

ANOTHER FINE NEW  
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 MECCANO MODEL  
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# A 26-Ton Side Dumper

THIS model of a large capacity Side Dumper consists of two units, a tractor and a dumper trailer. The tractor is built as follows: two  $5\frac{1}{2}$ " Strips 1 are bolted

together to form an 8" compound strip and to this is bolted a  $2\frac{1}{2}$ "  $\times$   $2\frac{1}{2}$ " Flexible Plate 2, at the same time bolting in place a compound 4" strip 3, made up from two  $2\frac{1}{2}$ "

Strips, a 3" Strip 4 and a Fishplate 5. A  $5\frac{1}{2}$ "  $\times$   $1\frac{1}{2}$ " Flexible Plate 6 is bolted to the Fishplate 5 and to both the Strips 3 and 4. Strips 3 and 4 are connected by a  $2\frac{1}{2}$ " Narrow Strip and a  $2\frac{1}{2}$ " Stepped Curved Strip as shown. This completes one side of the body.

The other side is similarly constructed

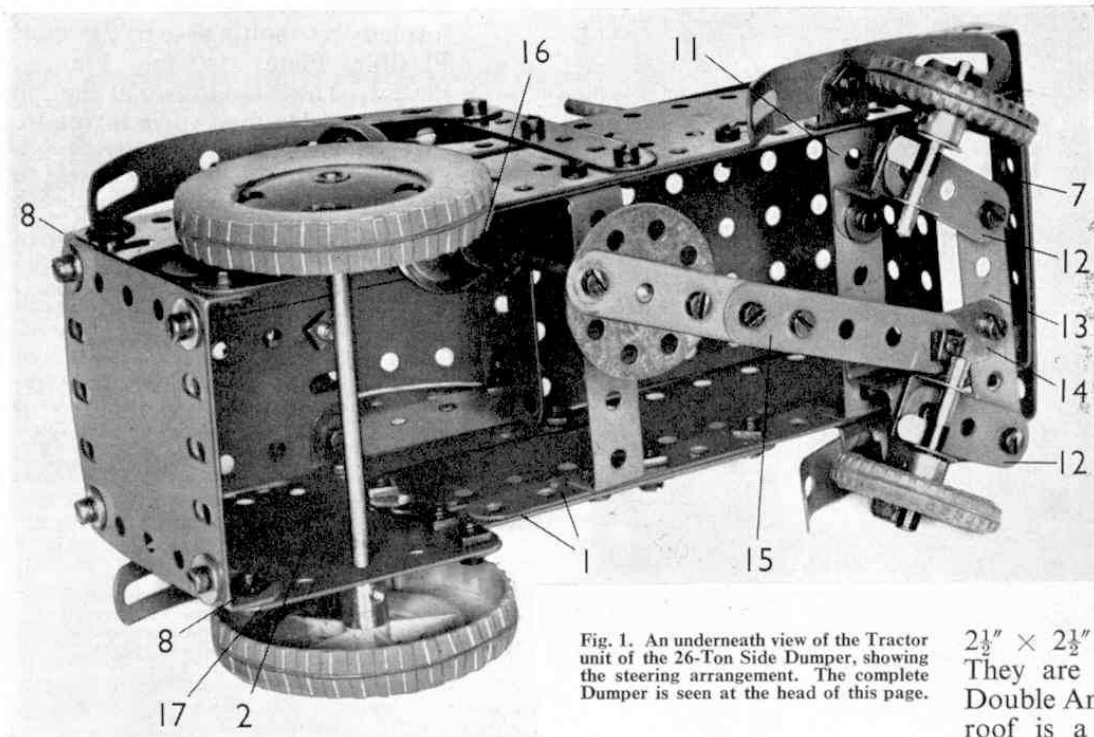


Fig. 1. An underneath view of the Tractor unit of the 26-Ton Side Dumper, showing the steering arrangement. The complete Dumper is seen at the head of this page.

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By  
 "SPANNER"

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and they are joined together at the front by a  $2\frac{1}{2}$ "  $\times$   $1\frac{1}{2}$ " Flanged Plate and a  $2\frac{1}{2}$ " Double Angle Strip 7, and at the rear by two  $2\frac{1}{2}$ " Double Angle Strips 8 to which a

$2\frac{1}{2}$ "  $\times$   $2\frac{1}{2}$ " Flexible Plate is bolted. They are also joined by two  $2\frac{1}{2}$ " Double Angle Strips 9, and the cab roof is a  $2\frac{1}{2}$ "  $\times$   $2\frac{1}{2}$ " Curved Plate

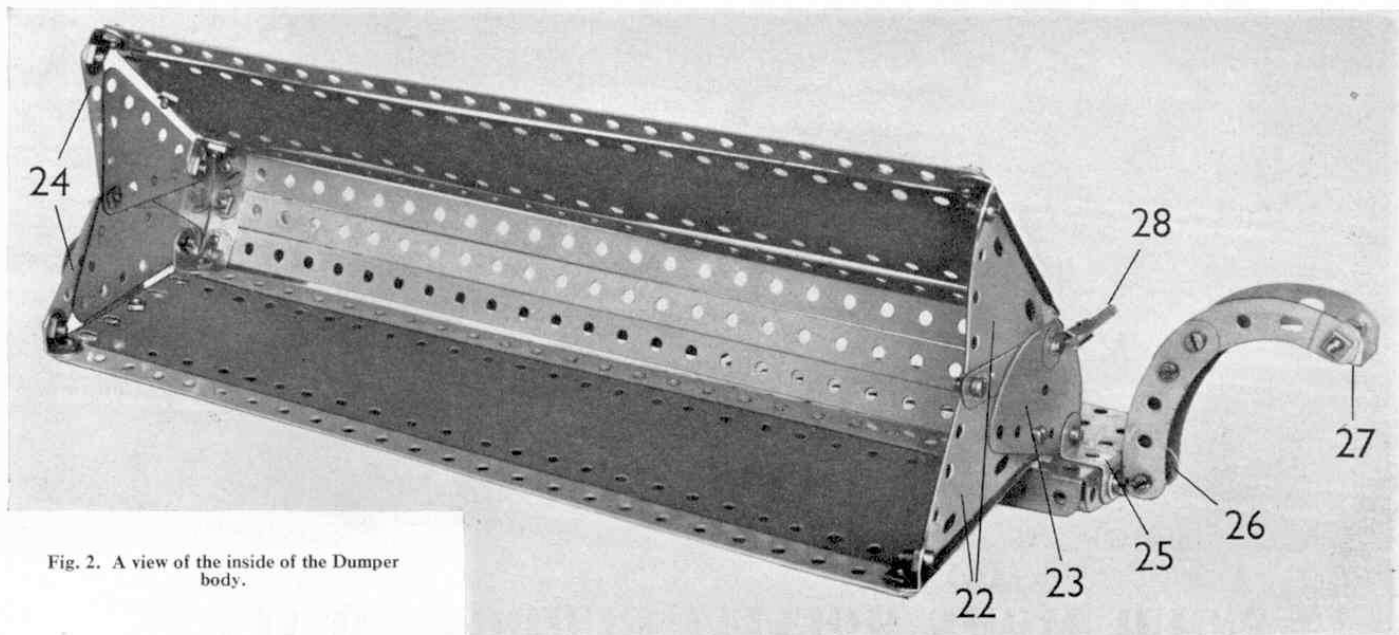


Fig. 2. A view of the inside of the Dumper body.

joined to the rear Double Angle Strip by two Obtuse Angle Brackets.

The top of the bonnet is a  $3\frac{1}{2}'' \times 2\frac{1}{2}''$  Flanged Plate, and the top of the boot is made up from two  $2\frac{1}{2}'' \times 1\frac{1}{2}''$  Flexible Plates fixed in place by Angle Brackets held by bolts 10 and the corresponding bolts on the opposite side. The lower sill of the cab's rear window is a  $2\frac{1}{2}''$  Narrow Strip fixed to an Angle Bracket bolted to the  $2\frac{1}{2}'' \times 1\frac{1}{2}''$  Flexible Plates.

The front axles are two  $1\frac{1}{2}''$  Rods journalled in Double Brackets each lock-nutted to a Reversed Angle Bracket bolted to a Double Angle Strip 11 joining the sides of the tractor. Two  $1\frac{1}{2}''$  Strips 12 are also bolted to the Double Bracket and to these is lock-nutted a  $2\frac{1}{2}''$  Strip 13. A Fishplate 14 is fixed to Strip 13, and through its elongated hole a compound 4" strip 15, consisting of two  $2\frac{1}{2}''$  Strips overlapped, is lock-nutted. The axles are held in place by Spring Clips and each of the front wheels is a 1" Pulley with tyre.

The other end of strip 15 is bolted to an 8-hole Bush Wheel fixed on a  $3\frac{1}{2}''$  Rod, which passes through a  $2\frac{1}{2}''$  Double Angle Strip and a Fishplate 16 bolted to the Flanged Plate forming the top of the bonnet, to form the steering column. The steering wheel is a 1" Pulley with Boss.

The rear wheel assembly consists of two  $2\frac{1}{2}''$  Road Wheels fixed on a  $3\frac{1}{2}''$  Rod journalled in the Plates 2 and the  $2\frac{1}{2}''$  Strips 17 that edge Plates 2. Each mud-

guard is a  $2\frac{1}{2}''$  Formed Slotted Strip fixed to the body by an Angle Bracket, as shown in the illustrations. The towing hook for the trailer is a Long Threaded Pin 18, and the exhaust pipe is represented by a 2" Rod held in the bonnet by Collars. The bumper is a  $3\frac{1}{2}'' \times \frac{1}{2}''$  Double Angle Strip bolted to Double Angle Strip 7.

### THE DUMPER TRAILER

The chassis of the trailer consists of two  $12\frac{1}{2}''$  Angle Girders extended at the front by a  $5\frac{1}{2}'' \times 2\frac{1}{2}''$  Flanged Plate. They are connected at the rear by a  $2\frac{1}{2}''$  Strip 19 and a  $2\frac{1}{2}'' \times \frac{1}{2}''$  Double Angle Strip 20.

Each side of the dumper is built up from two  $12\frac{1}{2}''$  Strips and two  $3\frac{1}{2}''$  Strips 21, the resulting frame being filled by a  $12\frac{1}{2}'' \times 2\frac{1}{2}''$  Strip Plate. The sides are joined at the front by two  $2\frac{1}{2}'' \times 2\frac{1}{2}''$  Triangular Flexible Plates 22 and a Semi-Circular Plate 23, Angle Brackets being used at each corner. They are joined at the rear by two  $2\frac{1}{2}''$  Strips 24, two  $2\frac{1}{2}'' \times 2''$  Triangular Flexible Plates and a Semi-Circular Plate. The bottom is filled in by three  $12\frac{1}{2}''$  Strips connected to the sides by two Fishplates and two Angle Brackets at each end.

The tipping action is obtained by pivoting the dumper on lock-nutted bolts, passed through the end holes of the Semi-Circular Plates, to Reversed Angle Brackets 25, bolted as shown.

Finally, the connecting arm between the tractor and the trailer is built up from two  $2\frac{1}{2}''$  Stepped Curved Strips and two  $2\frac{1}{2}''$  Curved Strips arranged as shown and joined by Double Brackets 26 and 27. Bracket 26 is bolted to the  $5\frac{1}{2}'' \times 2\frac{1}{2}''$  Flanged Plate and Bracket 27 is fitted on to Threaded Pin 18. The wheels are two  $2\frac{1}{2}''$  Road Wheels on a  $3\frac{1}{2}''$  Rod. The dumper is held upright by a 1" Rod 28 fixed in a Rod and Strip Connector bolted to the Semi-Circular Plate.

**Parts required to build the 26-Ton Side Dumper:** 7 of No. 1; 4 of No. 2; 4 of No. 3; 2 of No. 4; 12 of No. 5; 2 of No. 6a; 2 of No. 8; 8 of No. 10; 4 of No. 11; 17 of No. 12; 6 of No. 12c; 3 of No. 16; 1 of No. 17; 2 of No. 18a; 1 of No. 18b; 3 of No. 22; 1 of No. 24; 4 of No. 35; 131 of No. 37a; 119 of No. 37b; 25 of No. 38; 8 of No. 48a; 1 of No. 48b; 1 of No. 51; 1 of No. 52; 1 of No. 53; 2 of No. 59; 2 of No. 90; 4 of No. 90a; 4 of No. 111c; 1 of No. 115a; 4 of No. 125; 2 of No. 142c; 4 of No. 187; 2 of No. 188; 2 of No. 189; 3 of No. 190; 2 of No. 193; 2 of No. 197; 1 of No. 200; 1 of No. 212; 2 of No. 214; 4 of No. 215; 2 of No. 222; 2 of No. 223; 3 of No. 235.

### New Meccano Battery Driven Motor—

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and held in place by Spring Clips. The hoisting cord is wrapped around Rod 25, passes over the Pulley on Rod 26, over a 1" Pulley without Boss on a  $1\frac{1}{2}''$  Rod 27 in the jib, around the 1" Pulley in the load hook and is tied to an Angle Bracket bolted to Double Angle Strip 20. The Rod 27 is held by Spring Clips. Power is transferred to Rod 25 by a driving cord from the Pulley on the Motor to one of the Pulleys on Rod 25.

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pylons for underwing loads.

As an attack fighter, the Crusader would carry bomb loads ranging from two 2,000-pounders to twelve 250-pounders, two Bullpup guided missiles or 24 Zuni air-to-ground rockets in two clusters of three four-rocket tanks. It would retain its normal armament of four 20 mm. cannon and either four Sidewinder missiles or eight Zunis on the fuselage pylons.