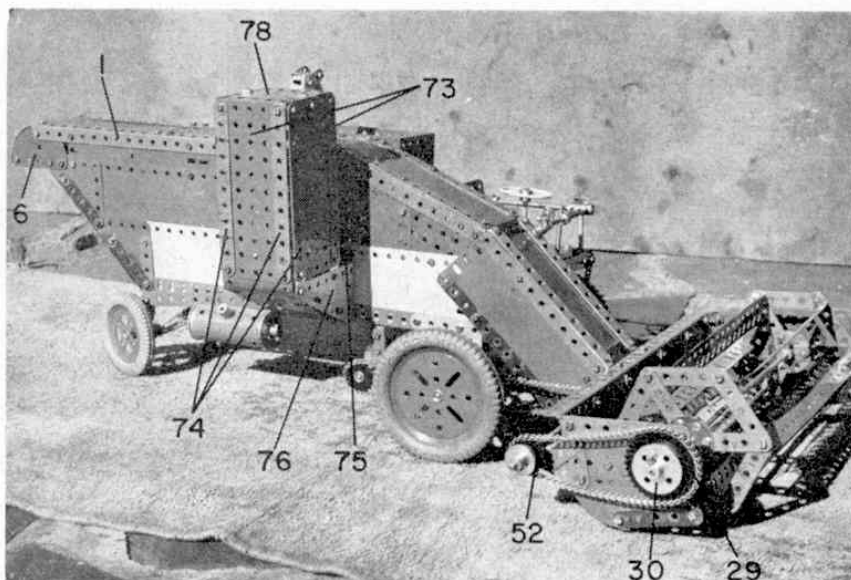


COMBINE HARVESTER

Part II

*Described by
Clive Robins*



Now bolted to Double Angle Strip 34 are two $3\frac{1}{2}$ in. Strips 41, angled inwards, and connected at their lower ends by a $2\frac{1}{2} \times 1\frac{1}{2}$ in. Double Angle Strip 42. Journalled in the end holes in the lugs of this Double Angle Strip and in Corner Gusset 10 is the front axle supplied by two 5 in. Rods connected by a Coupling and held in place by Collars. Mounted on the axle are a 2 in. Sprocket Wheel 43 and a $\frac{1}{2}$ in. Pinion 44. In mesh with the Pinion is a second $\frac{1}{2}$ in. Pinion on a sliding layshaft supplied by a $3\frac{1}{2}$ in. Rod journalled in the centre holes of the lugs of Double Angle Strip 42. Note that this Pinion is loose on the Rod but is held in place by Collars. Under normal circumstances the Rod is held steady by a Compression Spring, held in place by a Collar, working against the outside lug of the Double Angle Strip, another Collar preventing the Rod from leaving its bearings. The layshaft is moved by an Angle Bracket fixed to yet another Collar 45 mounted on the Rod. Bolted to the free lug of the Angle Bracket is a Rod and Strip Connector in which a $\frac{1}{4}$ in. Rod 46 is held, this Rod passing through the base of the cab. A locking device to hold the layshaft out of its normal resting position, when required, is provided by a Coupling 47 on a Threaded Pin screwed into a Collar 48 on the front handrail. By turning the Coupling the Collar on the handrail can be freed to slide to the required position and then locked in place.

Running parallel to the layshaft is a $6\frac{1}{2}$ in. Rod also journalled in Double Angle Strip 42 and held in place by Collars. Fixed on this Rod are a $\frac{1}{2}$ in. Pinion 49 and a 1 in. Sprocket Wheel 50. When moved inwards, the Pinion on the layshaft should mesh both with Pinion 49 and Pinion 44. Sprocket Wheel 43 is connected by Chain to a 1 in. Sprocket on the Rod carrying Gear Wheel 9, while Sprocket Wheel 50 is connected to a $\frac{3}{4}$ in. Sprocket on a Rod 51 journalled in two Cranks bolted one to the central body chute and the other to the appropriate end plate of the cutter shield. Another 1 in. Sprocket 52 is fixed on the Rod, as also is a $\frac{3}{4}$ in. Flanged Wheel, the Sprocket being connected by Chain to Sprocket Wheel 29. The front road wheels, mounted on the ends of the front axle, are each supplied by a 3 in. Pulley fitted with a Motor Tyre.

Returning to the cab a rear-view mirror is supplied by a $\frac{3}{4}$ in. Washer bolted to an Obtuse Angle Bracket 53 which is in turn bolted to the corner Coupling

incorporated in the handrail. The steering wheel is mounted on a $4\frac{1}{2}$ in. Rod journalled in Flat Plate 31 and in a Double Bent Strip fixed to the underside of the Plate, Collars holding it in place. Mounted on the lower end of the Rod is an 8-hole Bush Wheel to which a $2\frac{1}{2}$ in. Strip 54 is bolted. A $1\frac{1}{8}$ in. Bolt carrying two free-running $\frac{1}{2}$ in. Pulleys 55 is secured, as shown, to left-hand Girder 7 through its tenth hole from the front, two further $\frac{1}{2}$ in. Pulleys 56 and 57 being mounted on Bolts fixed in the rear chassis cross member. A length of Cord is then tied to the left-hand end of Strip 54, is taken over lower Pulley 55 and round Pulley 57 to be secured to the Bolt locking right-hand Strip 14 to Strip 15. Another length of Cord is tied to the right-hand end of Strip 54, this being taken over upper Pulley 55, round Pulley 56 and tied to the Bolt locking left-hand Strip 14 to Strip 15. Both these Cords should be as taut as possible to keep steering play to a minimum.

Situated behind the cab is the large grain hopper, this being built-up from two $5\frac{1}{2} \times 3\frac{1}{2}$ in. Flat Plates 58 connected by four $2\frac{1}{2} \times \frac{1}{2}$ in. Double Angle Strips to two $3\frac{1}{2} \times 2\frac{1}{2}$ in. Flanged Plates 59. Bolted to each Flat Plate are two $3\frac{1}{2} \times 2$ in. Triangular Flexible Plates 60 and a $4\frac{1}{2} \times 2\frac{1}{2}$ in. Flexible Plate 61. The lower ends of these Plates at each side being connected together by a "U"-Section Curved Plate 62, the joints being overlaid by $2\frac{1}{2}$ in. Strips 63. Attached by an Obtuse Angle Bracket to each Flanged Plate 59 are two $3\frac{1}{2} \times 1\frac{1}{2}$ in. Triangular Flexible Plates 64, these also being attached to Triangular Flexible Plates 60 by ordinary Angle Brackets held by Bolts 65. The outlet pipe for the grain is represented by a 5 in. Rod held in the boss of a small Fork Piece 66 attached to a $\frac{1}{2}$ in. Reversed Angle Bracket bolted to outside Strip 63. Secured on the Rod are a Collar and four Couplings, the lower Coupling being attached to the side of the hopper by an Angle Bracket, then a Chimney Adaptor with Sleeve Piece are mounted on the upper end of the Rod and held in place by a Collar inside the Chimney Adaptor. The completed hopper is fixed to the main body by two 1×1 in. Angle Brackets 67.

A load chute for the hopper is built up from two $5\frac{1}{2}$ in. Angle Girders 68 secured to each other by Double Brackets to form a box section, the resulting box being attached to Angle Girder 32 by a Double Bent Strip and to the back of the hopper by a Reversed