-4's
Top View

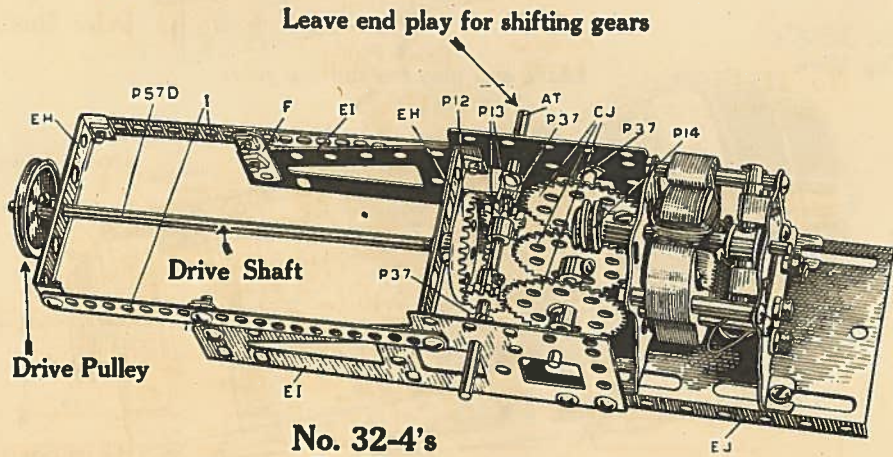
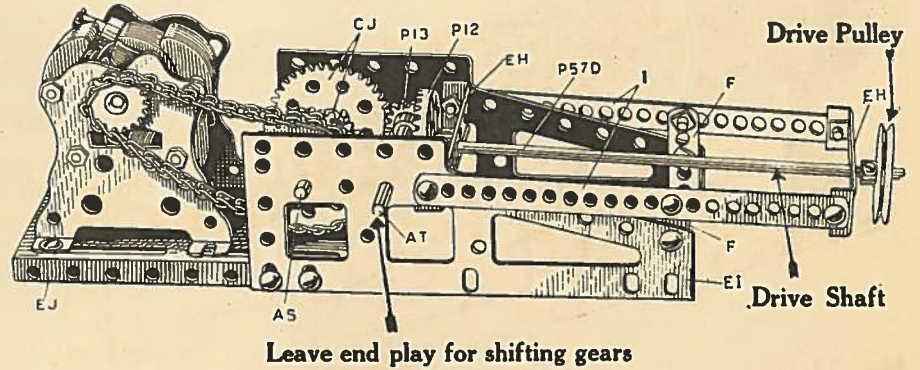


Standard Gear Box Reverse Combinations

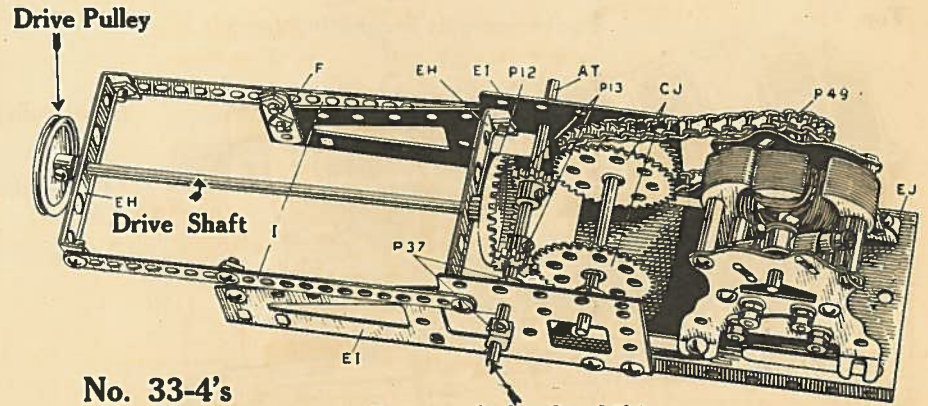
No. 32-4's
Low speed reverse
Shift gear type
Right side view



No. 33-4's
High speed reverse
Shift gear type
Right side view



No. 32-4's
Top View



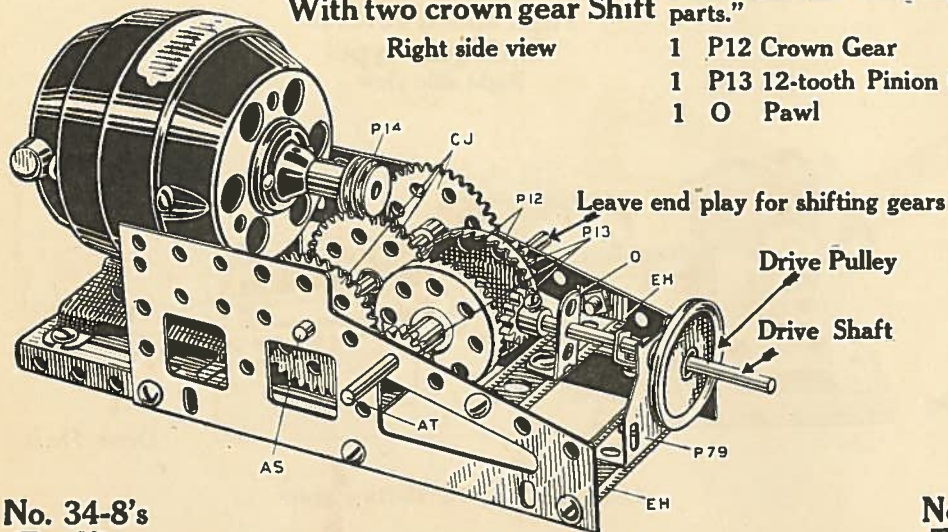
No. 33-4's
Top View

Leave end play for shifting gears

Standard Gear Box Reverse Combinations

No. 34-8's
High speed reverse
With two crown gear Shift

Right side view

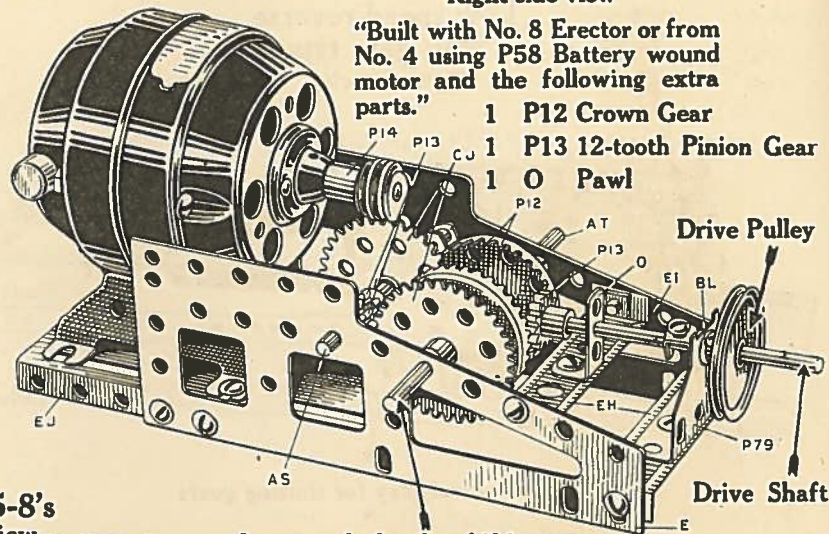


"Built with No. 8 Erector or from No. 4 using P58 Battery wound motor and the following extra parts."

- 1 P12 Crown Gear
- 1 P13 12-tooth Pinion Gear
- 1 O Pawl

No. 35-8's **Low speed reverse**
With two crown gear Shift

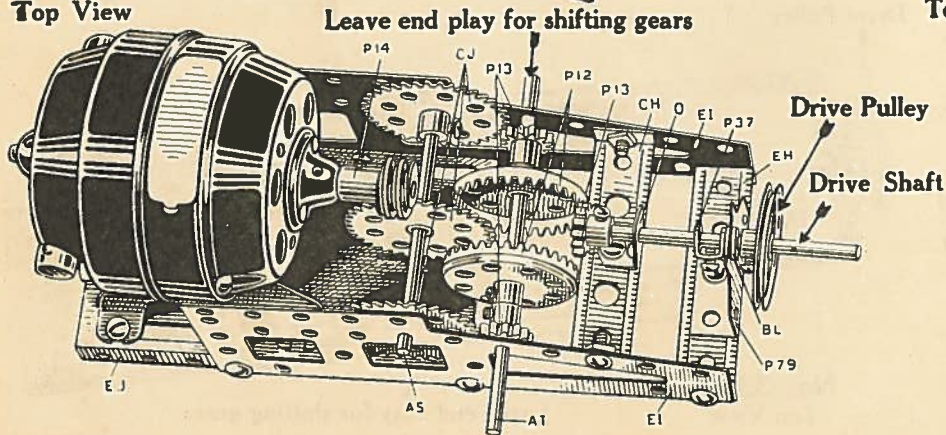
Right side view



"Built with No. 8 Erector or from No. 4 using P58 Battery wound motor and the following extra parts."

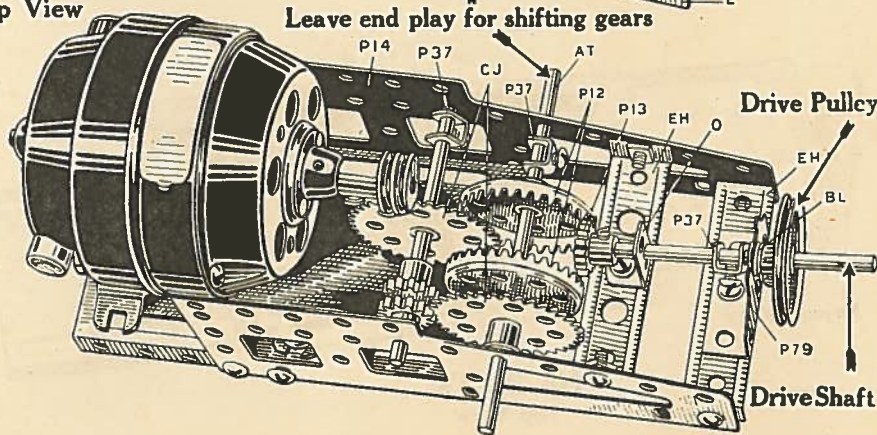
- 1 P12 Crown Gear
- 1 P13 12-tooth Pinion Gear
- 1 O Pawl

No. 34-8's
Top View



Leave end play for shifting gears

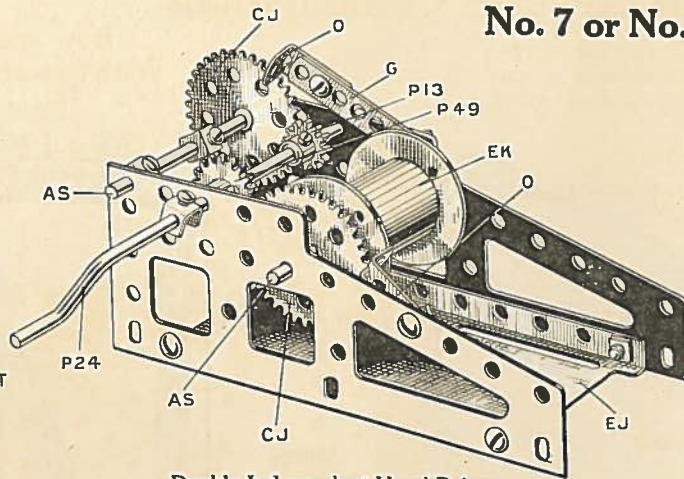
No. 35-8's
Top View



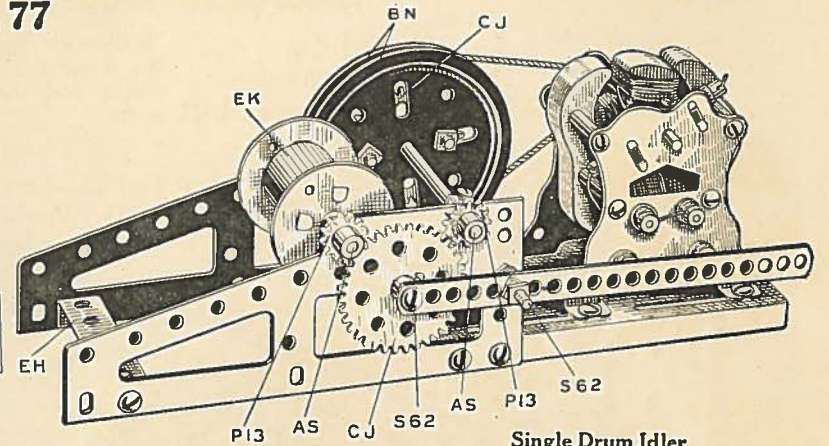
Leave end play for shifting gears

Standard Gear Box Section No. 7 or No. 77

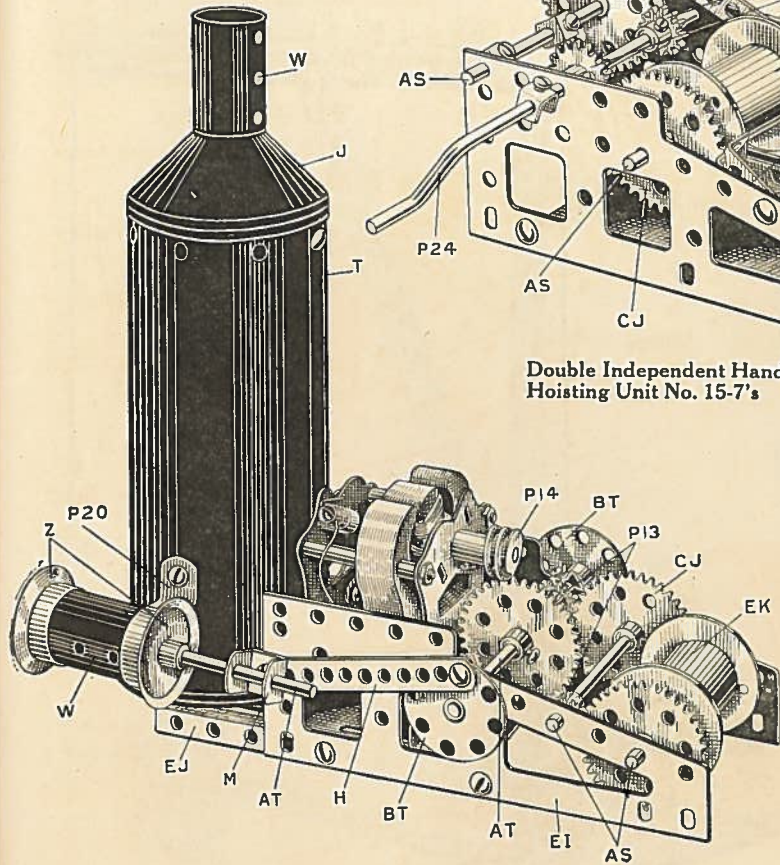
Section 5



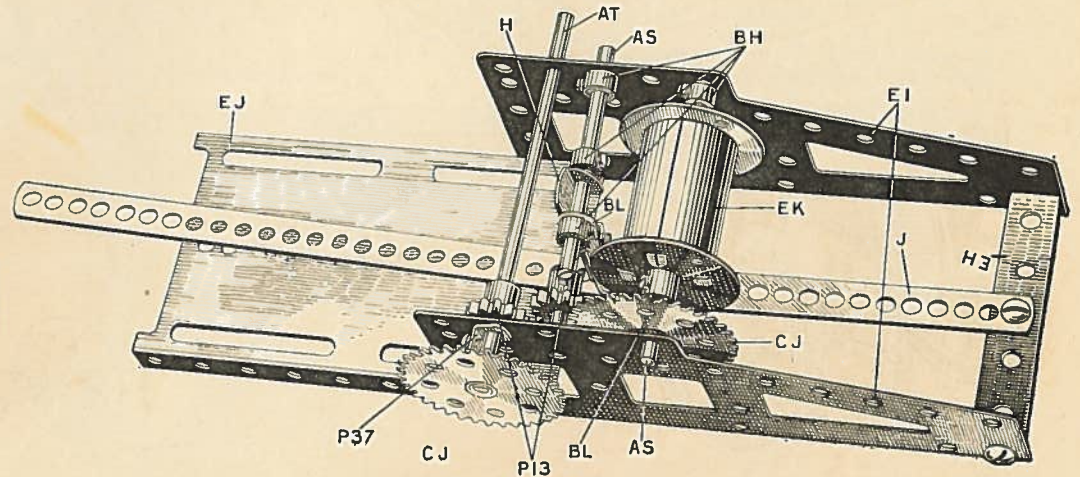
Double Independent Hand Driven
Hoisting Unit No. 15-7's



Single Drum Idler
Release No. 17-7's

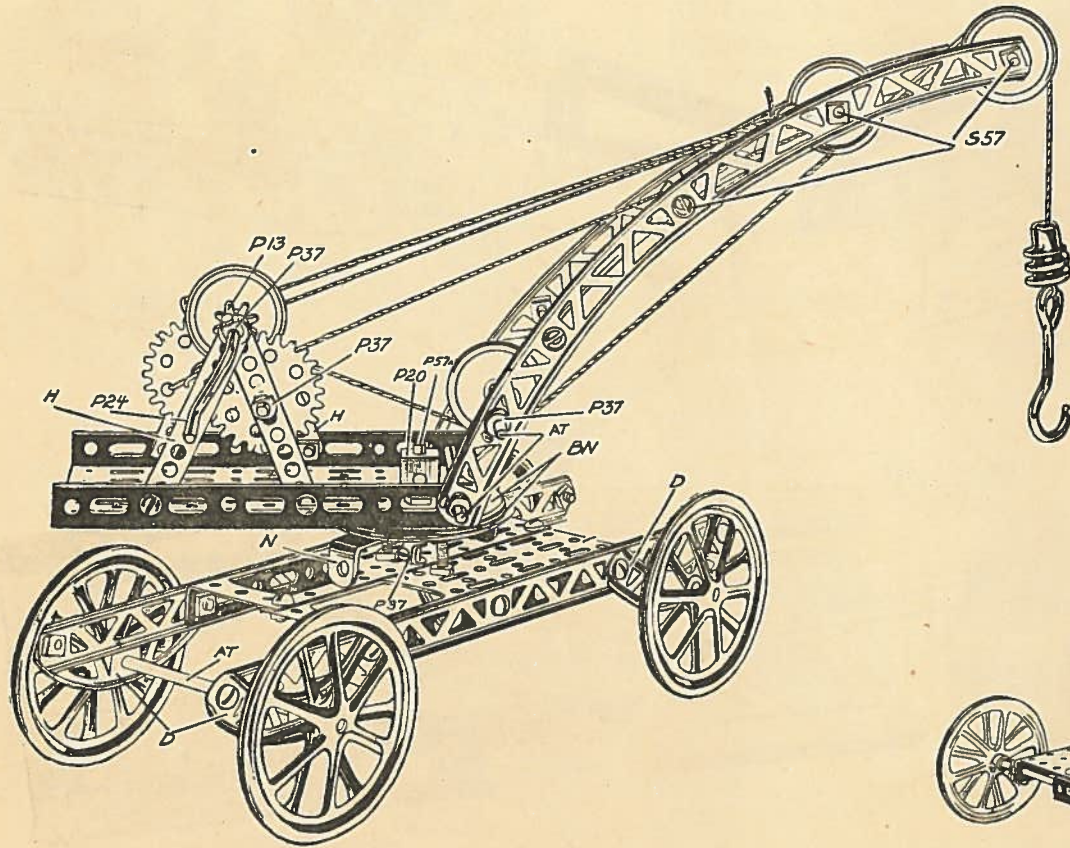


Single Drum Hoisting Unit
With Boiler No. 18-7's

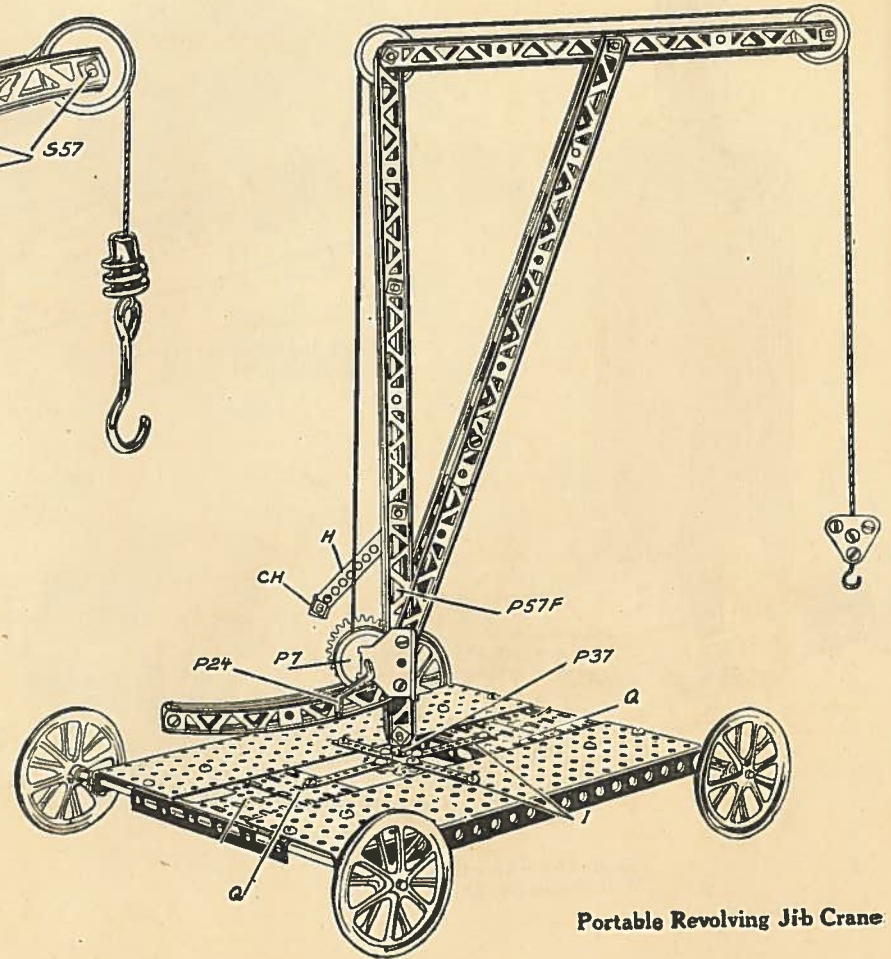


Single Drum Release
Standard Gear Box - Top View Detail No. 16-7's

Models Built with No. 7 or No. 77 Erector

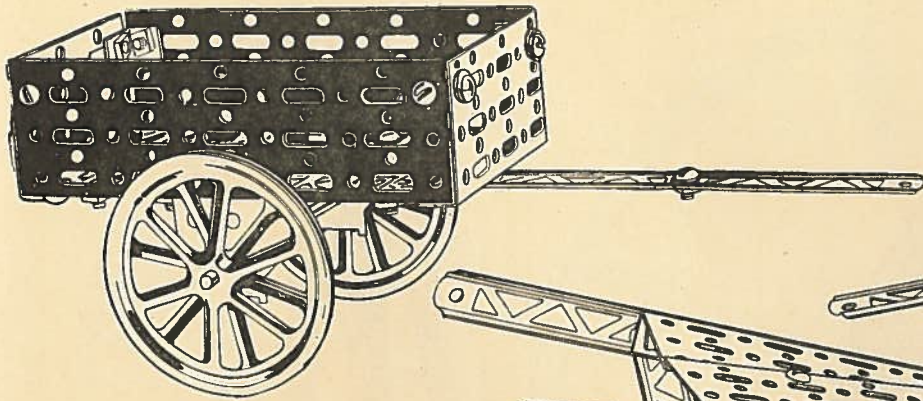


Portable Hand Derrick

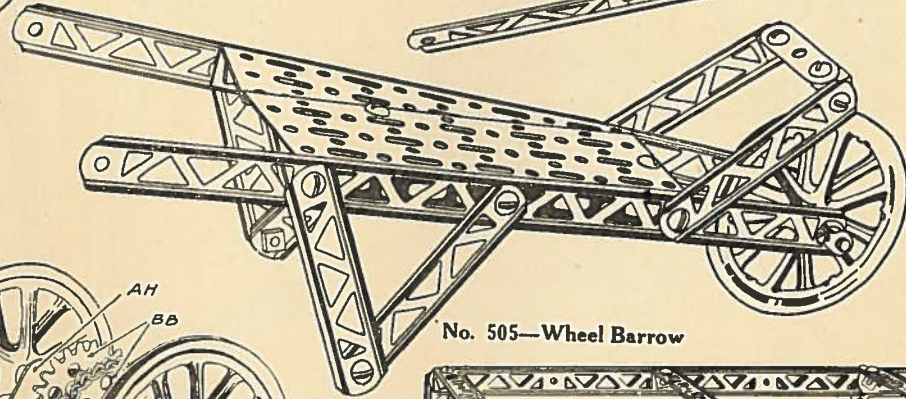


Portable Revolving Jib Crane

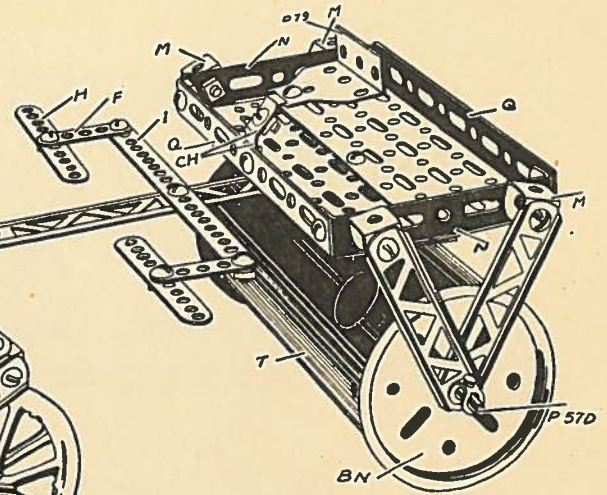
Models Built with No. 7 or No. 77 Erector



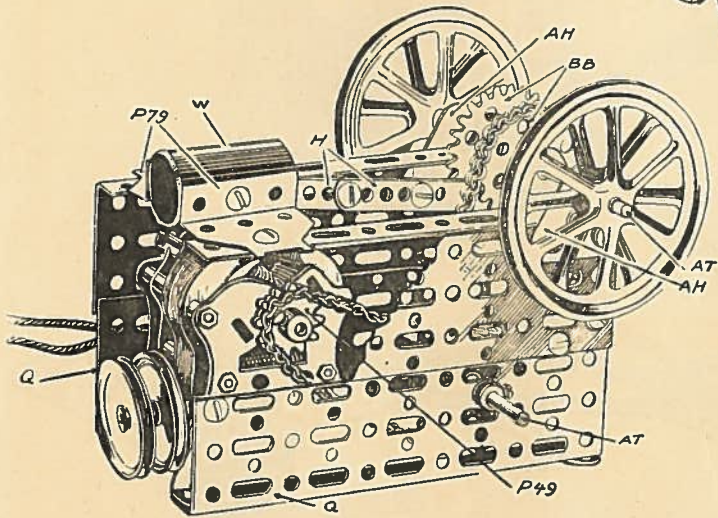
Cart



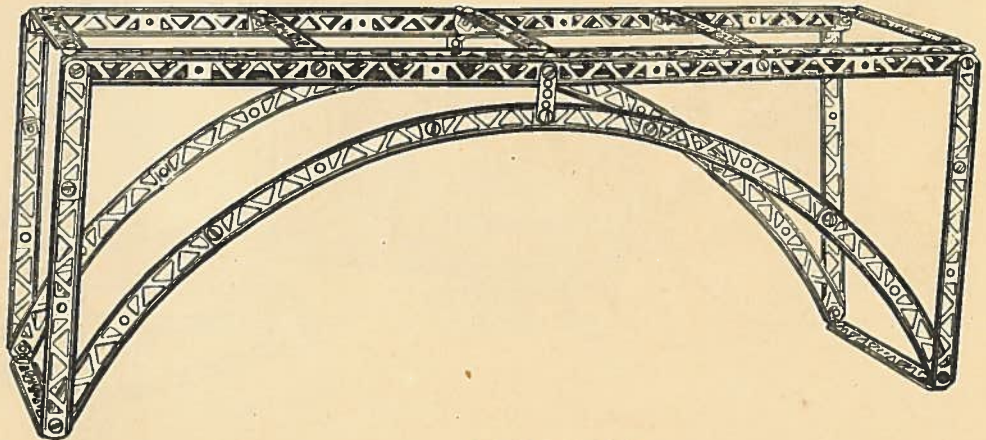
No. 505—Wheel Barrow



Field Roller

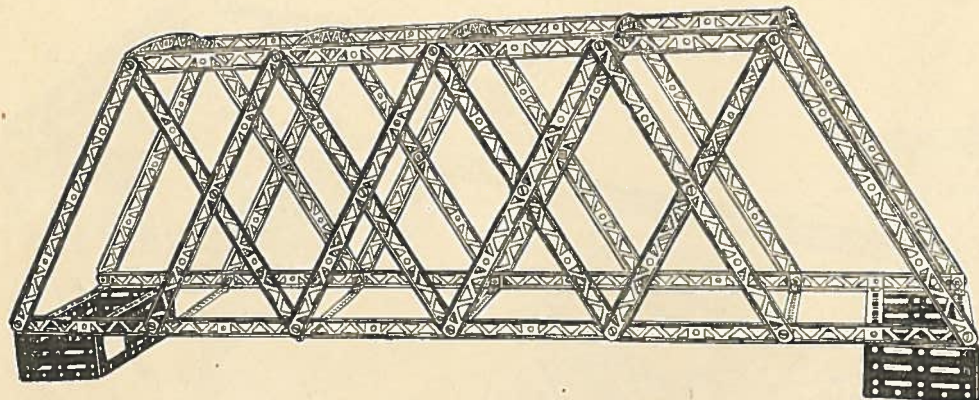


Gas Engine

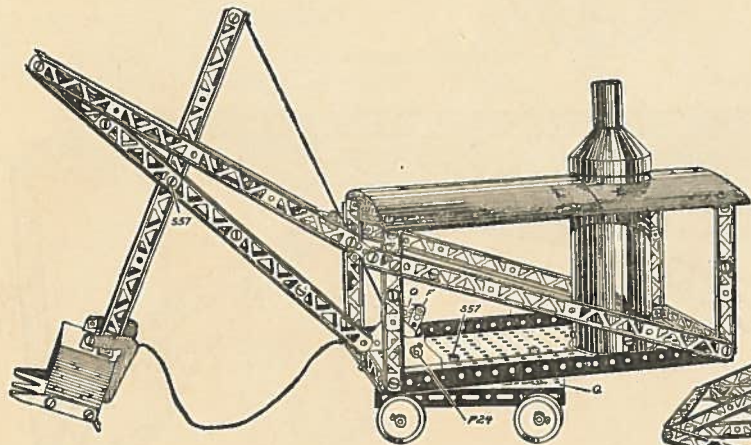


Single Arch Bridge

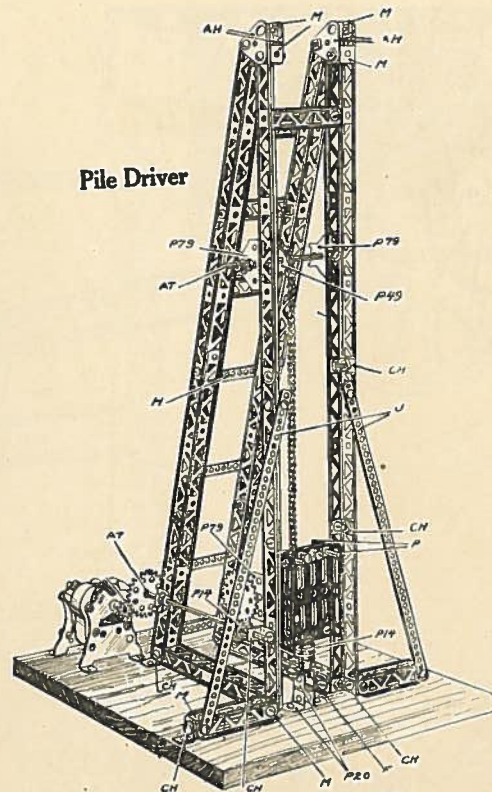
Models Built with No. 7 or No. 77 Erector



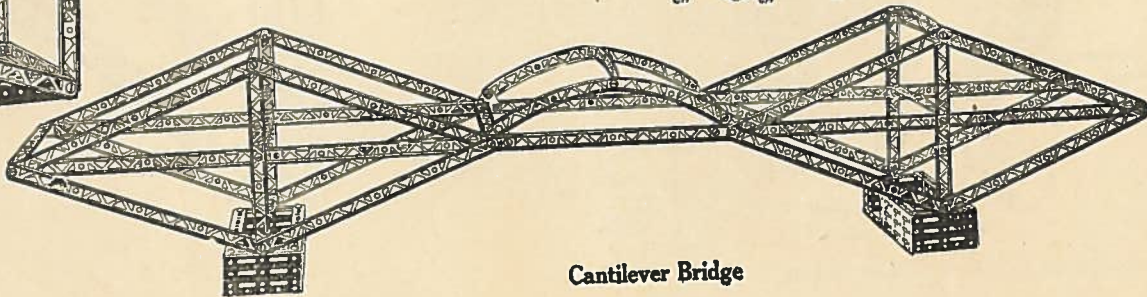
Single Track R. R. Bridge



Hand Power Steam Shovel

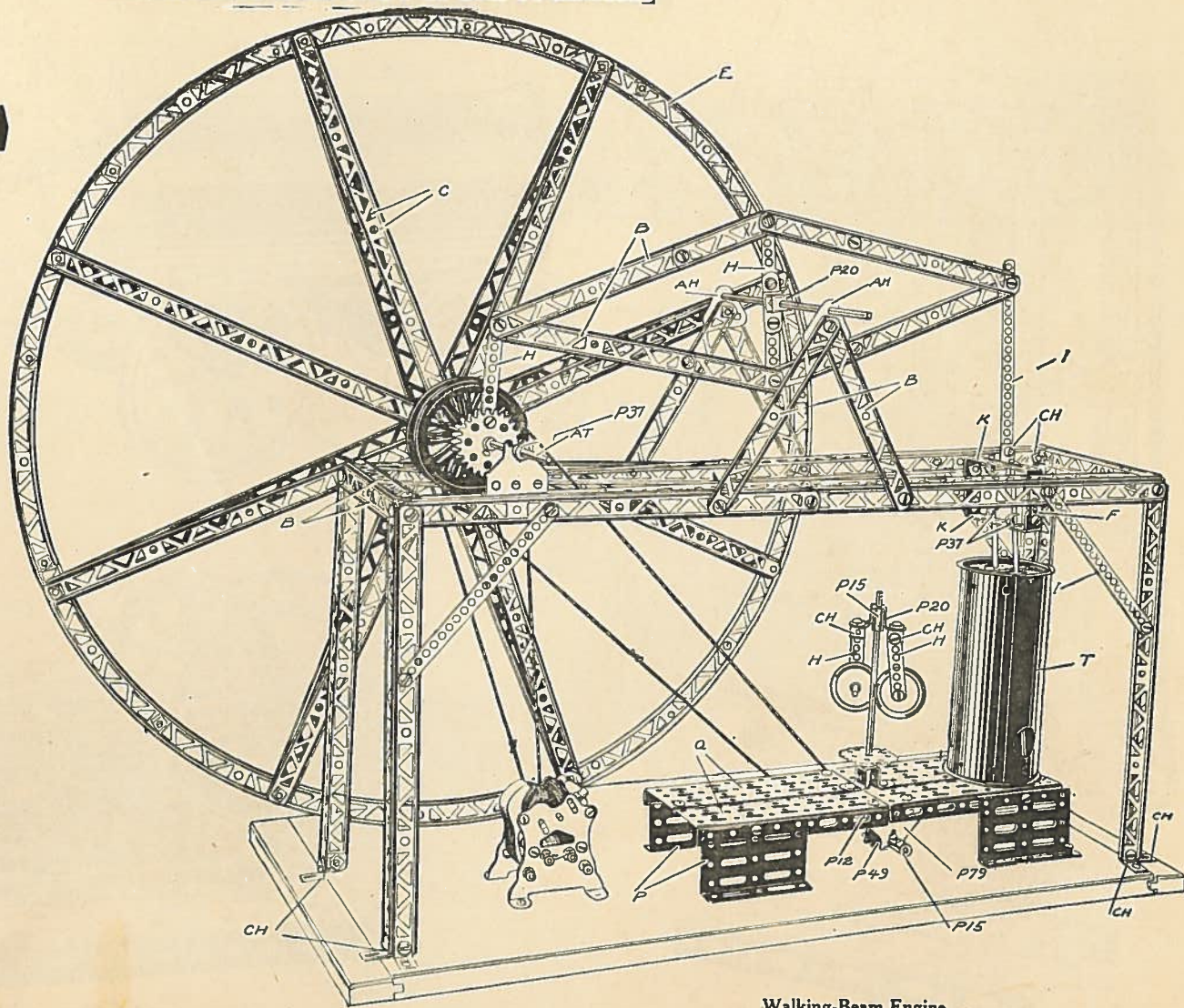
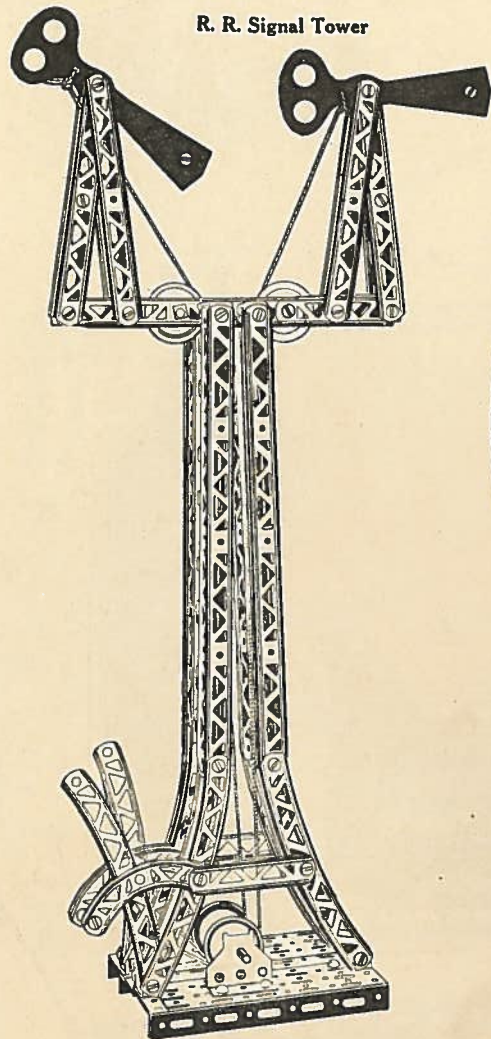


Pile Driver



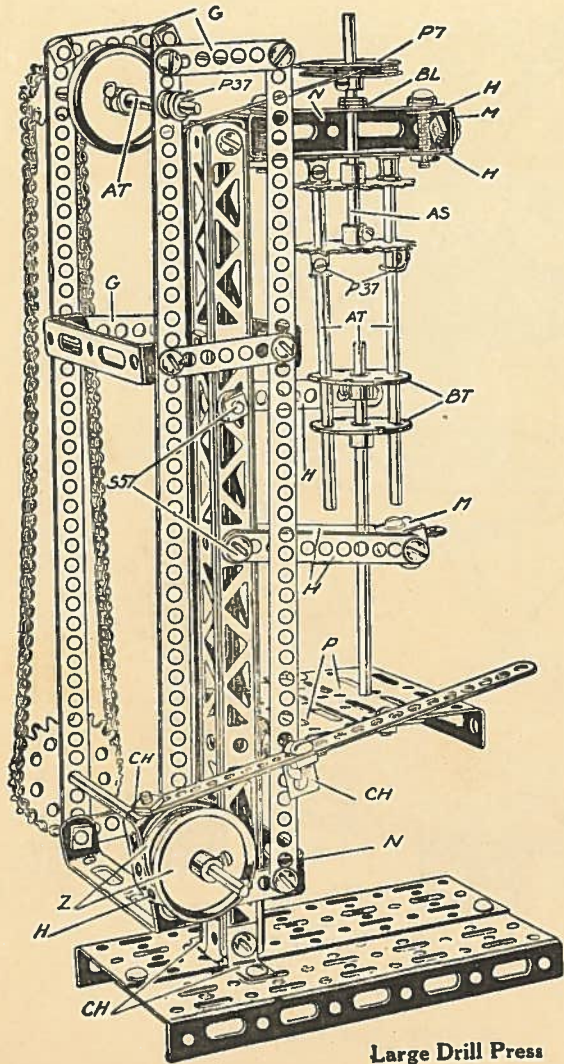
Cantilever Bridge

Models Built with No. 7 or No. 77 Erector

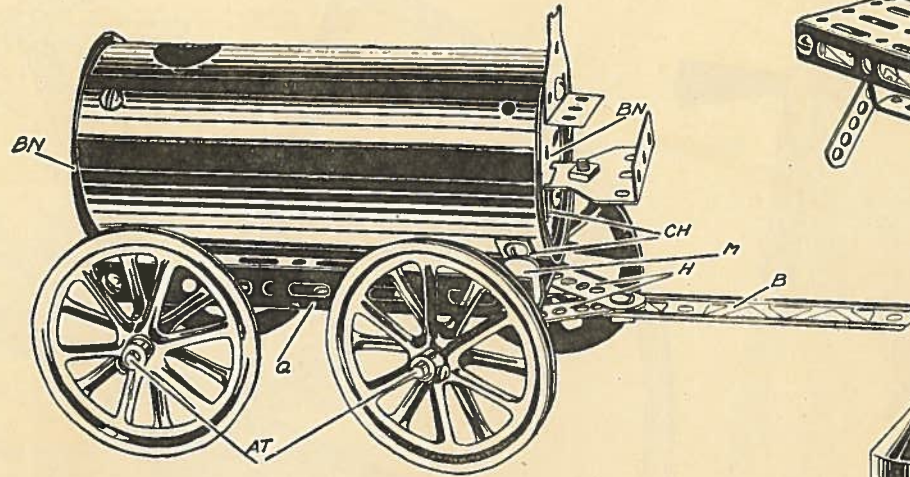


Walking-Beam Engine

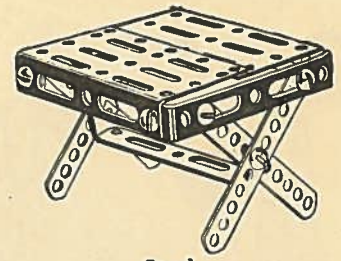
Models Built with No. 7 or No. 77 Erector



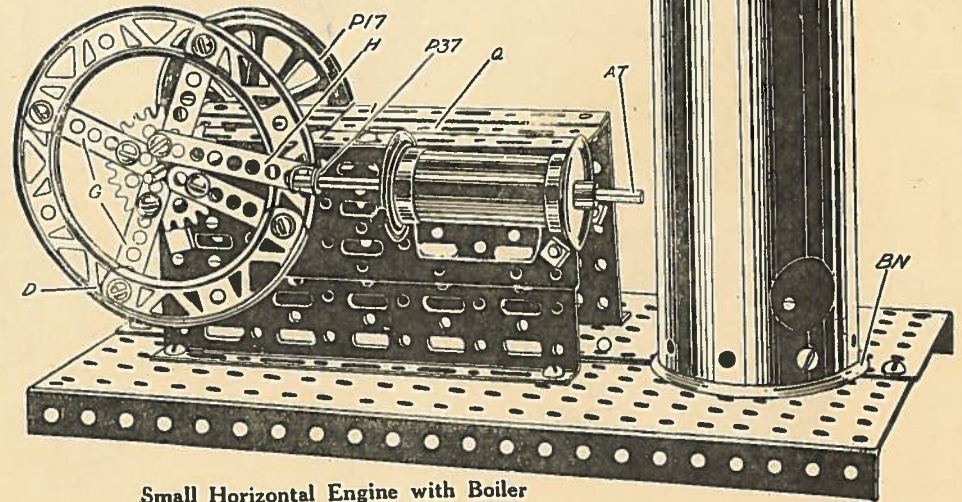
Large Drill Press



Tank Cart

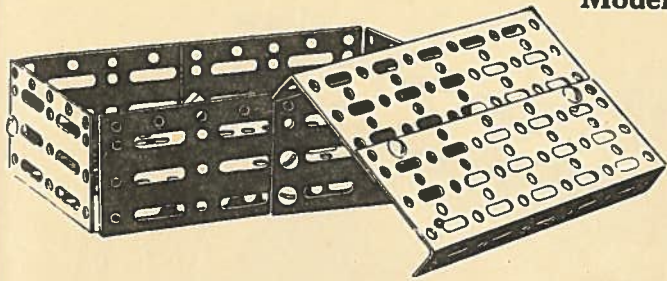


Stool

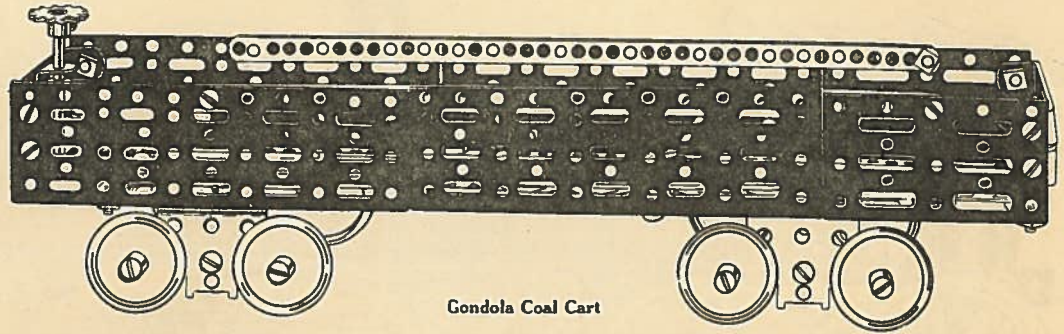


Small Horizontal Engine with Boiler

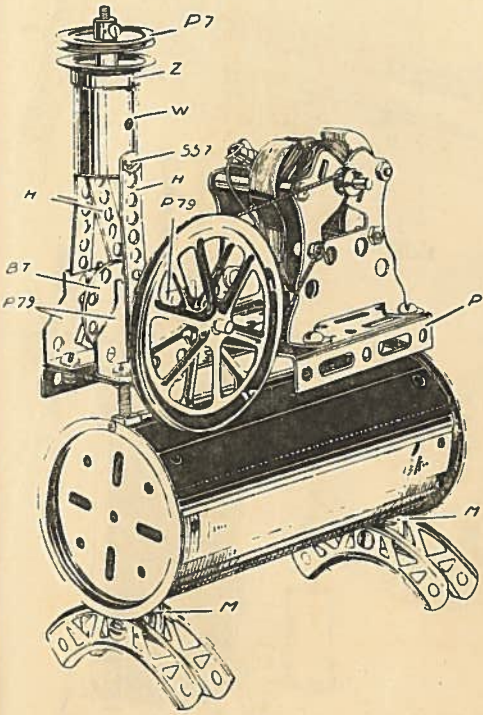
Models Built with No. 7 or No. 77 Erector



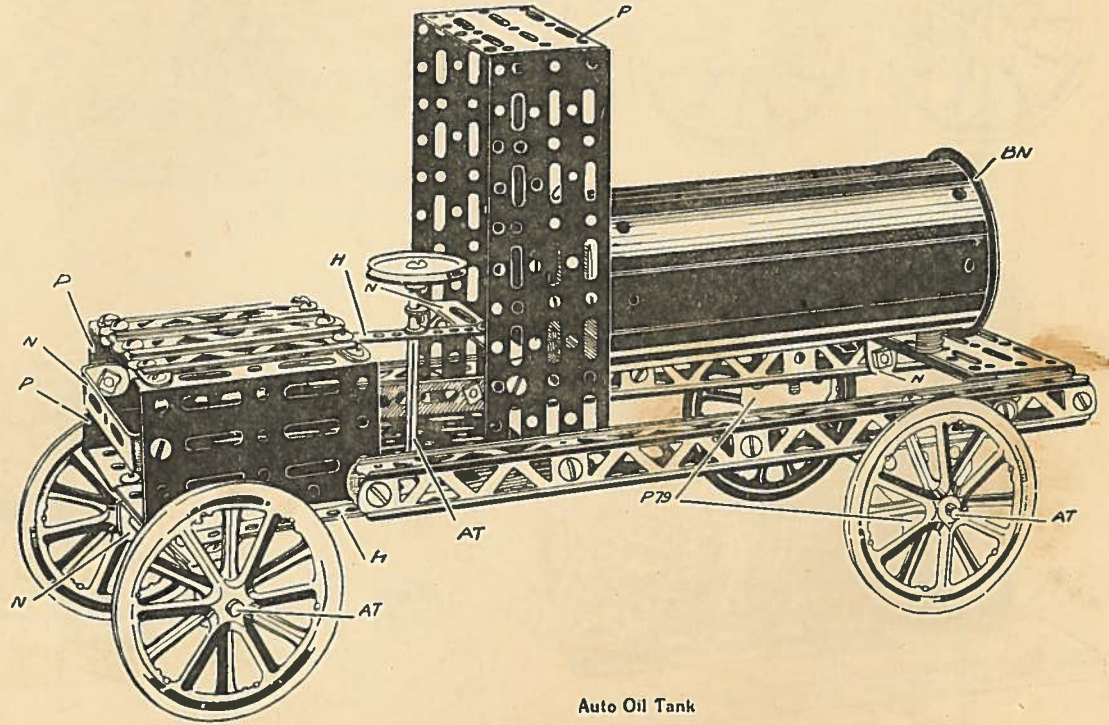
No 518—Box



Gondola Coal Cart

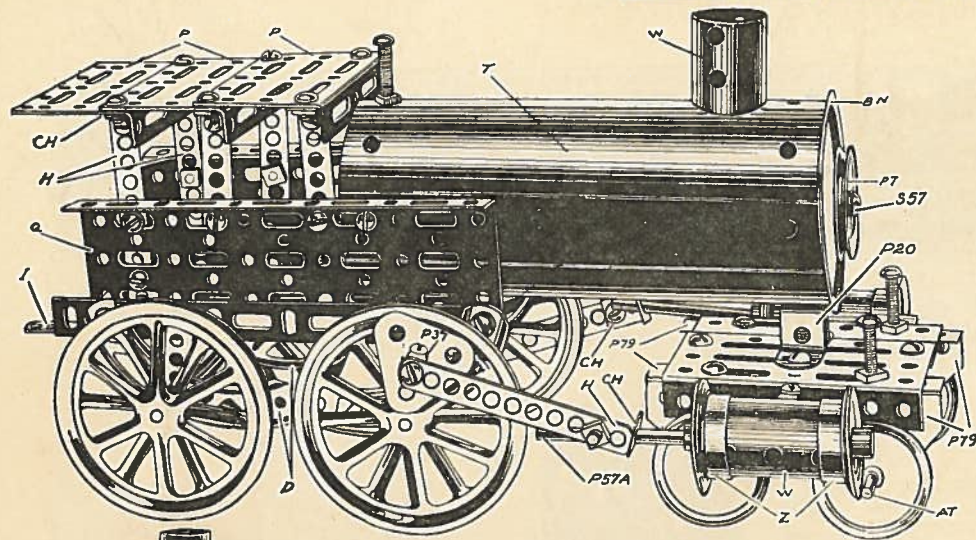


Small Air Compressor

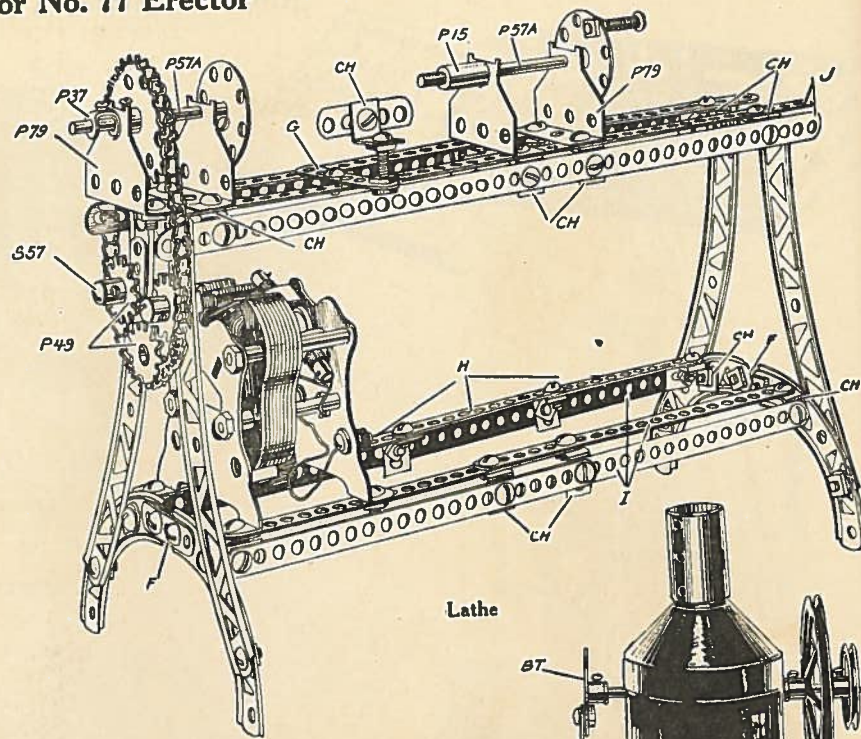


Auto Oil Tank

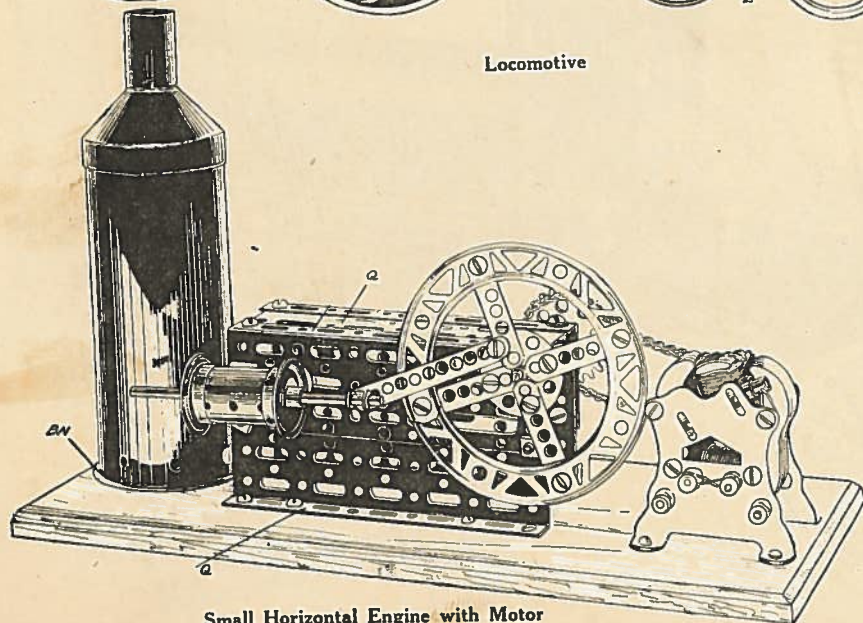
Models Built with No. 7 or No. 77 Erector



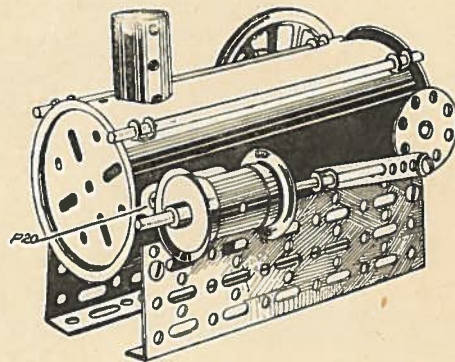
Locomotive



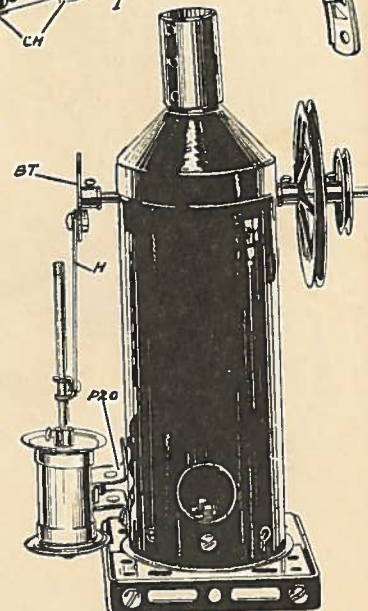
Lathe



Small Horizontal Engine with Motor



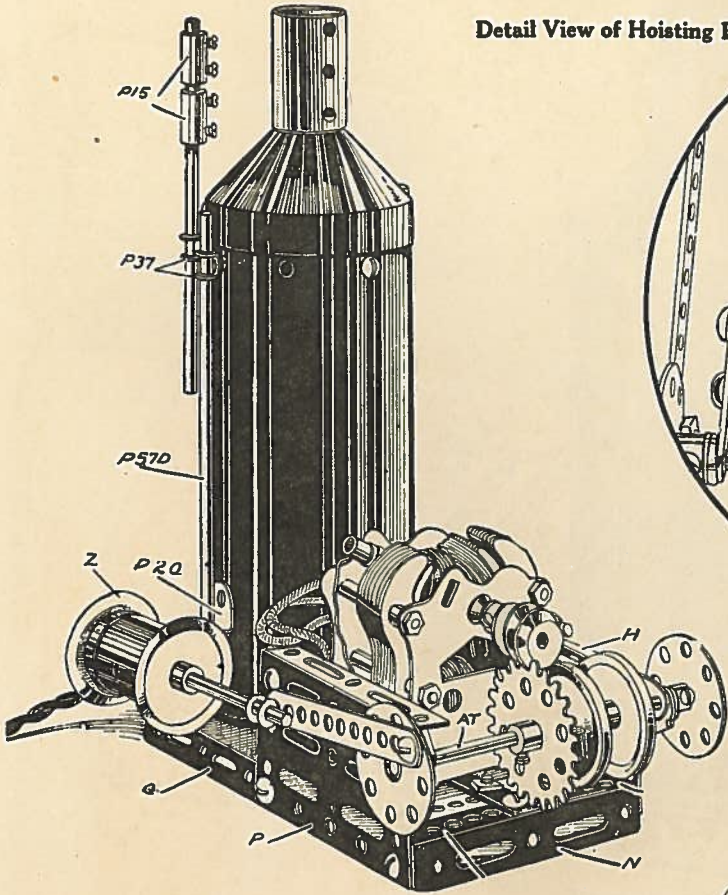
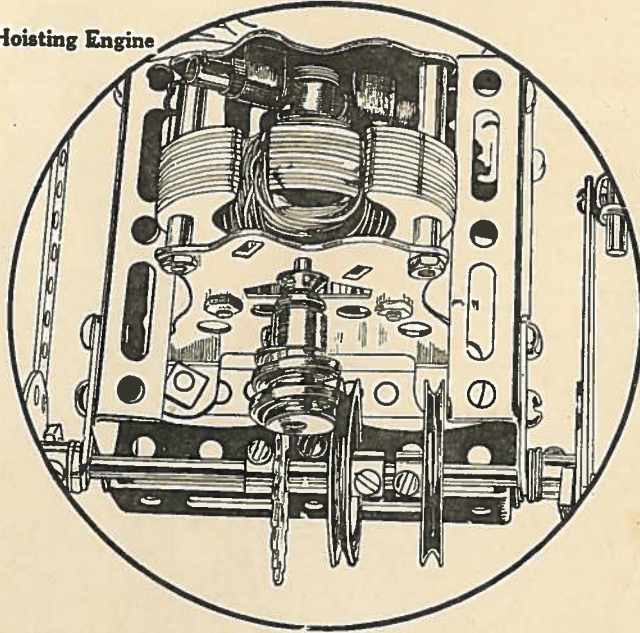
Horizontal Boiler Engine



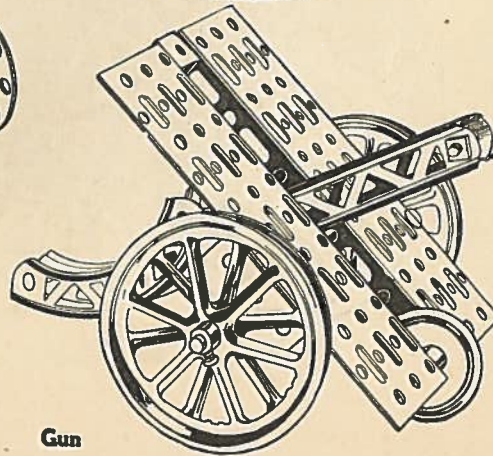
Single Cylinder Upright Engine

Models Built with No. 7 or No. 77 Erector

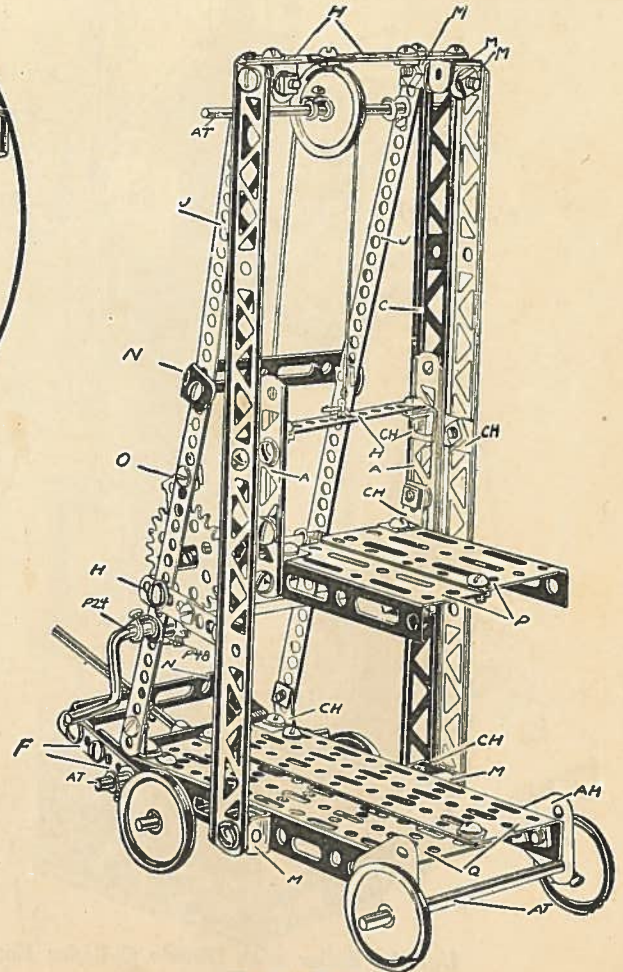
Detail View of Hoisting Engine



Hoisting Engine

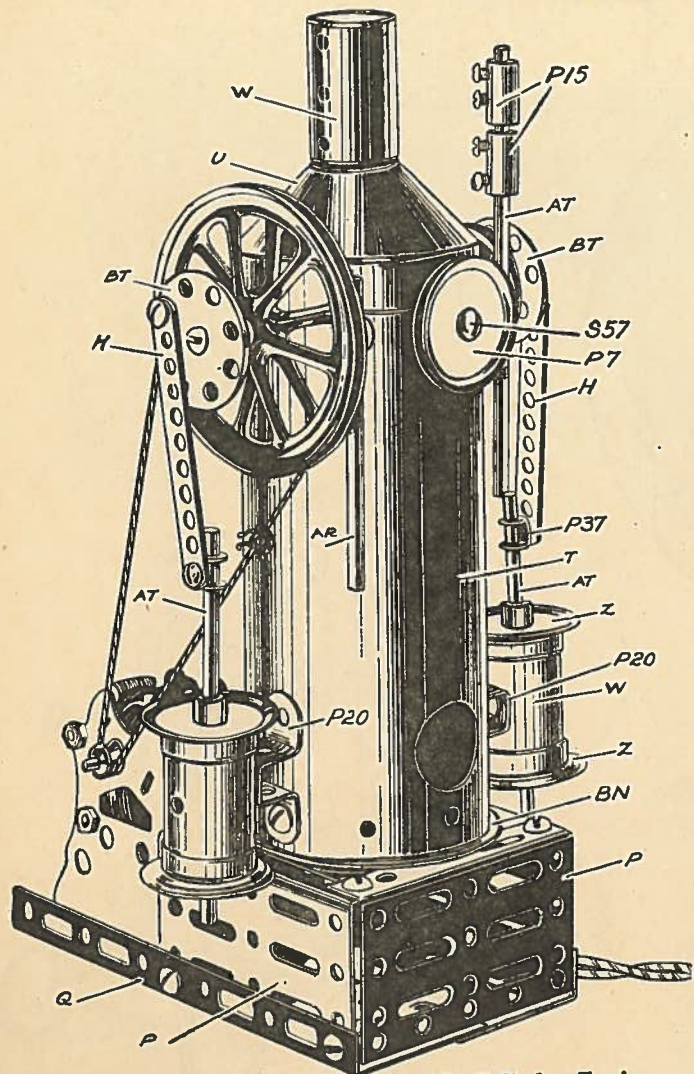


Gun

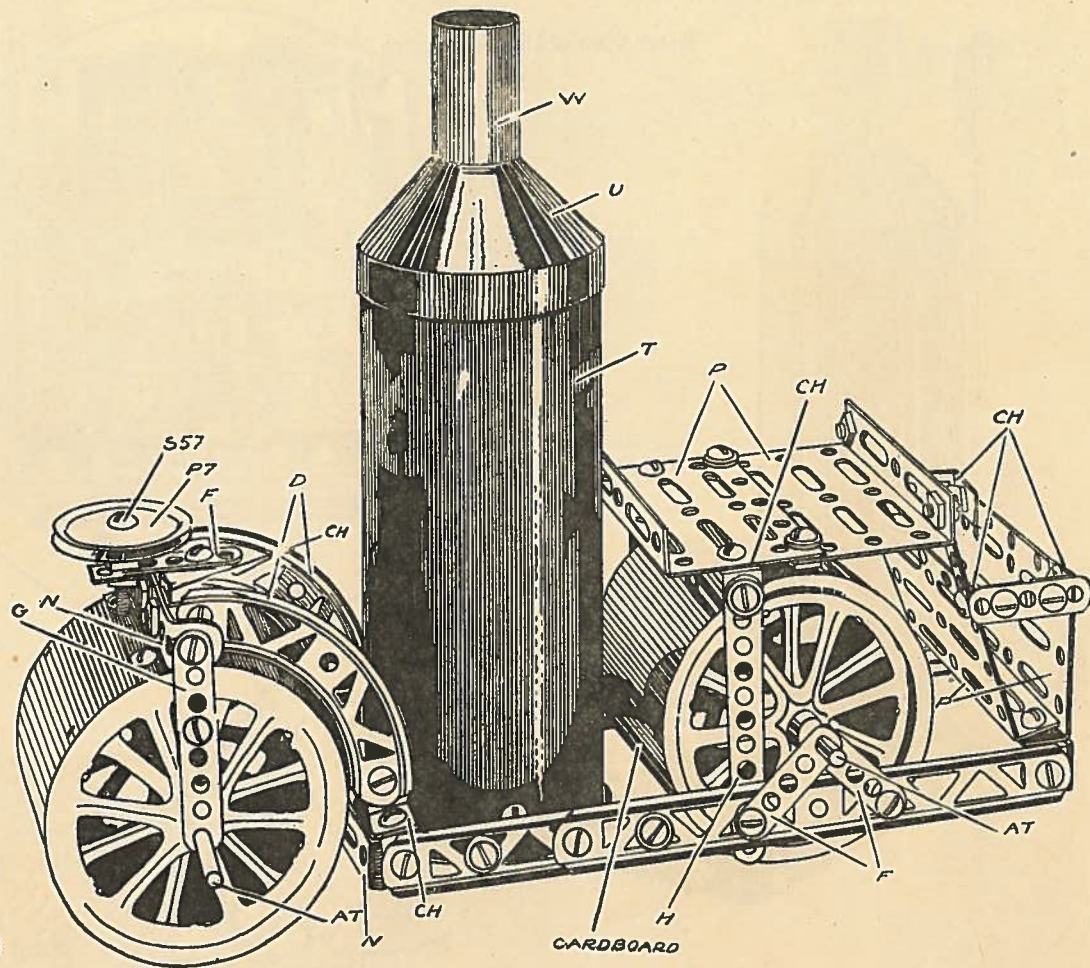


Elevator Truck

Models Built with No. 7 or No. 77 Erector

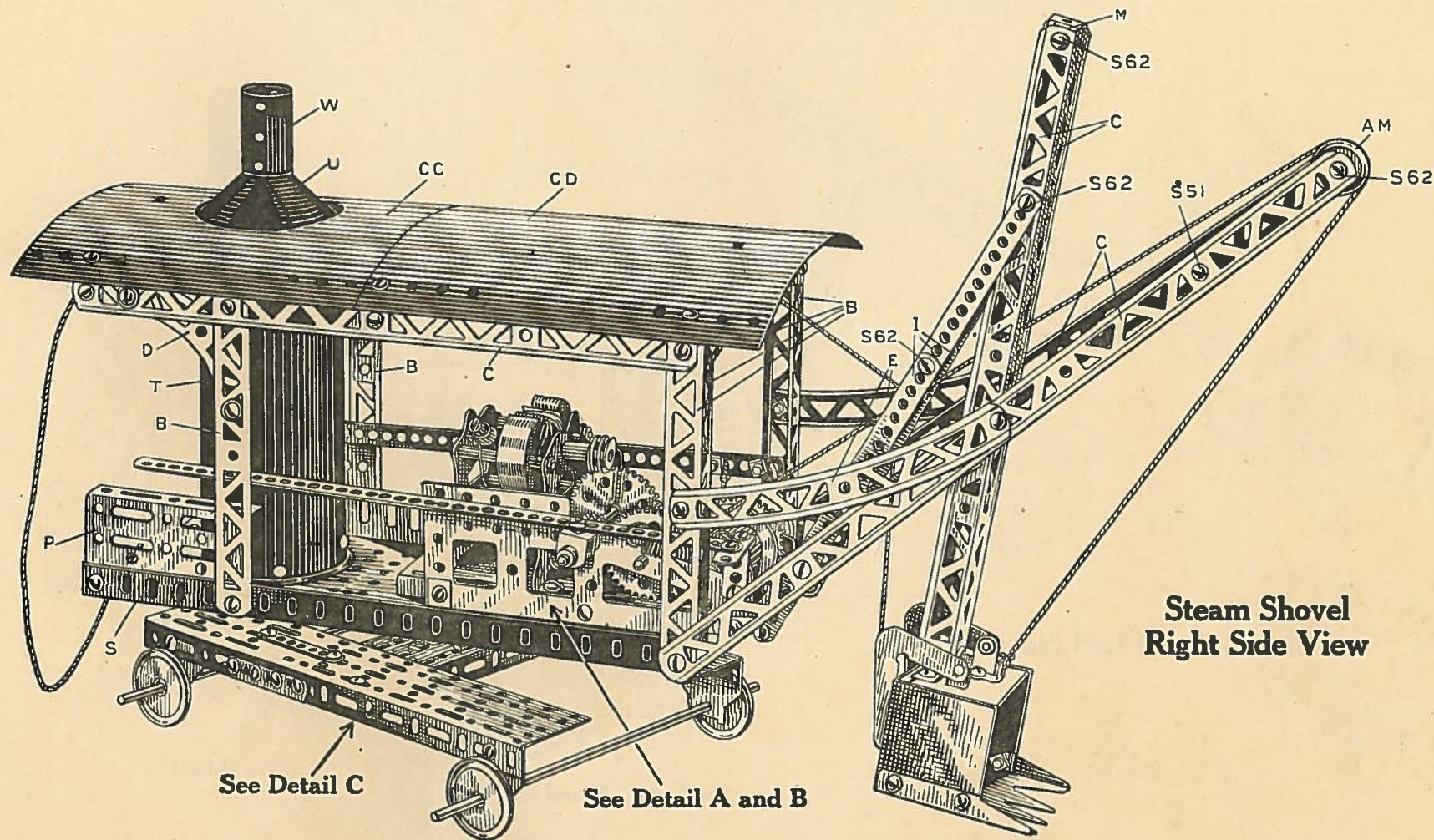


Upright Boiler with Double Cylinder Engine

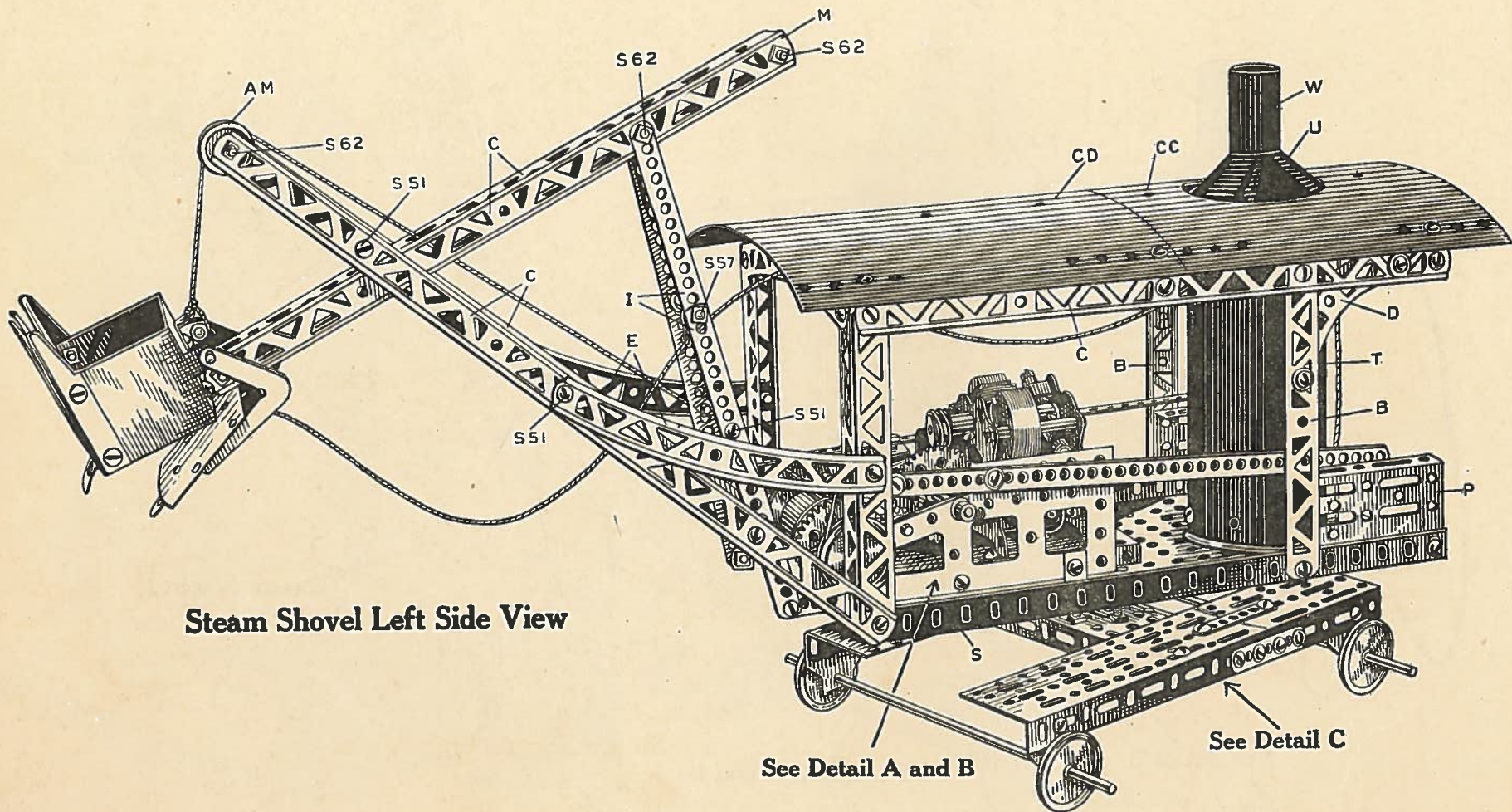


Low Type Road Roller

Models Built with No. 7 or No. 77 Erector



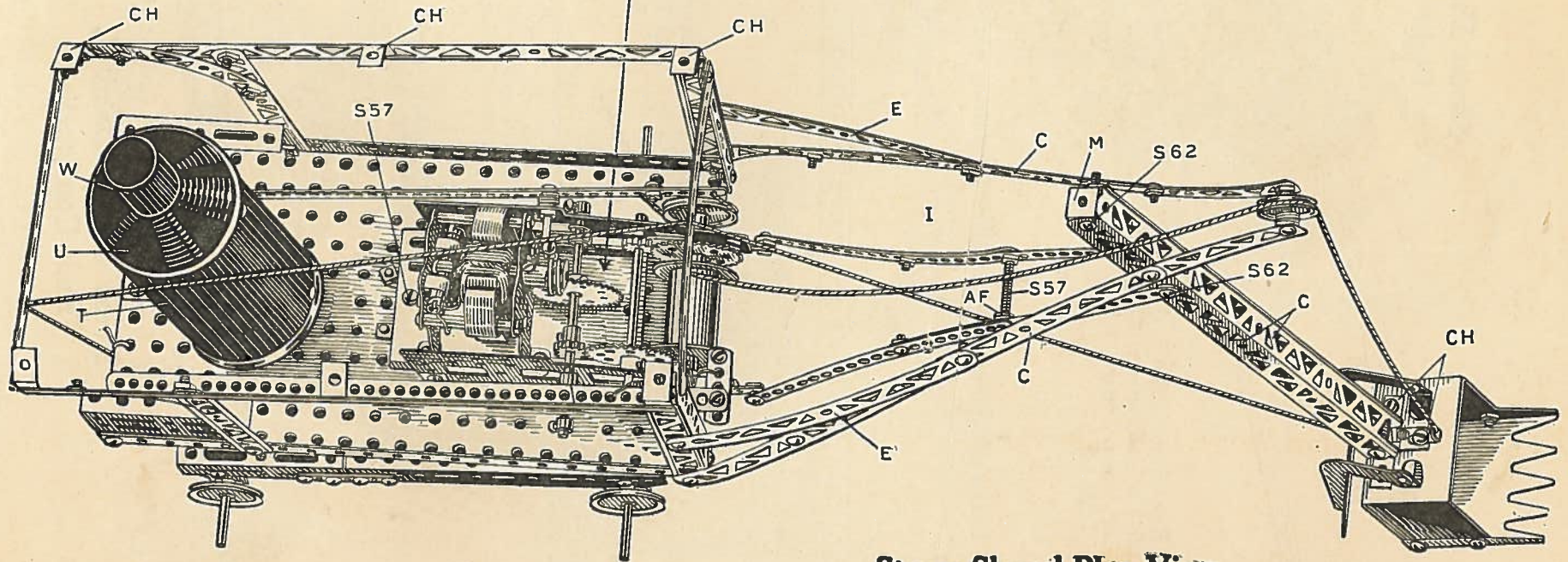
Models Built with No. 7 or No. 77 Erector



Steam Shovel Left Side View

Models Built with No. 7 or No. 77 Erector

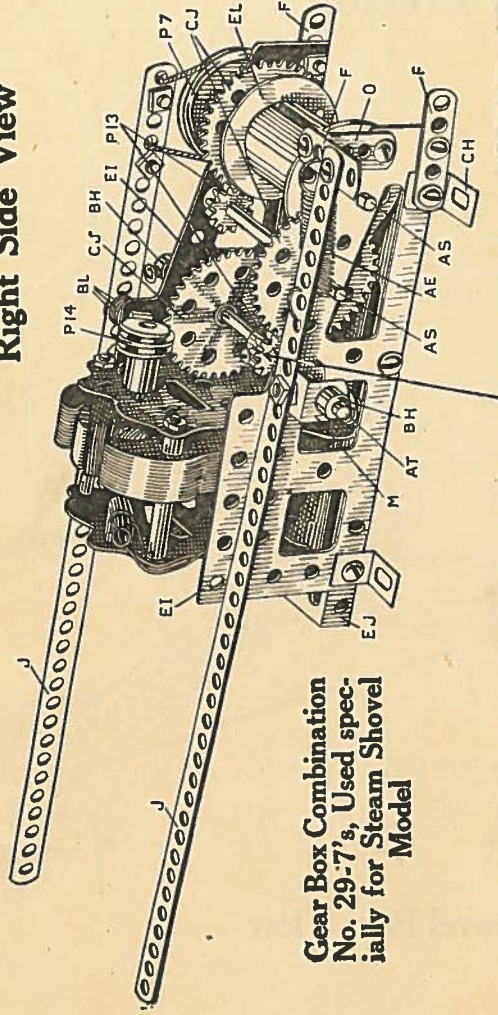
See Detail A and B



Steam Shovel Plan View

Models Built with No. 7 or No. 77 Erector

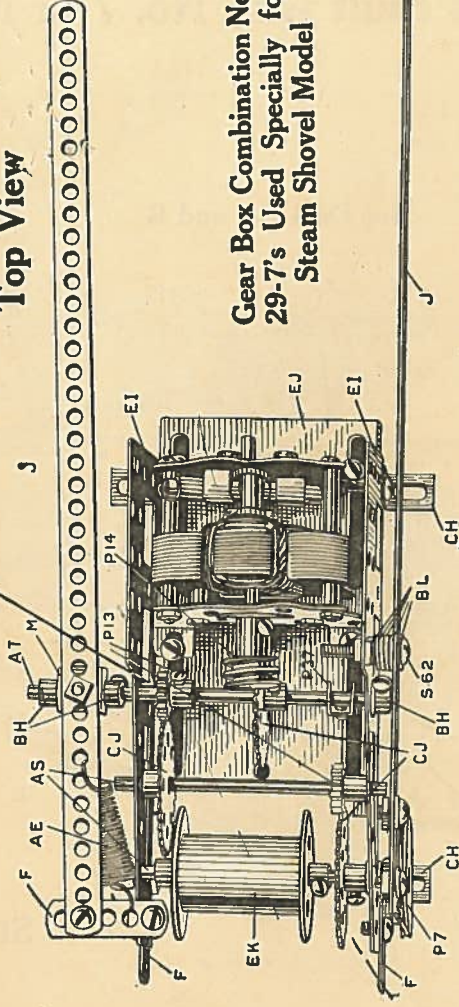
**Steam Shovel Detail A
Right Side View**



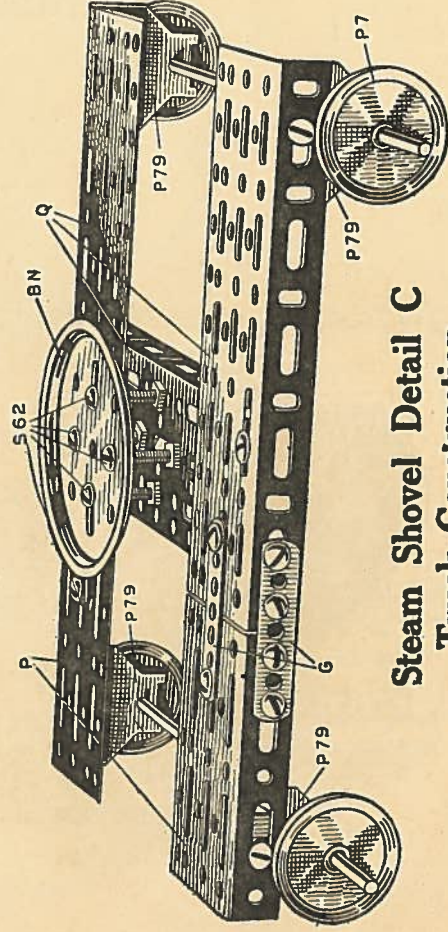
Gear Box Combination No. 29-7's, Used specially for Steam Shovel Model

Leave enough end play to allow for putting gears in and out of mesh

**Steam Shovel Detail B
Top View**



Gear Box Combination No. 29-7's Used Specially for Steam Shovel Model

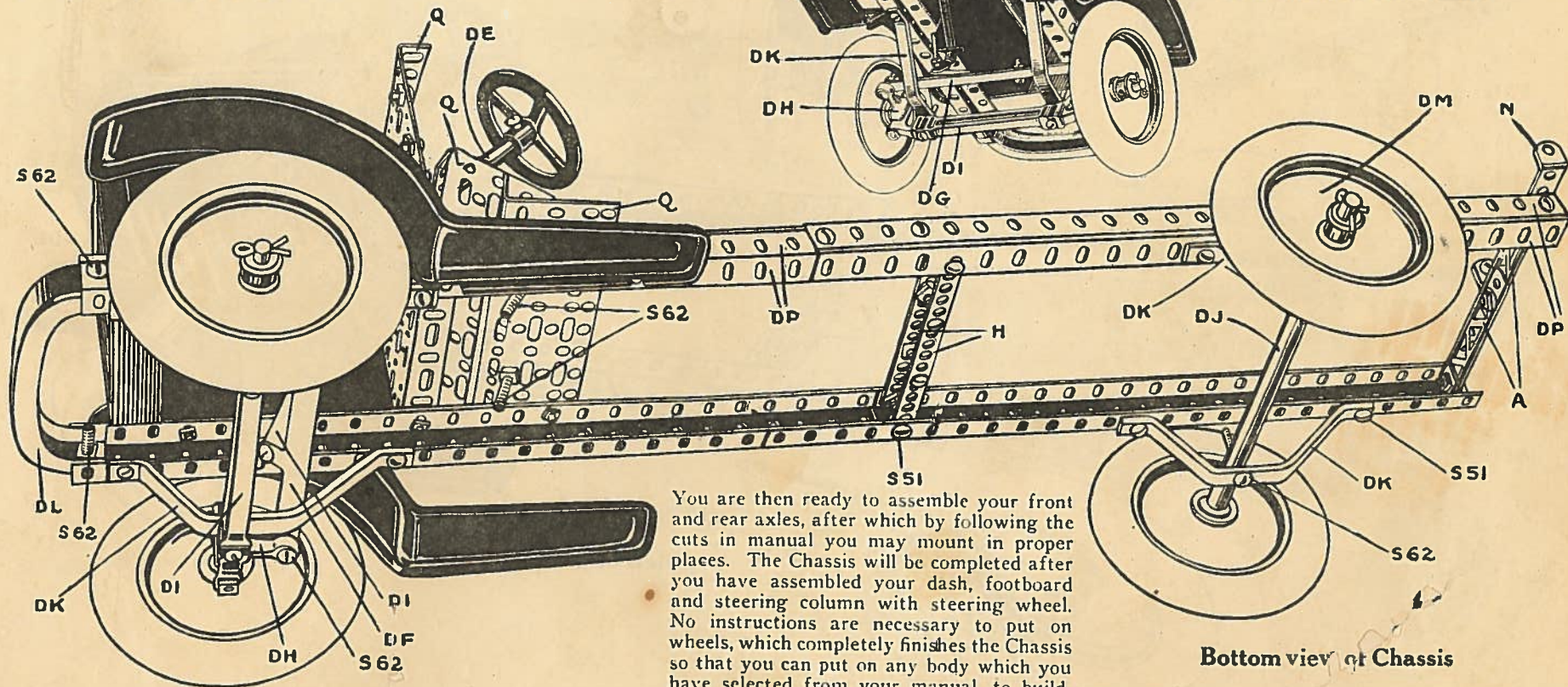


**Steam Shovel Detail C
Truck Construction**

Models Built with No. 7½ Erector

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.



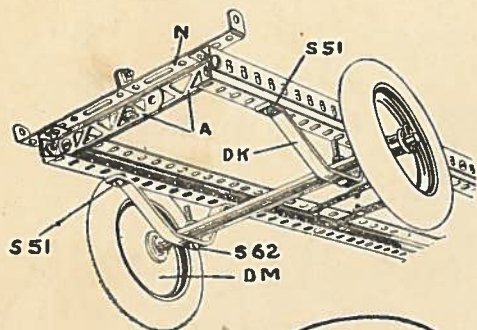
You are then ready to assemble your front and rear axles, after which by following the cuts in manual you may mount in proper places. The Chassis will be completed after you have assembled your dash, footboard and steering column with steering wheel. No instructions are necessary to put on wheels, which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

Bottom view front end

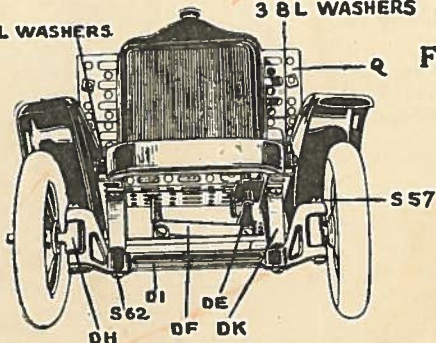
Bottom view of Chassis

Models Built with No. 7½ Erector

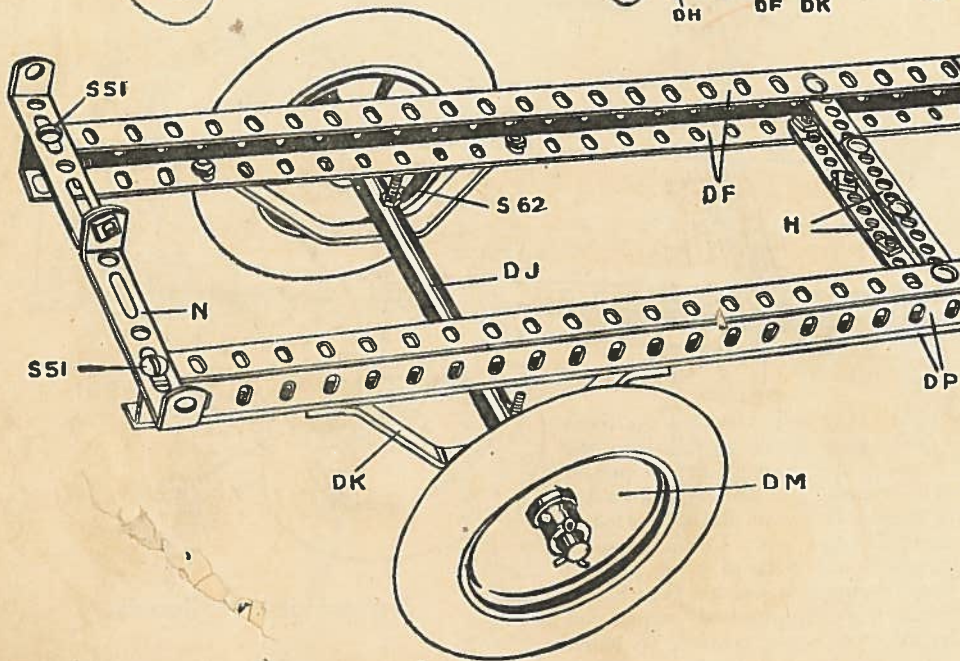
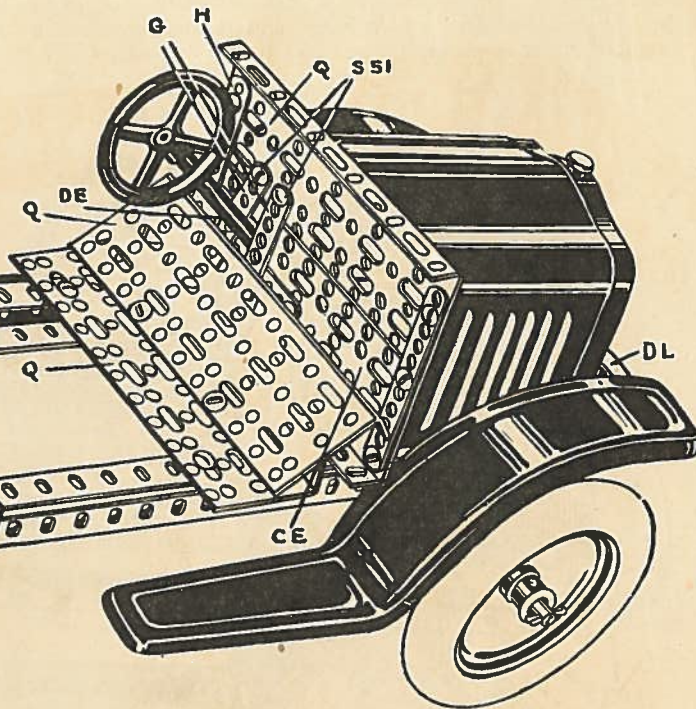
Rear end construction



3 BL WASHERS



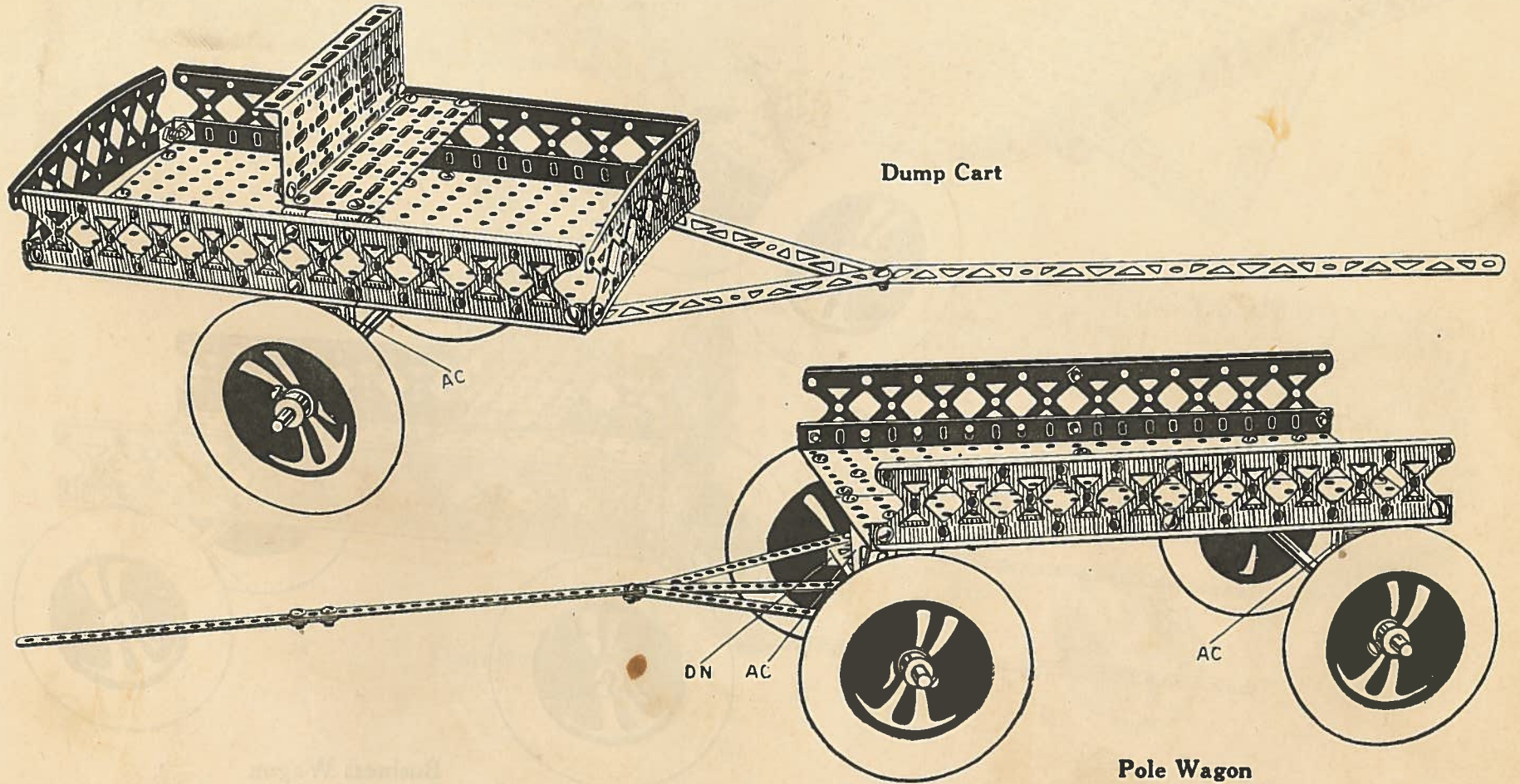
Front end construction



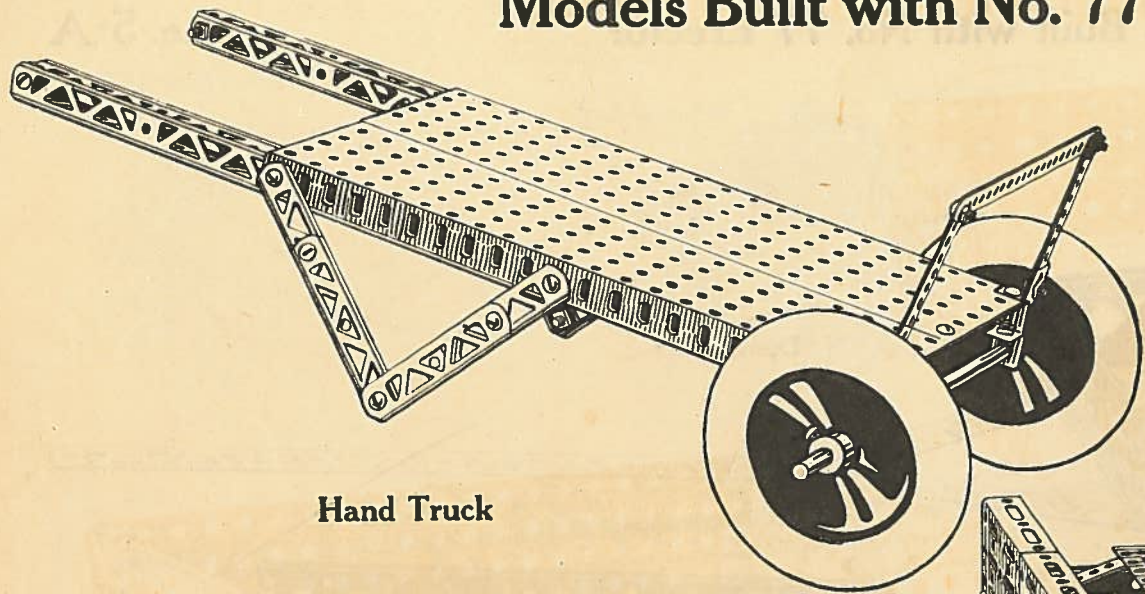
Top view of Chassis

Models Built with No. 77 Erector

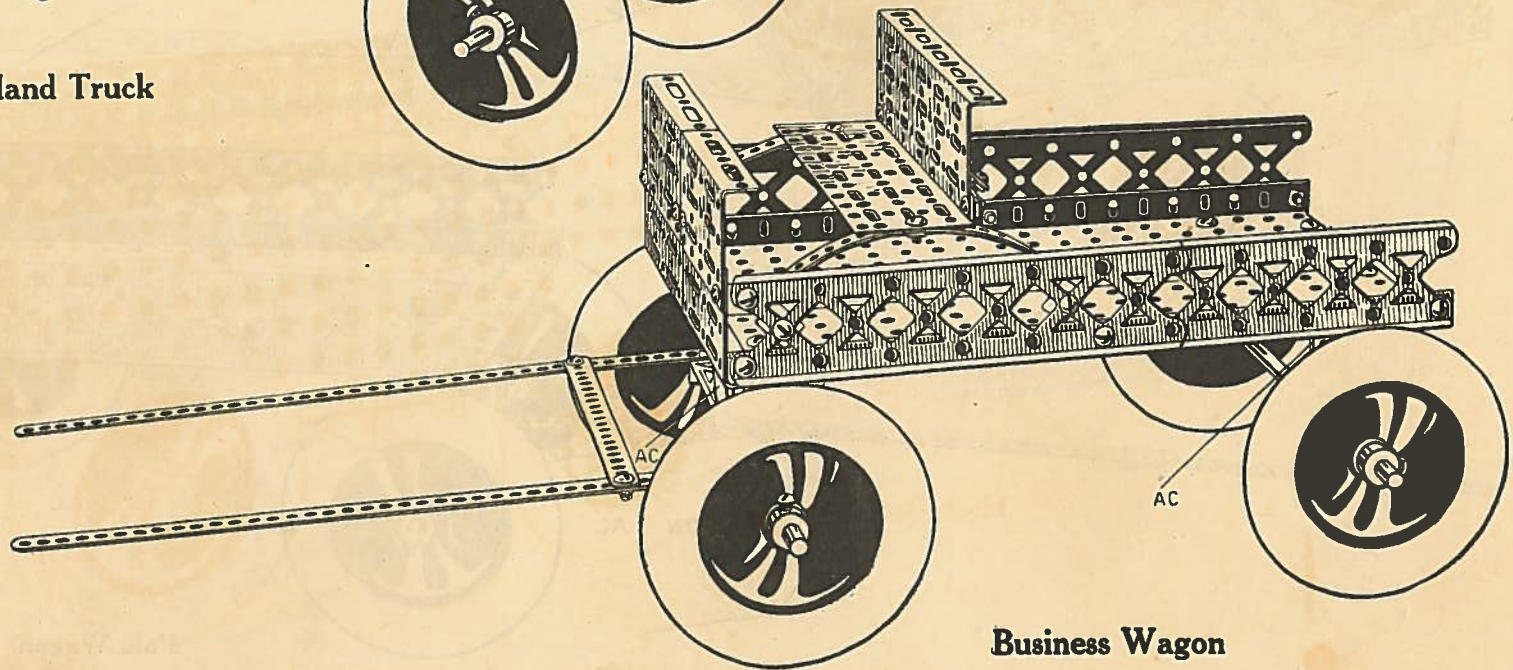
Sec. 5-A



Models Built with No. 77 Erector

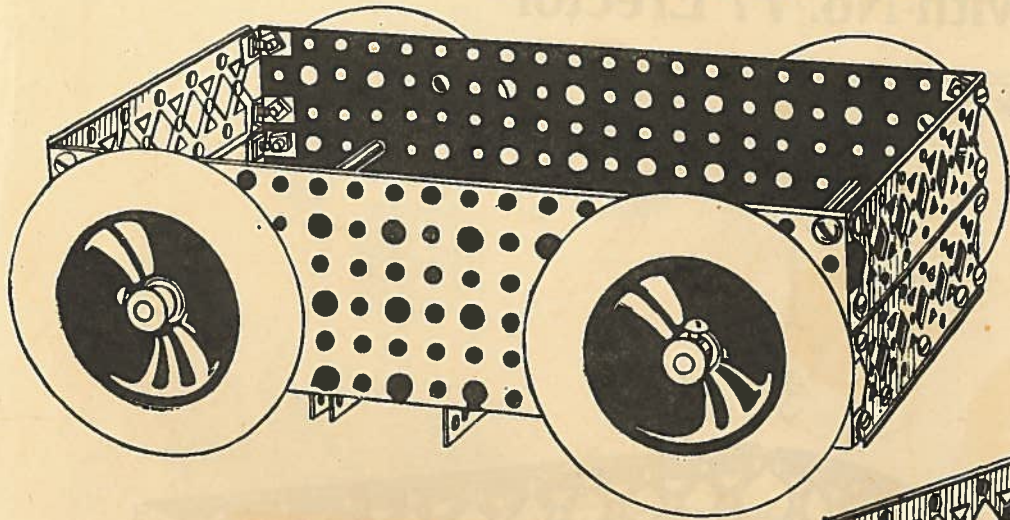


Hand Truck

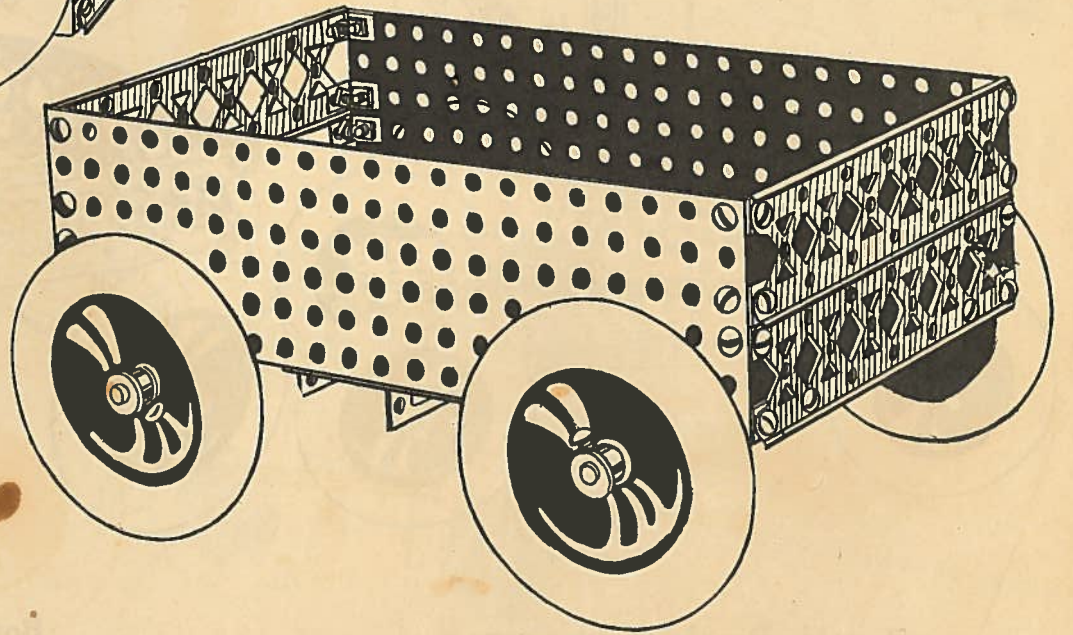


Business Wagon

Models Built with No. 77 Erector

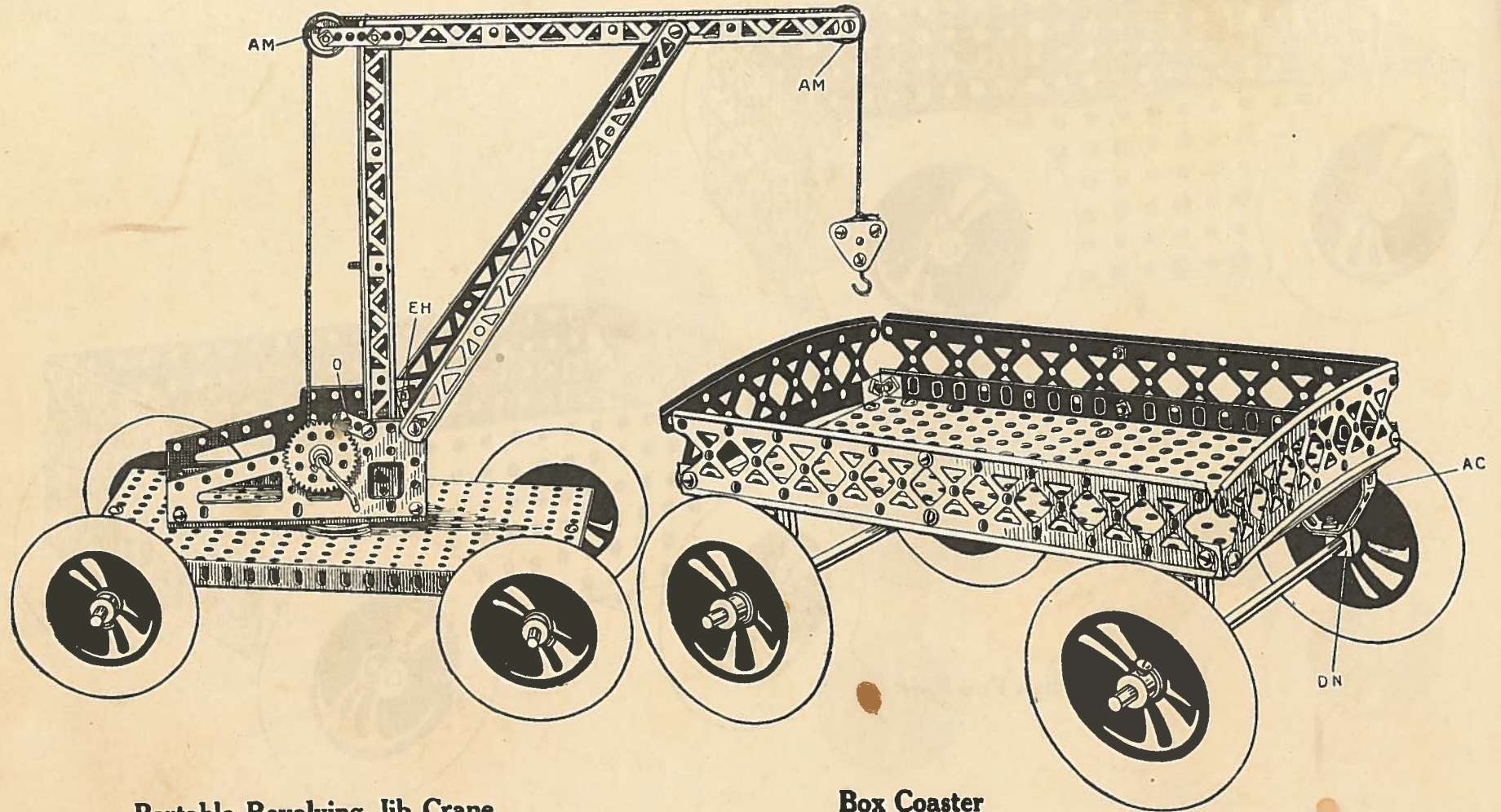


Low Box Cart



High Box Cart

Models Built with No. 77 Erector

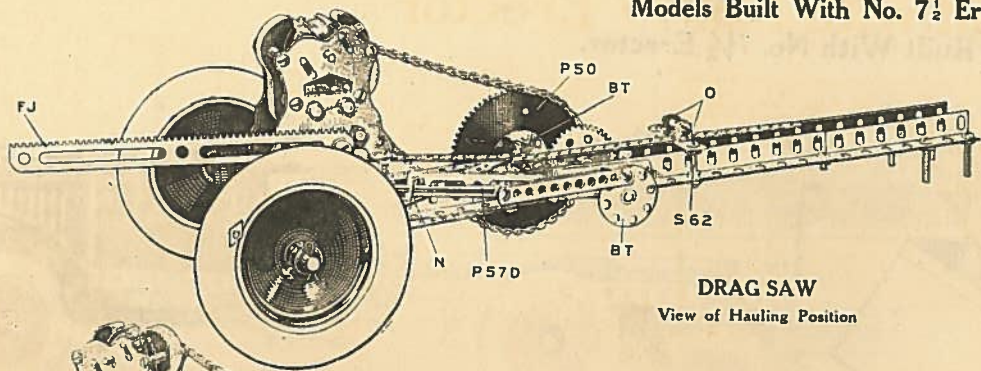


Portable Revolving Jib Crane

Box Coaster

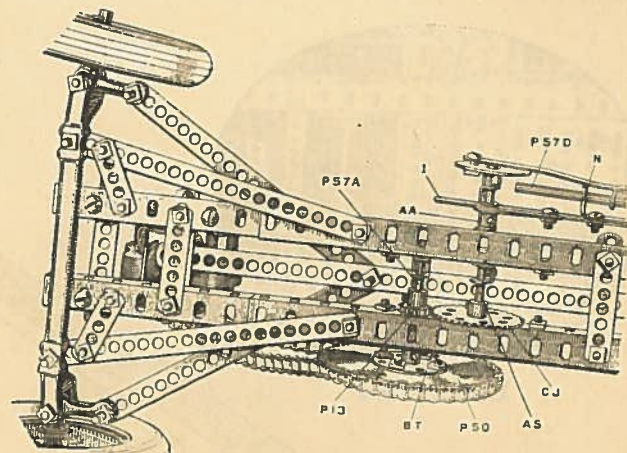
Models Built With No. 7½ Erector

Section 6



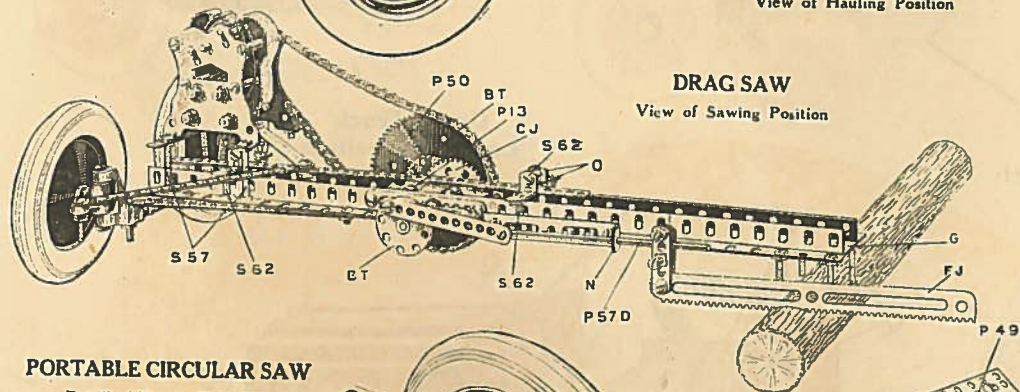
DRAG SAW

View of Hauling Position



DRAG SAW

Detail View of Under-side

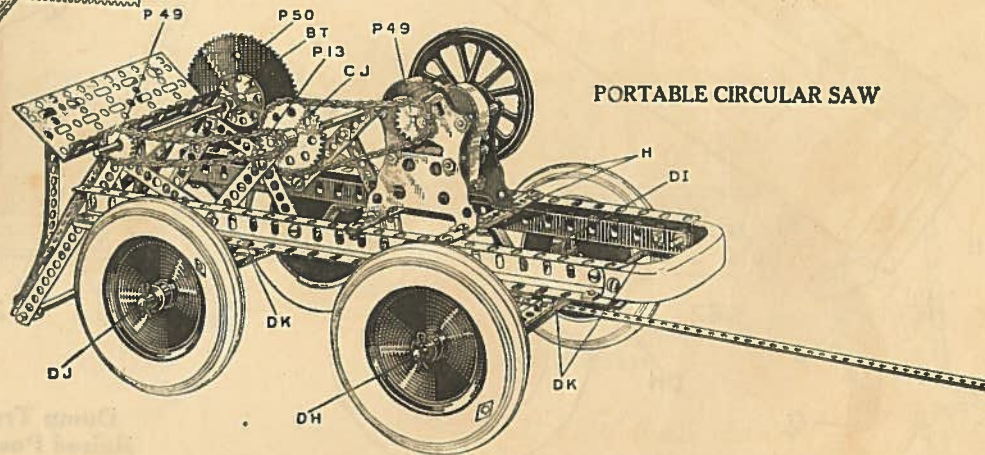
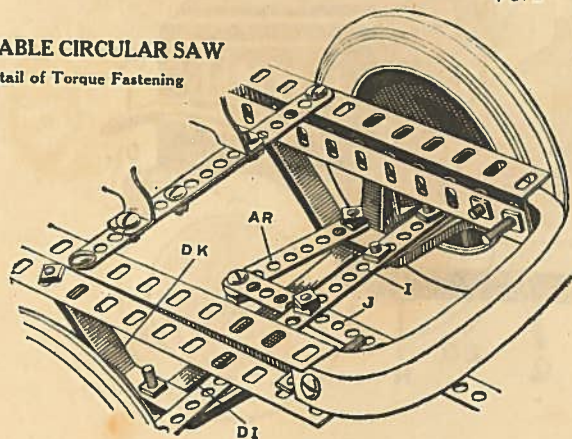


DRAG SAW

View of Sawing Position

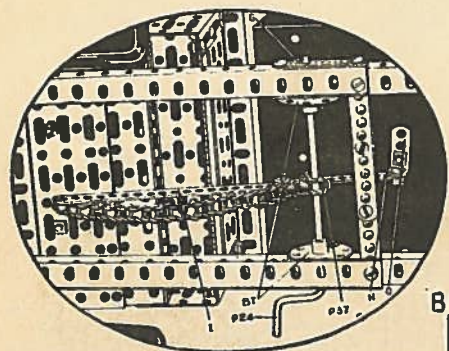
PORTABLE CIRCULAR SAW

Detail of Torque Fastening

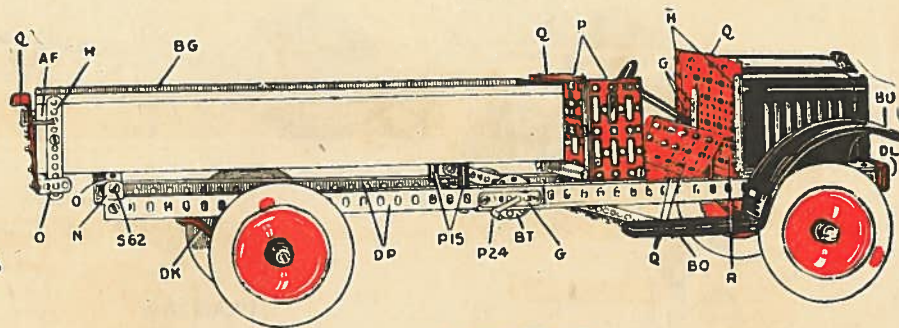


PORTABLE CIRCULAR SAW

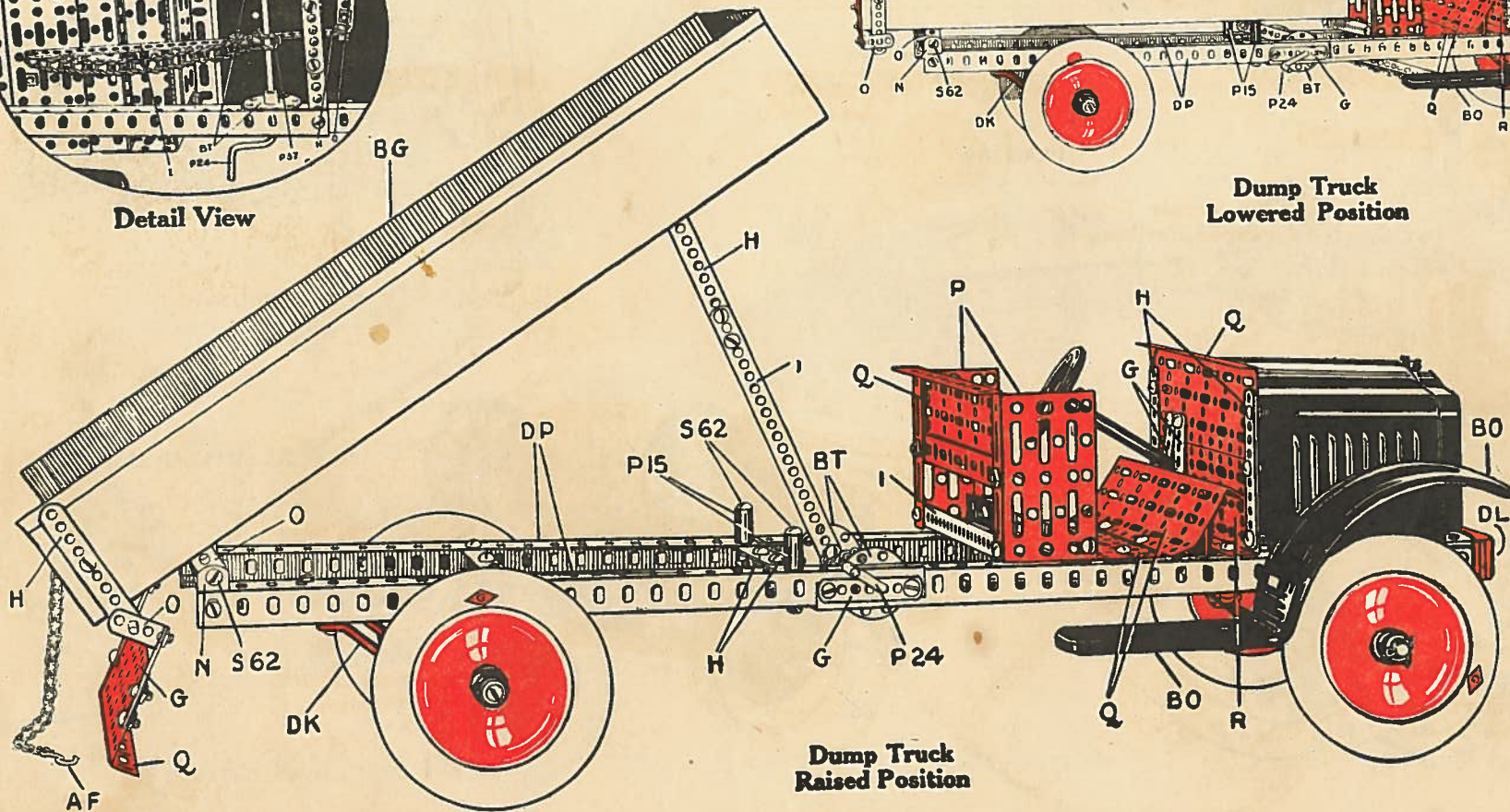
Models Built With No. 7 1/2 Erector.



Detail View

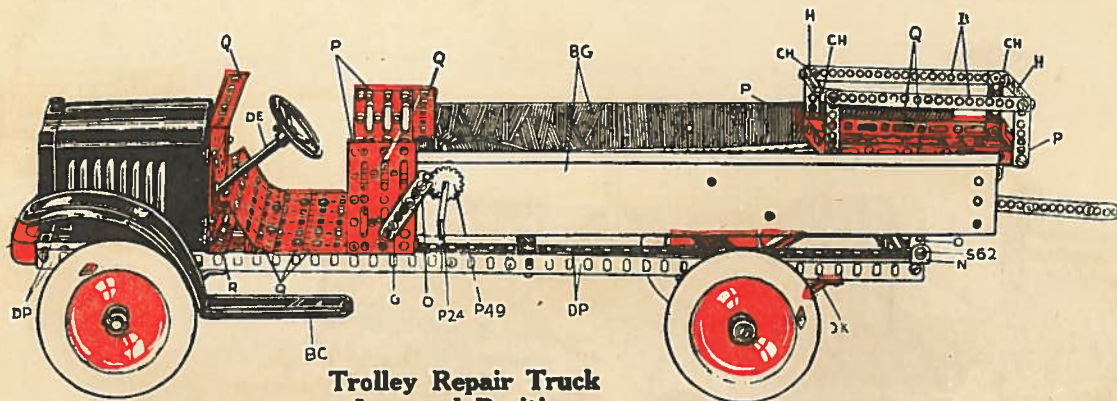


Dump Truck
Lowered Position

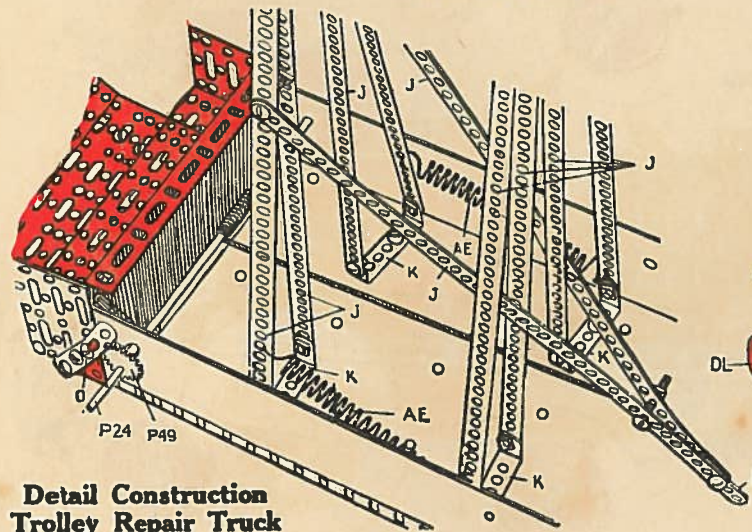
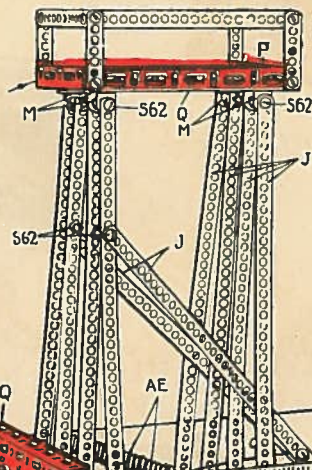


Dump Truck
Raised Position

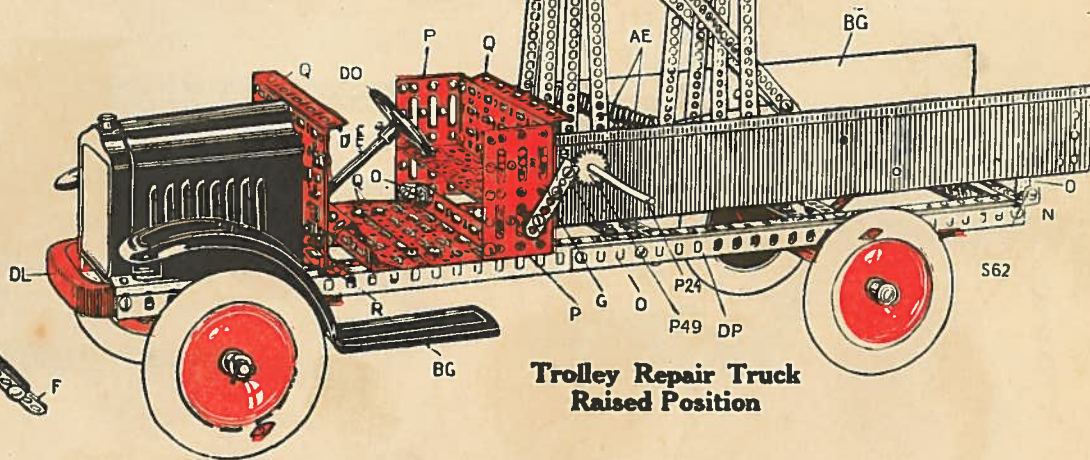
Models Built With No. 7½ Erector



**Trolley Repair Truck
Lowered Position**

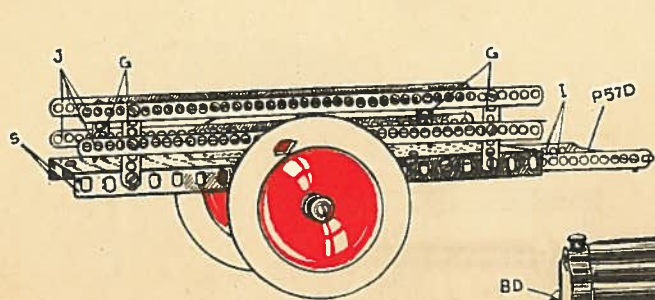


**Detail Construction
Trolley Repair Truck**

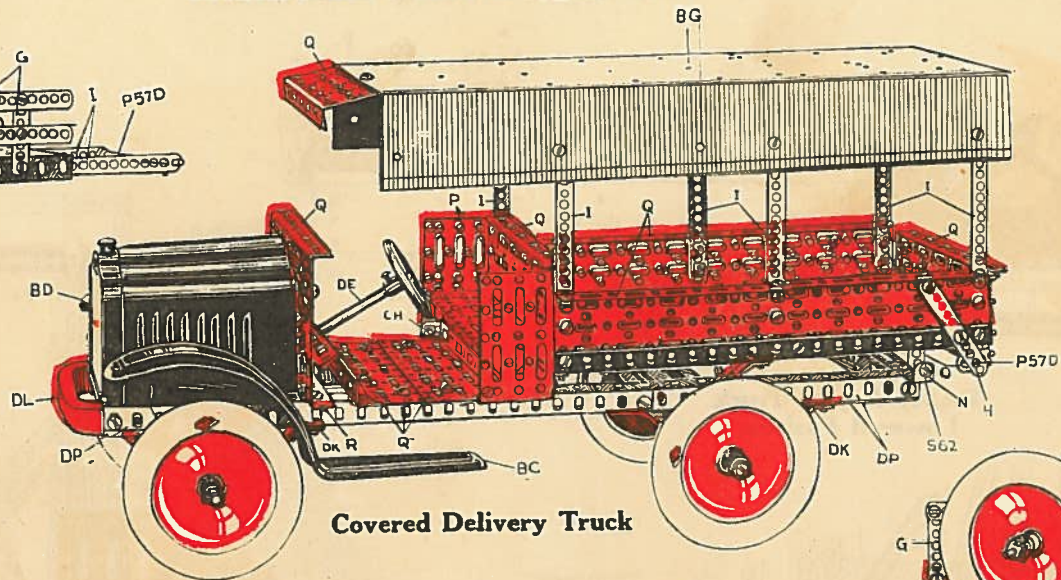


**Trolley Repair Truck
Raised Position**

Models Built With No. 7½ Erector.



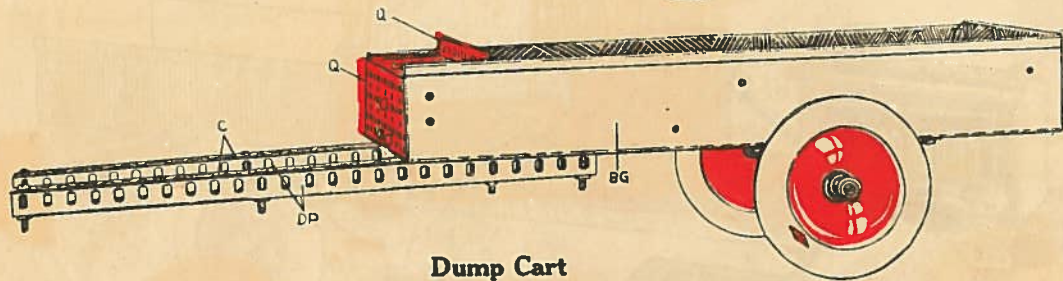
Push Cart



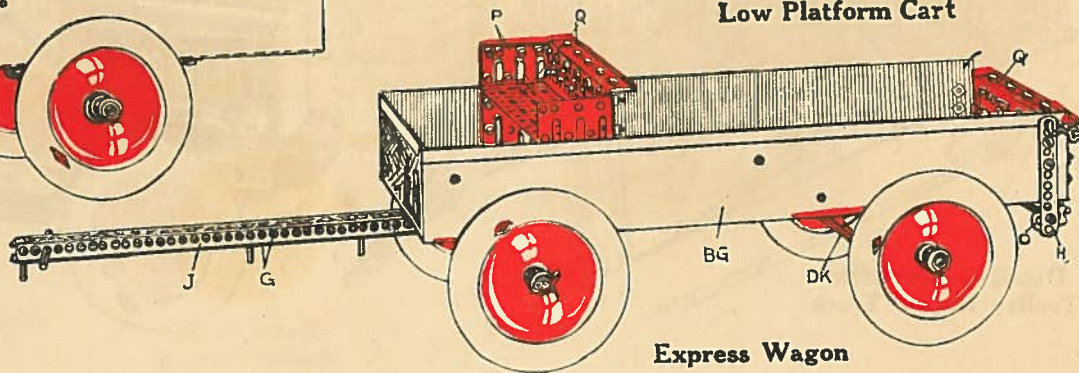
Covered Delivery Truck



Low Platform Cart

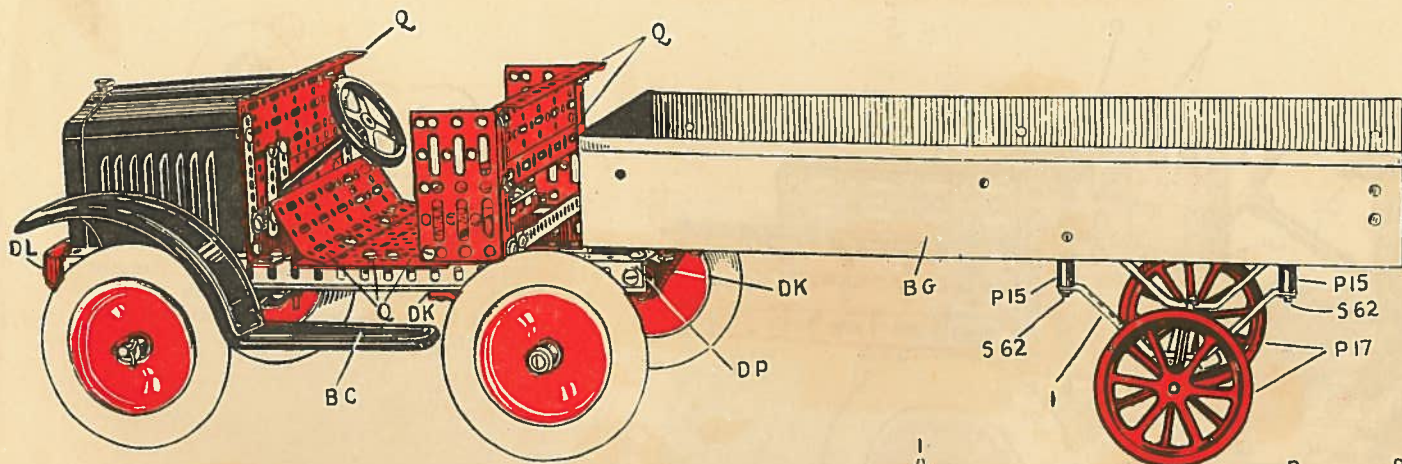


Dump Cart

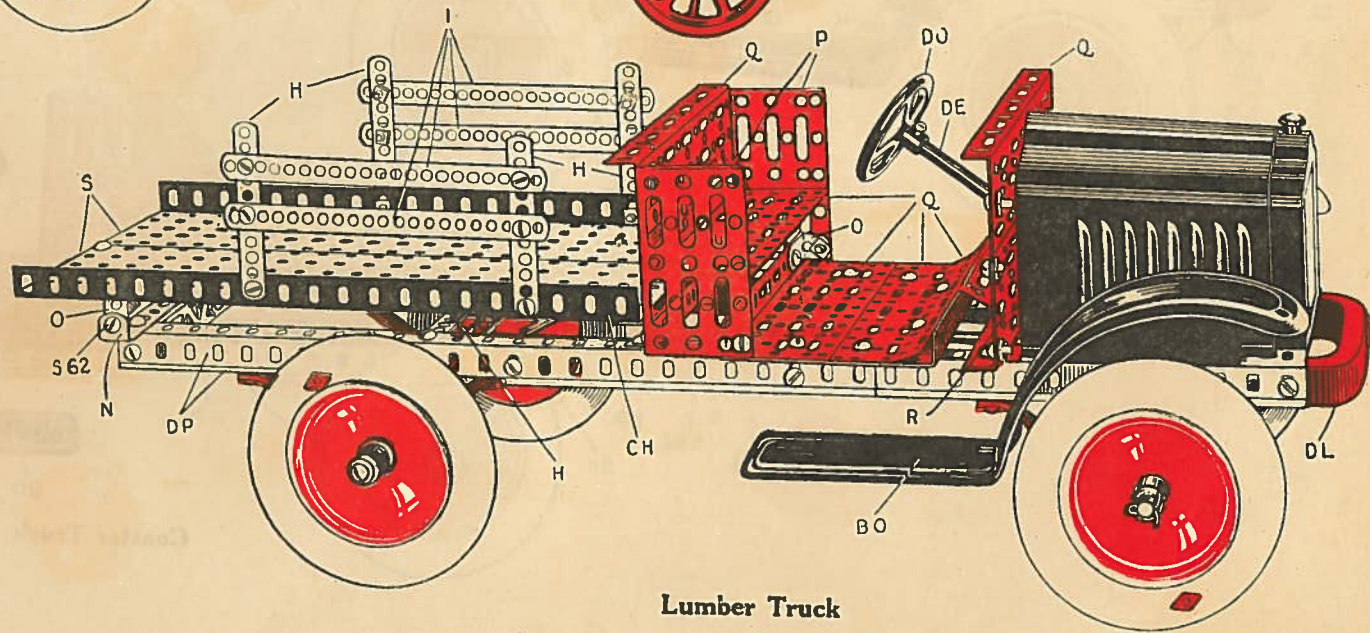


Express Wagon

Models Built With No. 7½ Erector.

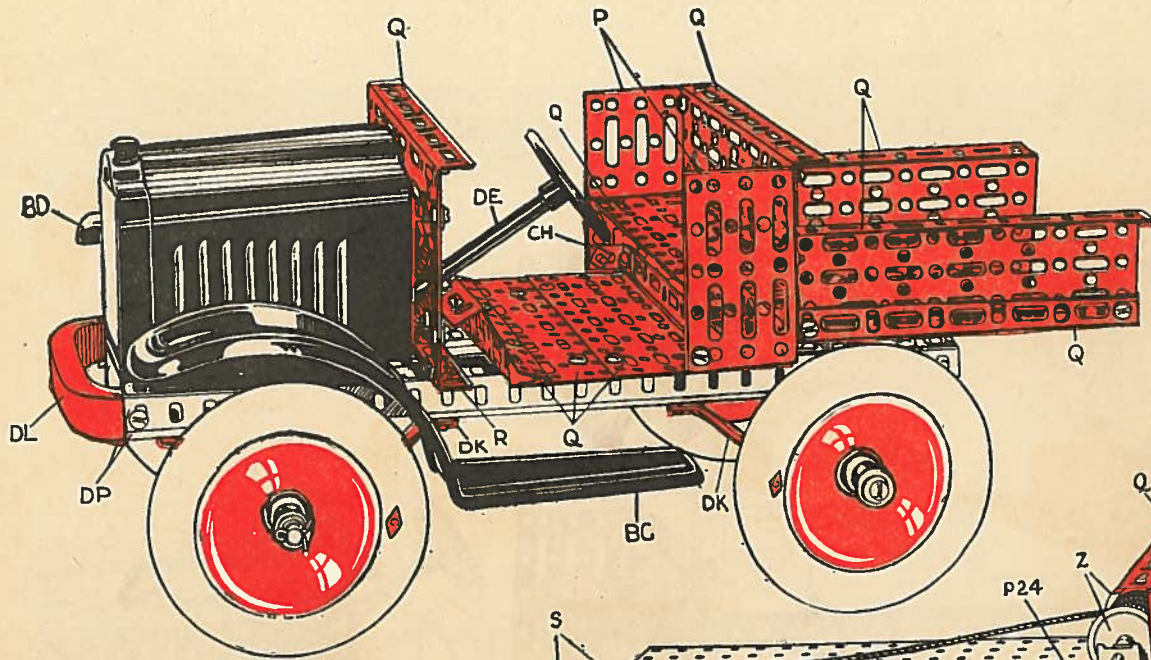


Trailer Truck

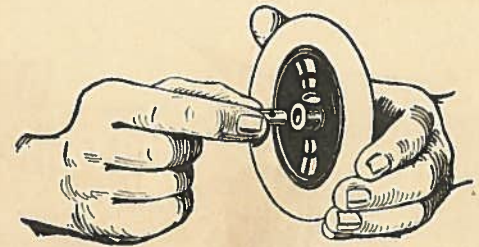


Lumber Truck

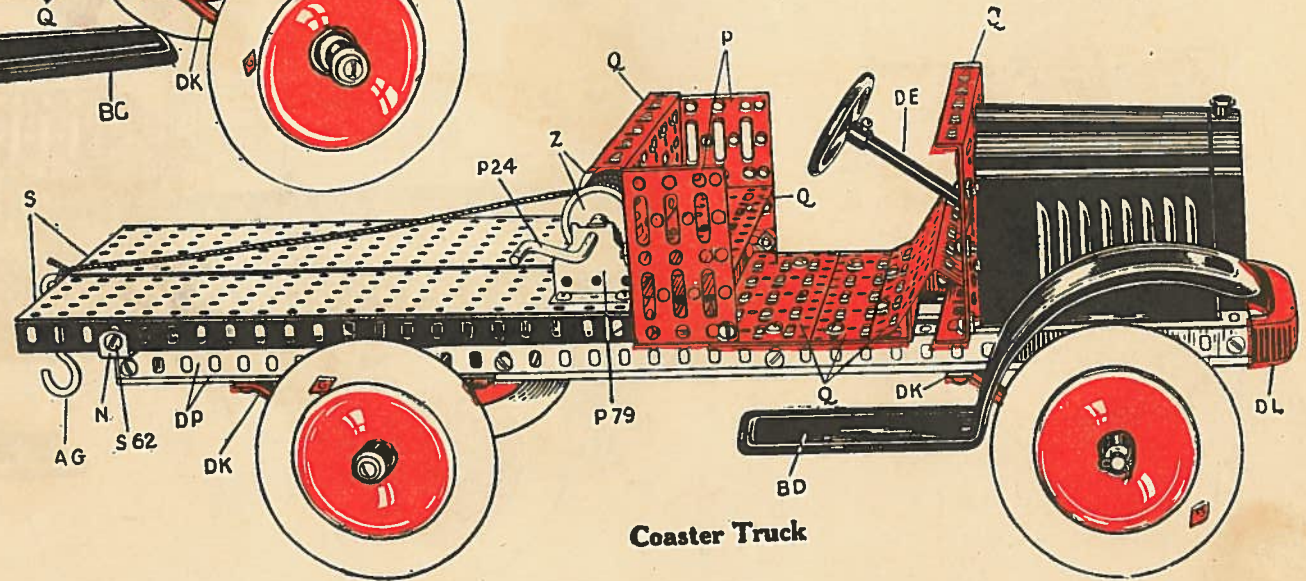
Models Built With No. 7½ Erector.



Run-about Delivery

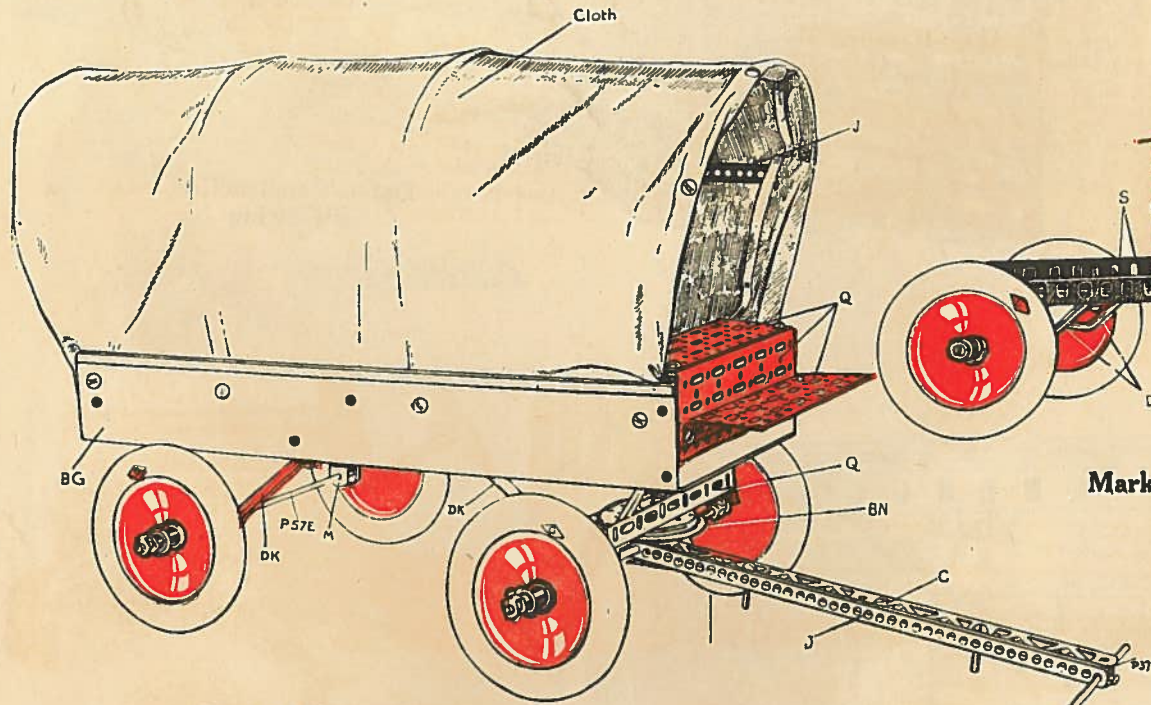


To use disc wheel on Small Erector Rods, insert disc bushing into hub of disc wheel, lining up hole in the bushing with set screw before tightening.

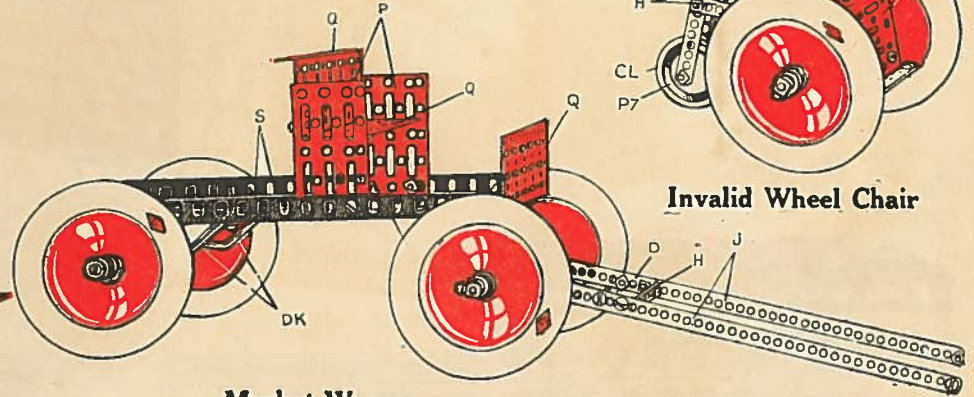


Coaster Truck

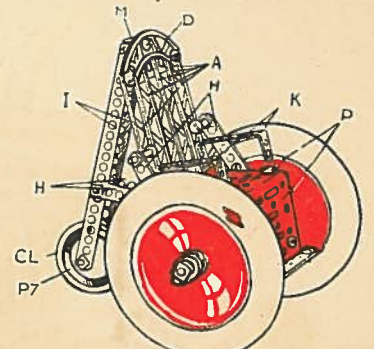
Models Built With No. 7½ Erector.



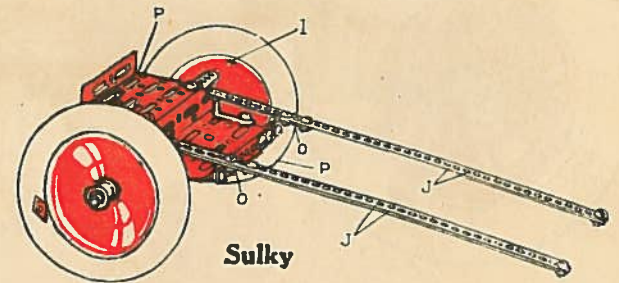
Covered Wagon



Market Wagon

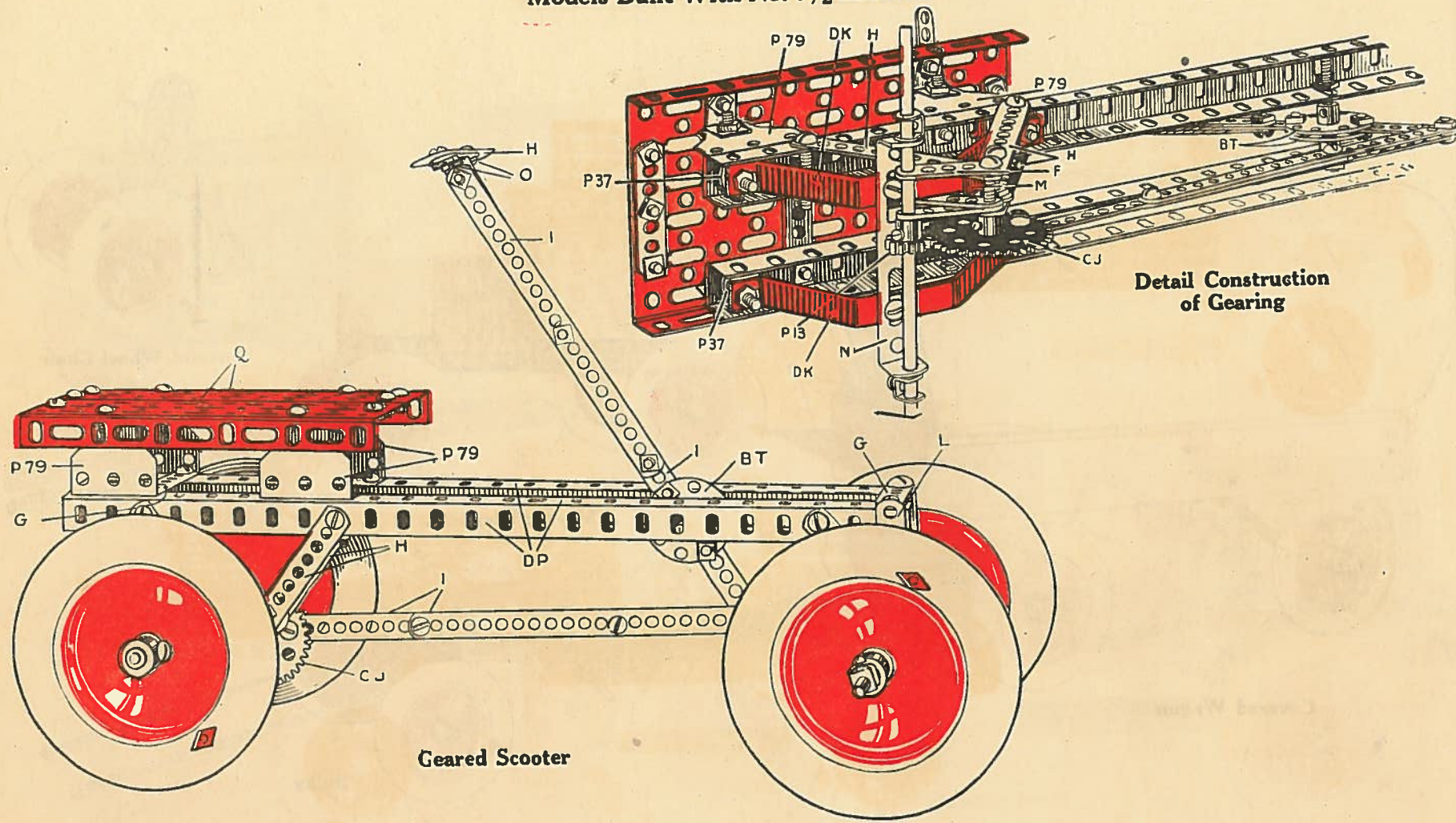


Invalid Wheel Chair



Sulky

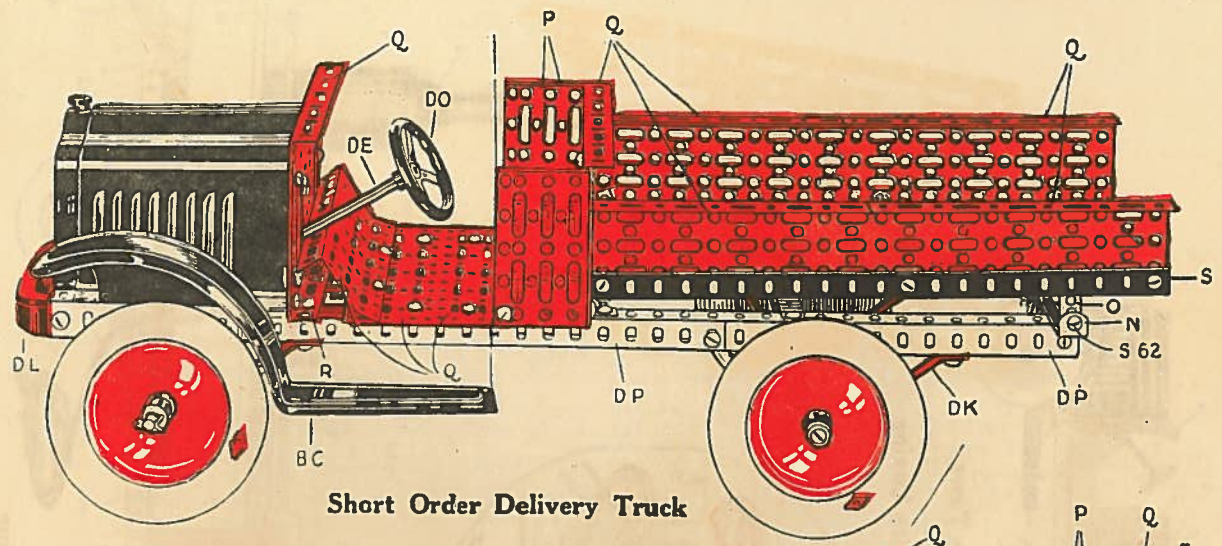
Models Built With No. 7 1/2 Erector.



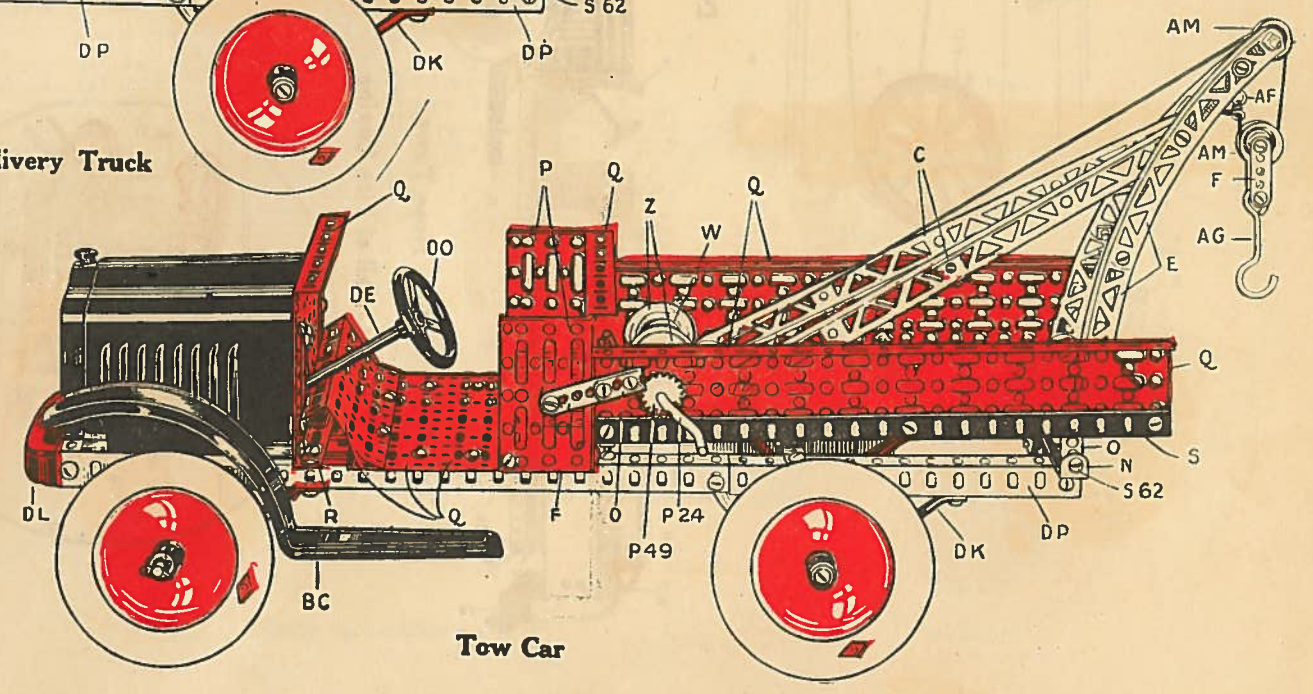
Detail Construction of Gearing

Geared Scooter

Models Built With No. 7 1/2 Erector.

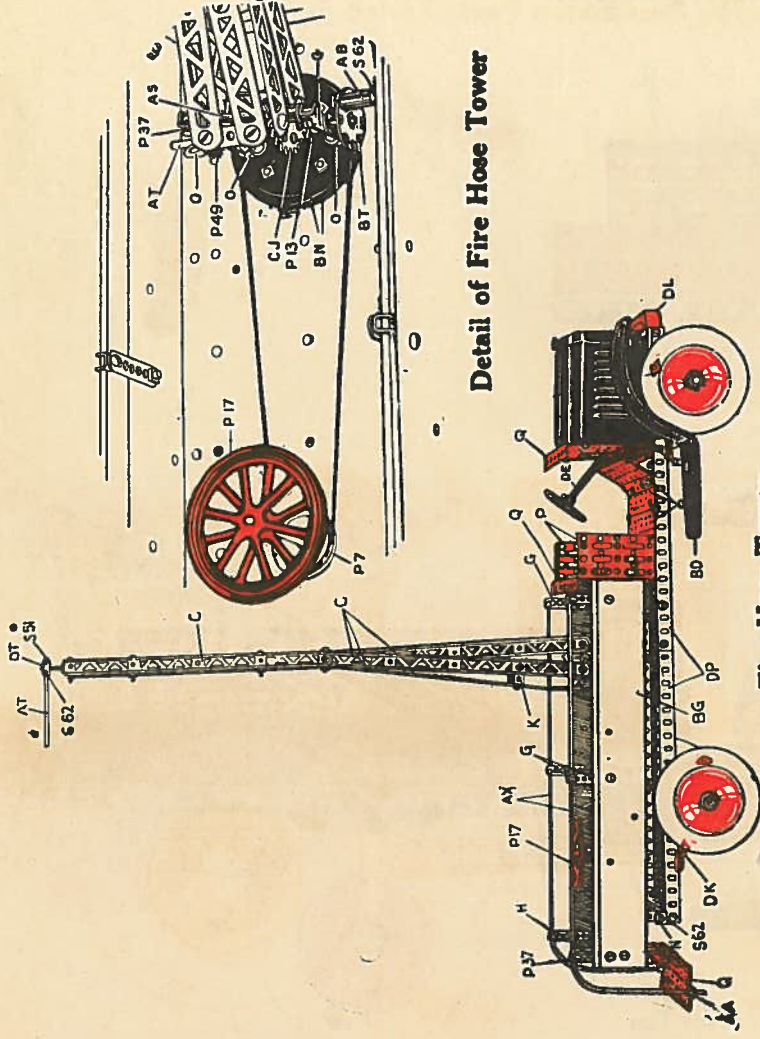


Short Order Delivery Truck



Tow Car

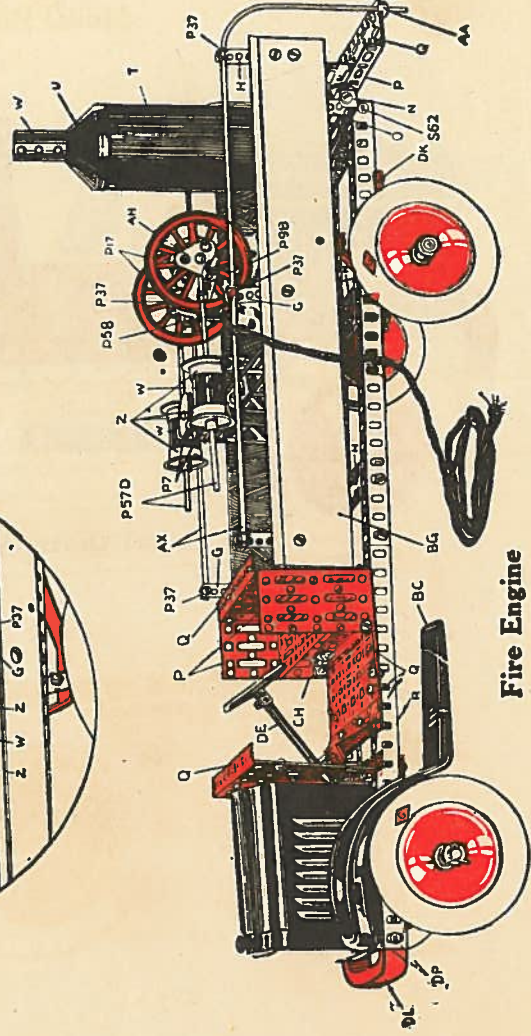
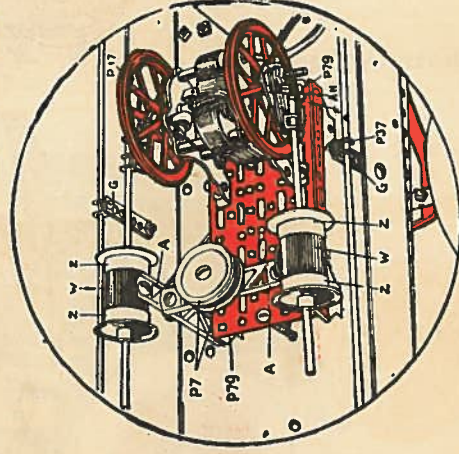
Models Built With No. 7½ Erector



Detail of Fire Hose Tower

Fire Hose Tower

Detail of Fire Engine

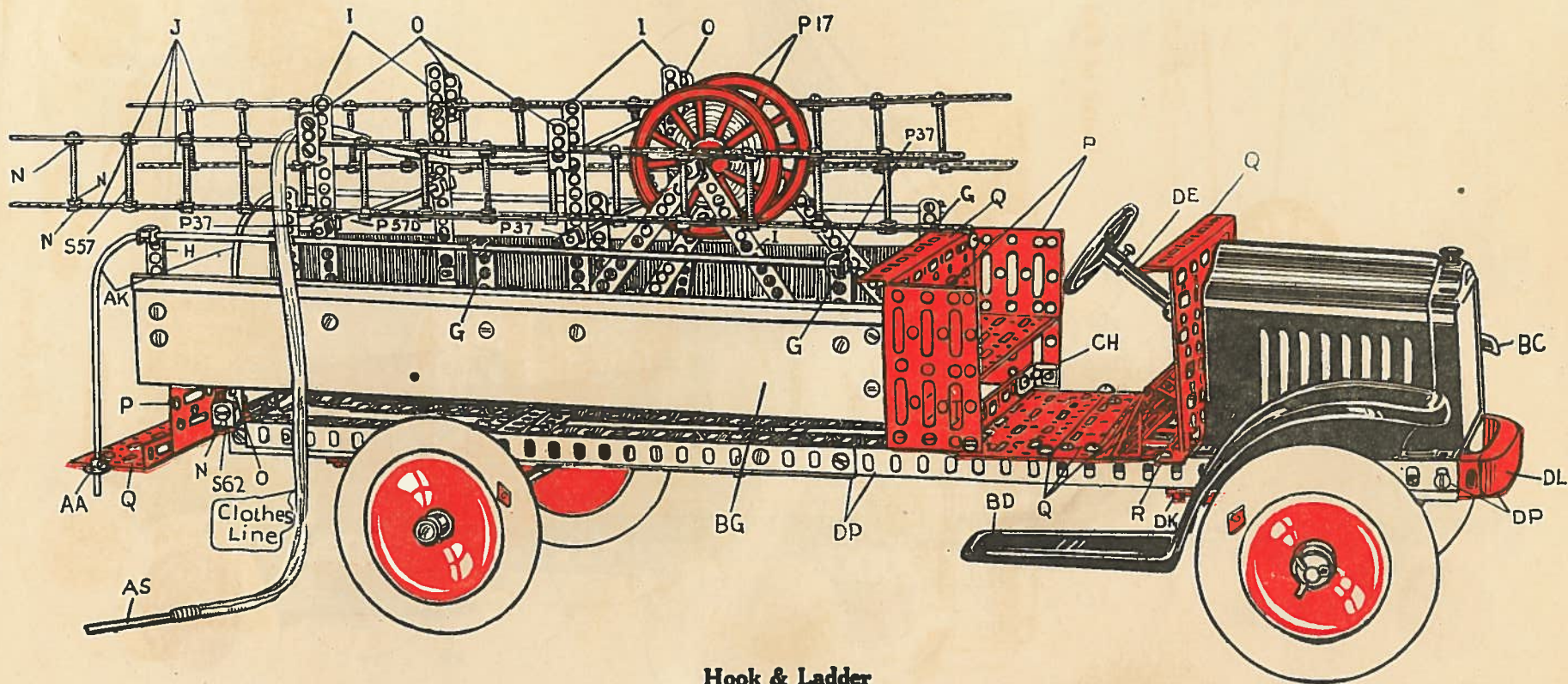


Fire Engine

Model Built With No. 10 Erector or No. 7½ Plus Extra Parts Listed.

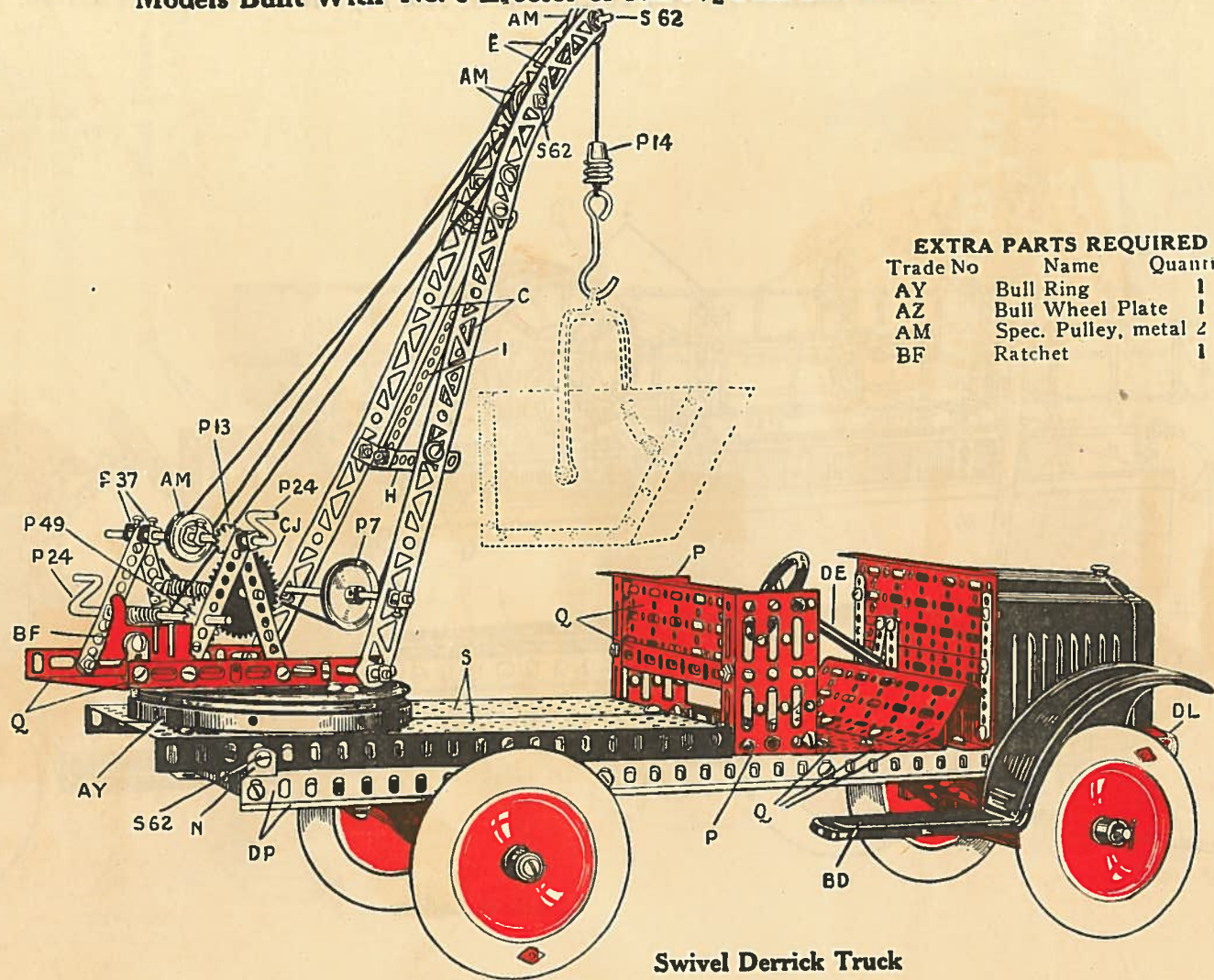
EXTRA PARTS REQUIRED

Trade No.	Name	Quantity
S-57	1¼" 8-32 Screw	28



Hook & Ladder

Models Built With No. 8 Erector or No. 7½ Plus Extra Parts Listed.



EXTRA PARTS REQUIRED

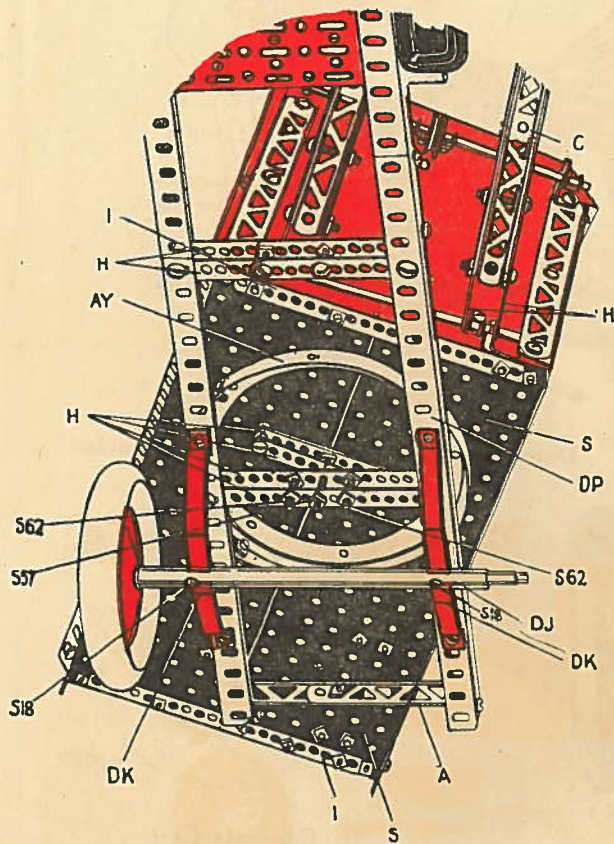
Trade No	Name	Quantity
AY	Bull Ring	1
AZ	Bull Wheel Plate	1
AM	Spec. Pulley, metal	2
BF	Ratchet	1

Swivel Derrick Truck

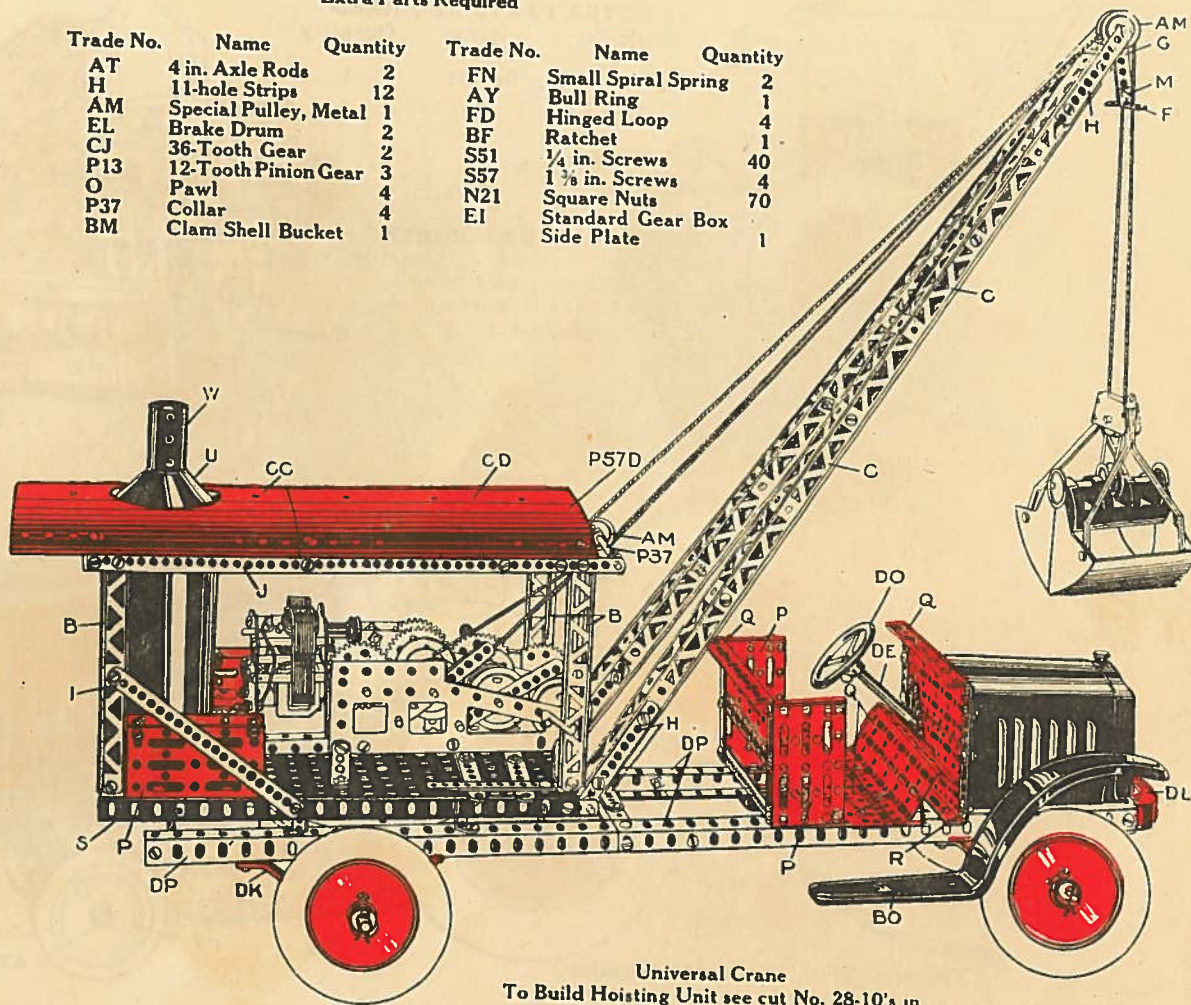
Models Built With No. 10 Erector or 7½ Plus Extra Parts Listed.

Extra Parts Required

Trade No.	Name	Quantity	Trade No.	Name	Quantity
AT	4 in. Axle Rods	2	FN	Small Spiral Spring	2
H	11-hole Strips	12	AY	Bull Ring	1
AM	Special Pulley, Metal	1	FD	Hinged Loop	4
EL	Brake Drum	2	BF	Ratchet	1
CJ	36-Tooth Gear	2	S51	¼ in. Screws	40
P13	12-Tooth Pinion Gear	3	S57	1 ⅜ in. Screws	4
O	Pawl	4	N21	Square Nuts	70
P37	Collar	4	E1	Standard Gear Box	1
BM	Clam Shell Bucket	1		Side Plate	1

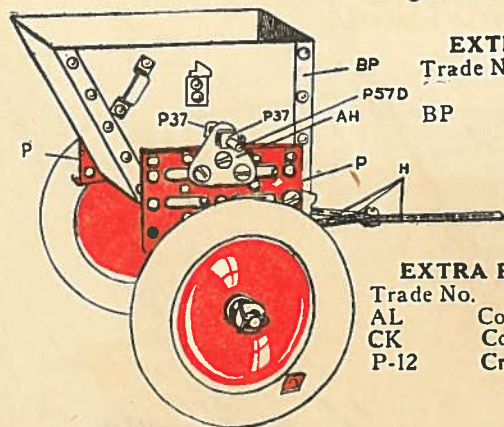


Detail Construction
Universal Crane



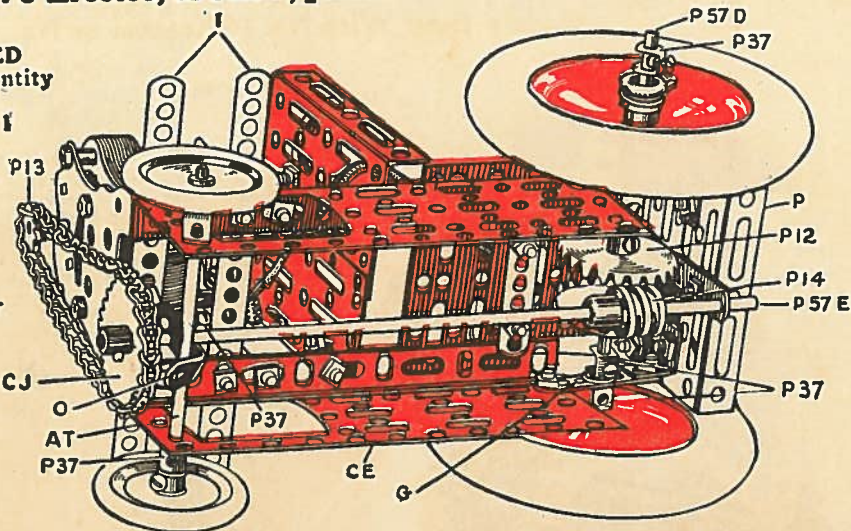
Universal Crane
To Build Hoisting Unit see cut No. 28-10's in
Standard Gear Box Section

Models Built With No. 8 Erector, or No. 7½ Plus Extra Parts Listed.

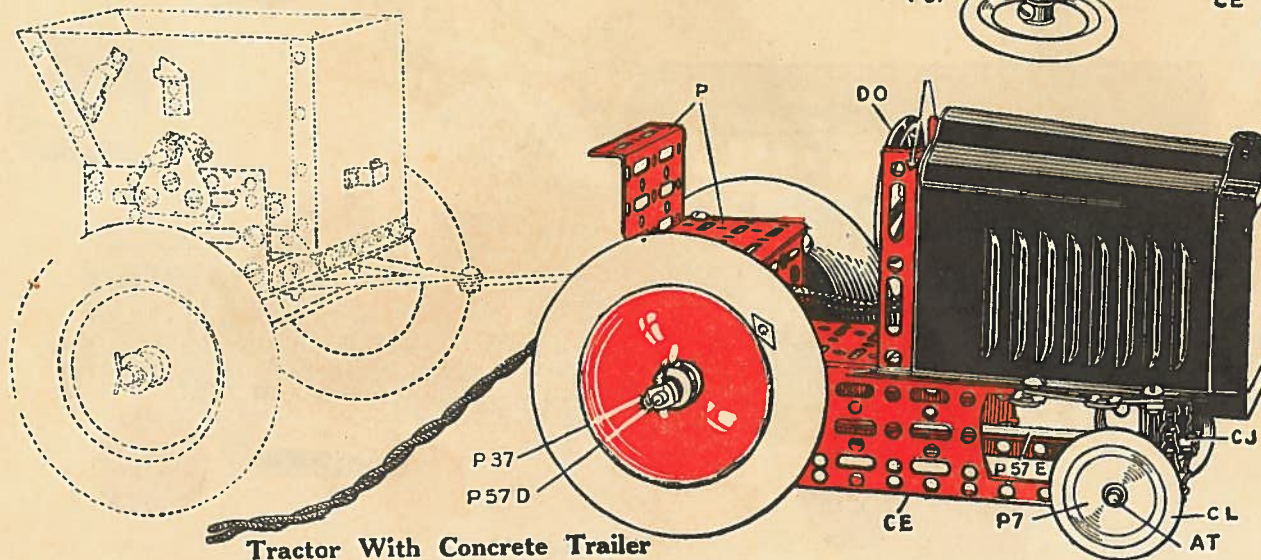


EXTRA PARTS REQUIRED		
Trade No.	Name	Quantity
BP	Tip Bucket	1

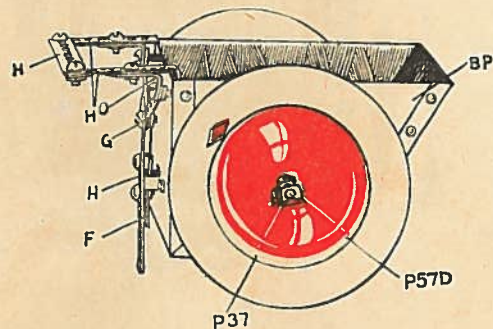
EXTRA PARTS REQUIRED		
Trade No.	Name	Quantity
AL	Collar formed 1 side	1
CK	Coil of Magnet wire	1
P-12	Crown Gear	2



Detail Construction of Gearing-Tractor



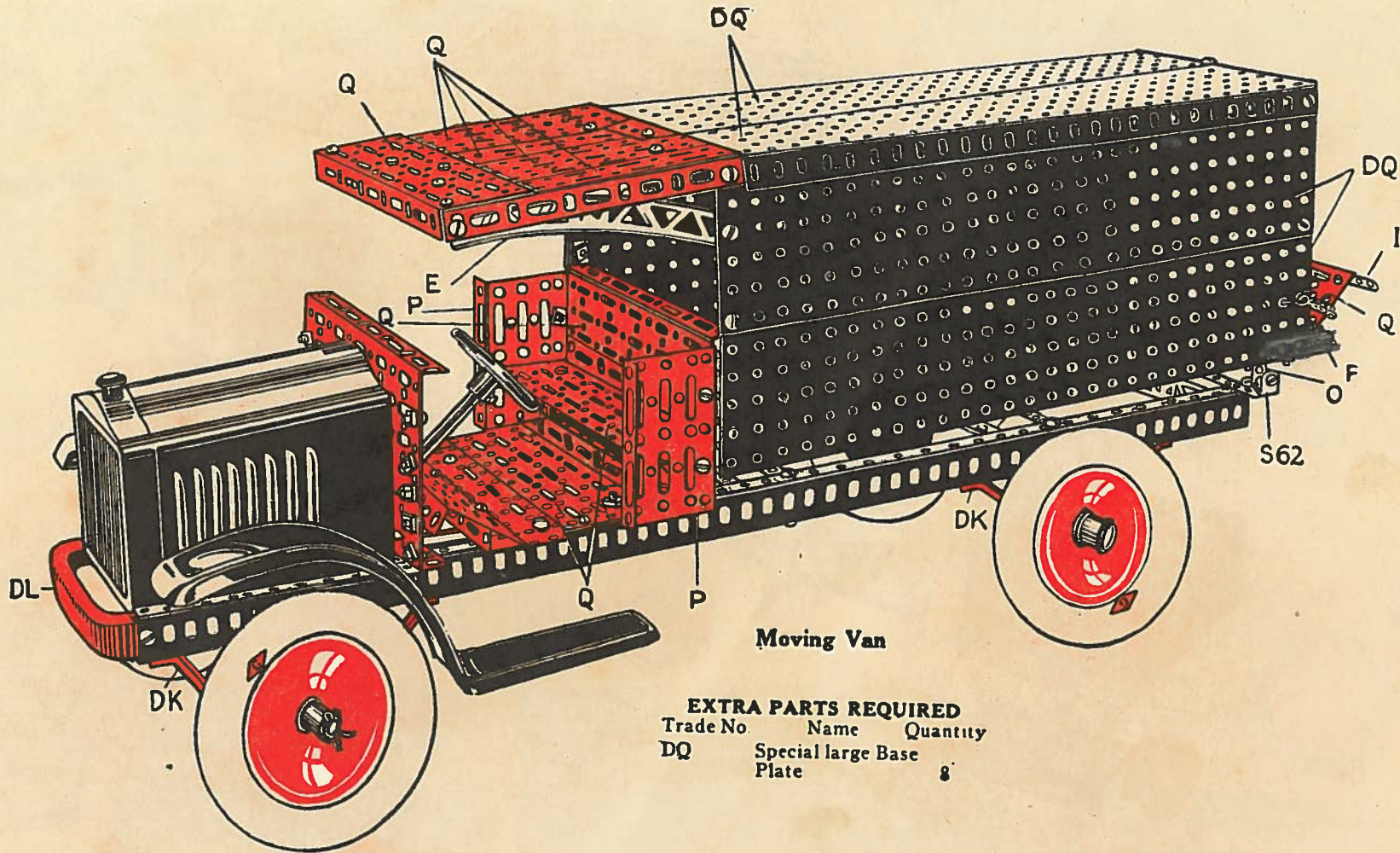
Tractor With Concrete Trailer
(Trailer Built
No. 8 Erector)



Concrete Cart

EXTRA PARTS REQUIRED		
Trade No.	Name	Quantity
BP	Tip Bucket	1

Models Built With No. 10 Erector or No. 7½ Plus Extra Parts Listed.

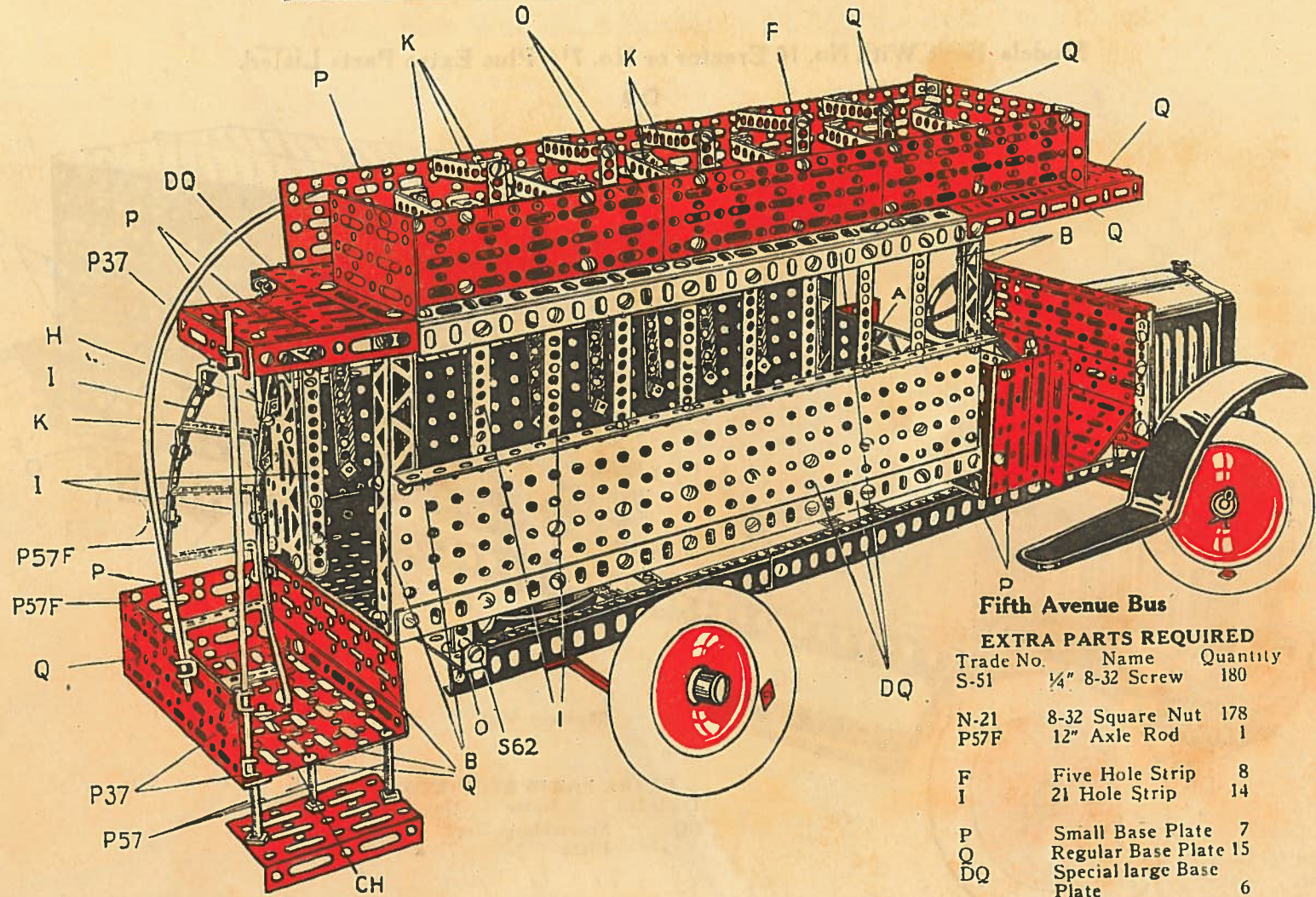


Moving Van

EXTRA PARTS REQUIRED

Trade No.	Name	Quantity
DQ	Special large Base Plate	8

Models Built With No. 10 Erector or No. 7½ Plus Extra Parts Listed.



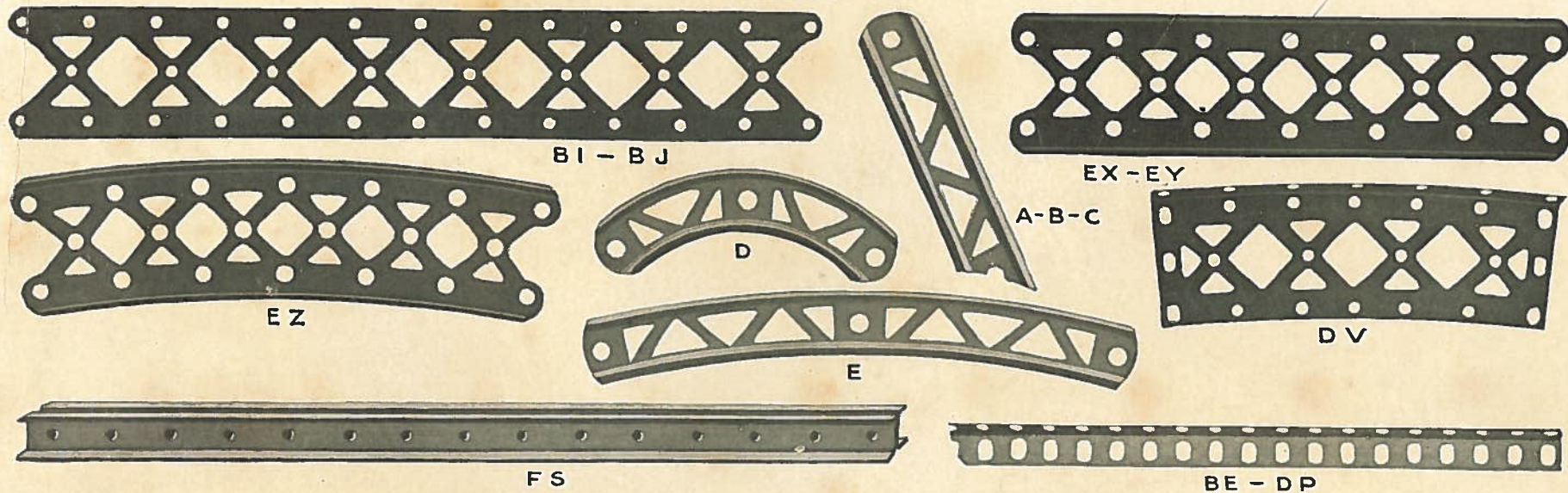
Fifth Avenue Bus

EXTRA PARTS REQUIRED

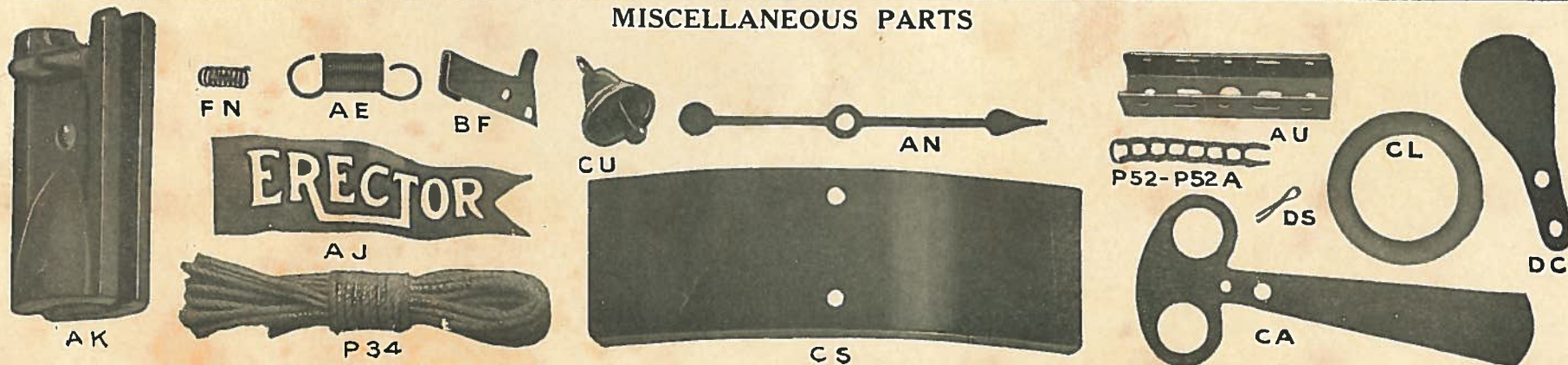
Trade No.	Name	Quantity
S-51	¼" 8-32 Screw	180
N-21	8-32 Square Nut	178
P57F	12" Axle Rod	1
F	Five Hole Strip	8
I	21 Hole Strip	14
P	Small Base Plate	7
Q	Regular Base Plate	15
DQ	Special large Base Plate	6
K	11 Hole Strip Bracket	25

ERECTOR SEPARATE PARTS

GIRDERS

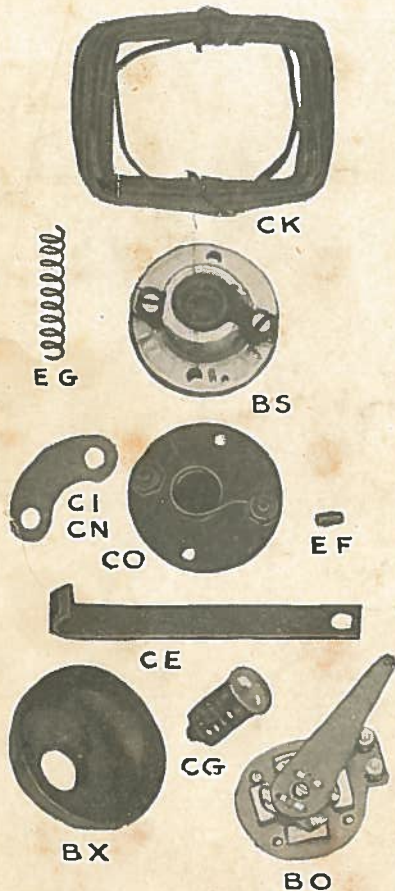


MISCELLANEOUS PARTS



ERECTOR SEPARATE PARTS

ELEC. ACCESSORIES



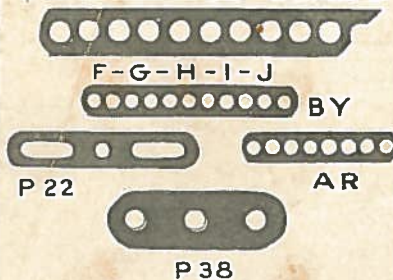
COLLARS COUPLINGS



SCREWS & NUTS



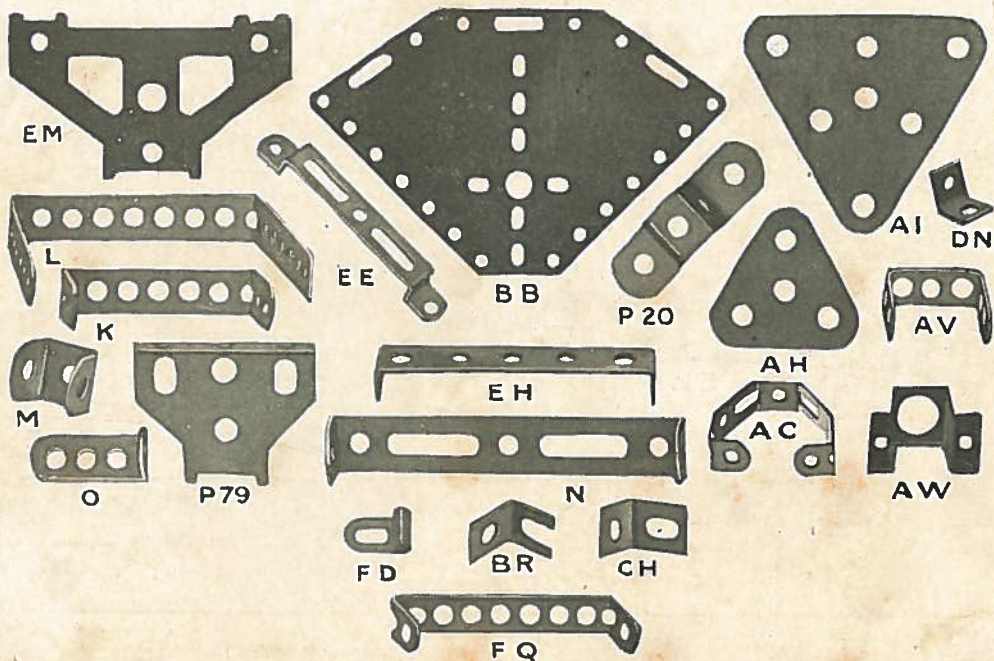
PERFORATED STRIPS



HOOKS & WASHERS



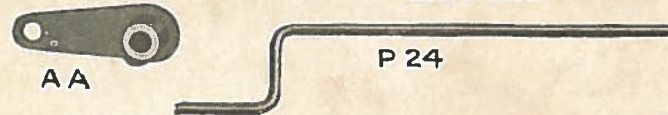
ANGLE & ANGLE PIECES



AXLE RODS & SHAFTINGS

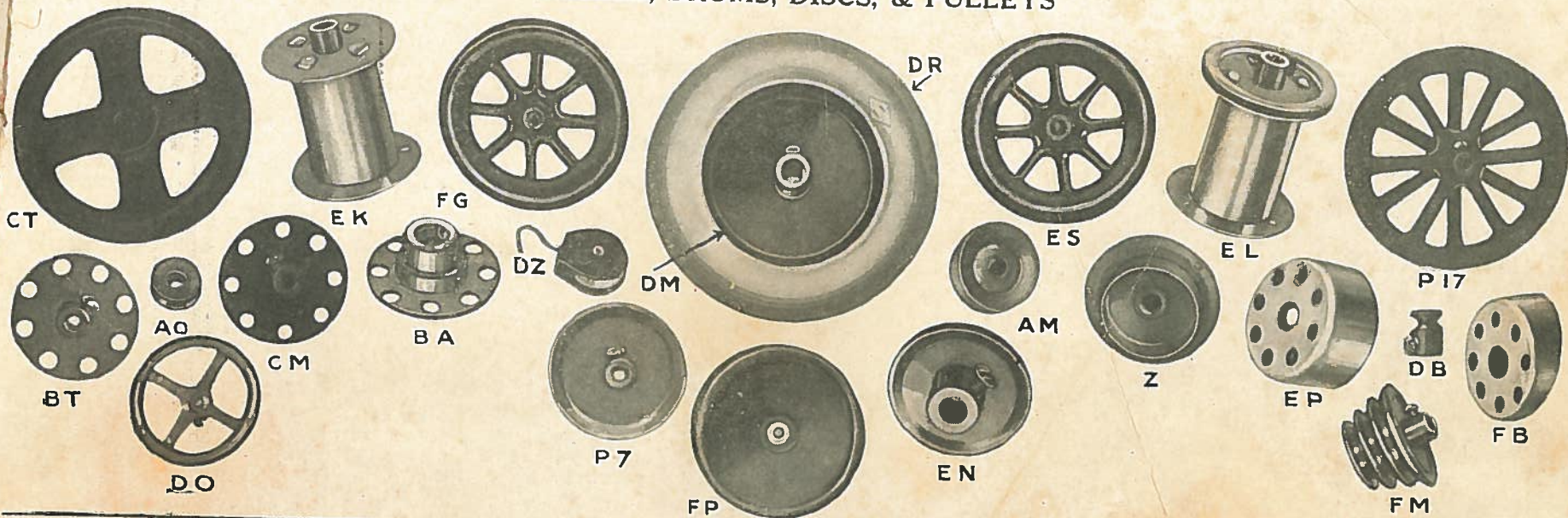


CRANKS

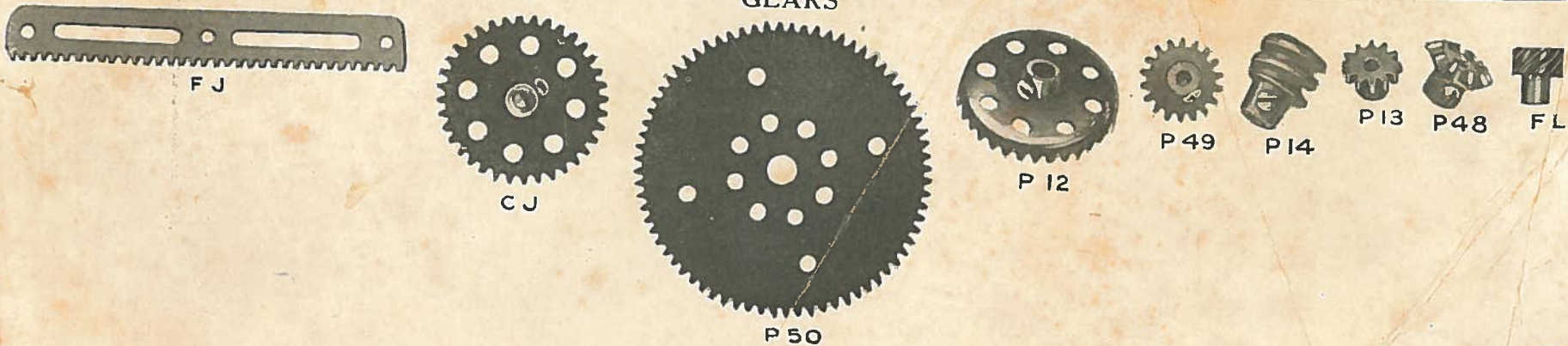


ERECTOR SEPARATE PARTS

WHEELS, DRUMS, DISCS, & PULLEYS

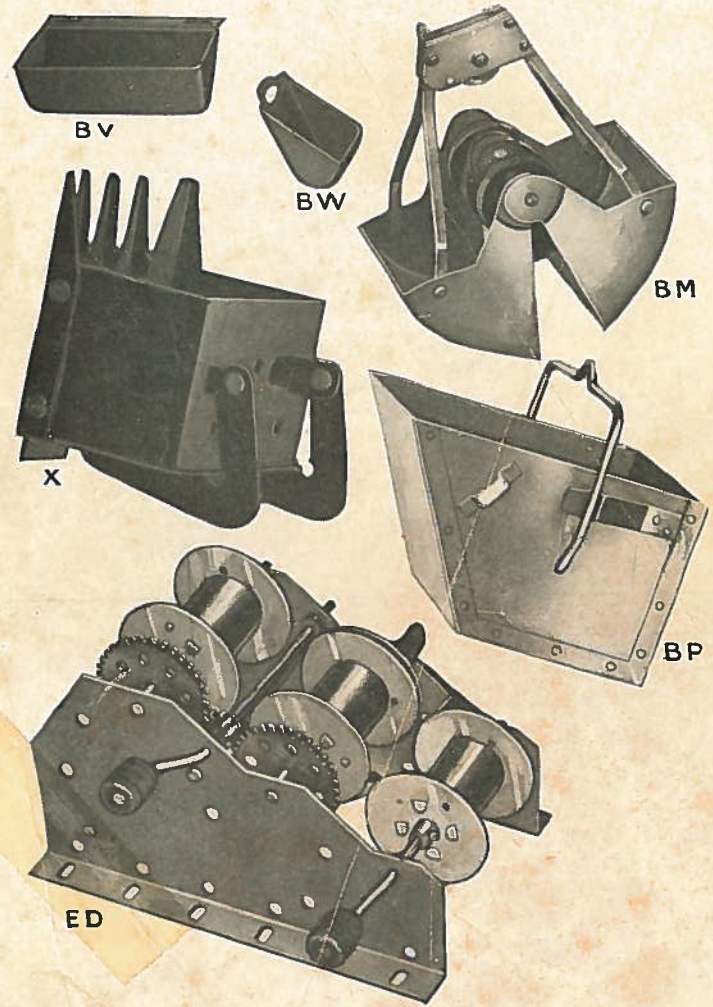


GEARS

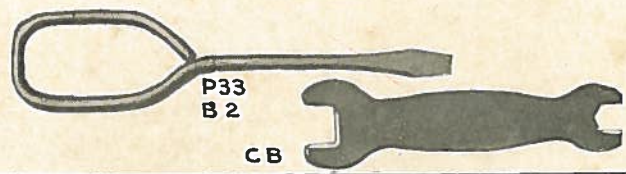


ERECTOR SEPARATE PARTS

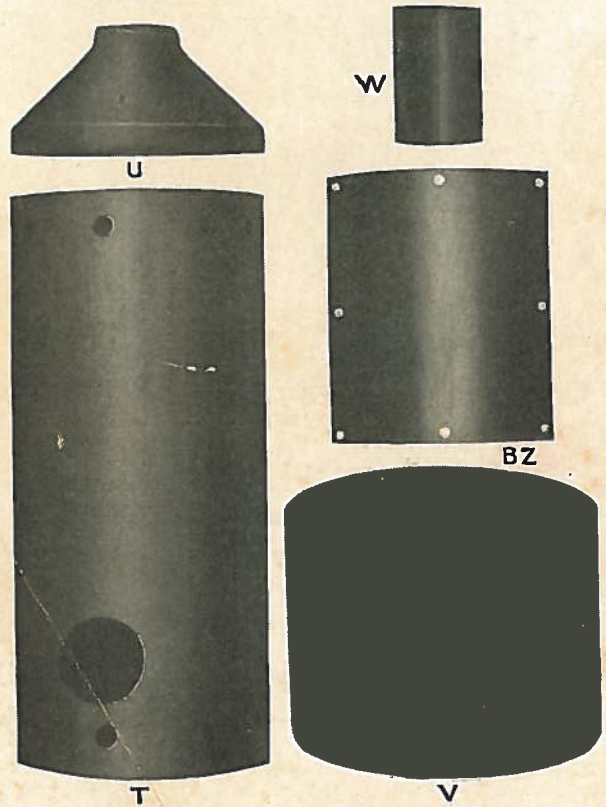
SCOOPS & BUCKETS



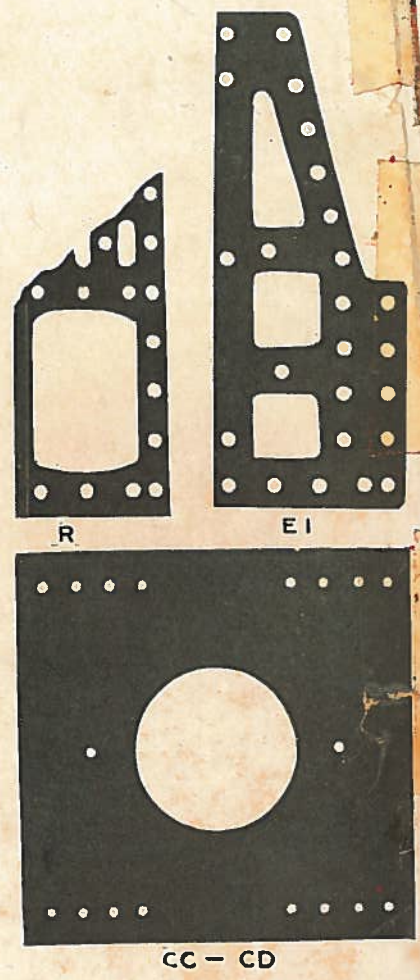
TOOLS



BOILERS AND ACCESSORIES

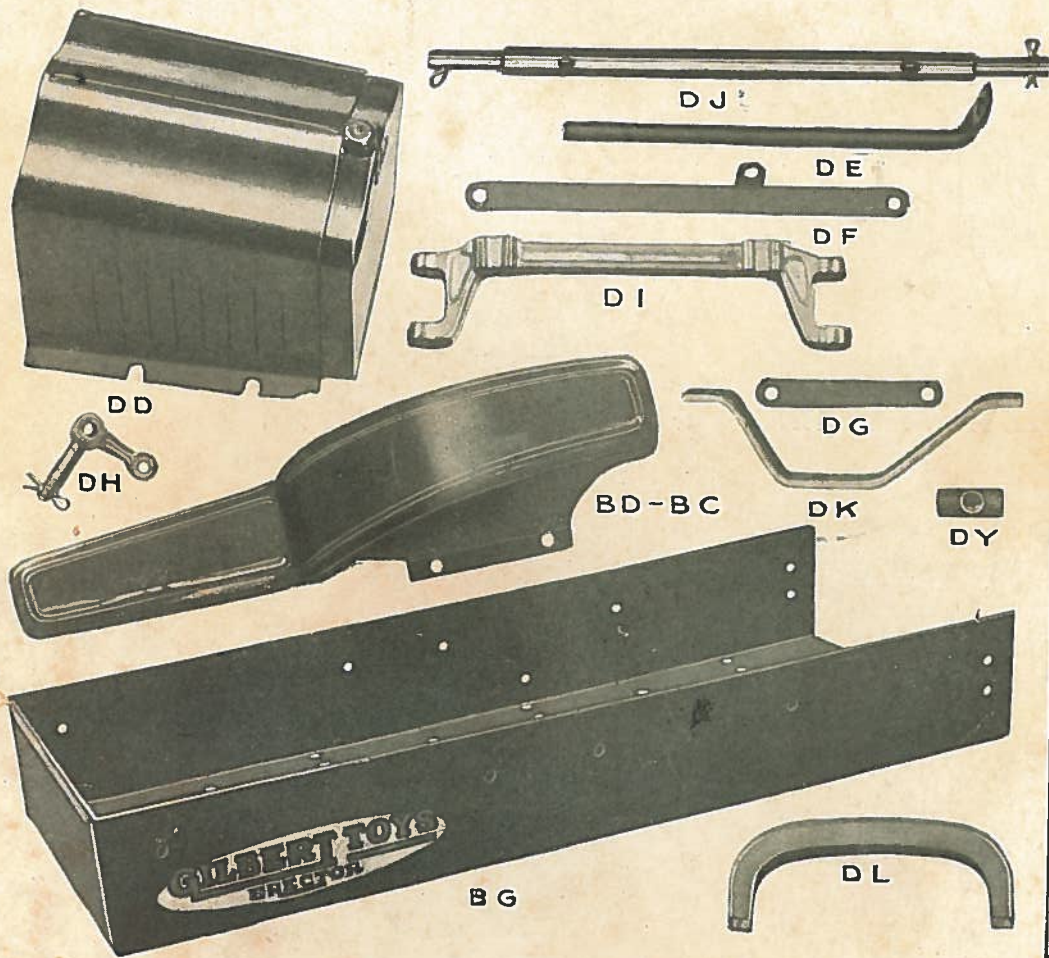


SIDE PLATES CAB TOPS

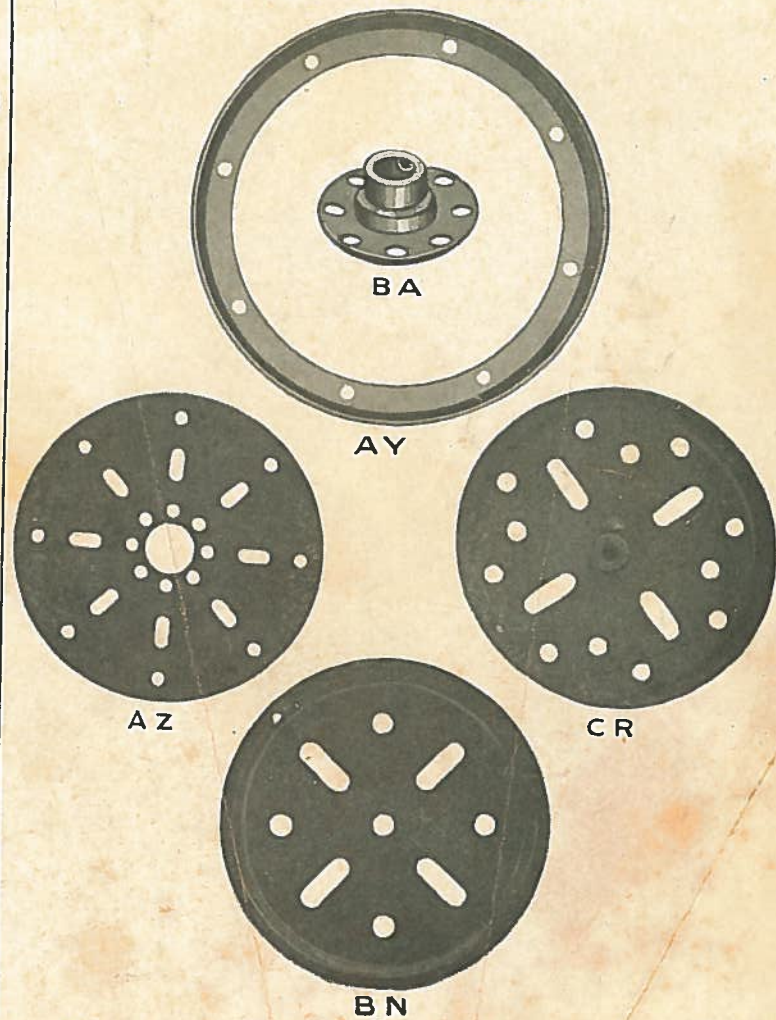


ERECTOR SEPARATE PARTS

CHASSIS PARTS



TURRET PLATES

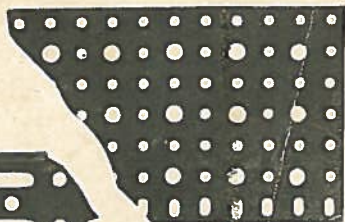


ERECTOR SEPARATE PARTS

BASE PLATES



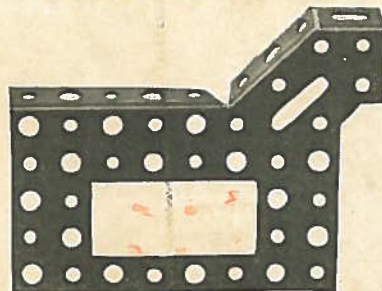
DQ-5



W



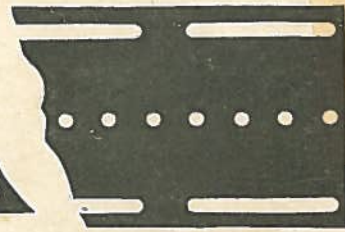
Q-P



FC-FK



EO-EU



EJ



FO

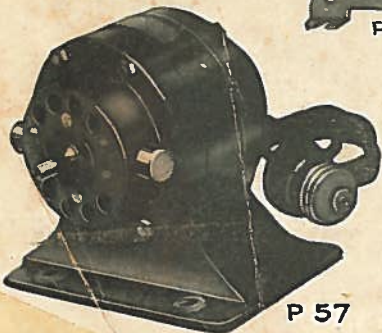
MOTORS AND HOISTING UNITS



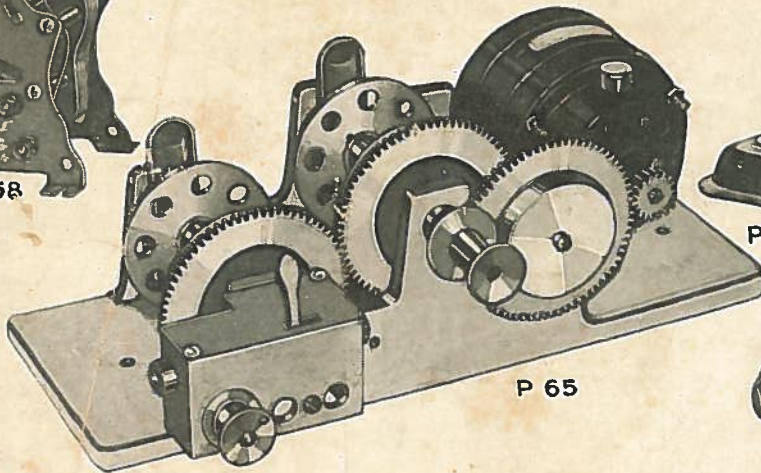
P 59



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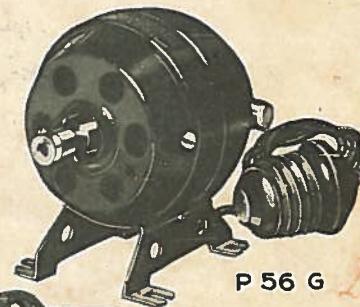
P 57



P 65



P 54



P 56 G



P 60 C