

STRUCTATOR

THE UP-TO-DATE CONSTRUCTIONAL TOY

Patents applied for in England and other Countries



Instructions and Designs

===== for Outfits Nos. 1 and 2 also for No. 1^a =====

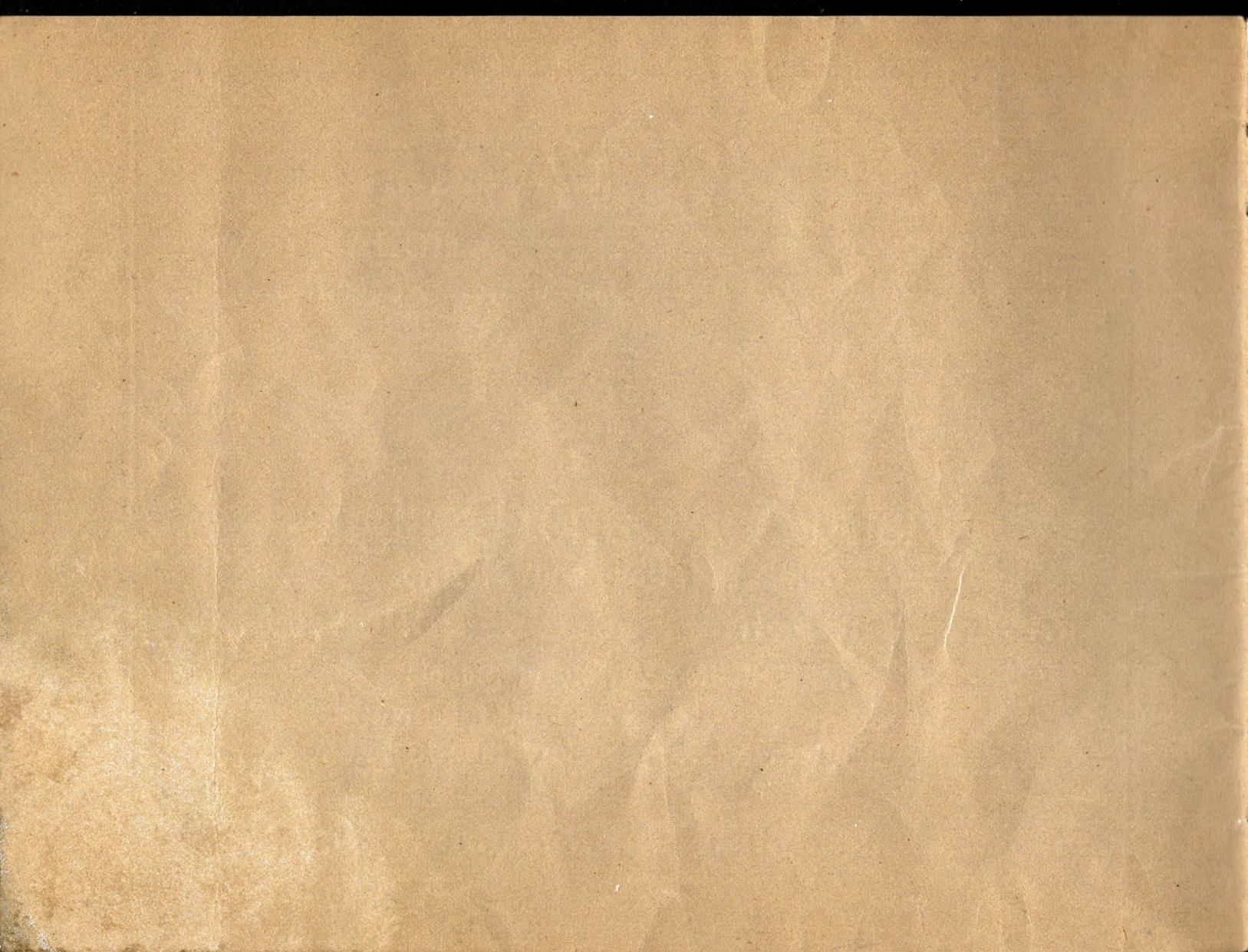
INTERESTING—INSTRUCTIVE—EDUCATIONAL

An Unlimited Variety of Models

Easily erected and as easily taken apart

Soundly constructed Models without Screws.

No. 1.



STRUCTATOR

The Up-To-Date Constructional Toy

Patents applied for in England and other Countries.

Constructional Outfits of various kinds have been used as toys for many years and their value for the entertainment and instruction of young people has been recognised by the highest authorities in that field.

Since what one teaches should be correct in theory and in practice, it follows that the elementary parts of constructional Outfits should be of correct geometrical form so as to permit of models being assembled which, excepting in size, do not materially differ from the actual machines or other articles they represent.

As Constructional Sets are used by young people just at the time of life when the mind is most receptive, it is of the utmost importance to place before them only such models as would tend by correct forms to cultivate the sense of proportion and to develop skill in construction.

The Structator Constructional Outfits have been designed and constructed on these lines with striking success.

The Inventor, himself a Schoolmaster, has devoted his whole attention to the purpose of making the Structator a unique combination of entertainment and instruction.

The Parts of which the Structator consists are of such a nature that they lend themselves to the making of the most diverse models imaginable, beginning with some of the simplest forms of domestic utensils and furniture and ranging to the most interesting and complicated models of machinery and apparatus as found in the most modern Industries.

The work, if one can call it work, is simple and easy to comprehend.

The manipulation of the various parts, with just a little practice, is simplicity itself.

Full details and instructions are appended below.

Instructions for the Use of Structator Outfits.

The essential parts which go to make up Structator Outfits are: Standard Bars of various lengths, three kinds of Joints, viz:

Straight Joints.

Angle Joints.

T Joints.

Wedge Rings.

Spring Washers.

Pair of Pliers.



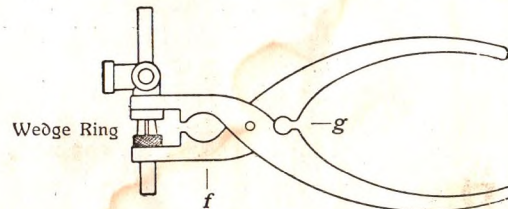
Straight joint



Angle joint



"T" joint



Structator Pliers, showing how to fix a wedge ring

Other Supplementary Parts are contained in Structator Outfits varying in quantities according to the number of the Set. All of the Parts may be purchased separately and a detailed Price List of all Parts and Accessories will be found at the end of this booklet.

The mode of building is as follows:—You take a standard bar and slip a wedge ring upon it. Then take a joint and slip it along the standard bar on to the conical neck of the wedge ring. Then take the pliers so that the larger opening of the plier ends goes around the thinner part of the joint just above the collar of same, whereas the smaller opening of the plier ends goes behind the milled collar of the wedge ring. Then give a gentle pressure with the pliers and the joint is made.

Proceed in this way to build any of the models shown in the book of instructions or, in fact, any other model which comes into the mind of the constructor.

In order to take a model to pieces again so that the parts should be available for another, proceed as follows:—

Grip only the milled collar of the wedge ring with the opening in the pliers below the forked ends, marked “f” on the illustration with one hand and with the other hand give a gentle twist to the joint which will unweave the connection. (In the case of the straight joint slip a short bar through it, to make the “untwisting” easier).

When building vehicles, wheels of various kinds are used and in order to keep these wheels in their place, special spring washers are used which will stay wherever they are put by means of a small strong spring inside. They can be moved along on the axles to any convenient point and can be put on and taken off without trouble.

Spring washers are employed specially for keeping wheels in their proper position but in Structator construction many other occasions arise in which they are found useful.

When building models upon the base board given with each box, proceed as follows:

Insert the square head of the screw (illustration No. 9/2 at the end of the book) into the groove of the base board and slide it to the right position. This is the only place where screws are used in Structator work. Use a standard bar to push it along. Then screw a base block upon the screw and tighten firmly with Structator pliers. Then screw a Bar with thread into the base block and tighten it with the round opening of Structator Pliers (marked “g” in the illustration). Then proceed to build the model by means of joints and standard bars, as detailed above.

If a revolving axle should be required this should be put into position **before** fixing the joints in which it revolves.

Generally, it will be well to observe that in order to obtain a firm connection the standard bars should at all times be pushed as far as possible into the joints.

The aluminium rungs and short aluminium tubes are used for representing girder construction work or for making a ladder or balustrade, etc.

The way they are used is as follows:

Take two standard bars, place them in a parallel line to each other, slip a spring washer upon each and slip both spring washers very near to the end. Then slip a short aluminium tube upon each bar close up to the spring washer. Then take one aluminium rung—place the two holes of the rung over the two standard bars—and slip it along until it comes

to rest on the aluminium tubes. Then take two more aluminium tubes, slip them up to the rung, one on each side and so on until the space between the bars is filled out.

If desired, one tube can be placed on one bar and two tubes on the other so that the rung lies in an oblique position between them. Either way gives a very realistic reproduction of girder work.

The ends of aluminium rungs may be bent in both directions without any trouble.

Structator Method of Technical Drawing.

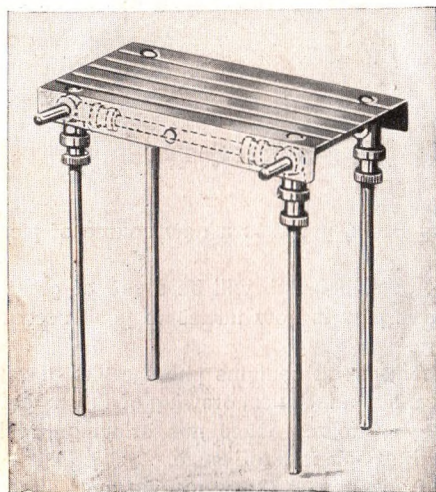
The inclusion with each Structator Outfit of a Constructional Drawing Book, provides a new source of pleasure and instruction.

These books are intimately connected with the building up process just described and will be found of great help to the young architect. Thus time which formerly was spent or wasted in mere play is now turned to good account by a training to the mind and hand which cannot fail to be of service in after years.

Each Structator Outfit contains one of the Structator Drawing Books. This book contains photographs of various models from one of the simplest models upwards, and alongside of each photograph is a technical drawing of the model and details of the parts required for it. On the same page is a blank space for the boy to reproduce this drawing—freehand if he can — or if he cannot he may use the sheet of tracing paper with which the book is interleaved.

These drawings are arranged progressively. Each page is a little more difficult than the preceding one; altogether a pleasant lesson in technical or engineering drawing.

It can easily be seen from the illustrations how the smaller Structator Models are to be built up. Exact technical drawings are contained in the Structator Drawing Books, and for the larger models explicit directions are also given in this book, to facilitate their construction.



1

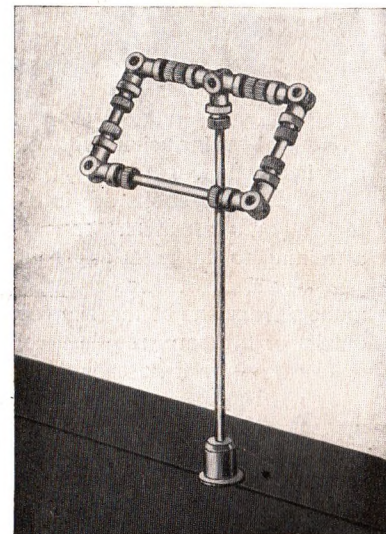
Structator Outfit No. 1.

No. 1. Table

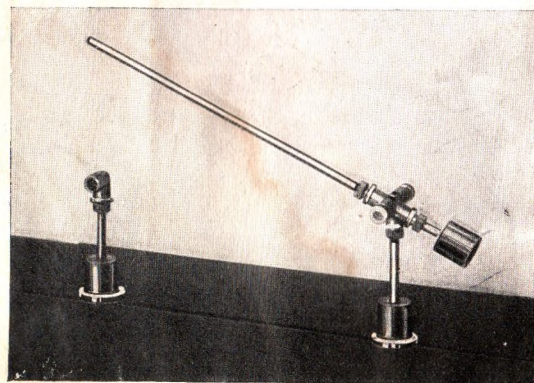
- 4 Standard Bars 4 in.
- 4 " " $2\frac{7}{8}$ "
- 4 Angle Joints
- 8 Wedge Rings
- 4 Spring Washers
- 1 Plate bent up on both sides
4x2 in.

No. 2. Music Stand

- 1 Bar with thread 6 in.
- 2 Standard Bars $2\frac{7}{8}$ "
- 2 " " $1\frac{1}{2}$ "
- 4 Angle Joints
- 1 T Joint
- 11 Wedge Rings
- 1 Base Block
- 1 Fixing Screw
- 1 Washer



2



3

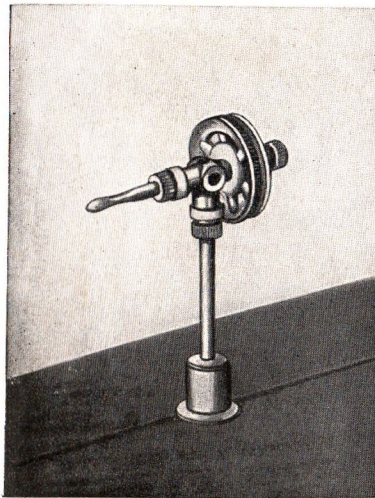
No. 3. Railway Barrier

- 3 Bars with thread 2 in.
- 1 Standard Bar 6 " "
- 1 " " $1\frac{1}{2}$ "
- 2 Angle Joints
- 1 T Joint
- 1 Spring Washer
- 5 Wedge Rings
- 3 Base Blocks
- 2 Fixing Screws
- 2 Washers.

Fixing Models upon the Base Board.

1. Slide a square-headed screw into the groove.
2. Slide it to the proper position. (Use a standard bar for doing so.)
3. Put the washer on.
4. Screw on the base block.
5. Tighten the screw with the Structator pliers.

Structator Outfit No. 1.



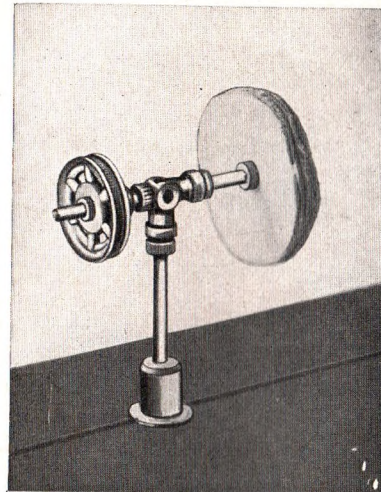
4

No. 4. Horizontal Drilling Machine

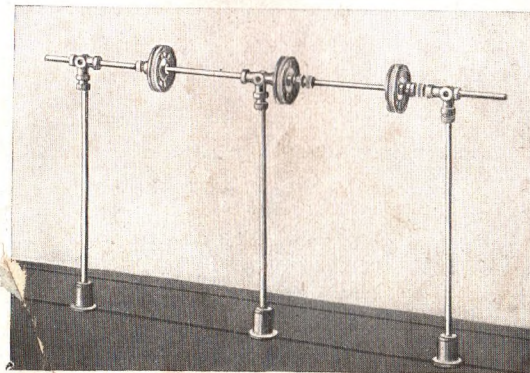
- 1 Bar with thread 2 in.
- 1 Angle Joint
- 2 Wedge Rings
- 1 Spring Washer
- 1 Base Block
- 1 Fixing Screw, 1 Washer
- 1 Pulley Wheel $1\frac{1}{8}$ in. diam.
- 1 small Drill $3\frac{1}{2}$ in. long

No. 5. Polishing Machine

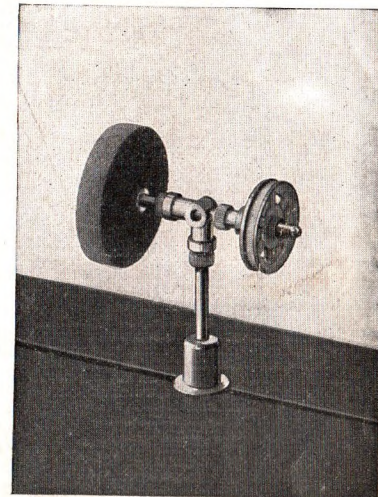
- 1 Bar with thread 2 in.
- 1 Standard Bar $2\frac{7}{8}$ in.
- 1 Angle Joint
- 2 Wedge Rings
- 3 Spring Washers
- 1 Pulley Wheel $1\frac{1}{8}$ in. diam.
- 1 Base Block
- 1 Fixing Screw, 1 Washer
- 1 Polishing Buff made up of 10 cloth discs



5



7



6

No. 6. Scouring Machine

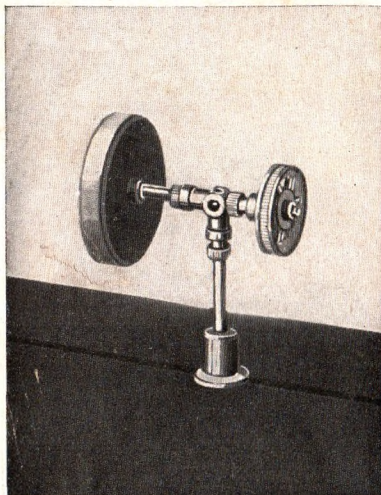
- 1 Bar with thread 2 in.
- 1 Standard Bar $2\frac{7}{8}$ in.
- 1 Angle Joint
- 2 Wedge Rings
- 1 Base Block
- 1 Fixing Screw, 1 Washer
- 1 Pulley Wheel $1\frac{1}{8}$ in. diam.
- 1 Scouring Wheel
- 3 Spring Washers

No. 7. Shafting with Pulleys

- 3 Bars with thread 6 in.
- 1 Standard Bar $11\frac{3}{4}$ in.
- 1 T-Joint, 2 Angle Joints
- 6 Wedge Rings
- 2 Spring Washers
- 3 Base Blocks
- 3 Fixing Screws
- 3 Washers
- 3 Pulley Wheels $1\frac{1}{8}$ in. diam.

When building working models take care that the bar can turn easily within the T or Angle Joint, as the case may be. For this reason it will be well to insert the horizontal bar (which serves as an axle) before tightening the upright bar.

Structator Outfit No. 1.



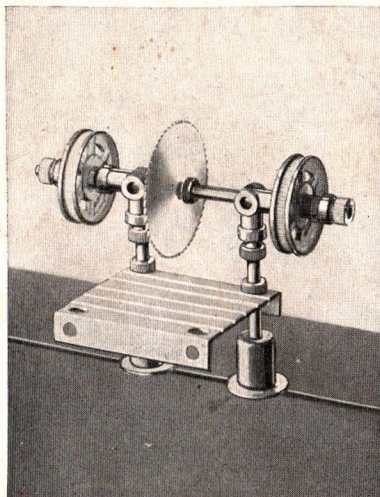
8

No. 8. Polishing Machine

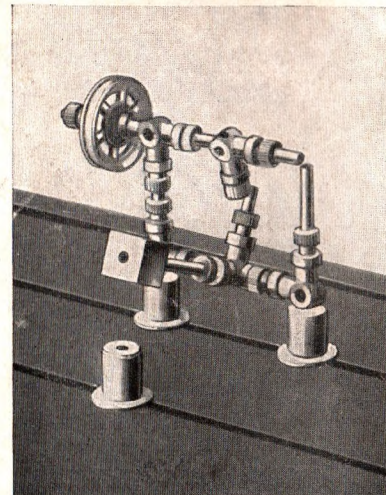
- 1 Bar with thread 2 in.
- 1 Standard Bar 2⁷/₈ "
- 1 Angle Joint
- 2 Wedge Rings
- 3 Spring Washers
- 1 Base Block
- 1 Pulley Wheel 1¹/₈ in. diam.
- 1 Leather Polishing Disc
- 1 Washer
- 1 Fixing Screw

No. 9. Circular Saw

- 2 Bars with thread 2 in.
- 1 Standard Bar 4 "
- 2 Angle Joints
- 5 Wedge Rings
- 4 Spring Washers
- 2 Base Blocks
- 2 Pulley Wheels 1¹/₈ in. diam.
- 1 Circular Saw
- 1 Plate bent up on both sides 2x2 in.
- 2 Washers, 2 Fixing Screws



9



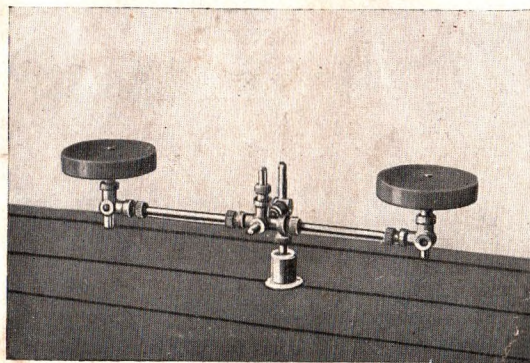
10*)

No. 10*). Forge Hammer

- 3 Bars with thread 2 in.
- 1 Standard Bar 2⁷/₈ "
- 1 " " 1¹/₂ "
- 1 " " 1 "
- 4 Angle Joints, 1 T Joint
- 10 Wedge Rings
- 2 Spring Washers
- 1 Pulley Wheel 1¹/₈ in. diam.
- 1 Hammer, 3 Base Blocks
- 3 Fixing Screws, 3 Washers

No. 11. Scales

- 1 Bar with thread 2 in.
- 2 Standard Bars 2⁷/₈ "
- 3 " " 1¹/₂ "
- 1 " " 1 "
- 3 Angle Joints, 1 T Joint
- 9 Wedge Rings
- 2 Spring Washers
- 1 Base Block, 1 Fixing Screw
- 1 Scouring Wheel 1 as scale
- 1 Polishing Disc 1 trays
- 1 Washer



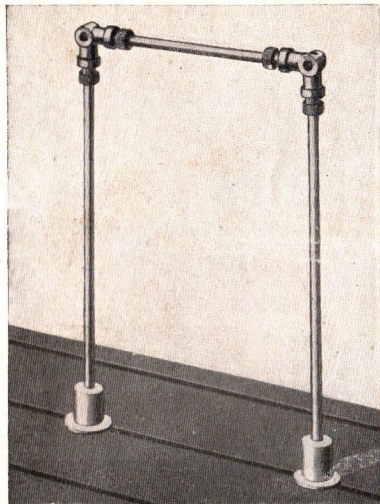
11

*) Note to No. 10. Take care that the angle joint which causes the hammer to lift, strikes exactly against the lever bar, pushing the latter gently backwards thus raising the hammer. The pulley wheels should always be firmly fixed.

Structator Outfit No. 1.

No. 12. Horizontal Bar

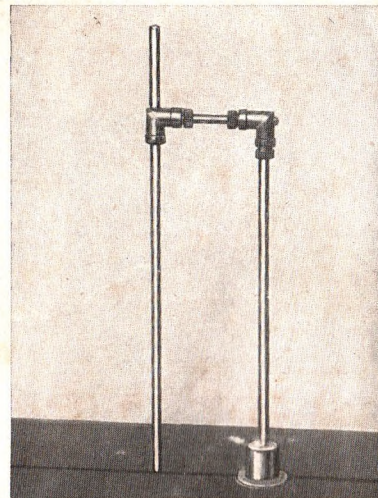
- | | |
|--------------------------|-----------------|
| 2 Bars with thread 6 in. | 2 Base Blocks |
| 1 Standard Bar 4 " | 2 Washers |
| 2 Angle Joints | 2 Fixing Screws |
| 4 Wedge Rings | |



12

No. 13. Garden Gate

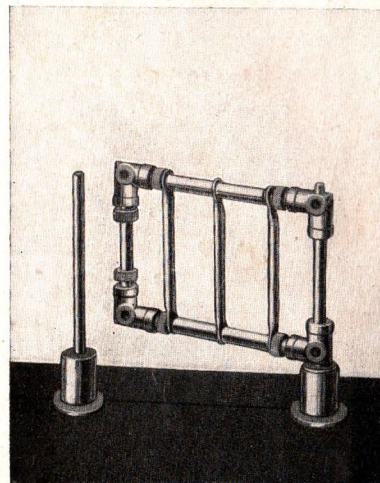
- | | |
|-----------------------------------|---|
| 2 Bars with thread 2 in. | 2 Fixing Screws |
| 2 Standard Bars 2 $\frac{1}{8}$ " | 4 Rungs |
| 1 " " 1 $\frac{1}{2}$ " | 6 Short Tubes for filling out intervals |
| 4 Angle Joints | 2 Washers |
| 6 Wedge Rings | |
| 2 Base Blocks | |



14

No. 14. Climbing Pole

- | | |
|-----------------------------------|----------------|
| 1 Bar with thread 6 in. | 3 Wedge Rings |
| 1 Standard Bar 11 $\frac{3}{4}$ " | 1 Base Block |
| 1 " " 1 $\frac{1}{2}$ " | 1 Fixing Screw |
| 2 Angle Joints | 1 Washer |



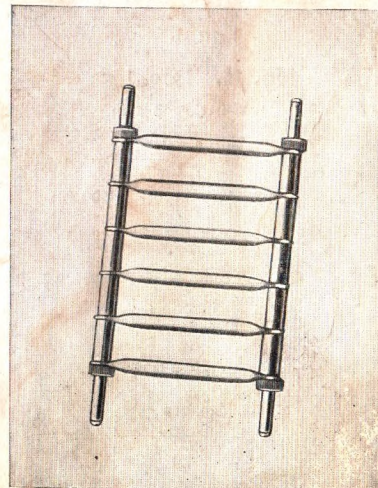
13

No. 15. Ladder

- | | |
|-----------------------|--|
| 2 Standard Bars 4 in. | 10 Short Tubes for filling out intervals |
| 4 Spring Washers | |
| 6 Rungs | |

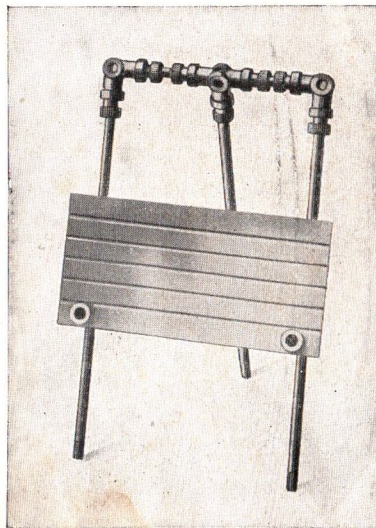
The use of rungs necessitates the employment of the short tubes (to hold the rungs away from each other at the right distance.)

See especially No. 15, which illustrates the use of short tubes.



15

Structator Outfit No. 1.



16

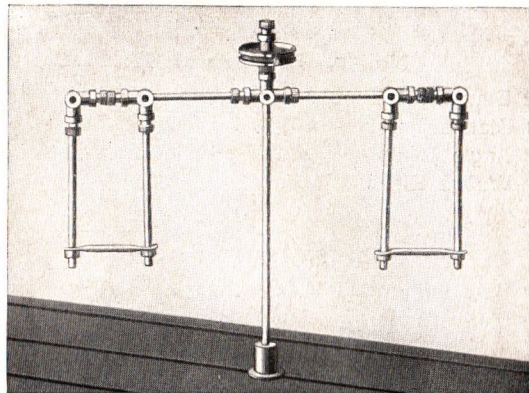
No. 16. Easel

- 3 Bars with thread 6 in.
- 1 Standard Bar $2\frac{7}{8}$ in.
- 4 Angle Joints
- 1 T Joint
- 11 Wedge Rings
- 1 Plate bent up on both sides 4×2 in.

No. 17.

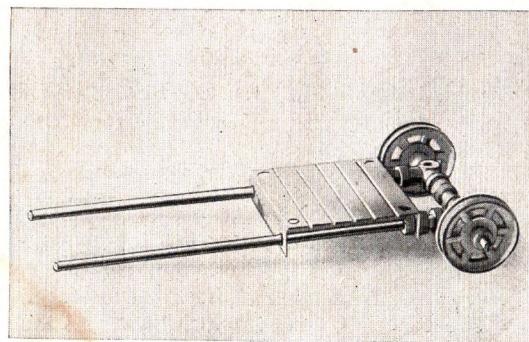
American Revolving Swing.

- 1 Bar with thread 6 in.
- 2 Standard Bars 4 "
- 4 " " $2\frac{7}{8}$ "
- 1 " " $1\frac{1}{2}$ "
- 4 Angle Joints, 1 T Joint
- 12 Wedge Rings
- 4 Spring Washers
- 1 Base Block
- 1 Fixing Screw
- 1 Pulley Wheel $1\frac{1}{8}$ in. diam.
- 2 Rungs
- 1 Washer

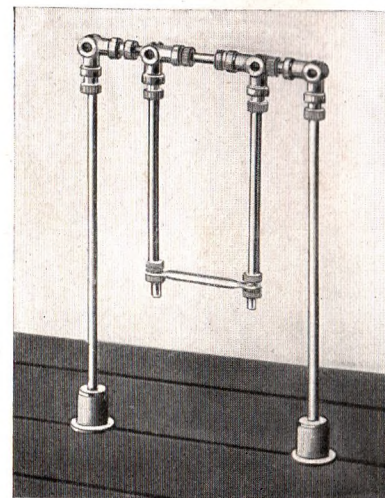


17

Spring washers should be used wherever a freely turning part is to be kept from sliding out of position. No. 17 and 18 may be mentioned as instances where these spring washers hold the rungs (used as horizontal bars) and No. 19 where they hold the wheels in position.



19



18

No. 18. Swing

- 2 Bars with thread 6 in.
- 3 Standard Bars 4 "
- 4 Angle Joints
- 6 Wedge Rings
- 6 Spring Washers
- 2 Base Blocks
- 2 Fixing Screws
- 1 Rung
- 2 Washers

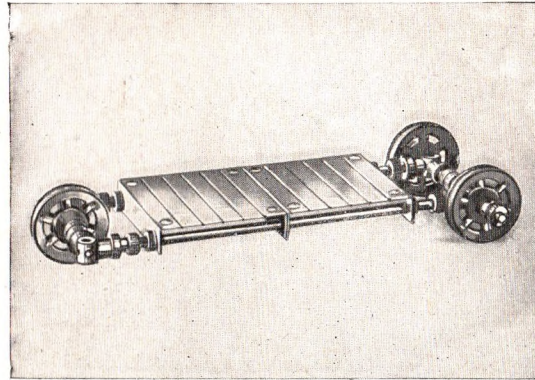


No. 19.

Two-Wheeled Truck

- 2 Bars with thread 6 in.
- 1 Standard Bar $3\frac{1}{2}$ "
- 2 Angle Joints
- 4 Wedge Rings
- 4 Spring Washers
- 2 Pulley Wheels $1\frac{1}{8}$ in. diam.
- 1 Plate bent up on both sides 2×2 in.

Structator Outfit No. 1.

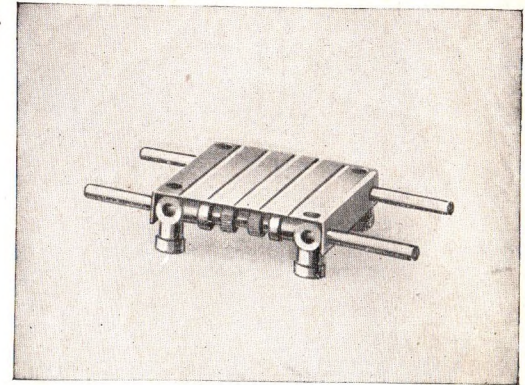


20

No. 20.

Three-Wheeled Truck

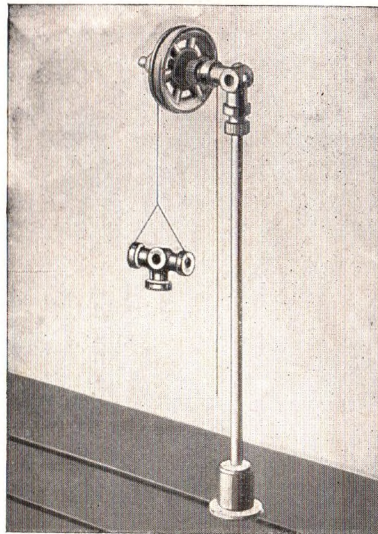
- 2 Bars with thread 6 in.
- 1 Standard Bar $3\frac{1}{2}$ "
- 1 " " $1\frac{1}{2}$ "
- 4 Angle Joints
- 6 Wedge Rings
- 6 Spring Washers
- 3 Pulley Wheels
- $1\frac{1}{8}$ in. diam.
- 2 Plates, bent up on both sides 2×2 in.



21

No. 21. Stretcher

- 2 Standard Bars 4 in.
- 1 Plate, bent up on both sides 2×2 in.
- 4 Angle Joints
- 4 Wedge Rings

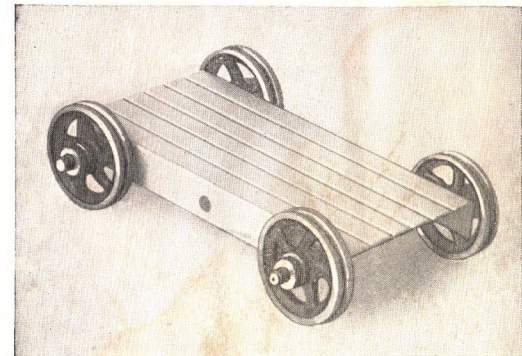


22

No. 22. Lifting Tackle

- 1 Bar with thread 6 in.
- 1 Standard Bar $1\frac{1}{2}$ "
- 1 Angle Joint
- 2 Wedge Rings
- 1 Spring Washer
- 1 Base Block
- 1 Fixing Screw
- 1 Pulley Wheel $1\frac{1}{8}$ in. diam.
- 1 Washer
- Driving Band 8 in. long

Weights for Cranes and Lifting Hoists may be chosen from any of the articles contained in the Structator Outfit. In No. 22, for instance, we use a T-joint.

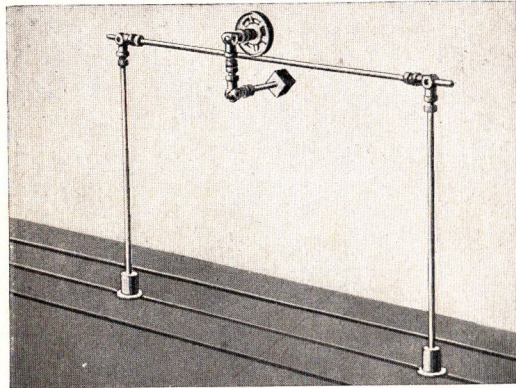


23

No. 23. Station Truck

- 2 Standard Bars $3\frac{1}{2}$ in.
- 4 Spring Washers
- 4 Wheels $1\frac{1}{8}$ in. diam.
- 1 Plate, bent up on both sides 4×2 in.

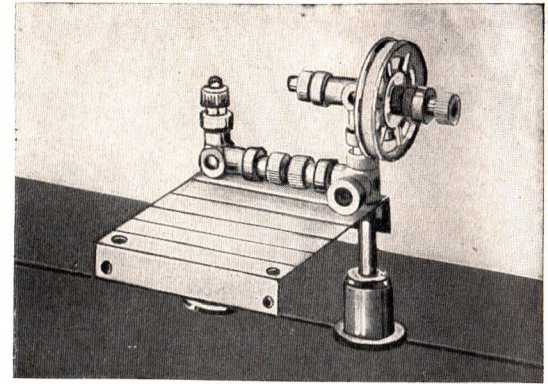
Structator Outfit No.1.



24

No. 24. Suspension Carrying Gear

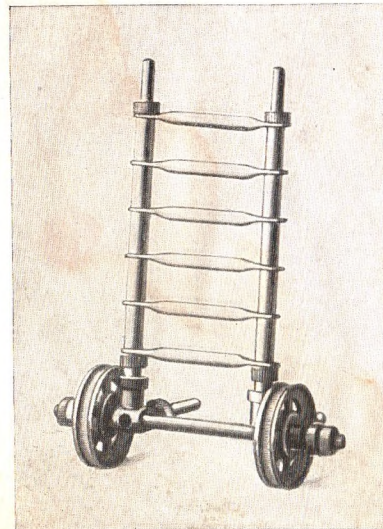
- 2 Bars with thread 6 in.
- 1 Bar " " 2 "
- 1 Standard Bar 1 1/2 " "
- 2 " " 1 1/2 "
- 4 Angle Joints
- 8 Wedge Rings
- 1 Spring Washer
- 2 Base Blocks
- 1 Pulley Wheel 1 1/8 in. diam.
- 1 Hammer
- 2 Washers
- 2 Fixing Screws



26

No. 25. Small Fire Ladder

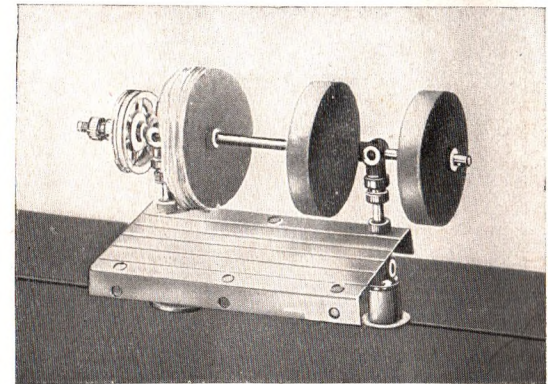
- 2 Standard Bars 4 in.
- 1 " " 3 1/2 "
- 2 " " 1 1/2 "
- 2 Angle Joints
- 4 Wedge Rings
- 4 Spring Washers
- 2 Wheels 1 1/8 in. diam.
- 6 Rungs
- 10 Short Tubes for filling out intervals



25

No. 26. Small Lathe

- 2 Bars with thread 2 in.
- 1 Standard Bar 1 1/2 " diam.
- 1 " " 1 " "
- 3 Angle Joints
- 5 Wedge Rings
- 3 Spring Washers
- 2 Base Blocks
- 1 Pulley Wheel 1 1/8 in. diam.
- 1 Plate, bent up on both sides 2x2 ins.
- 2 Washers
- 2 Fixing Screws



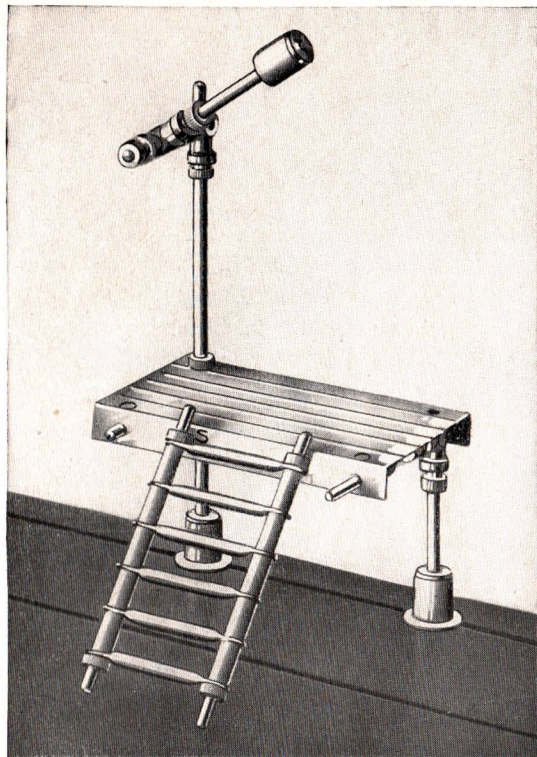
27

No. 27. Double Polishing Machine

- 1 Bar with thread 6 in.
- 2 " " " 2 "
- 4 Angle Joints
- 5 Wedge Rings
- 6 Spring Washers
- 2 Base Blocks
- 2 Fixing Screws
- 1 Pulley Wheel 1 1/8 in. diam.
- 1 Leather Polishing Pad
- 1 Polishing Pad
- 1 Emery Wheel
- 1 Plate, bent up on both sides 4x2 in.
- 2 Washers

Bent up aluminium plates may be used as table tops and fixed in two different ways upon the vertical bars.

1. by using spring washers to support the plate as in Fig. 26 or
2. by using T or angle joints as supports, as in Fig. 27, by employing wedge rings which pass through the top holes of the plate.



28*)

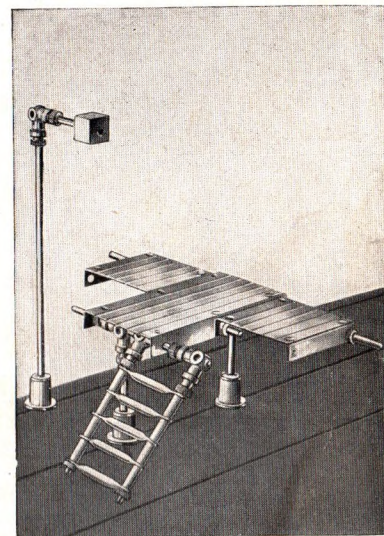
Structator Outfit No. 1.

No. 28*). Signalling Platform

- | | |
|-------------------------|----------------------------|
| 1 Bar with thread 6 in. | 3 Base Blocks |
| 2 Bars " " 2 " | 2 Fixing Screws |
| 2 Standard Bars 4 " | 2 Washers |
| 2 " " 2 " | 6 Rungs |
| 1 " " 1 1/2 " | 10 Short Tubes for filling |
| 4 Angle Joints | out intervals |
| 8 Wedge Rings | 1 Plate, bent up on |
| 6 Spring Washers | both sides 4x2 in. |

No. 29*). Goods Platform

- | | |
|-------------------------|---------------------------|
| 1 Bar with thread 6 in. | 3 Fixing Screws |
| 3 " " " 2 " | 5 Rungs |
| 3 Standard Bars 4 " | 8 Short Tubes for filling |
| 3 " " 2 7/8 " | out intervals |
| 4 Angle Joints | 1 Plate bent up on |
| 1 T Joint | both sides 4x2 in. |
| 10 Wedge Rings | 2 Plates bent up on both |
| 4 Spring Washers | sides 2x2 in. |
| 3 Base Blocks | 1 Hammer head (re- |
| 3 Washers | presenting lantern) |

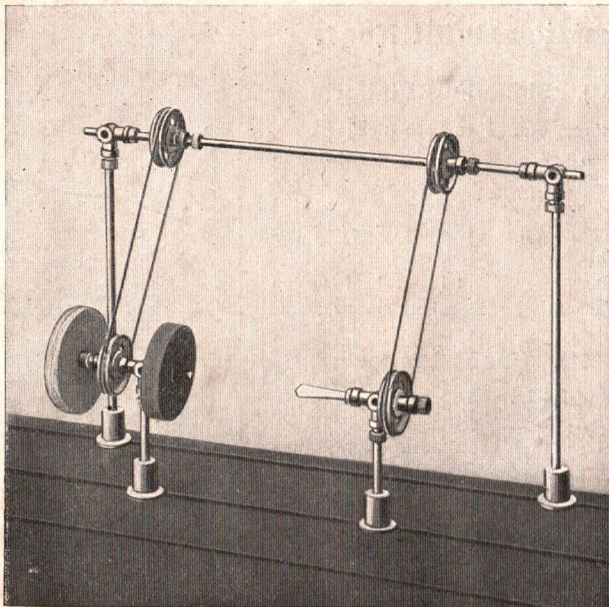


29*)

*) **No. 28. Signalling Platform**—Fasten two base blocks upon the wooden base-board at a distance of $3\frac{1}{8}$ in. and screw two bars one 2 in. and the other 6 in. in length into these. Fix an Angle Joint upon each of these bars at an equal height. Into these two joints fix two bars, 2 in. long, horizontally towards you, and upon these a plate of 4x2 ins. is fastened by means of spring washers. At the end of the 6 in. bar we again fix an angle joint holding another bar $1\frac{1}{2}$ in. in length. Upon this horizontal bar we fix another angle joint which carries the signal consisting of a base block and a 2 in. bar with thread.

By means of a wedge ring we can adjust the signal at any angle. The ladder is made as in Fig. 15 and leans against the bridge.

*) **No. 29. Goods Platform.** First fix two base blocks into a groove in the base-board at a distance of $3\frac{1}{8}$ in. apart, then fix two 2 in. bars with thread firmly into the base blocks and on the one bar an angle joint and on the other a T joint. Into the T joint fix a further two bars 4 in. long and parallel to these wedge another 4 in. bar through the angle joint. The three bars are to be wedged firmly in after the plate measuring 4x2 in. has been fastened to the bars in such a way that the joints come between the bent edges of the plate (see illustr.). The two plates measuring 2x2 are to be wedged upon the 4 in. bar of the T-joint on either side of the large plate and held in a horizontal position by a $2\frac{7}{8}$ in. bar. The latter is to be fixed through the middle holes in the large plate. The picture plainly indicates how the ladder and lamp are to be constructed.



30

Structator Outfit No. 1.

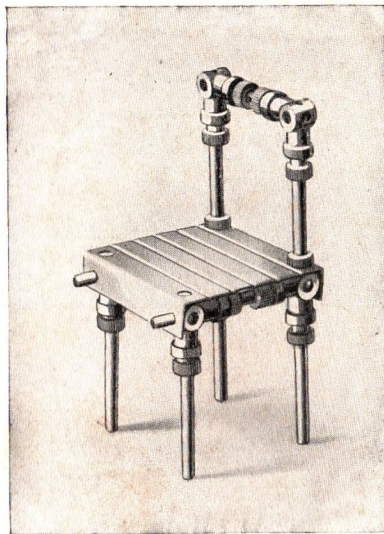
No. 30. Factory No. 1.

2 Bars with thread 6 in.	4 Base Blocks
2 Bars with thread 2 in.	4 Fixing Screws
1 Standard Bar 11 ³ / ₄ in.	4 Pulley Wheels 1 ¹ / ₈ in. diam.
1 Standard Bar 2 ⁷ / ₈ in.	1 Leather Disc
4 Angle Joints	1 Polishing Pad
8 Wedge Rings	1 Small Drill 3 ¹ / ₂ in. long
6 Spring Washers	4 Washers
	2 Driving Bands 10 in. long

First two bars with thread 6 in. long are fixed by means of the base blocks upon the wooden boards at a distance of 9 ³/₄ in. and upon each an angle joint is fixed, through which a long bar is introduced which revolves lightly within these joints. Laterally the long bar is held in position by 2 spring washers, as can be seen from the illustration. Nos. 4 and 5, or 5 and 6 may be taken as working Models.

With the 30 models enumerated, we conclude the first series of models for Outfit No. 1. By means of the material contained in Outfit No. 1 the young architect may construct models evolved from his own imagination, and it is just this almost limitless variety of subjects which may be made which teaches the child to think out for himself the construction of other models, and he will find that with the parts he has in his box and other single parts which can be purchased, he can continue to produce new and original structures.

Models from Structator Outfit No. 2 or from No. 1 and 1a.



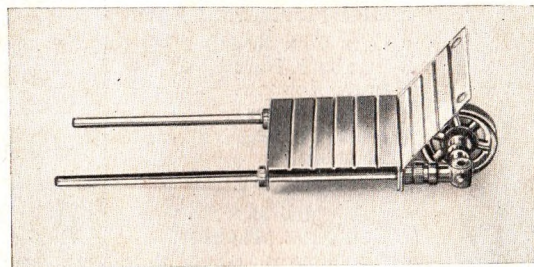
32

No. 32. Chair

- | | |
|-----------------------|-------------------------|
| 2 Standard Bars 4 in. | 2 Spring Washers |
| 5 " " 2 " | 1 Plate bent up on both |
| 6 Angle Joints | sides 2x2 in. |
| 12 Wedge Rings | |

No. 34. Band Saw

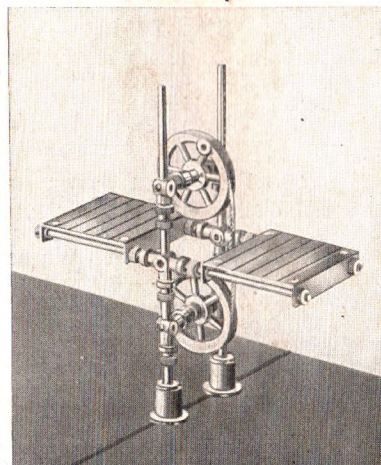
- | | |
|---------------------------|------------------|
| 2 Bars with thread | 2 T Joints |
| 6 in. | 4 Angle Joints |
| 4 Standard Bars 2 7/8 in. | 10 Wedge Rings |
| 2 " " 1 " | 6 Spring Washers |



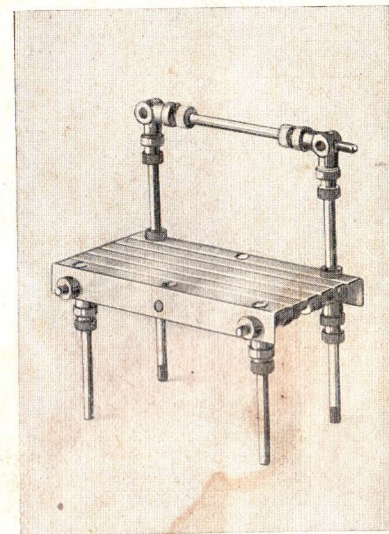
31

No. 31. Trolley

- | | |
|-----------------------|-------------------------|
| 2 Standard Bars 6 in. | 1 Pulley Wheel |
| 1 " " 2 " | 1 1/8 in. diam. |
| 2 Angle Joints | 1 Plate bent up on both |
| 2 Wedge Rings | sides 2x2 in. |
| 5 Spring Washers | 1 Plate, flat 2x2 in. |



34



33

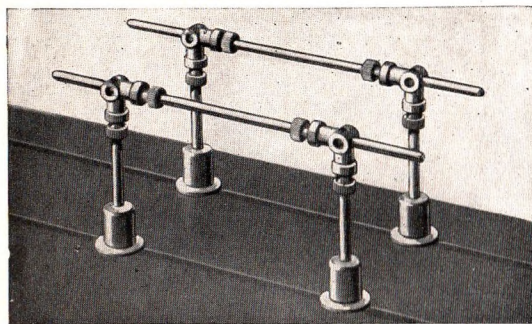
No. 33. Garden Seat

- | | |
|-----------------------|-------------------------|
| 3 Standard Bars 4 in. | 4 Spring Washers |
| 4 " " 2 " | 1 Plate bent up on both |
| 6 Angle Joints | sides 4x2 in. |
| 12 Wedge Rings | |

No. 34. Band Saw.

- | | |
|--------------------------|-------------------|
| 2 Base Blocks | 2 Band Saw Pulley |
| 2 Plates bent up on both | Wheels |
| sides 2x2 in. | 2 Washers |
| 1 Band Saw Blade | 2 Fixing Screws |

Models from Structator Outfit No. 2 or from No. 1 and 1a.



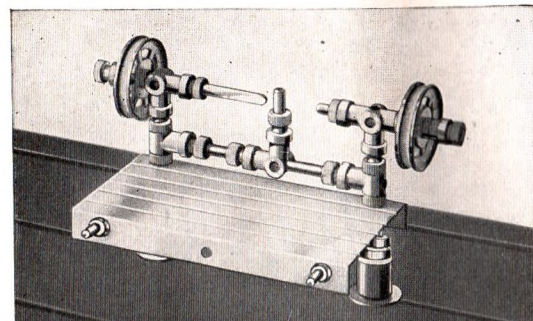
35

No. 35. Parallel Horizontal Bars

- 4 Bars with thread 2 in.
- 2 Standard Bars 6 "
- 4 Angle Joints
- 8 Wedge Rings
- 4 Base Blocks
- 4 Washers
- 4 Fixing Screws

No. 36. Centring Machine

- 2 Bars with thread 2 in.
- 1 Standard Bar 2⁷/₈ "
- 3 " " 2 "
- 1 " " 1 "
- 4 Angle Joints " 1 T Joint
- 2 Straight Joints

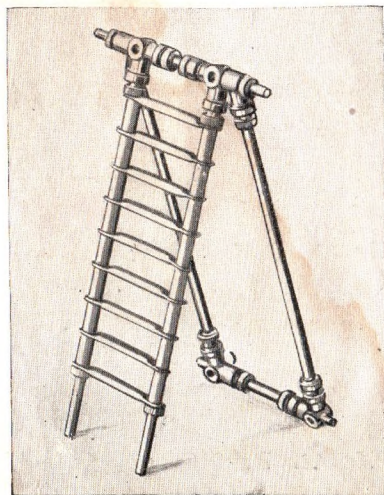


36

- 2 Base Blocks
- 12 Wedge Rings
- 4 Spring Washers
- 2 Pulley Wheels 1¹/₈ in. diam.
- 2 Fixing Screws
- 1 Drill 3¹/₂ in. long
- 1 Plate bent up on both sides 4x2 in.
- 2 Washers

No. 37. Step Ladder

- 4 Standard Bars 6 in.
- 1 " " 3¹/₂ "
- 1 " " 2⁷/₈ "
- 4 Angle Joints
- 2 Straight Joints
- 10 Wedge Rings
- 4 Spring Washers
- 10 Rungs
- 18 Short Tubes for filling out intervals



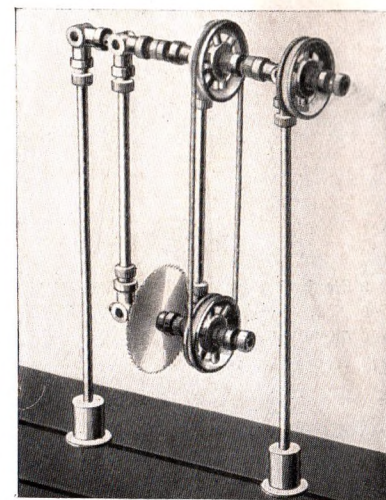
37

No. 38. Pendulum Saw

- 2 Bars with thread 6 in.
- 1 Standard Bar 4³/₄ "
- 2 " " 4 "
- 1 " " 2³/₈ "
- 6 Angle Joints
- 2 Base Blocks
- 2 Fixing Screws
- 10 Wedge Rings
- 2 Spring Washers
- 3 Pulley Wheels
- 1 Circular Saw
- 2 Washers
- Driving Band, 9 in. long

*) No. 38. In this model the rotating motion of the longer bar has to be communicated to a shorter one which swings upon it.

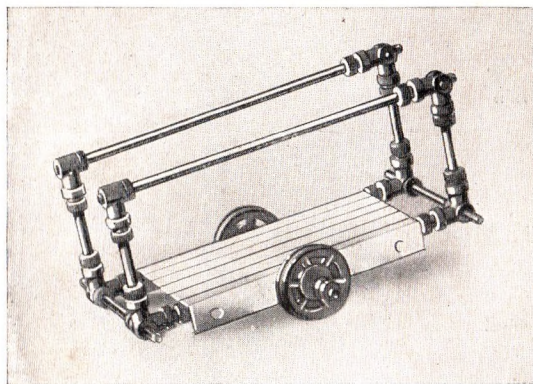
Erect two uprights 6 in. in length upon the board at a distance of 3¹/₈ in. from each other and fasten an angle joint on the top of each in which a bar of 4³/₄ in. in length easily



38*)

revolves. Upon the latter bar there are, between the joints which carry it, a wheel (wedged tightly), two angle joints (loose), and two spring washers to hold these in position. A bar 4 in. long is fixed upon each of these angle joints and at the end of the bar there are two further angle pieces in which a 2³/₈ in. bar with a pulley wheel (wedged tightly) turns easily. The circular saw is fixed upon the bar between these angle joints by means of a wedge ring.

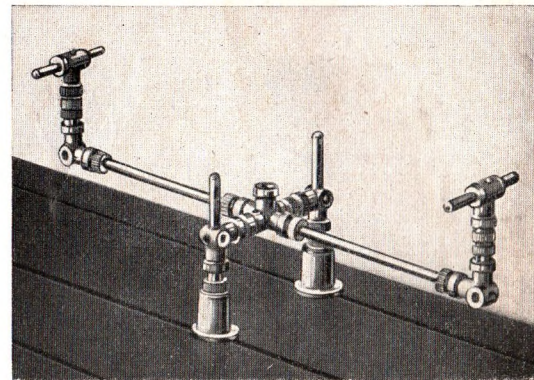
Models from Structator Outfit No. 2 or from No. 1 and 1a.



39

No. 39. Ship's Gangway

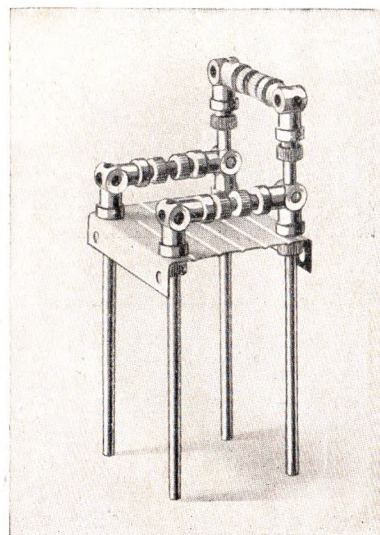
- 2 Standard Bars 6 in.
- 2 " " $4\frac{3}{4}$ "
- 1 " " $3\frac{1}{2}$ "
- 2 " " $2\frac{7}{8}$ "
- 4 " " 2 "
- 14 Wedge Rings
- 6 Angle Joints
- 2 Straight Joints
- 8 Spring Washers
- 2 Wheels
 $1\frac{1}{8}$ in. diam.
- 1 Plate bent up on both sides 4×2 in.



41

No. 40. Baby Chair

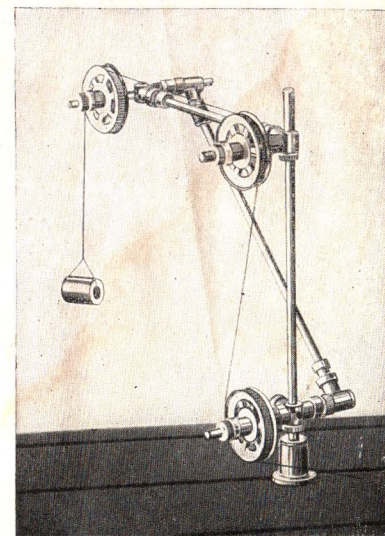
- 2 Standard Bars $4\frac{3}{4}$ in.
- 2 " " $3\frac{1}{2}$ "
- 1 " " 2 "
- 2 " " $1\frac{1}{2}$ "
- 6 Angle Joints
- 12 Wedge Rings
- 1 Plate bent up on both sides 2×2 in.



40

No. 41. See-Saw

- 2 Bars with thread 2 in.
- 2 Standard Bars 4 "
- 1 " " 2 "
- 2 " " $1\frac{1}{2}$ "
- 2 " " 1 "
- 4 Angle Joints, 1 T Joint
- 2 Straight Joints
- 12 Wedge Rings
- 2 Base Blocks
- 2 Washers
- 6 Spring Washers
- 2 Fixing Screws

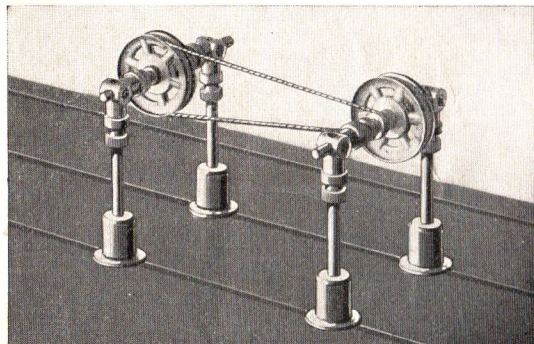


42

No. 42. Revolving Crane

- 1 Bar with thread 6 in.
- 1 Standard Bar 6 "
- 1 " " 4 "
- 1 " " $2\frac{7}{8}$ "
- 2 " " $1\frac{1}{2}$ "
- 1 " " 1 "
- 2 Angle Joints, 1 T Joint
- 2 Straight Joints
- 8 Wedge Rings
- 7 Spring Washers
- 1 Base Block
- 1 Washer
- 3 Pulley Wheels
 $1\frac{1}{8}$ in. diam.
- 1 Fixing Screw
- Driving Band 20 in. long

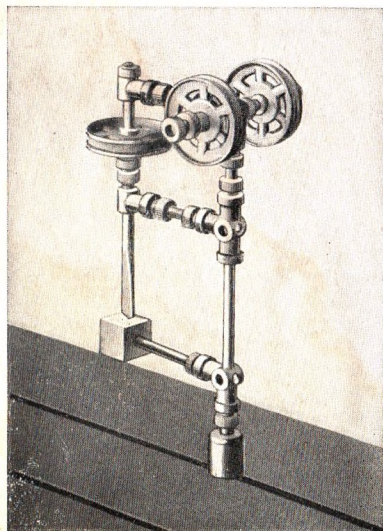
Models from Structator Outfit No. 2 or from No. 1 and 1a.



43

No. 43. Two-Speed Pulley

- 4 Bars with thread 2 in.
- 2 Standard Bars $2\frac{7}{8}$ „
- 4 Angle Joints
- 6 Wedge Rings
- 4 Spring Washers
- 4 Base Blocks
- 2 Pulley Wheels $1\frac{1}{8}$ in. diam.
- 4 Washers
- 4 Fixing Screws
- Driving Band $9\frac{1}{2}$ in. long



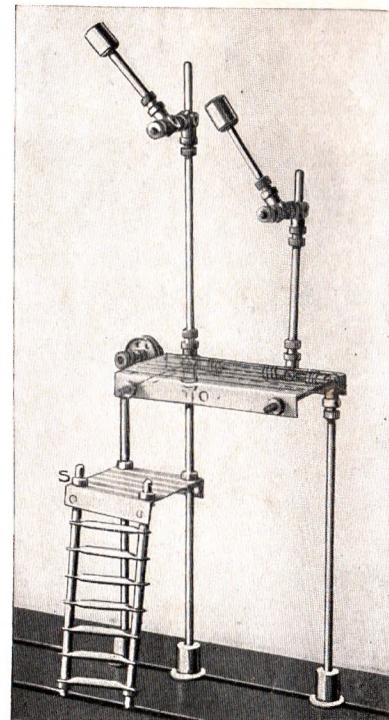
44

No. 44. Drilling Machine

- | | |
|--------------------------------------|--------------------------|
| 1 Bar with thread $4\frac{3}{4}$ in. | 11 Wedge Rings |
| 1 „ „ „ 2 „ | 3 Spring Washers |
| 1 Standard Bar 2 „ | 1 Base Block 1 Washer |
| 2 „ „ „ $1\frac{1}{2}$ „ | 1 Fixing Screw |
| 1 Drill $3\frac{1}{2}$ in. | 1 Hammer |
| 2 Angle Joints, 1 T Joint | 3 Pulley Wheels |
| 2 Straight Joints | $1\frac{1}{8}$ in. diam. |

No. 45. Railway Signal

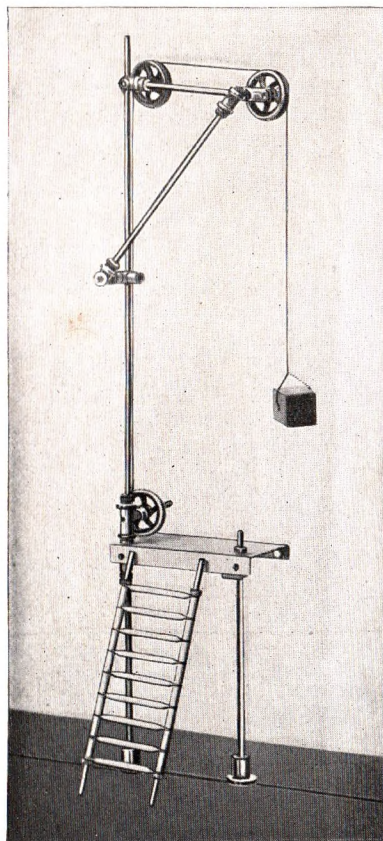
- | | |
|---------------------------|----------------------------|
| 3 Bars with thread 6 in. | 12 Spring Washers |
| 2 „ „ „ 2 „ | 1 Pulley Wheel |
| 1 Standard Bar 6 „ | $1\frac{1}{8}$ in. diam. |
| 1 „ „ „ 4 „ | 8 Rungs |
| 2 „ „ „ $4\frac{3}{4}$ „ | 14 Short Tubes for filling |
| 3 „ „ „ $2\frac{7}{8}$ „ | out intervals |
| 2 „ „ „ $1\frac{1}{2}$ „ | 1 Plate bent up on both |
| 1 „ „ „ 1 „ | sides 2×2 in. |
| 1 T Joint, 6 Angle Joints | 1 Plate bent up on both |
| 1 Straight Joint | sides 4×2 in. |
| 5 Base Blocks | 3 Washers |
| 17 Wedge Rings | 3 Fixing Screws |



45

*) No. 45. This is a very simple construction, but care must be exercised to choose exact distances between the base blocks according to the measurements to be taken between the holes in the plates. It is advisable not to fix the base blocks firmly until the model is finished, so that the distance may be altered if necessary.

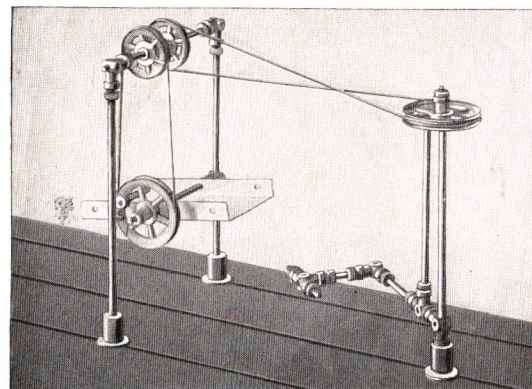
Models from Structator Outfit No. 2 or from No. 1 and 1a.



46

No. 46. Lifting Crane

- 2 Bars with thread 6 in.
- 1 Standard Bar 13³/₄ "
- 3 " " 6 "
- 1 " " 4 "
- 3 " " 1¹/₂ "
- 1 " " 2⁷/₈ "
- 1 " " 2 "
- 6 Angle Joints
- 1 T Joint
- 2 Straight Joints
- 15 Wedge Rings
- 11 Spring Washers
- 3 Pulley Wheels
- 1¹/₈ in. diam.
- 10 Rungs
- 18 Short Tubes for filling
out intervals 1¹/₂ in.
long
- 2 Base Blocks
- 1 Plate bent up on both
sides 4x2 in.
- 2 Washers
- 2 Fixing Screws
- Driving Band 30 in. long

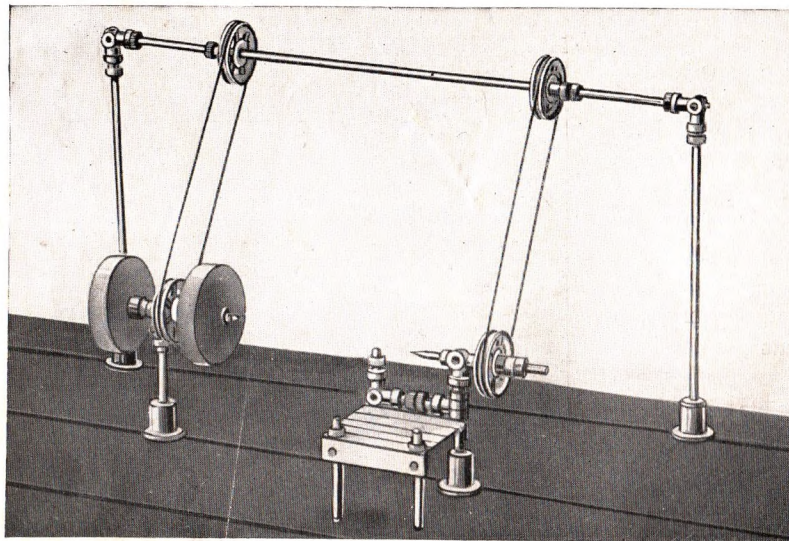


47

No. 47. Capstan with Threshing Machine

- | | |
|--|--|
| 3 Bars with thread
6 in. | 7 Spring Washers |
| 1 Bar with thread
4 ³ / ₄ in. | 3 Base Blocks |
| 1 Bar with thread
2 in. | 2 Pulley Wheels |
| 1 Standard Bar 4 ³ / ₄ in. | 1 ¹ / ₈ in. diam. |
| 1 " " 2 " | 2 Band Saw Pulley
Wheels |
| 2 " " 3 ¹ / ₂ " | 1 Plate bent up on
both sides 4x2 in. |
| 1 " " 1 ¹ / ₂ " | 3 Washers |
| 6 Angle Joints | 3 Fixing Screws |
| 1 T Joint | Driving Band 28 in.
long |
| 13 Wedge Rings | |

Model from Structator Outfit No. 2 or from 1 and 1a.



48

No. 48*). Factory No. 2

2 Bars with thread	6 in.	12 Spring Washers
3 " " "	2 "	5 Base Blocks
1 Standard Bar	13 ³ / ₄ "	4 Pulley Wheels
1 " "	2 ⁷ / ₈ "	1 ¹ / ₈ in. diam.
1 " "	2 "	1 Plate bent up on both
2 " "	1 ¹ / ₂ "	sides 2×2 in.
1 " "	1 "	5 Washers
5 Angle Joints		1 Leather Polishing Disc
1 Straight Joint		1 Emery Wheel
11 Wedge Rings		5 Fixing Screws
Driving Band 28 in. long.		

No. 48*). This shafting is constructed according to the description given with No. 30 (Outfit No. 1). The working models are easily built up from the designs.

The preceding forty-eight models may all be constructed from Structator Outfit No. 2 or from No. 1 and 1a. Other models may easily be built up according to the young architect's own ideas. We would, however, just mention that by purchasing other parts (which are sold separately, see end of the book) the necessary material is obtained to create new and original models. If, for instance, a further working model is desired to be attached to the Shafting of No. 48, one may purchase the required single parts, in order to fix three or more machines upon the same base-board.

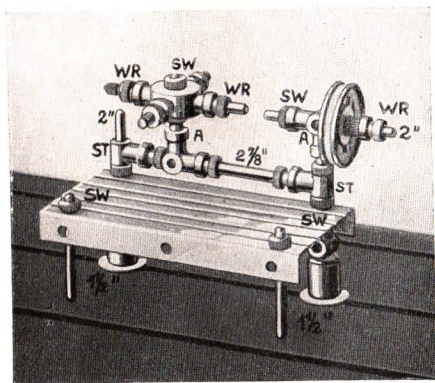
Specimen Models from larger STRUCTATOR OUTFITS.

We specially draw attention to the **Supplementary Structator Outfits** which contain the material required to transform any box into the next larger one.

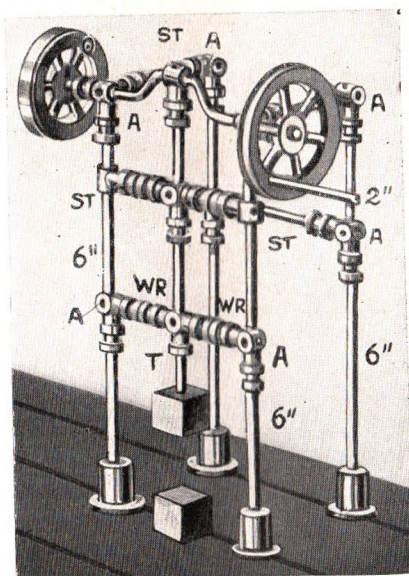
For instance, **Outfits No. 1 and 1a make Outfit No. 2**

Outfits No. 3 and 3a make Outfit No. 4, and so on

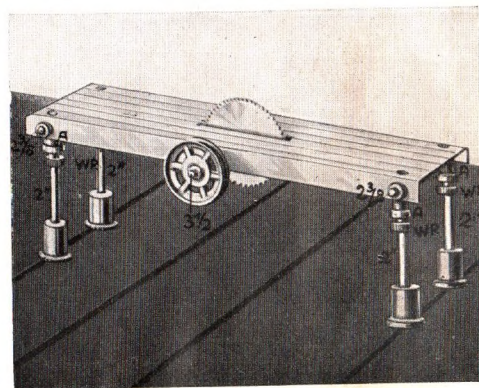
For further particulars and prices, see inside of cover.



No. 76. Turning Lathe
From Structator
Outfit No. 4 or No. 3 and 3a.



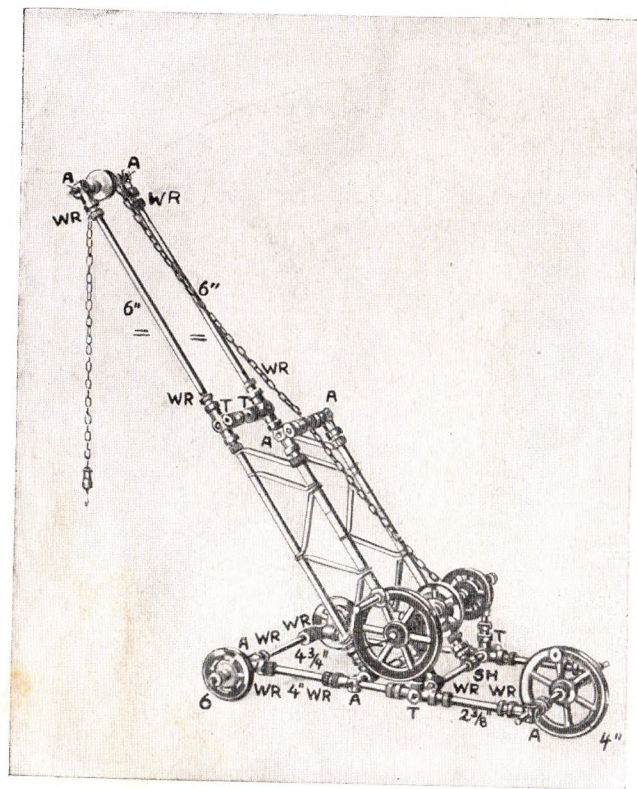
No. 92. Steam Hammer.
From Structator
Outfit No. 5 or No. 4 and 4a.



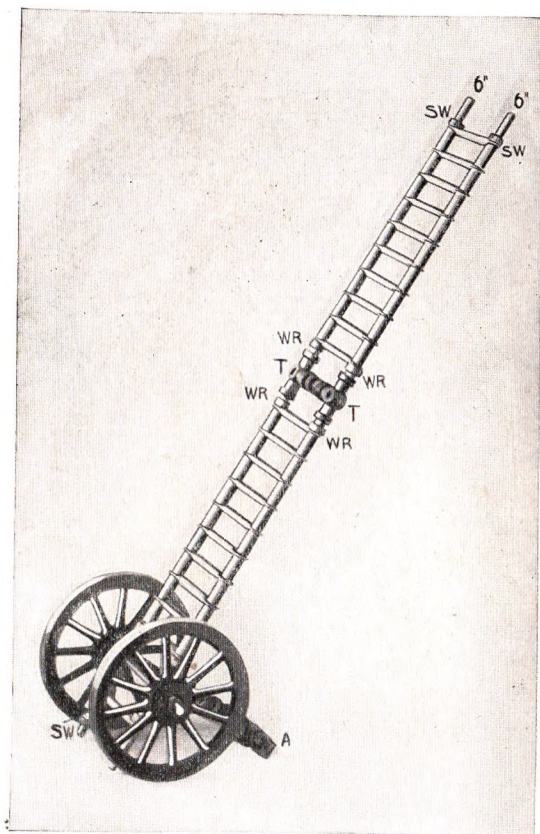
No. 88. Circular Saw.
From Structator
Outfit No. 5 or No. 4 and 4a.

For full instructions how to build these models, see the Booklets for Outfits Nos. 3 to 8 sold by all Structator Dealers.

The numbers shown in the illustrations indicate the length of the Standard Bars in inches.
The letters represent:—**A** = Angle Joint, **T** = T Joint, **St.** = Straight Joint, **W.R.** = Wedge Ring, **S.W.** = Spring Washer.



No. 78. Loading Crane
from Structator Outfit No. 4 or No. 3 and 3a.

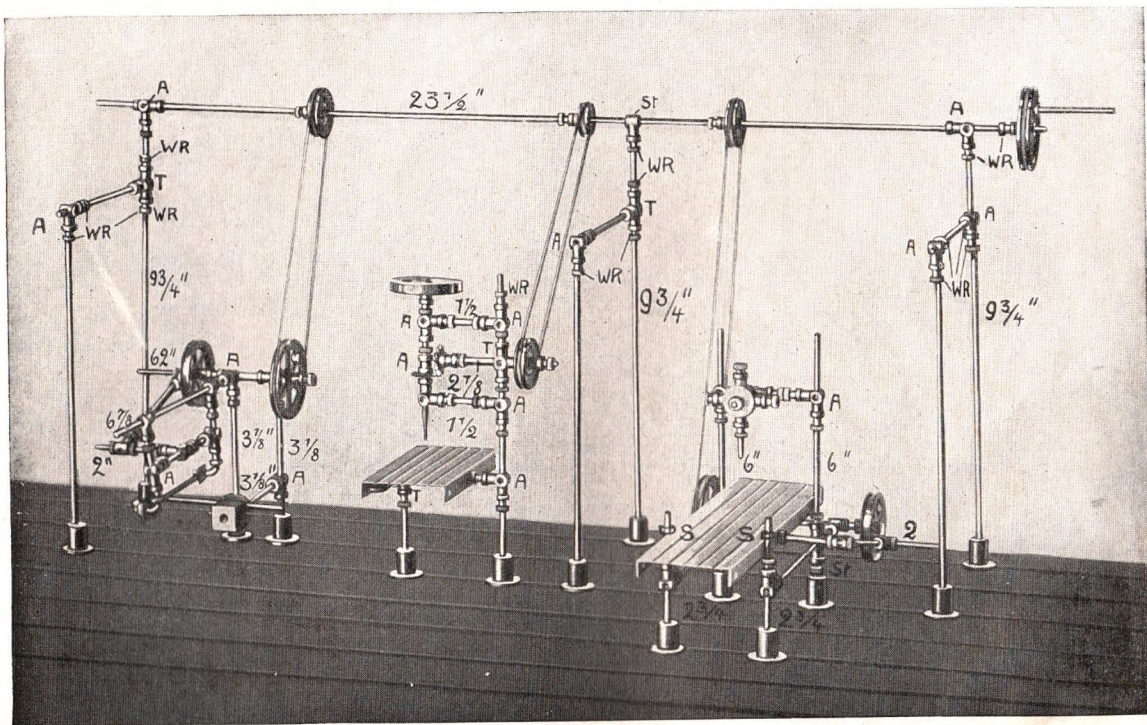


No. 65. Large Fire Escape
from Structator Outfit No. 3 or from No. 2 and 2a.

For full instructions how to build these models, see the Booklets for Outfits Nos. 3 to 8 sold by all Structator Dealers.

The numbers shown in the illustrations indicate the length of the Standard Bars in inches.

The letters represent:—**A** = Angle Joint, **T** = T Joint, **St.** = Straight Joint, **W.R.** = Wedge Ring, **S.W.** = Spring Washer.



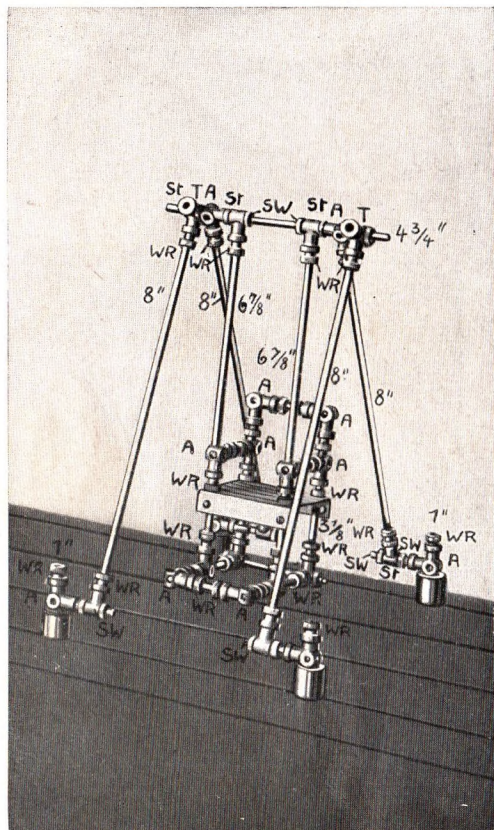
No. 102. From Outfit No. 5 or No. 4 and 4a.

Model Workshop (Factory) with Lathes and Drilling Benches constructed solely from the contents of Structator Outfits.

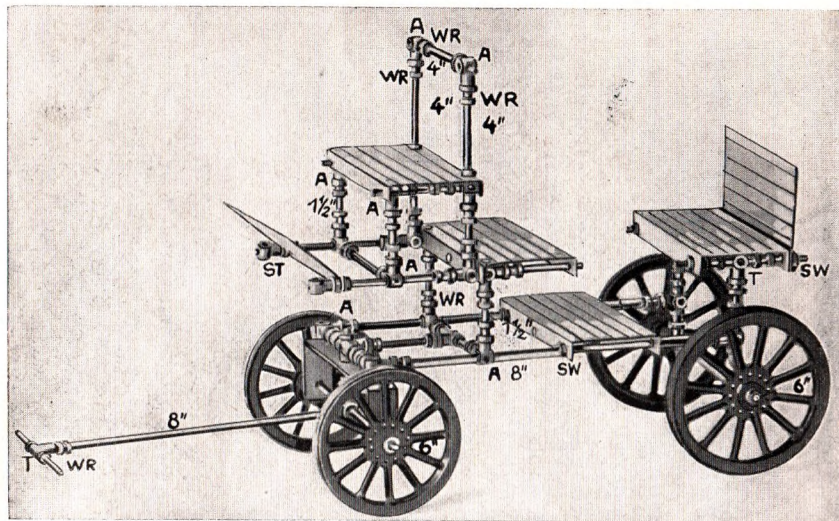
For full instructions how to build these models, see the Booklets for Outfits Nos. 3 to 8 sold by all Structator Dealers.

The numbers shown in the illustrations indicate the length of the Standard Bars in inches.

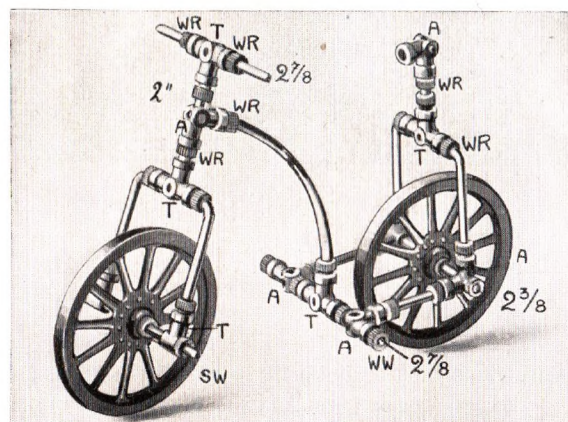
The letters represent:—**A** = Angle Joint, **T** = T Joint, **St.** = Straight Joint, **W.R.** = Wedge Ring, **S.W.** = Spring Washer.



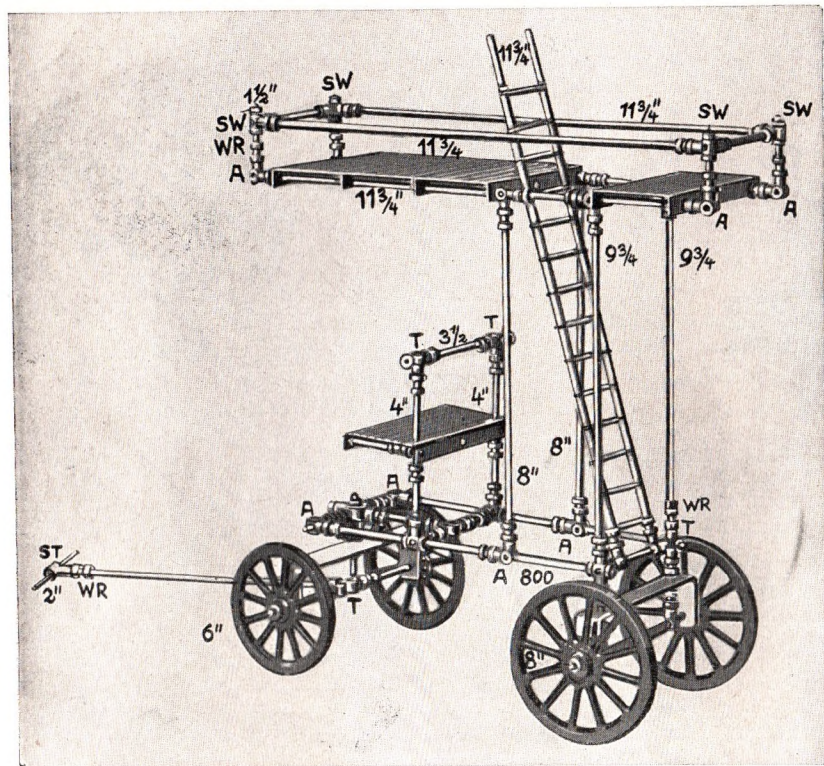
No. 94. Swing
from Structator Outfit No. 5 or No. 4 and 4a.



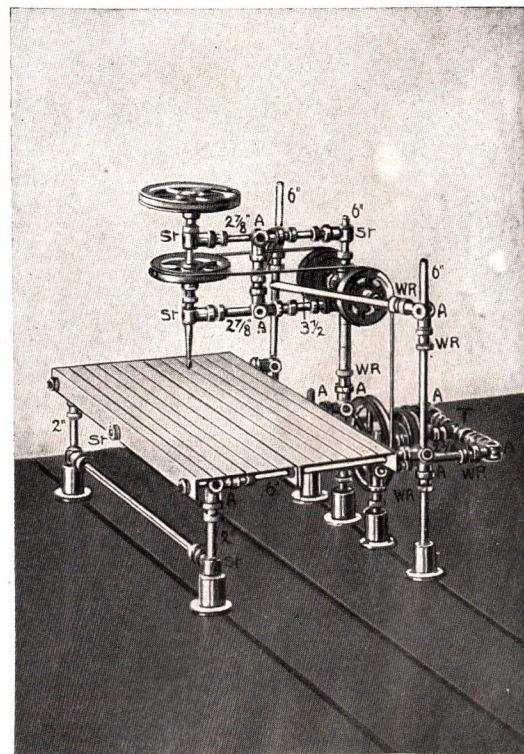
No. 89. Wagon
from Structator Outfit No. 5 or No. 4 and 4a.



No. 56. Ladies' Bicycle.
from Structator Outfit No. 3 or No. 2 and 2a.



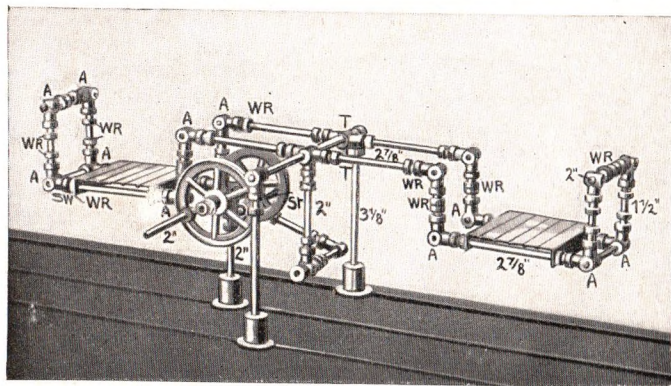
No. 86. Repair Waggon for Overhead Wires



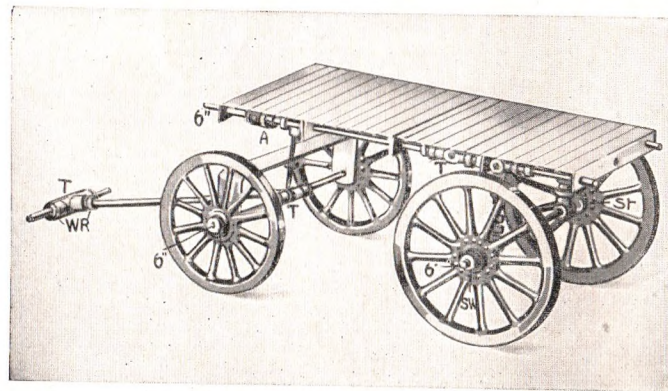
No. 98. Drilling Machine
from Structator Outfit No. 5 or No. 4 and 4a.

For full instructions how to build these models, see the Booklets for Outfits Nos. 3 to 8 sold by all Structator Dealers.

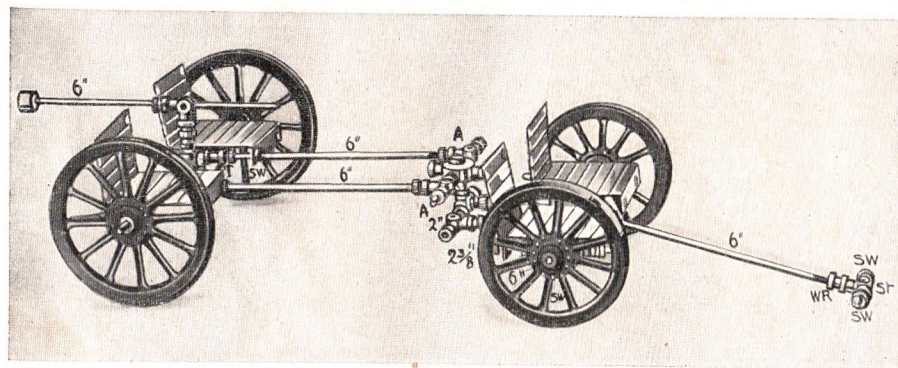
The numbers shown in the illustrations indicate the length of the Standard Bars in inches. The letters represent:—**A** = Angle Joint, **T** = T Joint, **St.** = Straight Joint, **W.R.** = Wedge Ring, **S.W.** = Spring Washer.



No. 79. American Revolving See-Saw
from Structator Outfit No. 4 or No. 3 and 3a.



No. 70. Goods Waggon
from Structator Outfit No. 4 or No. 3 and 3a.

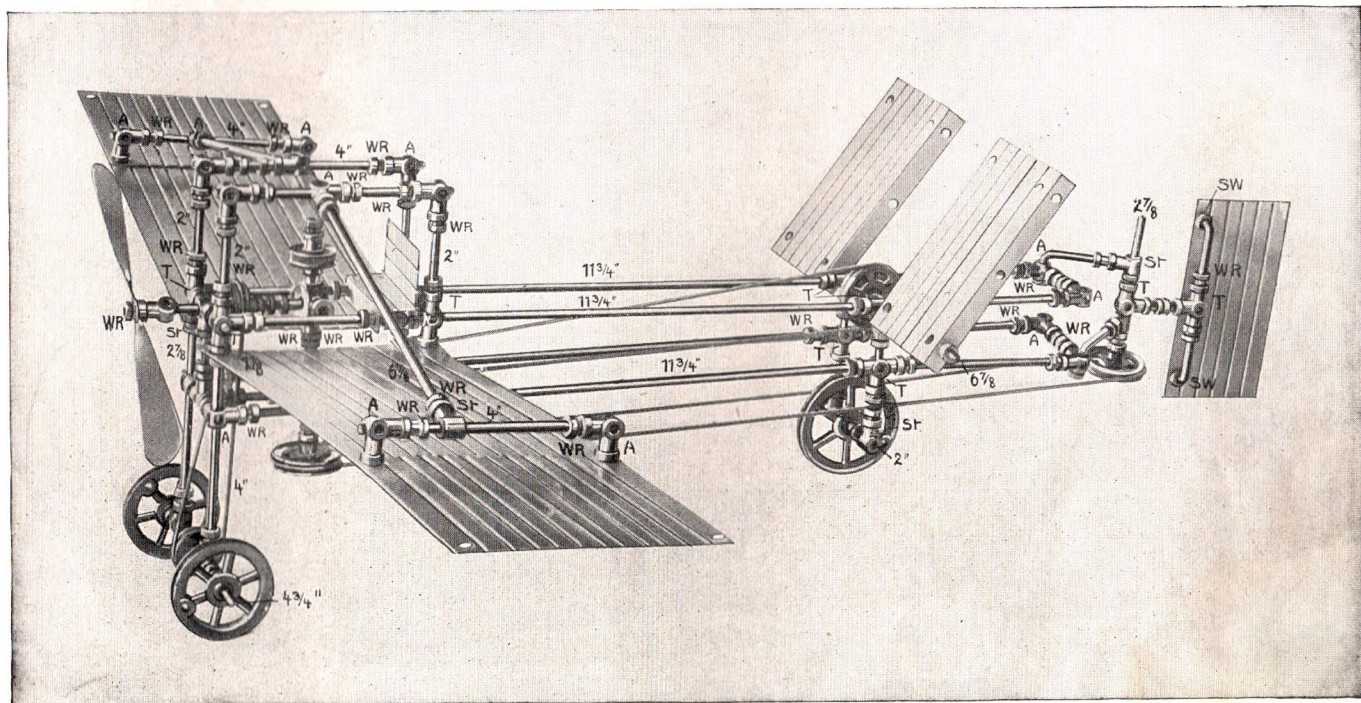


No. 77. Gun Carriage and Limber Cart
from Structator Outfit No. 4 or No. 3 and 3a.

For full instructions how to build these models, see the Booklets for Outfits Nos. 3 to 8 sold by all Structator Dealers.

The numbers shown in the illustrations indicate the length of the Standard Bars in inches.

The letters represent:—**A** = Angle Joint, **T** = T Joint, **St.** = Straight Joint, **W.R.** = Wedge Ring, **S.W.** = Spring Washer.

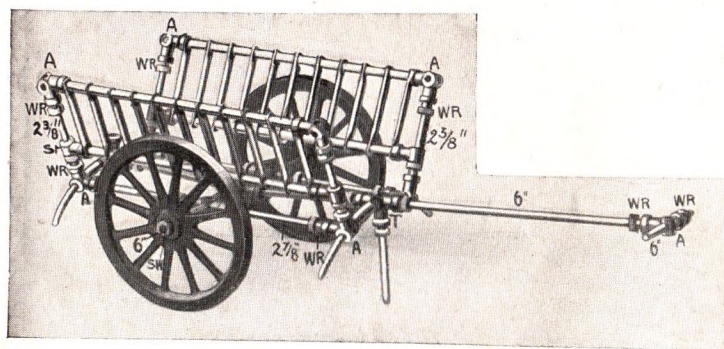


No. 113. Aeroplane (Monoplane)
from Structator Outfit No. 6 or No. 5 and 5a.

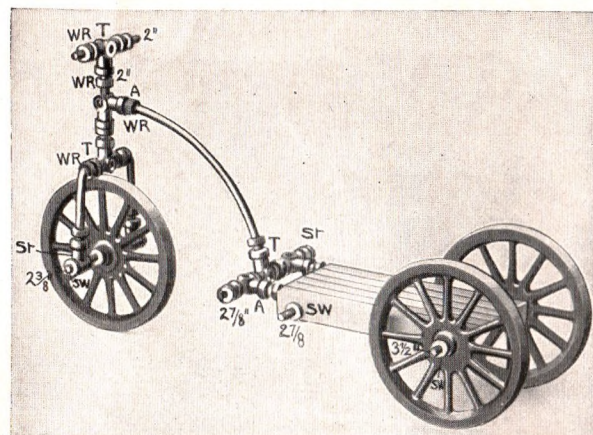
For full instructions how to build these models, see the Booklets for Outfits Nos. 3 to 8 sold by all Structator Dealers.

The numbers shown in the illustrations indicate the length of the Standard Bars in inches.

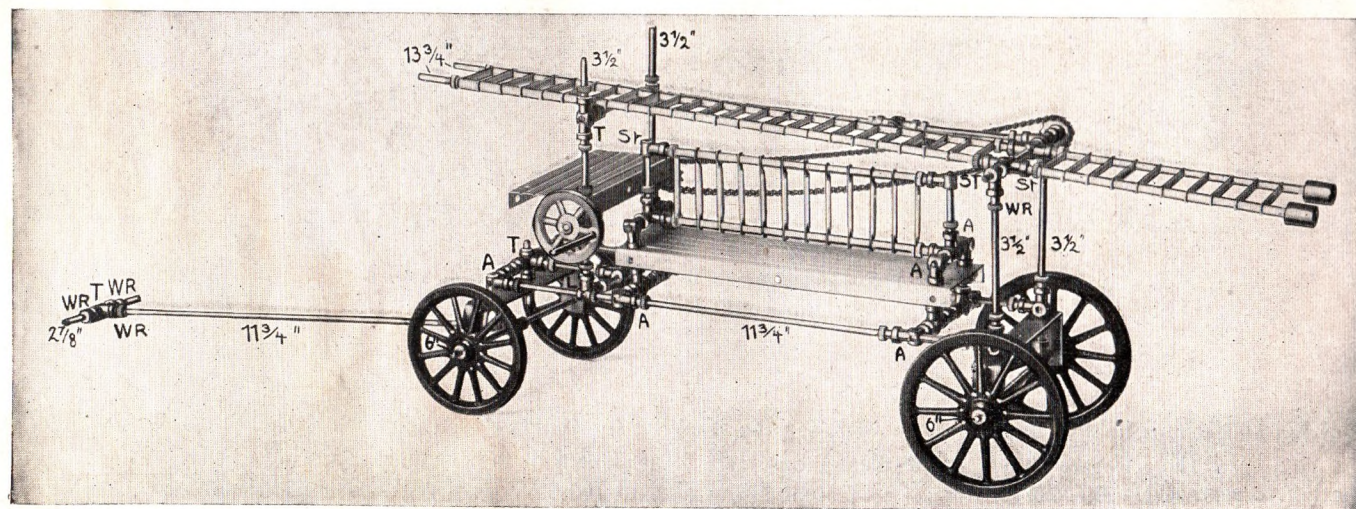
The letters represent:—**A** = Angle Joint, **T** = T Joint, **St.** = Straight Joint, **W.R.** = Wedge Ring, **S.W.** = Spring Washer.



No. 68. Hay Cart
from Structator Outfit No. 4 or No. 3 and 3a.

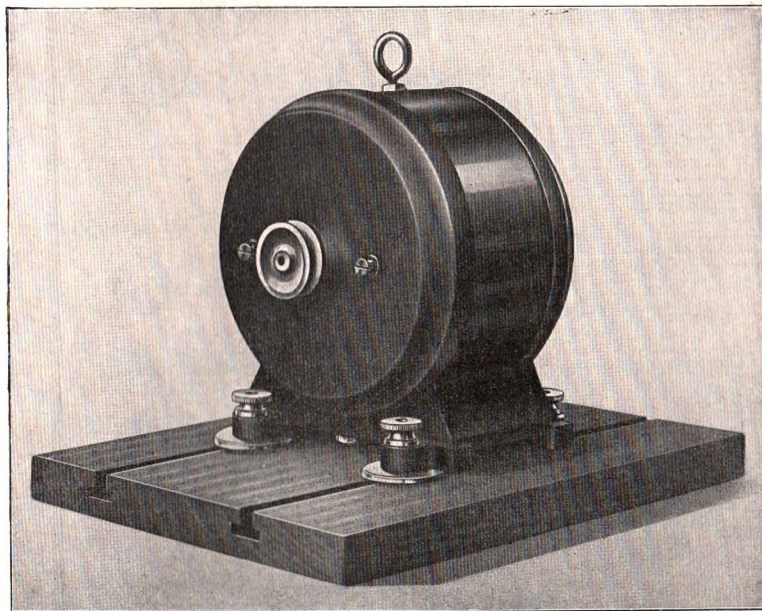


No. 73. Delivery Tricycle
from Structator Outfit No. 4 or No. 3 and 3a.



No. 119. Fire Escape with Tilting Ladder
from Structator Outfit No. 6 or No. 5 and 5a.

The "Structator" Clockwork Movement



To enable Structator enthusiasts to work their various models without the necessity of turning a handle, a clockwork movement has been introduced, as illustrated, which is easily fitted to any suitable Structator model.

When the motor has been put into place and everything properly adjusted, a simple movement of one of the levers suffices to set the whole thing going.

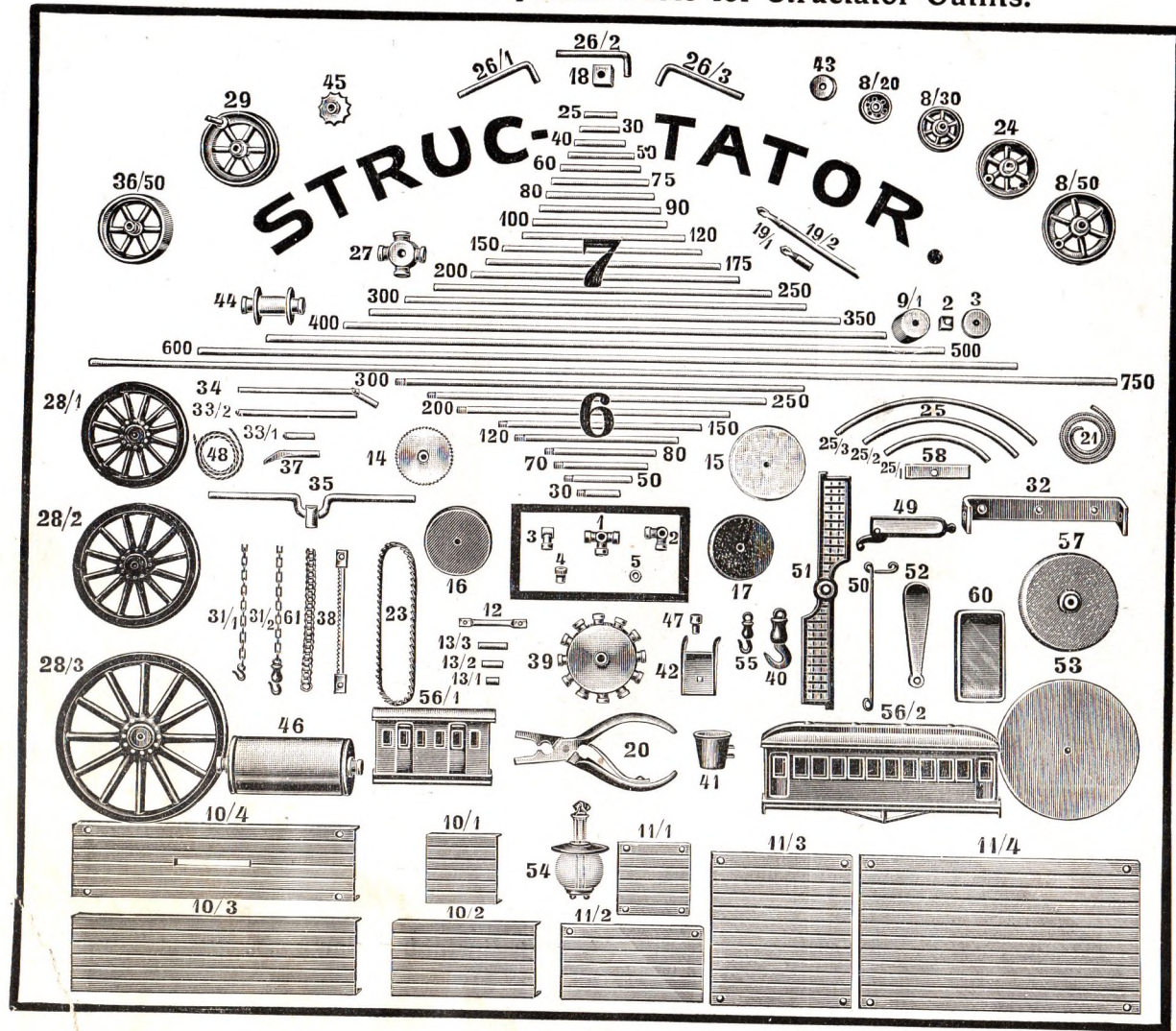
These Structator movements are a very fine addition to, or rather completion of any Structator outfit.

The motor is mounted upon a grooved wooden base, which may be connected with the base board of any Structator model or set of models by means of the joining plates (No. 58 in the list of Separate Parts).

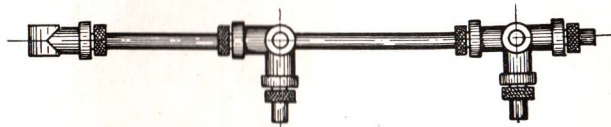
They are fitted with best clockwork movement, are strongly made and resemble an electric motor in appearance.

Height $4\frac{3}{4}$ inches, diameter $3\frac{1}{2}$ inches. **Price 6/-** each (including clamp screw for fixing to table).

Illustration of the Separate Parts for Structator Outfits.



Separate Parts for Structator Outfits.



Showing the principal joints fixed to a Standard Bar by means of Spring Washers.

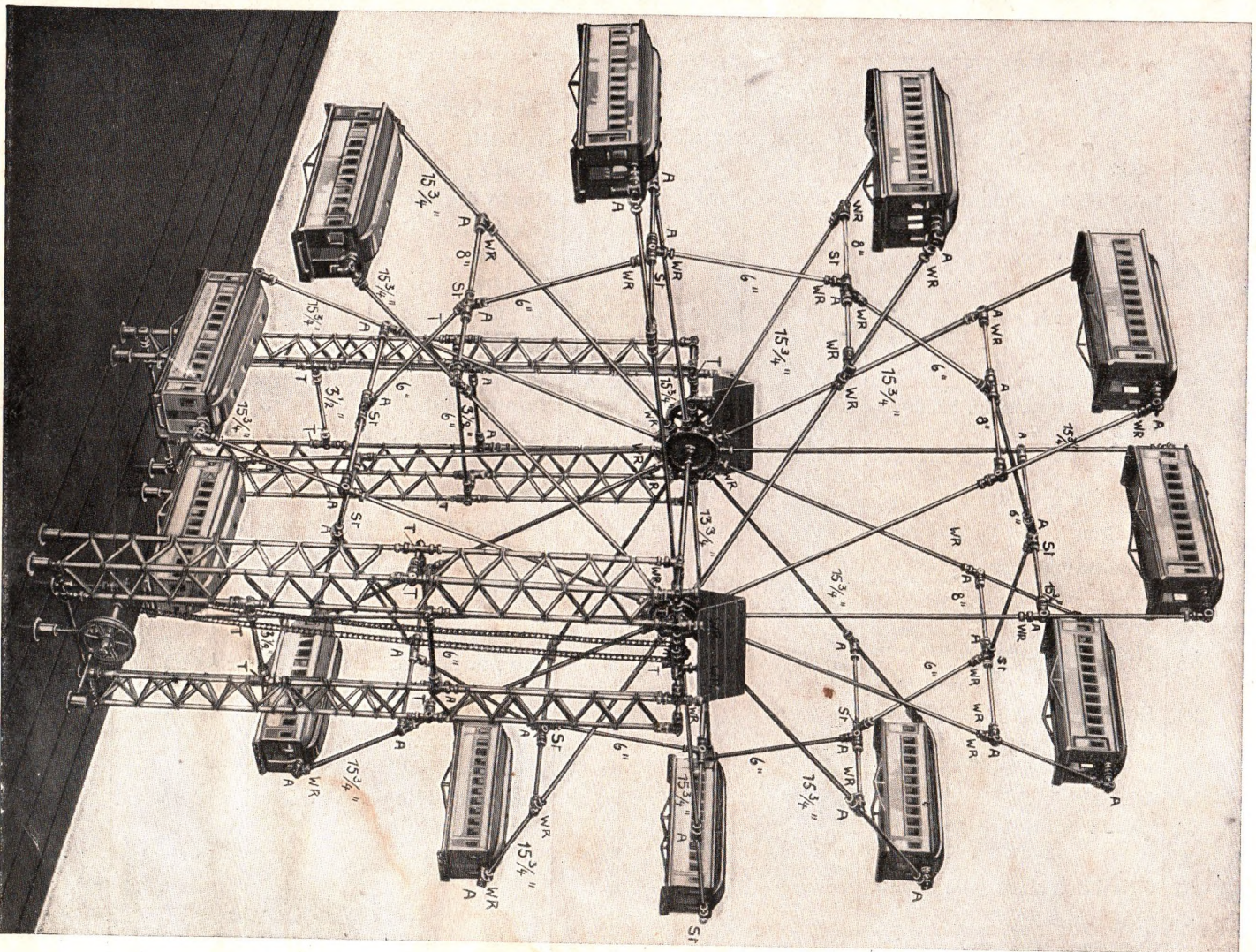


Showing a revolving wheel fixed between 2 Spring Washers on a Standard Bar.

No.		Price	Packing	No.		Price	Packing
1	 T-Joints	-/2½ each	12 pieces	7/30	= 1½ inches long . .	-/4 doz.	24 pieces
2	 Angle Joints	-/2 " " " "	12 "	7/40	= 1½ " " " "	-/4½ " "	24 "
3	 Straight Joints	-/2 " "	12 "	7/50	= 2 " " " "	-/4½ " " "	24 "
4	 Wedge Rings	-/8 doz.	48 "	7/60	= 2¾ " " " "	-/4½ " " "	24 "
5	 Spring Washers . . .	-/9 " "	48 "	7/75	= 2⅞ " " " "	-/4½ " " "	24 "
6	Standard Bars with thread			7/80	= 3⅛ " " " "	-/6 " " "	12 "
	 6/30 = 1½ inches long . .	-/4 doz.	24 "	7/90	= 3½ " " " "	-/6 " " "	12 "
	6/50 = 2 " " " "	-/4½ " "	24 "	7/100	= 4 " " " "	-/7½ " "	12 "
	6/70 = 2¾ " " " "	-/6 " "	24 "	7/120	= 4¾ " " " "	-/7½ " "	12 "
	6/80 = 3⅛ " " " "	-/7½ " "	12 "	7/150	= 6 " " " "	-/9 " "	12 "
	6/120 = 4¾ " " " "	-/10 " "	12 "	7/175	= 6⅞ " " " "	-/10 " "	12 "
	6/150 = 6 " " " "	-/10 " "	12 "	7/200	= 8 " " " "	-/11 " "	12 "
	6/200 = 8 " " " "	1/3 " "	6 "	7/250	= 9¾ " " " "	1/3 " "	6 "
	6/250 = 9¾ " " " "	2/- " "	6 "	7/300	= 11¾ " " " "	-/1½ each	6 "
	6/300 = 11¾ " " " "	2/2 " "	6 "	7/350	= 13¾ " " " "	-/1½ " "	6 "
7	Standard Bars (plain)			7/400	= 15¾ " " " "	-/2 " "	6 "
	7/25 = 1 inch long . . .	-/3 " "	24 "	7/500	= 19½ " " " "	-/2½ " "	6 "
				7/600	= 23½ " " " "	-/3 " "	3 "
				7/750	= 29½ " " " "	-/4 " "	3 "

No.		Price	Packing	No.		Price	Packing
8	Pulley Wheels			16	Polishing Discs covered with leather	-/3 each	6 pieces
	 8/20 = $\frac{3}{4}$ inches diam.	-/3 each	6 pieces	17	 Emery Wheels . .	-/2 "	6 "
	8/30 = $1\frac{1}{8}$ " "	-/3 $\frac{1}{2}$ "	6 "	18	Hammer Heads	-/2 $\frac{1}{2}$ "	6 "
	8/50 = 2 " "	-/5 "	6 "	19	Drills		
9/1	 Base Blocks	1/3 dozen	6 "		19/1 = 1 inch	-/1 "	6 "
9/2	 Fixing Screws for Base Blocks, square headed	-/9 "	6 "		19/2 = $3\frac{1}{2}$ inches	-/1 $\frac{1}{2}$ "	6 "
9/3	 Washers	-/3 "	6 "	20	 Structator Pliers	-/6 "	3 "
10	Plates, bent up on both sides			21	Driving Band		
	10/1 = 2x2 inches . .	-/2 each	6 "		21/1 thin	-/3 per yard	5 yards
	 10/2 = 4x2 " . .	-/3 "	6 "		21/2 thick	-/3 $\frac{1}{2}$ " "	5 "
	10/3 = 8x2 " . .	-/5 "	6 "	22	Baseboards with grooves		
	10/4 = 8x2 " . .	-/6 "	6 "		22/1 = $11\frac{1}{4}$ x $6\frac{1}{4}$ inches with 3 grooves	-/9 each	3 pieces
	(with slot)				22/2 = $13\frac{1}{2}$ x $6\frac{3}{8}$ inches with 3 grooves	1/1 "	2 "
11	Plates, flat				22/3 = $14\frac{1}{4}$ x $8\frac{3}{4}$ inches with 4 grooves	1/10 "	1 "
	11/1 = 2x2 inches . . .	-/1 $\frac{1}{2}$ "	6 "		22/4 = $15\frac{3}{4}$ x11 inches with 5 grooves	2/6 "	1 "
	11/2 = 4x2 " . . .	-/2 $\frac{1}{2}$ "	6 "		22/5 = 23x11 inches with 6 grooves	3/9 "	1 "
	11/3 = 4x4 " . . .	-/4 $\frac{1}{2}$ "	6 "		22/6-8 = $28\frac{3}{4}$ x11 inches with 6 grooves	6/- "	1 "
	11/4 = 8x4 " . . .	-/6 "	6 "	23	Band Saws	-/2 "	6 "
12	 Rungs, $1\frac{3}{4}$ inches long	-/4 $\frac{1}{2}$ doz.	24 "	24	 Pulley Wheels with flat tread for band saw	-/4 "	6 "
13	Short Tubes for filling out intervals			25	 Bars bent in half circles		
	13/1 = $\frac{1}{4}$ inch long . .	-/6 per 100	100 "		25/1 D = $27\frac{7}{8}$ inches . .	-/1 $\frac{1}{2}$ "	12 "
	 13/2 = $\frac{1}{2}$ " " . .	-/8 " "	100 "				
	13/3 = $\frac{3}{4}$ " " . .	-/10 $\frac{1}{2}$ " "	100 "				
14	Circular Saws	-/1 each	6 "				
15	 Polishing Buffs made up of 10 pieces of cloth	-/1 "	6 "				

No.		Price	Packing	No.		Price	Packing
25	Bars bent in half circles 25/2 D = 4 $\frac{1}{4}$ inches . . . 25/3 D = 6 $\frac{7}{8}$ „ . . .	-/1 each -/1 „	12 pieces 12 „	37	Lathe Turning Tools . .	-/2 $\frac{1}{2}$ each	3 pieces
26	Bars bent in right angles 26/1 = 1 $\frac{1}{2}$ inches long . . 26/2 = 2 „ „ . . 26/3 = 2 $\frac{3}{8}$ „ „ . .	-/1 $\frac{1}{2}$ „ -/1 $\frac{1}{2}$ „ -/1 $\frac{1}{2}$ „	12 „ 12 „ 12 „	38	Saw Blades (straight) . .	-/6 „	3 „
27	 Centre Pieces with 4 joints	-/4 $\frac{1}{2}$ „	6 „	39	Centre Pieces with 12 Joints	3/- „	1 „
28	Wheels, japanned  28/1 = 2 $\frac{7}{8}$ in. diameter 28/2 = 3 $\frac{1}{2}$ „ „ 28/3 = 4 $\frac{3}{4}$ „ „	-/2 „ -/2 $\frac{1}{2}$ „ -/9 „	6 „ 6 „ 4 „	40	Large Hooks for Chains .	-/2 „	6 „
29	Wheels with crank	-/6 „	3 „	41	Buckets for Dredgers . .	-/2 $\frac{1}{2}$ „	6 „
30	Chains	-/2 per yard	10 yards	42	Catches	-/1 „	12 „
31	Chains with hooks 31/1 31/2 heavy	-/1 $\frac{1}{2}$ each -/1 „	6 pieces 6 „	43	Rollers for Cranes	-/2 „	6 „
32	Under-Frames for Waggon Wheels	-/1 „	3 „	44	 Drums for Crane . .	-/8 „	3 „
33	Standard Bars with pointed ends 33/1 = 1 inch long . . . 33/2 = 3 $\frac{1}{2}$ inches long . .	-/4 doz. -/1 $\frac{1}{2}$ each	12 „ 12 „	45	Wheels for Crane Chain .	-/3 „	6 „
34	 Jointed Standard Bars	-/2 $\frac{1}{2}$ „	6 „	46	Drums for Printing Press .	1/- „	1 „
35	Standard Bars with Crank .	-/5 „	3 „	47	Connecting Pins	-/1 „	12 „
36	Fly Wheels 36/50 = 2 inches diameter .	-/11 „	3 „	48	Green Cord	1/- p. 100 yards	50 yards
				49	Indicator Arms	-/1 each	6 pieces
				50	Rods for above	-/1 $\frac{1}{2}$ „	6 „
				51	 Sails for Windmill	-/2 „	6 „
				52	 Propeller Blades .	-/1 „	6 „
				53	Aluminium Discs 4 inches in diameter	1/- „	1 „
				54	Arc Lamps	-/4 „	3 „
				55	Hooks for Arc Lamps . .	-/1 „	12 „
				56	Cars 56/1 small 56/2 large	-/4 $\frac{1}{2}$ „ -/9 „	3 „ 3 „
				57	Emery Wheels, large . .	-/6 „	3 „
				58	Joining Plates	-/1 $\frac{1}{2}$ „	6 „
				59	Bending Shapes 59/1 small 59/2 large	1/- „ 1/6 „	1 „ 1 „
				60	Tin Boxes with Celluloid Lid	-/2 „	6 „
				61	Dredger Chain	-/2 per yard	6 yards



No. 150. Big Wheel
from Strucator Outfit No. 8 or No. 7 and 7a.

STRUCTATOR.

The Up-To-Date Constructional Toy

can be obtained everywhere at the following prices:

Outfit No. 1 with designs for 30 models 6/- each.						Supplementary Outfit No. 1a . 6/6 each					
" 2	"	"	"	48	" 12/-	"	"	"	"	2a . 9/-	"
" 3	"	"	"	66	" 18/-	"	"	"	"	3a . 13/-	"
" 4	"	"	"	84	" 27/6	"	"	"	"	4a . 20/-	"
" 5	"	"	"	102	" 43/-	"	"	"	"	5a . 40/-	"
" 6	"	"	"	120	" 75/-	"	"	"	"	6a . 50/-	"
" 7	"	"	"	138	" 110/-	"	"	"	"	7a . 70/-	"
" 8	"	"	"	150	" 160/-	"					

The supplementary outfits are made up in such a manner, that for instance Outfits No. 1 and 1a together form Outfit No. 2 and so on and contain in addition some extra parts.

Structator Drawing Books.

Each Structator Outfit contains one of the Structator Drawing Books. This book contains photographs of various models from one of the simplest models upwards, and alongside of each photograph is a technical drawing of the model and details of the parts required for it. On the same page is a blank space for the boy to reproduce this drawing—freehand if he can—or if he cannot, he may use the sheet of tracing paper, with which the book is interleaved.

These drawings are arranged progressively. Each page is a little more difficult than the preceding one; altogether a pleasant lesson in technical or engineering drawing.

■■■■■■■■■■ Price of Drawing Book: Three Pence each. ■■■■■■■■■■

Separate Parts for Structator Outfits can always be obtained. (See list on page 29).
