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F. BRINKMANN ET AL
ELECTRIC PLUGGING DEVICE

2,283,040

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FIG. 1.

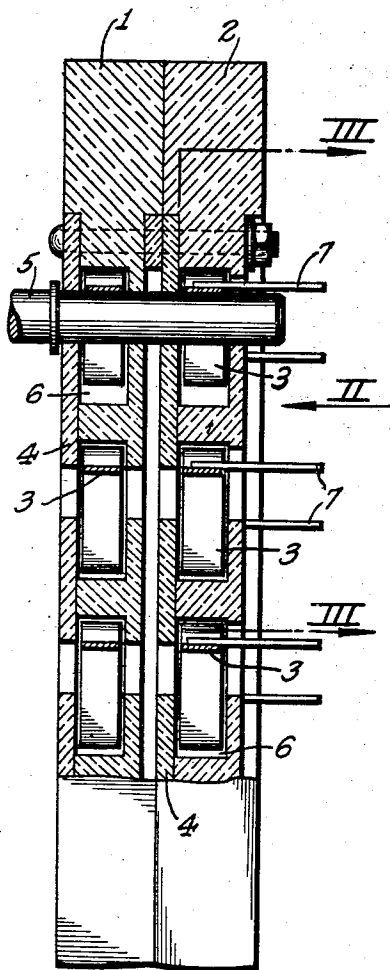


FIG. 2.

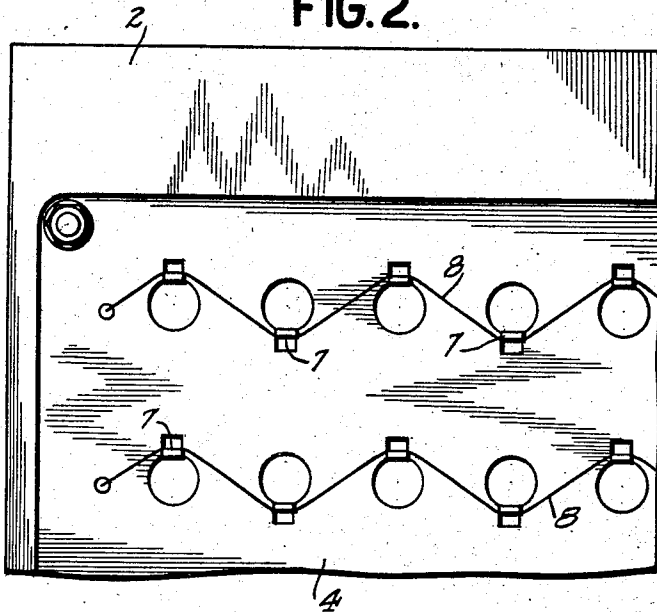
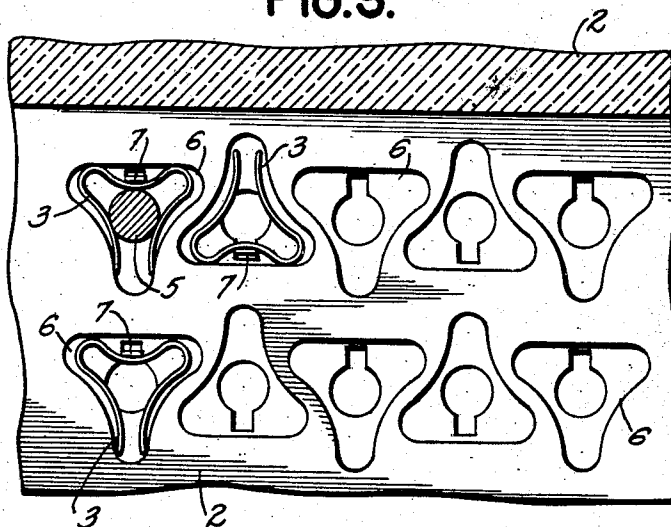


FIG. 3.



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ELECTRIC PLUGGING DEVICE

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4 Claims. (Cl. 173—332)

Plug connections are known which have plug sockets embedded in a moulded insulating body, the plug pins for these sockets being spring contact plugs. These arrangements are disadvantageous in several respects. For instance, the mould is complicated, having to deal with these sockets. Also the contact pressure produced by the spring contact plugs fails to be constant.

The present invention does away with the use of plug sockets and spring contact plugs, as will be understood from the following description and accompanying drawing, in which

Fig. 1 is a fragmentary sectional view showing one embodiment of the invention, Fig. 2 is a fragmentary elevation thereof, viewed in the direction of arrow II in Fig. 1, Fig. 3 represents a section on line III—III, Fig. 1.

Devices as provided by the invention comprise an upper or front plate 1 and a lower or back plate 2, both made of a suitable insulating material by moulding. The plates 1, 2 are each provided with cavities 6 in which leaf springs 3, bent as illustrated in Fig. 3, are located loosely so as to have a certain freedom of movement. For the sake of simplicity Fig. 3 shows only three of the springs 3. In the case represented by way of example, the cavities 6 and springs 3 are heart-shaped. A plug pin 5 inserted in the plates 1, 2 thus contacts with the springs 3 at three points and thereby causes them to bear resiliently against wall portions of the cavities 6. In this way, the springs are effectively pressed against the plug pin, whereby the contact pressure will be constant even in the event of long periods of service. It will be seen also that solid plug pins may be used, that is to say, the plug pins need not be springy themselves.

The cavities 6 are covered by insulating plugs 4 which also serve to guide the plug pins.

7 denotes soldering tabs of the springs 3 while 8 indicates wires by which certain numbers of soldering tabs are interconnected for a purpose that need not be considered here.

It will be obvious also that the mould for manufacturing the plates 1, 2 is more simple in structure than a mould by which plug sockets

are embedded in the insulating material. In addition no finishing work is necessary, the manufacture hence being less troublesome than in the case of prior devices.

What is claimed is:

1. A connector comprising a block of insulating material, a plurality of approximately triangular-shaped recesses formed in said block, an opening to receive a plug in each recess, a spring connector in each recess having a pair of symmetrically formed arms of approximately heart-shape, a curve formed in each connector arm and also at the junction of said arms, said curves projecting inwardly beyond said opening, the arrangement being such that a plug inserted in any of said openings is contacted by the contact spring therein at three radially spaced places.

2. A connector comprising a block of insulating material, a plurality of approximately triangular-shaped recesses formed in said block, an opening to receive a plug in each recess, a spring connector in each recess having a pair of symmetrically formed arms of approximately heart-shape, a curve formed in each connector arm and also at the junction of said arms, said curves projecting inwardly beyond said opening, the arrangement being such that a plug inserted in any of said openings is contacted by the contact spring therein at three radially spaced places, and a cover member common to all recesses for retaining said spring connectors in said recesses, and openings in said cover in register with the first mentioned openings.

3. A connector according to claim 1 in which said spring connectors are loosely arranged in said recesses and when engaged by plug pins inserted in said openings bear resiliently against the wall portion of said recesses.

4. A connector according to claim 1 in which the base and apex positions of the adjacent triangular shaped recesses are alternately reversed in order to make possible closer spacing of the recesses.

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