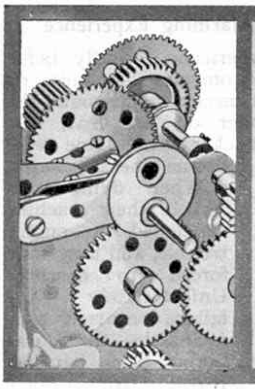
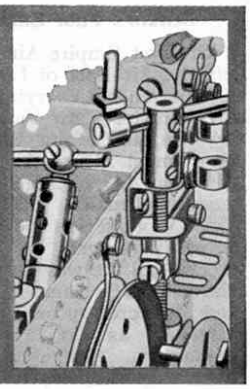


HOW TO USE Meccano Parts

IV.—PLATES, etc. (CLASS D)



For the purpose of this series of articles we have grouped all the Meccano parts into two main sections, termed the Structural and Mechanical Sections, and these sections have been further divided into a number of separate classes. The complete grouping is as follows. Structural Section: Class A, Strips; Class B, Girders; Class C, Brackets, Trunnions, etc.; Class D, Plates, Boilers, etc.; Class E, Nuts and Bolts, Tools and Literature. Mechanical Section: Class M, Rods, Cranks and Couplings; Class N, Wheels, Pulleys, Bearings, etc.; Class O, Gears and Toothed Parts; Class P, Special Accessories; Class Q, Miscellaneous Mechanical Parts; Class T, Electrical Parts; Class X, Motors, Accumulators, etc.

IN Classes A and B we described the more important uses of the Meccano Strips and Girders, which are designed primarily for building the framework or "outlines" of Meccano models, and in Class C we dealt with Brackets and Trunnions, etc., the chief function of which is the forming of connecting links between the larger parts. Class D, which is the subject of this month's article, comprises the Meccano Plates, Boilers, and associate parts. These are intended principally for "filling in" the framework of models and for building gear boxes, floors, roofs, etc. Of course, certain parts, such as the Circular Plates, Chimney Adaptor, etc., included in this Class have other very different uses.

Flanged and Flat Plates

The Perforated Flanged Plates are in two sizes, $5\frac{1}{2}'' \times 2\frac{1}{2}''$ and $3\frac{1}{2}'' \times 2\frac{1}{2}''$ (parts Nos. 52 and 53 respectively). The former has flanges on all four sides, whilst the latter is flanged on only two sides. Part No. 52 is used to a large extent as a base for small models, and in the construction of work-tables, platforms and sides of gear boxes, etc. In addition to the usual perforations it has a slot 2" long and a hole $\frac{5}{8}'' \times 3/16''$ near its centre. The purpose of the slot is to receive the blade of a Circular Saw when the latter is mounted beneath the Plate, whilst the elongated hole is intended to facilitate the adjustment of the Saw guide piece.

Fig. 3 shows the Plate incorporated in a model saw bench. The blade of the Saw, which is secured to the Sprocket Wheel shaft, can just be seen above the Angle Girder that forms the guide piece. This Girder is held in place by the Collar shown, and the latter is secured on to the shank of a bolt passed through the elongated hole in the Plate.

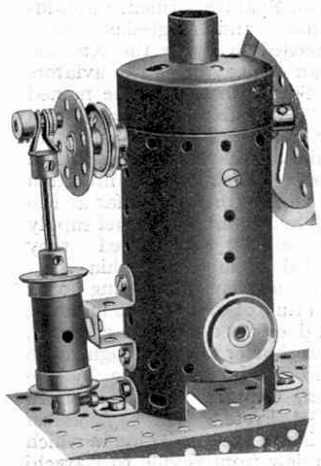


Fig. 1

The slot and hole increase the adaptability of the Plate in several other ways. If the Plate is used as the side of a gear box, for example, a change-gear lever may be arranged to work in the slot, and the inner end of the lever may then be connected direct to the shaft, clutch member or gear that it controls.

There are four sizes of Flat Plates, i.e., $5\frac{1}{2}'' \times 3\frac{1}{2}''$, $5\frac{1}{2}'' \times 2\frac{1}{2}''$, $4\frac{1}{2}'' \times 2\frac{1}{2}''$, and $2\frac{1}{2}'' \times 2\frac{1}{2}''$. If plates are required larger than these it is of course a simple matter to build them up by joining two or three Flat Plates together. Fig. 17 shows two of No. 52a connected together to form a platform measuring $6\frac{1}{2}'' \times 5\frac{1}{2}''$. The various types of Flat Plate, used in conjunction with the Flanged Plates, etc., enable covered structures of all kinds to be built-up speedily and in a sturdy and realistic manner.

The Sector Plate

The Sector Plate (part No. 54) is an extremely useful accessory. It measures $2\frac{1}{2}''$ across at its widest end and tapers down to $1\frac{1}{2}''$ at its other end, and its sides are provided with flanges which are punched with slightly elongated holes. The tapered shape so obtained enables the part to be used in many structures and mechanisms where it would be impossible to achieve similar results from other parts. Fig. 9 shows two Sector Plates used to form the movable receptacle in a Meccano model of a foundry ladle. Fig. 8 illustrates a Sector Plate employed to form the bonnet of a motor car, and Figs. 12 and 16 indicate two ways in which the part can be used with great advantage in building-up bases or supports for machinery.

When a Sector Plate is bolted by one of its flanges to a Girder or other part, its other flange and the rows of holes punched in its face lie at an angle to the part, and this fact proves advantageous in numerous cases. In Fig. 10, for example, a Sector Plate is shown secured to the base of a rotating crane. Another is bolted to the opposite side of the

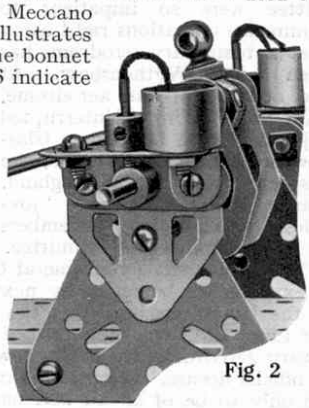
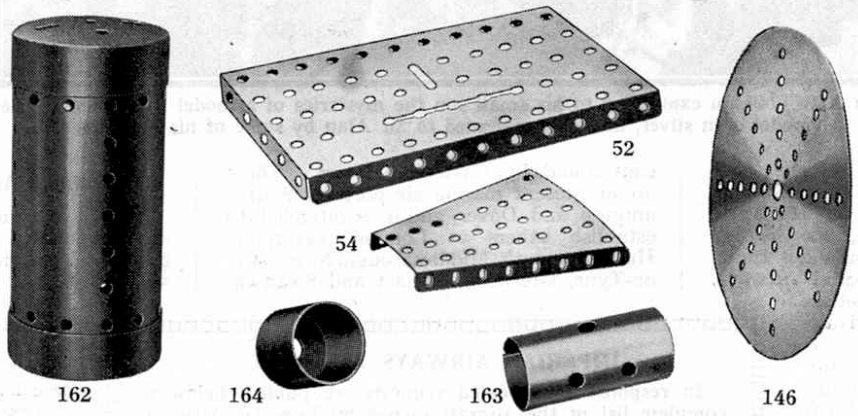


Fig. 2

Parts in Class D: Plates, Boilers, etc.



The following is a complete list of parts in Class D. Some of the parts are illustrated above.

Parts No.			Price s.	Price d.
52	Perforated Flanged Plates, $5\frac{1}{2}'' \times 2\frac{1}{2}''$	each	0	5
53	Perforated Flanged Plates, $3\frac{1}{2}'' \times 2\frac{1}{2}''$	,,	0	3
52a	Flat Plates, $5\frac{1}{2}'' \times 3\frac{1}{2}''$	,,	0	5
53a	Flat Plates, $4\frac{1}{2}'' \times 2\frac{1}{2}''$	,,	0	3
70	Flat Plates, $5\frac{1}{2}'' \times 2\frac{1}{2}''$	,,	0	4
72	Flat Plates, $2\frac{1}{2}'' \times 2\frac{1}{2}''$	,,	0	2
54	Perforated Flanged Sector Plates ...	,,	0	3
76	Triangular Plates, $2\frac{1}{2}''$ ...	... each	0	2
77	Triangular Plates, 1"	... ,,	0	1
146	Circular Plates, 6"	... ,,	1	0
162	Boiler, Complete with Ends ...	... ,,	1	0
162a	Boiler Ends	... ,,	0	3
163	Sleeve Pieces	... pair	0	6
164	Chimney Adaptors	... each	0	2