

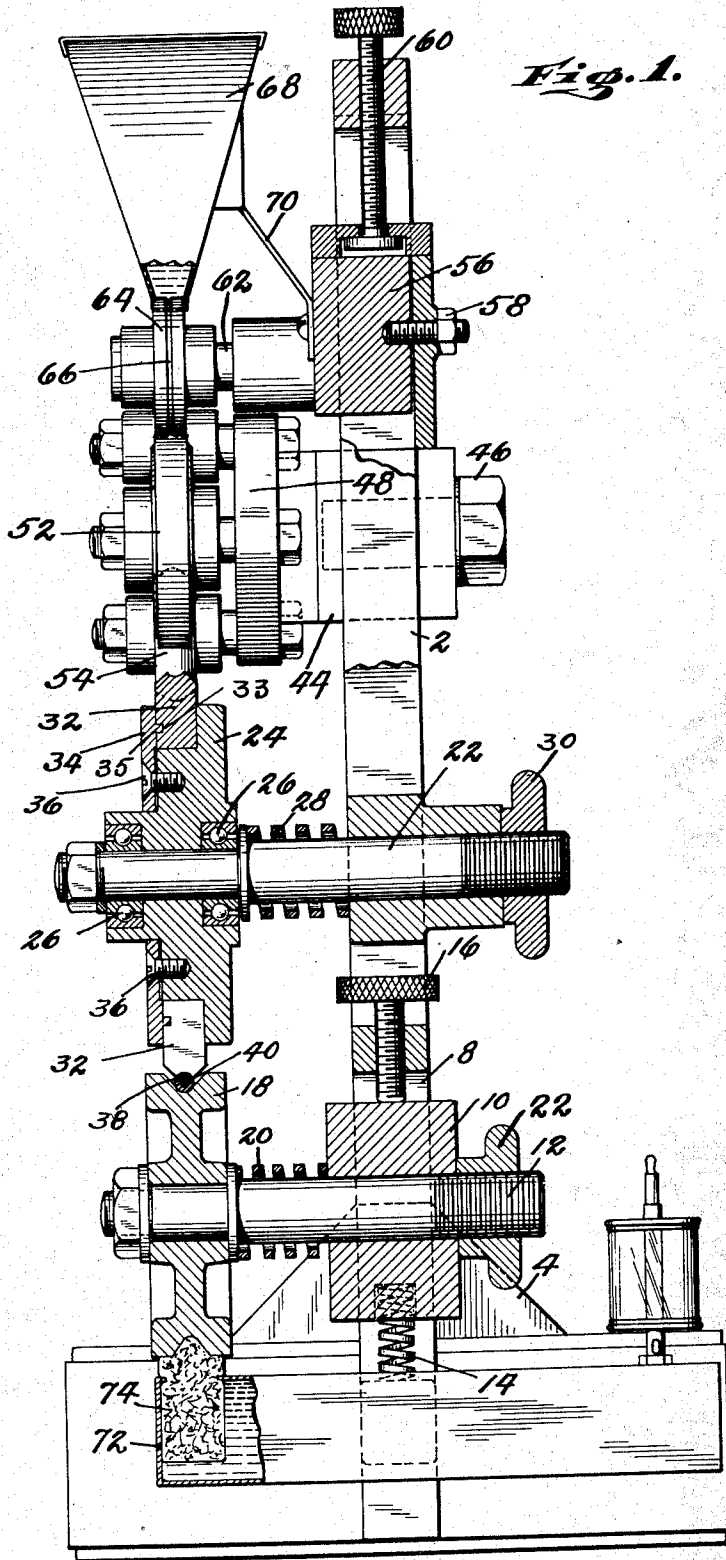
Jan. 7, 1941.

H. O. BATES
MARKING MACHINE

2,227,694

Filed July 16, 1938.

2 Sheets-Sheet 1



INVENTOR

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2 Sheets-Sheet 2

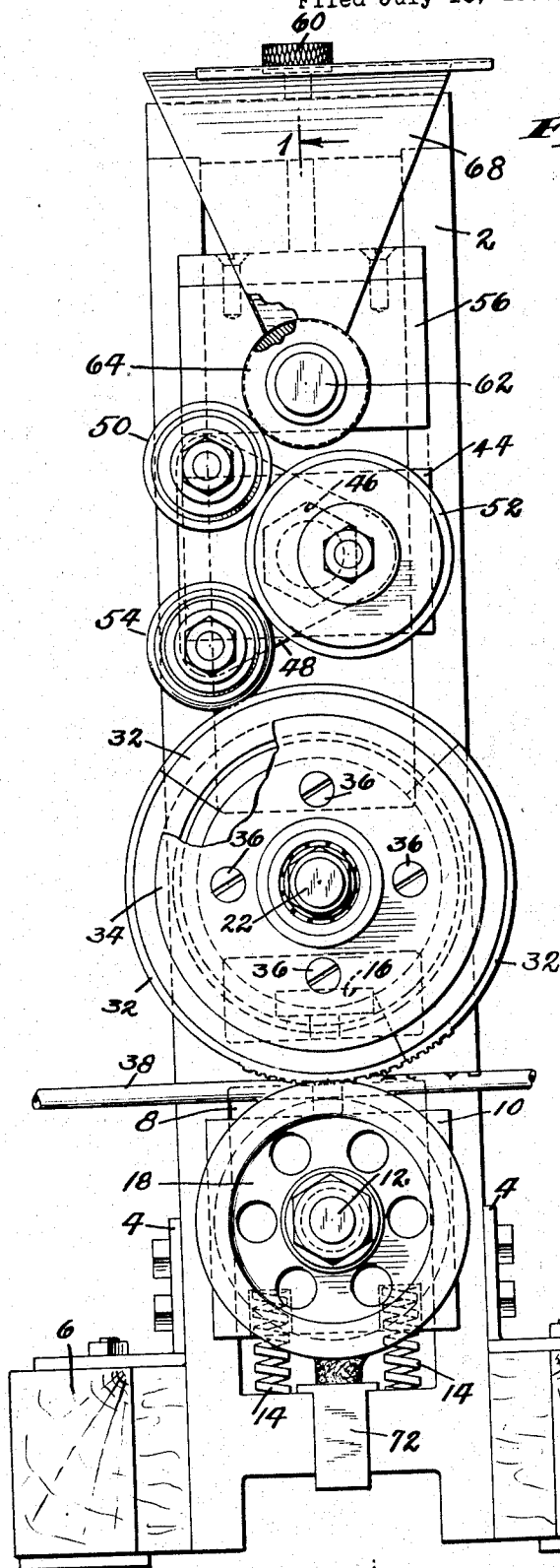


Fig. 2.

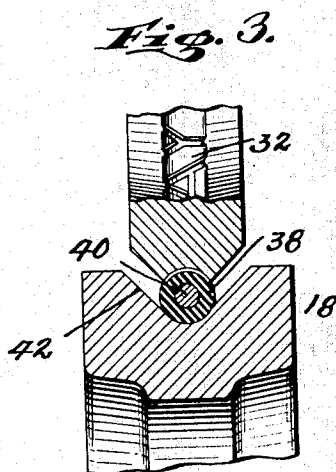


Fig. 3.

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UNITED STATES PATENT OFFICE

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MARKING MACHINE

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Application July 16, 1938, Serial No. 219,552

4 Claims. (Cl. 101—36)

This invention is directed to an improvement in machines for applying letters, figures, symbols or other characters to the insulation or coating of wires and cables.

One object of my invention is the provision of a machine such as above indicated which will be well adapted for the purpose, and which is simple, efficient and practicable in construction and operation, foolproof and unlikely to get out of order.

A further object of my invention is the provision of a marking machine which can be set in the finishing line in the manufacture of covered wire and cable for printing or marking the covering of the wire, no driving means being necessary except the passing of the wire through the machine.

In the accompanying drawings wherein I have illustrated an embodiment of my invention:

Fig. 1 is a section on the line I—I of Fig. 2;
Fig. 2 is an elevational view of the machine;
and

Fig. 3 is a sectional detail view of a part of the marking die and cooperating platen.

Referring to the drawings in detail: 2 designates the frame of the machine which takes the form, for example, of an elongated vertically extending metal plate, secured in any convenient fashion as, for example, by angle irons 4 to suitable base or foundation members 6.

The frame 2 adjacent its lower end is provided with a rectangular opening 8 for the reception of a vertically adjustable block 10 carrying a stub shaft 12. The block 10 is mounted on springs 14 and vertical adjustment of the block in the opening 8 is accomplished by thumb-screw 16.

Rotatably mounted on the bearing shaft 12 is a grooved pulley or platen 18. Spring 20 is also carried by the shaft 12 intermediate the pulley 18 and the block 10. The inner end of the shaft 12 is provided with thumb-nut 22. By manipulation of this thumb-nut the platen 18 can be properly spaced from the face of the frame 2.

Extending through the frame 2 parallel to and above the stub shaft 12 is a stub shaft 24 carrying a type or die wheel 24. This wheel is freely rotatable on the shaft 22 on ball bearings 26. The shaft 22 also carries a tension spring 28 intermediate the type or die wheel 24 and the face of the frame 2. By adjustment of the thumb-nut 30 on the inner end of the shaft 22 proper spacing of the wheel from the frame can readily be effected.

It will be appreciated that the platen 18 and

type or die wheel 24 can be properly lined up with respect to each other by manipulation of the thumb-nuts 22 and 30. It will be apparent also that by proper adjustment of the screw 16, the correct pressure can be imposed on the coating of a cable or wire passing between the platen and type wheel.

The type or die wheel 24 can be solid with the type or dies engraved on the face thereof, or the type or dies can be made up in the form of segments 32, slotted as shown at 33, these slots receiving tongues 35 on the inner face of plate 34, which is fastened to the face of the wheel by screws 36. For convenience of illustration only, impressions have been shown only on two type segments 32, those immediately adjacent the wire. It will be understood, of course, that the impressions extend fully around the periphery of the type or die wheel in order that, as pointed out above, no driving means is necessary except the passage of the wire through the machine.

The face of the type or die segments is concaved, as seen in Fig. 3, to conform to the surface of the cover 38 of the wire or cable 40 which passes between the grooved face 42 of the platen and the concaved type, when the machine is in operation, as will be understood.

Above the shaft 22 the frame 2 is provided with a block 44 adjustable vertically of the frame and held in adjusted position by lock nut 46. This block carries a bracket or support 48 for mounting inking rollers 50, 52 and 54.

The inking rollers are mounted in ball bearings and the face of each roller is rubber composition.

Above the block 44 the frame 2 is provided with a block 56 which is adjustable vertically of the frame, and held in adjusted position by a lock nut 58. Adjustment of this block is effected by thumb-screw 60. This block 56 carries a shaft 62 on which is mounted an inking wheel 64. The face of this inking wheel contacts the inking roller 50 and is grooved, as shown at 66. The block 56 also carries bracket 70 supporting ink supply reservoir 68, the face of the inking wheel 64 extending into the bottom of this reservoir. This construction, together with the fact that the face of the inking wheel 64 is provided with the groove 66, provides for the feeding of a predetermined amount of ink to the face of the wheel 64 at all times.

Adjacent the platen 18 is a tank or reservoir 72 containing a suitable oil, for instance, and provided with a wick 74 which constantly engages the concaved face of the platen 18 at all times,

this arrangement preventing the coating on the cable or wire being marred from building up on the face of the platen.

It will be seen from the drawings that the covered wire or cable as it moves forward passes between the roller 18 and the die roller 24, and no driving mechanism is required for the entire machine other than the act of drawing the wire or cable through it.

Inasmuch as the platen 18, die wheel 24 and the inking rollers and inking wheel are all adjustable in the frame 2, it will be quite apparent that the parts can be adjusted so as to provide the proper pressure between the faces of the various wheels and rollers and also so that the type or die on the face of the type or die wheel 24 will bear with the proper pressure upon the cover or insulation 38 of the cable 40 in order that the desired symbols, characters and other markings may be applied to this covering as the cable passes through the machine.

My machine will print coated wire while the coating is still soft and the imprint will remain after being further coated with paraffin or wax coating. I might say, also, that my machine is adapted to print a paraffin or wax coated wire as well as a wire having cloth, fabric, rubber or other coating.

It is to be understood that changes may be made in the details of construction and arrangement of parts above described without departing from the spirit and scope of my invention.

What I claim is:

1. In a machine of the class described, the combination of a vertically extending supporting frame, a supporting block extending through the frame, compression springs beneath the block, an adjusting screw above the block for adjusting the compression springs, a stub shaft extending through and supported by the block, a platen carried thereby, a compression spring intermediate the frame and said platen, said shaft being adjustable lengthwise to vary the spacing of the platen from the said supporting frame, and a thumb-nut for holding the shaft in adjusted position.

2. In a machine of the class described, the combination of a vertically extending supporting frame, a supporting block extending through the frame, and vertically slidable in guides therein, compression springs beneath the block, an

adjusting screw above the block for adjusting the compression springs, a stub shaft extending through and supported by the block, a platen roll freely rotatable thereon, a stub shaft above the first mentioned shaft extending parallel thereto, said last mentioned shaft being adjustable in an axial direction in said frame, and a type wheel freely rotatable on the last mentioned shaft with its periphery aligned with the periphery of the platen and spaced therefrom to provide for the reception of a traveling covered wire to be marked, the platen and type wheel being constructed and arranged to retain a cable in alignment with said type wheel.

3. A cable printing machine comprising a frame, a type wheel journaled for rotation around a continuous shaft and freely rotatable thereon, the type wheel and platen being so constructed and arranged that they are rotated by drawing the wire or cable through the machine, an inking roller resiliently bearing against said type and a platen wheel resiliently mounted for rotation adjacent to said type and constructed and arranged to bear against a strand of wire while the latter is in engagement with said type, said platen wheel having a V shaped periphery to retain the strand in alignment with the type and means for applying oil to the said periphery.

4. A cable printing machine adapted to print on a cable having a wet coating thereon comprising a stub shaft, a type wheel mounted for free rotation upon said shaft and having a grooved line of type thereon, means for applying ink to said type, a second stub shaft parallel to said first mentioned shaft, a grooved platen mounted for free rotation upon said second shaft, said shafts being so spaced as to bring said platen into alignment with and in spaced relation to said type wheel, means for adjustably varying the spaced relation of said wheels whereby the printing pressure may be accurately determined independent of other factors, said parts being so constructed and arranged that said type wheel and said platen will be continuously driven by movement of the cable between them in contact with the type and means for continuously applying a film of oil to said platen to protect said wet coating from damage.

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