

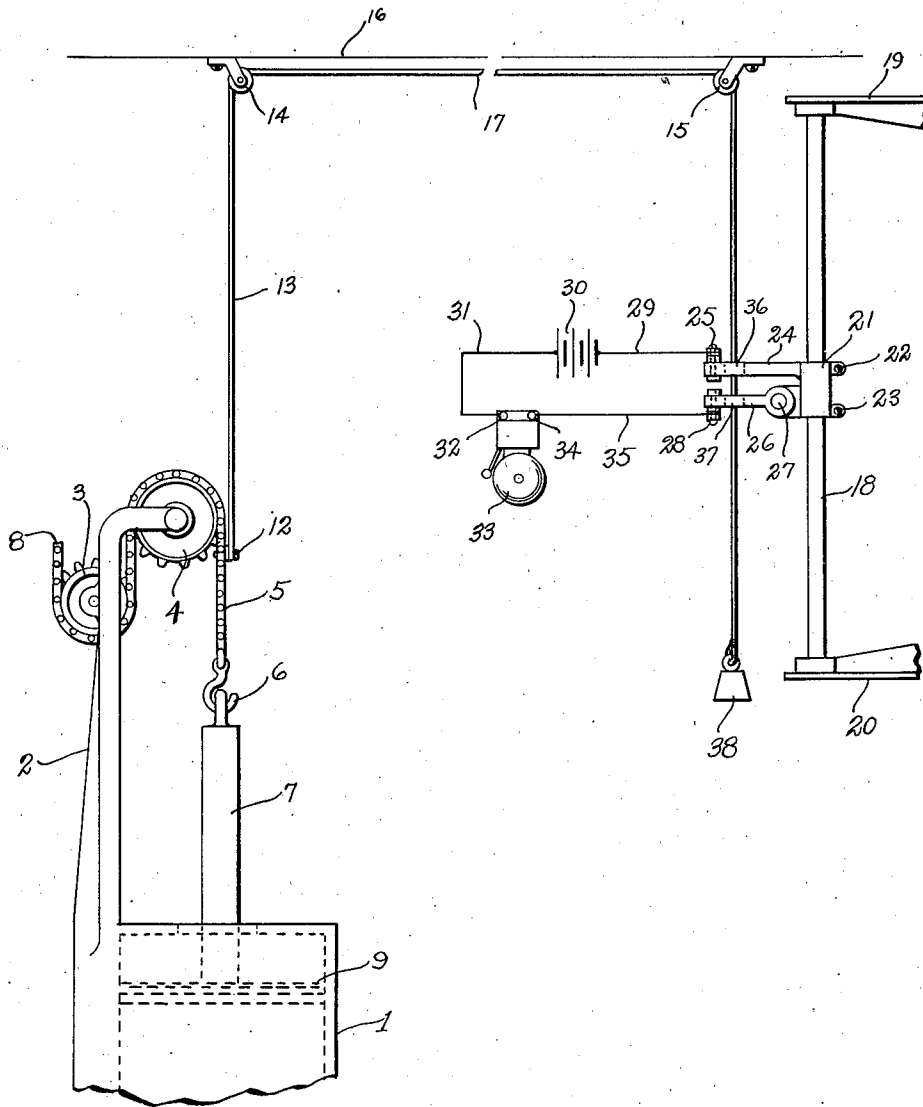
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SIGNAL DEVICE FOR MELTING POTS

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SIGNAL DEVICE FOR MELTING POTS

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1 Claim. (Cl. 177—311)

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This invention relates to an alarm or signaling device and more particularly to an alarm that is associated with a molten metal machine.

One of its objects is to provide an alarm that will warn the operator of the machine when the metal pig is nearly out.

Another object of the invention is to provide a device of such character that may be attached to practically any machine, without becoming an integral part thereof.

Another object is the provision of an alarm that is cheaply made, is automatic in operation and certain in operation.

And another object is to provide an alarm that may be used with either a stationary or movable metal pot.

A further object of the invention is the provision of an alarm of the class characterized that because of its simplicity may be manufactured at low cost and the operation of which is inexpensive.

The above and other objects will become apparent from a reading of the description taken in connection with the accompanying drawing, in which—

The figure illustrates the alarm device in operative position.

Referring now to the drawing, the numeral 1 designates the molten metal pot having a standard 2 thereon which supports the necessary cog wheels 3 and 4, which carry therearound a chain 5 that has a hook 6 arranged at its lower end. The hook 6 holds the pig metal and, by any conventional means, to which the end 8 of the chain 5 leads, permits the pig metal to be lowered into the molten metal 9 at any predetermined rate.

The foregoing described elements do not constitute, per se, a part of this invention but, the combination thereof, with the invention is believed to be novel.

Attached to the chain 5, as indicated by the numeral 12, is a line 13 made of any desirable material, which is run through pulleys 14 and 15 which may be fastened to the ceiling 16 or at any other preferred location. The line 13 is shown at 17 as being broken away in order to indicate that the alarm may be located at any convenient point or points.

A support consisting of a shaft 18 arranged between upper and lower retaining means 19 and 20 has mounted thereon the movable switch 21 which is held in place by means of the screws or bolts 22 and 23. The switch has a rigid terminal bearing arm 24 with a contact 25 mounted thereon and also a pivoted terminal arm 26 which

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is pivoted, as shown at 27, with a second contact 28 thereon.

The contact 25 is connected by a wire 29 to a source of electric energy 30 and from the source of energy a wire 31 connects to a terminal 32 of any desirable type of alarm or signal, which for convenience, has been illustrated in the drawing as a bell or buzzer 33, the other terminal 34 of the bell being connected by means of the wire 35 to the movable arm 26.

If the voltage of the source of energy is too high, a direct current may be reduced by a resistance and an alternating current by a transformer.

The terminal arms have circular openings 36 and 37 therein through which is passed the line 13, said line having at its end a suitable weight 38.

The operation of the device is as follows: as the pig metal is lowered into the metal pot such action will actuate the line 13 to raise the weight 38 which, in turn, will move the movable terminal arm 26 to bring the contact 28 against the contact 25, thus completing the circuit between the source of electric energy 30 and thereby sounding the alarm.

The accompanying drawing was made with a view of showing a device embodying the principles of my invention. The operating device will have the necessary compactness and include conventional refinements.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the parts without departing from the scope of my invention, which, generally stated, consists in a device capable of carrying out the objects above set forth, such as shown and described and defined in the appended claim.

What I claim is:

In a signal device for melting pots wherein the pig is suspended and lowered into the pot as used by a chain hoist or the like, a flexible element, means attaching one end of said flexible element to the chain adjacent the pig, a counterweight associated with the other end of said flexible element and suspended thereby, supporting elements through which said flexible element is trained, normally open contacts associated with said flexible element, one of said supporting elements positioned vertically above the usual position of the pig, another supporting element positioned above said contacts wherein the counterweight is suspended below the contacts and lowering of the pig to a predetermined position raises the counter-

weight to actuate the contacts to the closed position, a circuit associated with said contacts, a signal device incorporated in said circuit adapted to be operated by the circuit when closed, a post associated with the depending section of the flexible element suspending the counterweight, a bracket upon which the contacts are mounted, and means adjustably mounting the bracket on the post to position the contacts for closing movement thereof by the counterweight when the pig reaches the said predetermined position.

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