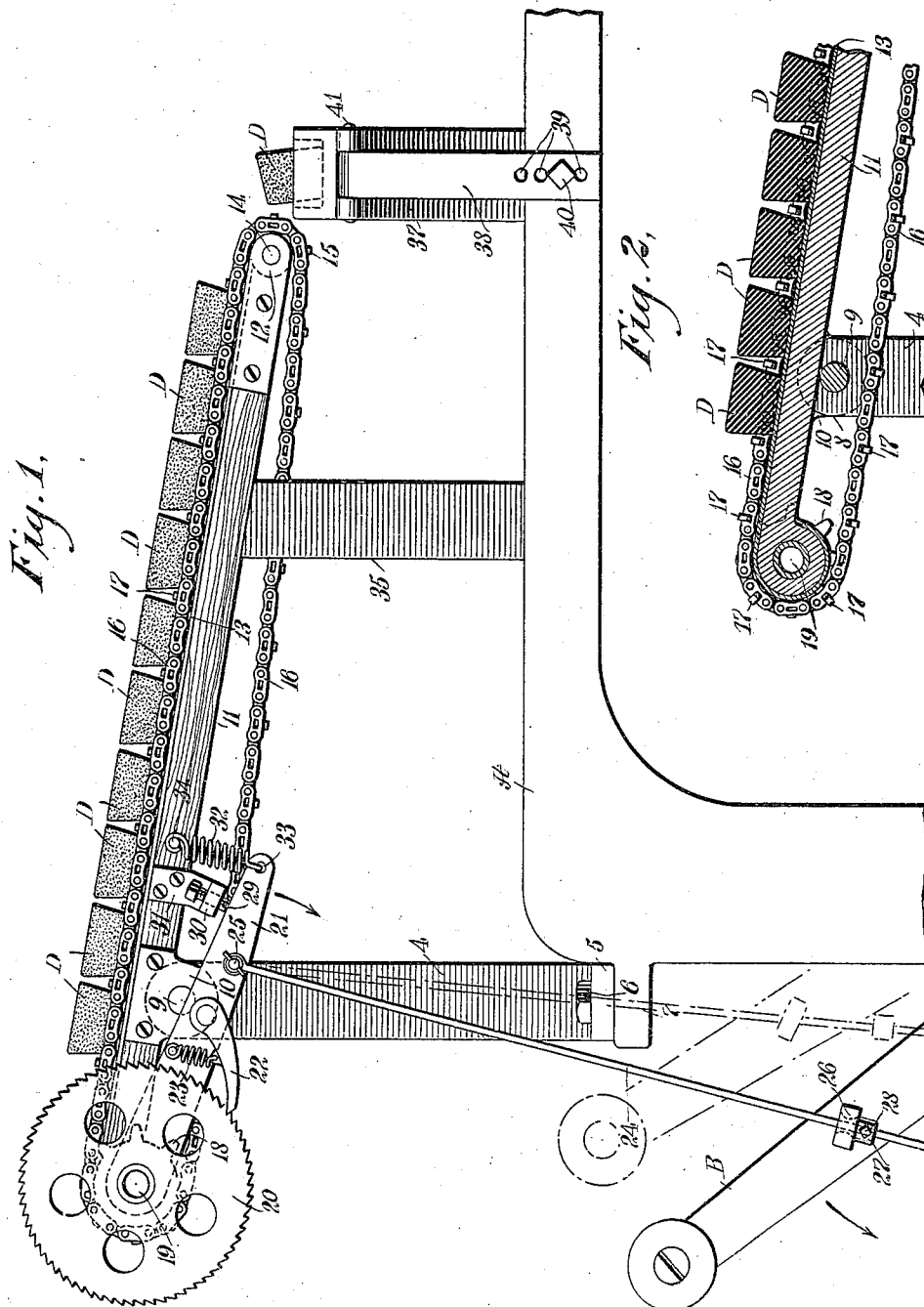


J. G. RAUCH.
 FEEDING ATTACHMENT FOR SLUG OR TYPE CASTING MACHINES.
 APPLICATION FILED JAN. 20, 1910.

987,489.

Patented Mar. 21, 1911.

2 SHEETS—SHEET 1.



WITNESSES:

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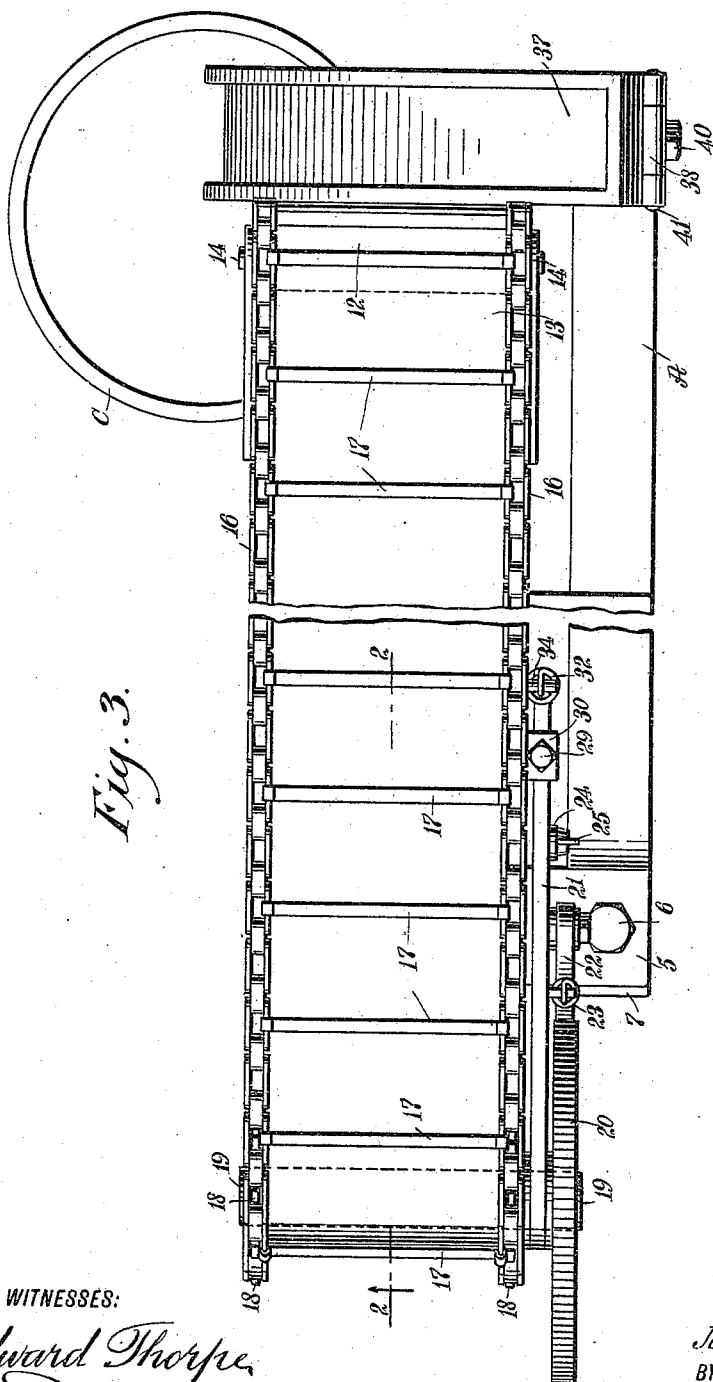


Fig. 3.

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UNITED STATES PATENT OFFICE.

JAMES G. RAUCH, OF SLATINGTON, PENNSYLVANIA.

FEEDING ATTACHMENT FOR SLUG OR TYPE CASTING MACHINES.

987,489.

Specification of Letters Patent.

Patented Mar. 21, 1911.

Application filed January 20, 1910. Serial No. 539,035.

To all whom it may concern:

Be it known that I, JAMES G. RAUCH, a citizen of the United States, and a resident of Slatington, in the county of Lehigh and State of Pennsylvania, have invented a new and Improved Feeding Attachment for Slug or Type Casting Machines, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: to provide means for delivering pigs of type metal to the melting pot at intervals coincident with the withdrawal therefrom of quantities of melted metal equaling in weight the said pigs; to provide means whereby the rate of adjustment may be varied to suit the action of the casting machine; to provide a construction whereby the feeding mechanism may be removed from over the melting pot; to provide means whereby the metal may be delivered into the melting pot without splash of the molten metal therein contained; and to provide a mechanism of the character specified which is simple, efficient and durable.

One embodiment of the present invention is disclosed in the structure illustrated in the accompanying drawings, in which like characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a side elevation of the feeding mechanism constructed and arranged in accordance with the present invention, and showing in fragmentary form parts of the type or slug casting machine to which the said feeding mechanism is connected; Fig. 2 is a vertical section of the upper and hinged end of the feed table taken on the line 2—2 in Fig. 3; and Fig. 3 is a plan view of the invention on an enlarged scale and illustrated as broken and contracted near the median line.

In Fig. 1 of the drawings the side bar A and the lever end B are parts of the ordinary linotype machine. The present feeding mechanism is mounted upon the side bar A by means of a standard 4, the lower end of which is bent to form a foot 5, suitably perforated to pass a bolt 6, which is extended through an ear 7 formed on the side bar A of the linotype machine. Extended laterally from the standard 4, and at the upper end thereof, is a hub 8, perforated to receive a pivot shaft 9, which is also extended through brackets 10, 10. The brackets 10, 10 are suitably mounted upon the sides of a

platform 11. It is upon the platform 11 that the feeding chains and guide pulleys therefor are mounted. By means of this construction the platform and parts carried thereby may be lifted and swung on the pivot 9 to raise the extended end of the platform 11 from over the melting pot C, in which position it is placed when in operation, as shown in Fig. 3 of the drawings.

The platform 11 is provided with a drum 12 at the forward end thereof, and upon the upper surface with a sliding plate or shoe 13. The plate 13 is disposed on the platform 11 to aline with the upper surface of the drum 12. The drum 12 is mounted upon a shaft 14, at the ends whereof are fixedly attached sprocket wheels 15, 15 to be engaged by sprocket chains 16, 16. The chains 16, 16 are suitably connected by cross bars 17, 17, the bars being spaced each from the other the distance required to receive the under side of the pigs D, D which, in the operation of the machine, are placed between the said bars.

The two sprocket chains 16 and the cross bars 17 constitute the conveyer whereby the pigs D, D are forced gradually forward over the platform and plate 13 mounted thereon, to be finally delivered over the drum 12 to an inclined chute extended into the melting pot C. The sprocket chains 16, 16 are reeved over sprocket wheels 18, 18, which are fixedly mounted upon a shaft 19, mounted on the upper end of the platform 11. The shaft 19 is the power shaft of the present mechanism, and is driven by a ratchet wheel 20, which is fixedly secured to the said shaft 19. The teeth formed on the wheel 20 are suitably fined to permit a large scope of adjustment of the feed for the conveyer formed by the chains 16, 16. The wheel 20 is rotated by a lever 21, which is pivotally mounted upon the shaft 19, as shown in Fig. 1 of the drawings, and has mounted thereon a pawl 22 adapted to over-ride the teeth formed in the wheel 20. The pawl 22 is seated on the periphery of the wheel 20 by a spiral spring 23, anchored to both the said lever 21 and the pawl 22, in the manner shown in Fig. 1 of the drawings. The lever 21, in rotating the wheel 20, is oscillated about the shaft 19 in a larger or smaller arc, as the case may be. The oscillation of the lever 21 is produced by the lever B, or other suitable reciprocating or rocking member of the linotype or type casting machine to which this invention is

applied. The operative connection between the lever B and the lever 21 is a connecting rod 24. The rod 24 is connected to the lever 21 by a pin 25 set out from the side of the said lever 21, and to the lever B by a perforated eye-bolt 26 adapted to freely pass the rod 24. At the under side of the eye-bolt 26 is disposed a movable collar 27. The collar 27 is fixed in adjusted position upon the rod 24 by a set screw 28. The reason for the connection by means of the eye-bolt 26 and the collar 27 shown and described, is to permit any adjustment whereby the lever B is allowed to move to an extreme forward position without lifting the rod 24, and to govern the extent of the movement of the rod 24 by the lever B at the opposite end of the stroke of the said lever, as shown in dotted lines in Fig. 1 of the drawings.

The forward stroke of the lever 21 is governed by a set screw 29. The screw 29 is suitably mounted in an extension 30 of a bracket 31. It is obvious that by the extension or withdrawal of the screw 29 through the threaded extension 30, the upward lift of the lever 21 is limited and controlled. The lever 21 is lifted against the end of the screw 29 by a spiral spring 32, one end of which is threaded through perforations 33 in the end of the lever 21, and the other end of which is engaged with a pin 34 set out from the side of the platform 11.

The platform 11 is constructed of suitable and desired length. Between the bars 17, 17 are placed the metal pigs D, D. In its lowered condition a support for the forward end is required. This I prefer to provide in the form of a bracket rest.

With a mechanism constructed and arranged as above described, and as shown in the accompanying drawings, loaded with the metal pigs D, D, in the manner stated and shown, the operation is as follows: With each oscillation of the lever B, which in the present instance is connected with the line casting mechanism, the rod 24 is depressed at the free end thereof a distance regulated by the position in which the collar 27 is placed on the rod 24. When the lever 21 descends, the wheel 20 is rotated by the pawl 22, which is in engagement with the teeth of the said wheel. The rotation of the wheel 20 advances the chains 16, 16 and bars 17, 17, and the pigs D, D, held therebetween, carrying the pigs gradually to the end of the platform 11 and drum 12 thereon mounted. When in the operation of the type casting machine of which the lever B is a member, an amount of type metal has been removed from the melting pot C equal in weight to the pigs D, D, the conveyer and wheel 20 operating the same are arranged to deliver to the said pot C one of the pigs mounted thereon. In this manner the melting pot of the machine is automatically and constantly

replenished, removing the difficulties attendant upon the exhaustion of the melting pot through inattention on the part of the operator and the failure to cast the lines set up or forms provided for casting lines of type. It will be understood that the movement of the rod 24 is controlled so that the chains 16, 16 will be moved the distance required to deliver the successive pigs as and when the needed number of lines of type or slugs have been cast from the molten metal withdrawn from the pot C. It will also be understood that the adjustment of the rod 24 necessary to accomplish this is by setting the collar 27 and manipulating the screw 29, the one regulating the extent of the downward movement and the other limiting the extent of the upward movement of the lever 21.

It will be understood that the conveyer and platform 11 may be placed upon the machine at any suitable and convenient position. That illustrated in Fig. 3 of the drawings is considered by me the most advantageous. The delivery end of the conveyer is advanced over the top of the pot C and at one side of the center thereof to avoid the plunger rod with which the melting pots of linotype and other type casting machines are provided. It is to prevent the splash of the molten metal when the pigs are dropped therein that I have provided an inclined chute 37. The chute 37 is illustrated by me in Figs. 1 and 3 of the drawings as independently mounted on the bar A. I prefer such an adjustment, although it will be understood that the standard 38, supporting the inner end of the chute 37, may be extended from the side rails of the platform 11. The standard 38 is provided with a series of perforations 39. The perforations 39 are adapted to pass the shank of a bolt 40, whereby the said standard is secured to the side bar A. The series of perforations 39 are provided to permit the adjustment of the chute 37 to change the angle of travel thereon of the pigs, thereby reducing the speed at which the said pigs are delivered to the pot C. This controls the delivery of the pigs to the pot C and completely avoids the splashing of the hot metal by the introduction of the said successive pigs. The chute 37 is hingedly mounted on a pivot pin 41, whereby the chute may be lifted back from over the pot C to permit any necessary manipulation or repair thereof.

The operation of the invention is obvious. After the rod 24 has been properly adjusted to give the proper rate of travel to the chains 16, 16, all that remains for the operator to do is to see that the pigs D, D do not become exhausted in the conveyer. This does not require the constant or alert action demanded by the present system. The pigs may be supplied on the conveyer in many

or few numbers. Further, if by carelessness or inadvertence the conveyer should become exhausted, this could be replenished before the melted metal would be exhausted in the pot C, for the reason that the maximum supply of the metal in the pot C is maintained constant by the feeding attachment for type casting machines herein described.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A feeding attachment for type and slug casting machines, comprising a receiving platform; a plurality of sprocket chains disposed adjacent to said platform; a plurality of sprocket wheels mounted on said platform to receive said chains; a plurality of cross bars extended between said chains and adapted to pass over said platforms, said bars being separated to form pockets for lead ingots; a driving mechanism for said sprocket wheels and chains; and a transmission mechanism connecting said driving mechanism and the driving mechanism of the casting machine upon which said casting is mounted for operating the driving mechanism and chains connected therewith in unison with the operation of the casting machine.

2. A feeding attachment for type and slug casting machines, comprising a receiving platform; a plurality of sprocket chains disposed adjacent to said platform; a plurality of sprocket wheels mounted on said platform to receive said chains; a plurality of cross bars extended between said chains and adapted to pass over said platforms, said bars being separated to form pockets for lead ingots; a driving mechanism for said sprocket wheels and chains; a transmission mechanism connecting said driving mechanism and the driving mechanism of the casting machine upon which said casting is mounted for operating the driving mechanism and chains connected therewith in unison with the operation of the casting machine; and means embodied within said transmission mechanism for regulating the proportionate movement of said driving mechanism.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES G. RAUCH.

Witnesses:

CHARLES S. STETTLER,
HENRY N. SIEGER.