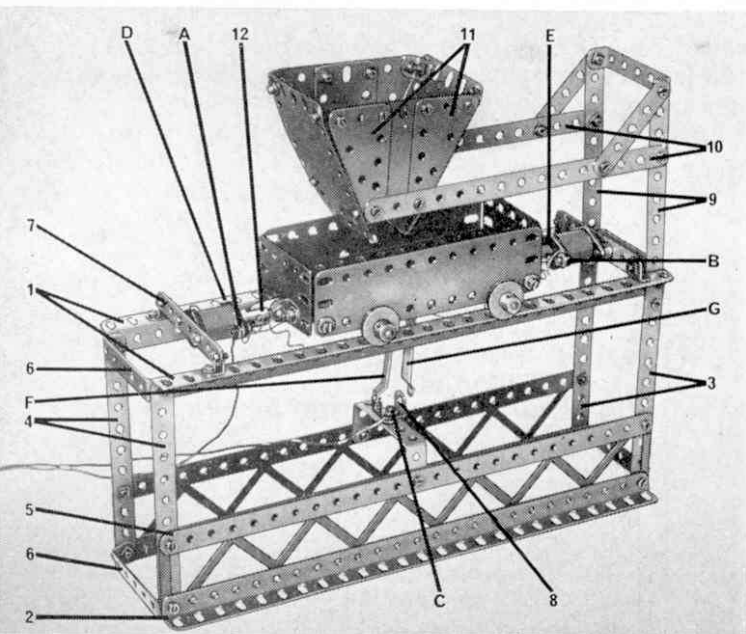


# A powered sifting machine

SINCE ITS invention Meccano has proved itself a highly versatile product but this adaptability has been greatly increased by the introduction of the Elektrikit. In our picture below you see a model—an Automatic Sifting Machine—which demonstrates the much-enlarged scope of the system. It represents an apparatus used for sifting or grading gravel, etc., and it makes use of standard Meccano Parts, in conjunction with various Elektrikit Parts. The standard Parts used are not taken from any particular Outfit. I should tell you that the operating machinery is rather delicate and will almost certainly require some very careful adjustment. When the current is switched on, the actual sifter will probably need to be started manually by pushing it backwards and forwards a few times so as to help the oscillating movement.

To build the model it is best to commence with the Framework. For this a rectangular frame, consisting of two 12½ in Angle Girders 1 and 2, connected together by two pairs of 5½ in Strips 3 and 4 is built up. Two 12½ in Strips 5, only one of which can be seen in the illustration, and two 12½ in Braced Girders are bolted in place as shown. Four Double Angle Strips 6 link the sides of the

This powered sifter, which moves rapidly backwards and forwards, can be constructed from Elektrikit and standard Meccano Parts.



frame together. Two 3½ in Strips 7 are attached to the Angle Girders 1 by Angle Brackets and Elektrikit Cylindrical Coils are bolted to them, one Coil being spaced away from the Strip by three Washers. A Double Bracket 8, spaced away by two Washers, is bolted to a 2½ in by 1 in Double Angle Strip attached to the 12½ in Strips 5, and the Strips 3 are then extended by 5½ in Strips 9. Two 7½ in Strips 10 supported by 2½ in Strips connected to a 2½ in by ½ in Double Angle Strip bolted to the ends of Strips 9, are secured through the fourth hole of Strips 9, as shown.

Attached to each Strip 10 are two 2½ in by 1½ in Triangular Flexible Plates 11 and a 2½ in by 1½ in Flexible Plate, all forming the sides of a hopper into which the material to be sifted is fed. These two sides are connected together by 3½ in by 2½ in Flexible Plates and Angle Brackets, thus completing the hopper.

## The sifter

Now, only the sifter itself remains to be built. Two 5½ in by 1½ in and two 2½ in by 1½ in Flexible Plates are bolted to the flanges of a 5½ in by 2½ in Flanged Plate. The bolts holding the 2½ in by 1½ in Plates in position at each end also hold two Angle Brackets in place, and between these is fitted a Fishplate to which is bolted a Slotted Core for Cylindrical Coil 12. Four ¾ in Flanged Wheels are mounted on 4½ in Rods with Spring Clips holding the Flanged Plate central on the Rods. Attached to two Double Brackets underneath the Plate is a 5½ in Insulating Strip. Two 2 in radius Bent Wiper Arms are bolted to two Angle Brackets attached to the Insulating Strip, one hole apart.

Special care should be taken with the electrical connections. One wire from the supply battery should be taken to Bolt A of one Coil and another wire from A to Bolt B of the other Coil. The other wire from the battery is taken to Bolt C. Now, connect a wire from Bolt D on the Coil indicated to the Angle Bracket fixing Wiper Arm F. A further wire is taken from Bolt E on the other Coil to the Angle Bracket fixing Wiper Arm G. Each Wiper Arm is arranged on the *outside* of the lugs of the Double Angle Bracket 8. When the Battery is connected with one of the Wiper Arms in contact with the Double Bracket 8 the Coil to which it is connected pulls the Sifter towards it. This action breaks the contact, and simultaneously the other Wiper Arm makes contact and the Sifter is pulled back again. By careful adjustment the Sifter can be made to move rapidly to and fro.

**Parts required.**—Standard parts.—2 of No. 1; 2 of No. 1b; 6 of No. 2; 2 of No. 3; 2 of No. 5; 4 of No. 8; 2 of No. 10; 3 of No. 11; 18 of No. 12; 2 of No. 15a; 4 of No. 20b; 4 of No. 35; 74 of No. 37a; 68 of No. 37b; 30 of No. 38; 1 of No. 46; 5 of No. 48a; 1 of No. 52; 2 of No. 99; 2 of No. 111a; 9 of No. 111c; 4 of No. 188; 2 of No. 189; 2 of No. 190a; 4 of No. 221. Elektrikit Parts.—1 of No. 501; 2 of No. 522; 2 of No. 527; 2 of No. 533; 1 of No. 558.