Spinning Wheel

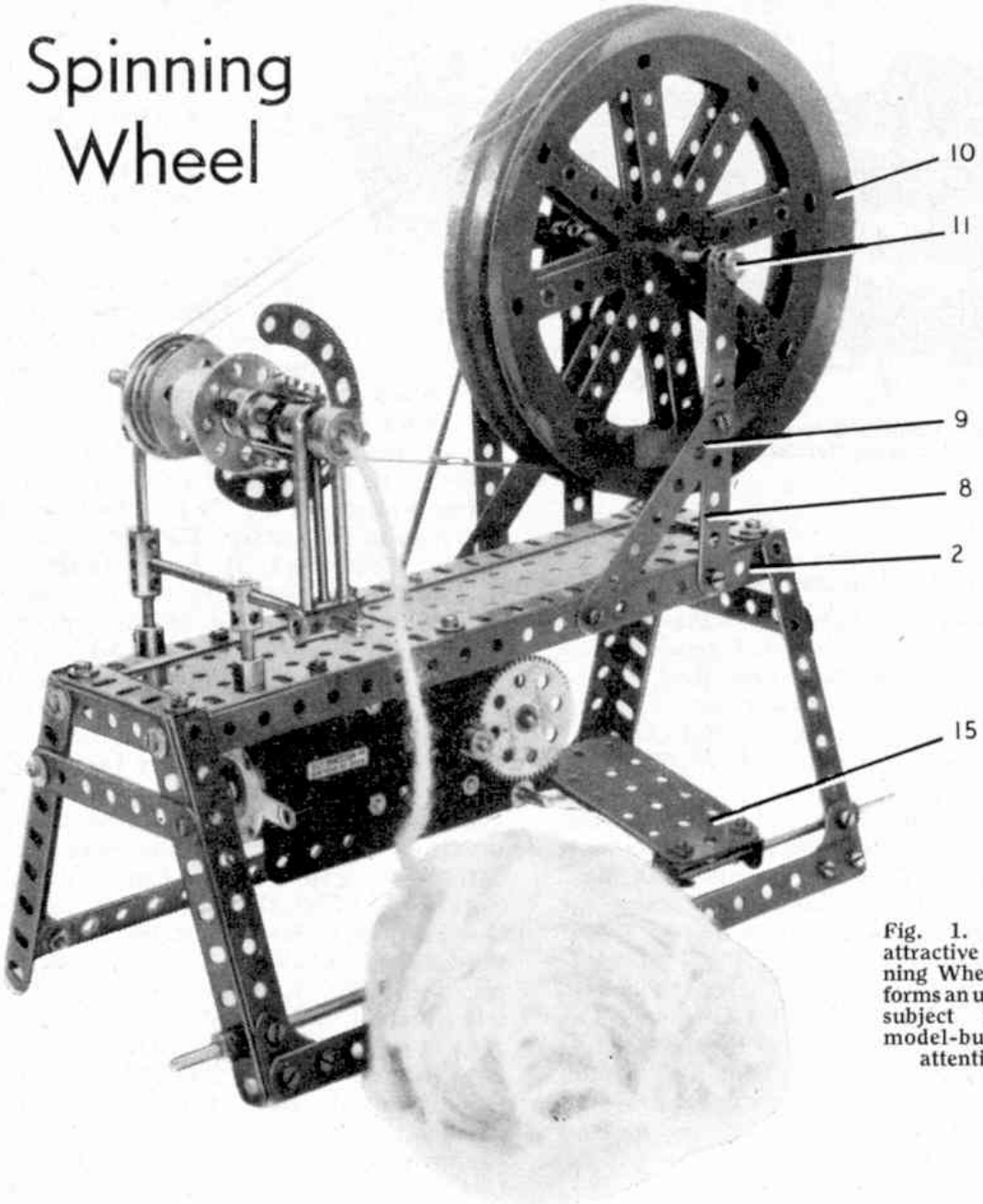

Fig. 1. An attractive Spinning Wheel that forms an unusual subject for a model-builder's attention.

An Unusual New Model

THE rectangular table of the Spinning Wheel shown in Figs. 1, 2 and 3 is built from two 9½″ Angle Girders 1 and 2, and two 2½″ Angle Girders 3 and 4, and is filled in with a 5½″×2½″ and a 4½″×2½″ Flat Plate. At each corner a 4½″ Angle Girder 5 is bolted, braced by a 3½″ Strip 6 and joined at the lower ends by 9½″ Strips 7, the latter having 1″ Corner Brackets to give extra support.

The Spinning Wheel bearings are 4½″ Strips 8 braced by 3½″ Strips 9 bolted to the Angle Girders 1 and 2.

Two 6″ Pulley Wheels 10 are placed on a 4½″ Rod 11 held in place with Collars. A 2″ Pulley Wheel and a Crank 12 are also fixed to the Rod. A 6½″ compound Strip is lock-nutted to the Crank at one end and to an Angle Bracket 13 at the other, and this in turn is lock-nutted to another Angle Bracket 14 bolted to a 3″ Strip attached to a 2½″×1½″ Plate 15. Next, a 1½″×½″ Double Angle Strip is bolted to the Plate, which pivots on a 11½″ Rod supported in the Angle Girders 5.

An E15R Electric Motor is bolted to the Angle Girders 1 and 2. A ½″ Pinion on its armature shaft drives a 57-tooth Gear

Wheel, on the Rod of which is also a $\frac{7}{16}$" Pinion that drives a 60-tooth Gear Wheel. The 1" Pulley is connected to the 2" Pulley with a 15" Driving Band.

On a 3" Rod 16 a $1\frac{1}{2}$" Pulley 17 is fixed. A Bush Wheel 18 and a $1\frac{1}{8}$" Flanged Wheel 19 are secured in a Socket Coupling 20, which is placed loosely on Rod 16 and held clear of the $1\frac{1}{2}$" Pulley by means of a Collar.

Two Socket Couplings 21 and 22 are joined together with two Fishplates, Washers being used on the bolt shanks so that the bolts do not foul the Collars inserted in each end of the Socket Couplings. *The Collars in the Socket Coupling 21 are fixed to the Rod 16. The Collars in Socket Coupling 22 are held with Grub Screws forming a hollow shaft.*

Two $2\frac{1}{2}$" Stepped Curved Strips 23 are held in place by two nuts on a $\frac{3}{4}$" Bolt 24 that is fastened in the Socket Coupling with a Nut and Washer. This entire unit is mounted loosely on a Rod journalled in Coupling 25 and the Bearing 26, which is made from two $2\frac{1}{2}$" Rods and a 2" Screwed Rod fixed in Coupling 27. Two Rod Sockets are fixed to the Angle Girders 1 and 2, and carry 1" Rods on which are mounted a Coupling and a Short Coupling. A $3\frac{1}{2}$" Rod 28 passes through these as shown. The Coupling also holds a $1\frac{1}{2}$" Rod and the Coupling 25. *The Rod 16 must rotate very freely.* A length of cord is used to connect one of the 6" Pulleys to the $1\frac{1}{2}$" Pulley, and a further length of cord connects the other 6" Pulley to the Flanged Wheel.

To get the Wheel ready for working unspun wool is threaded through both Collars in the Socket Coupling 22, through the end hole of one of the Curved Strips 23, and fastened to the Socket Coupling 20.

The correct material for use with this model is raw wool, and small supplies of this can usually be collected from barbed wire fences in fields where sheep have been grazing. Alternatively, you might be able to persuade a farmer to give you a handful or two from a fleece. *Ordinary cotton will not do,* but the kind used by chiropodists will be satisfactory.

Before the wool can be spun it must be "teased" with the fingers, pulling the wool out from its matted state, and afterwards "carded".

For carding, a pair of "cards" is needed. These are two flat pieces of wood with handles, like table tennis bats, only square. If possible the wood should be covered on one side with leather, or leathercloth, into which is inserted over the whole surface bent wires turning towards the handle.

Take one card in your left hand, placing it on your lap with the wires uppermost and the handle pointing to the left. On this you place a small portion of wool. Now, with the other card in the right hand, the handle pointing to the right, you draw this several times across the left card until almost all the wool is on the right-hand card. This is then returned to the left-hand card by turning this card and pointing both handles towards you, then pushing the right-hand card across the other. This process is repeated several times, and then the wool

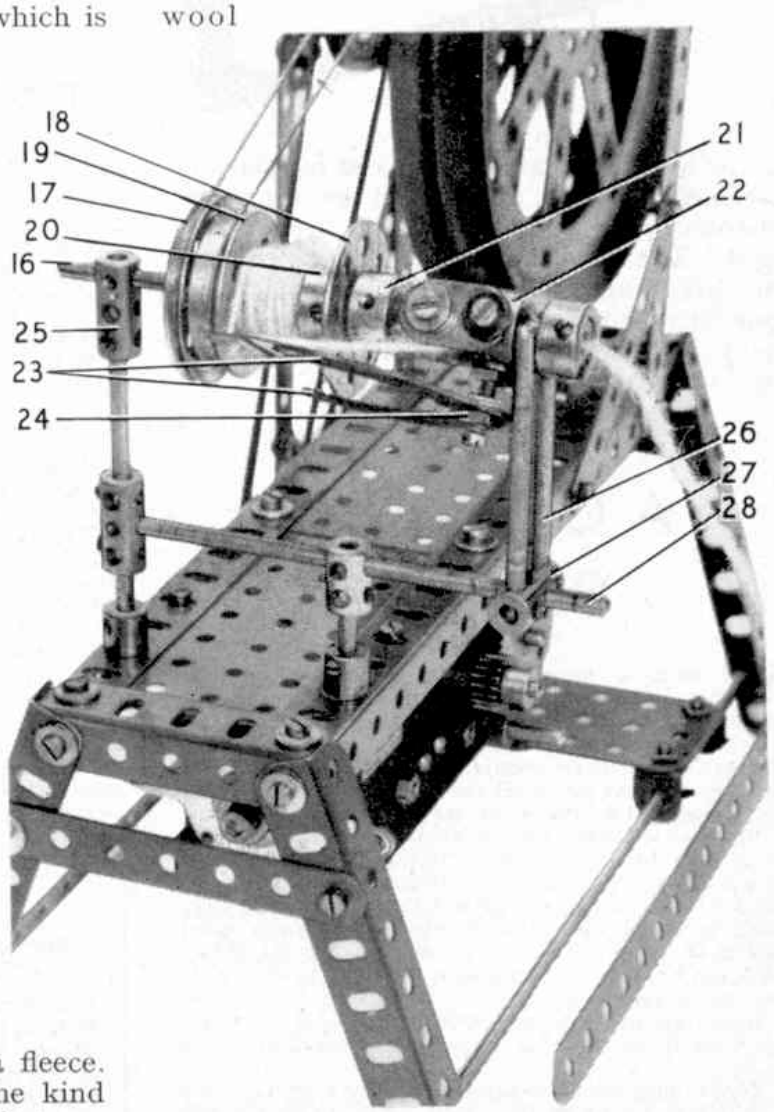

Fig. 2. A close-up of the "mechanism" of the Spinning Wheel.