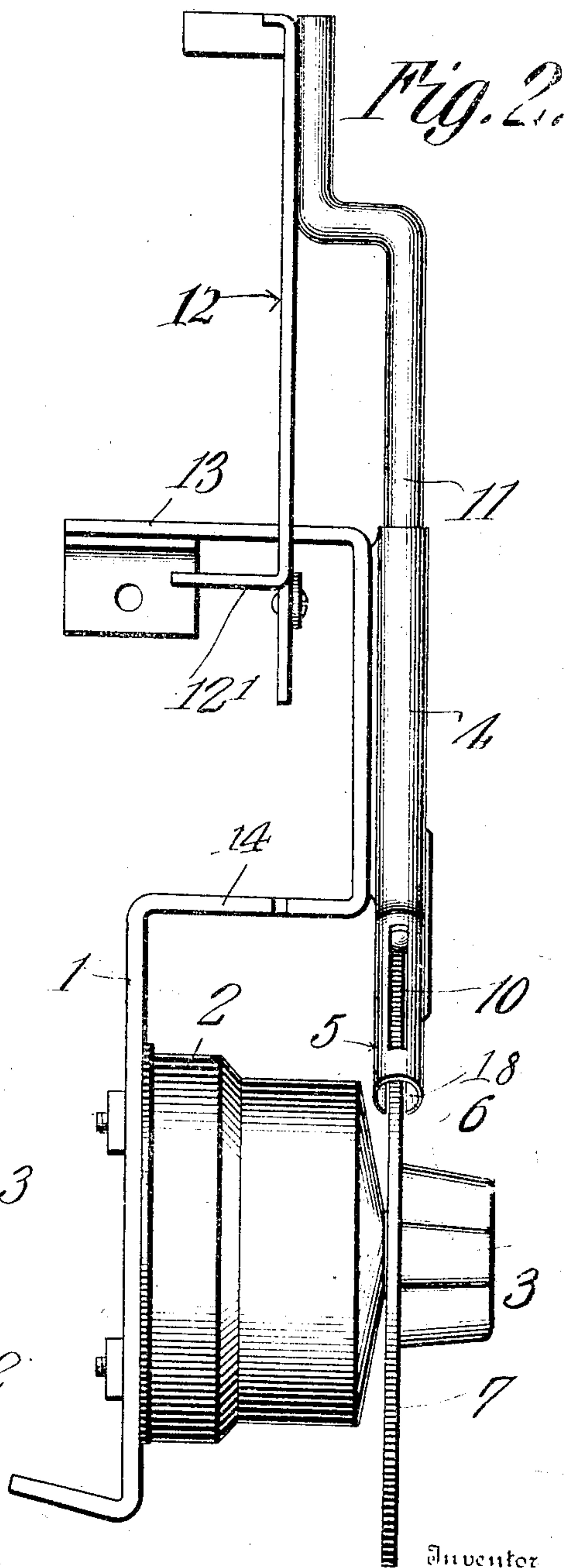
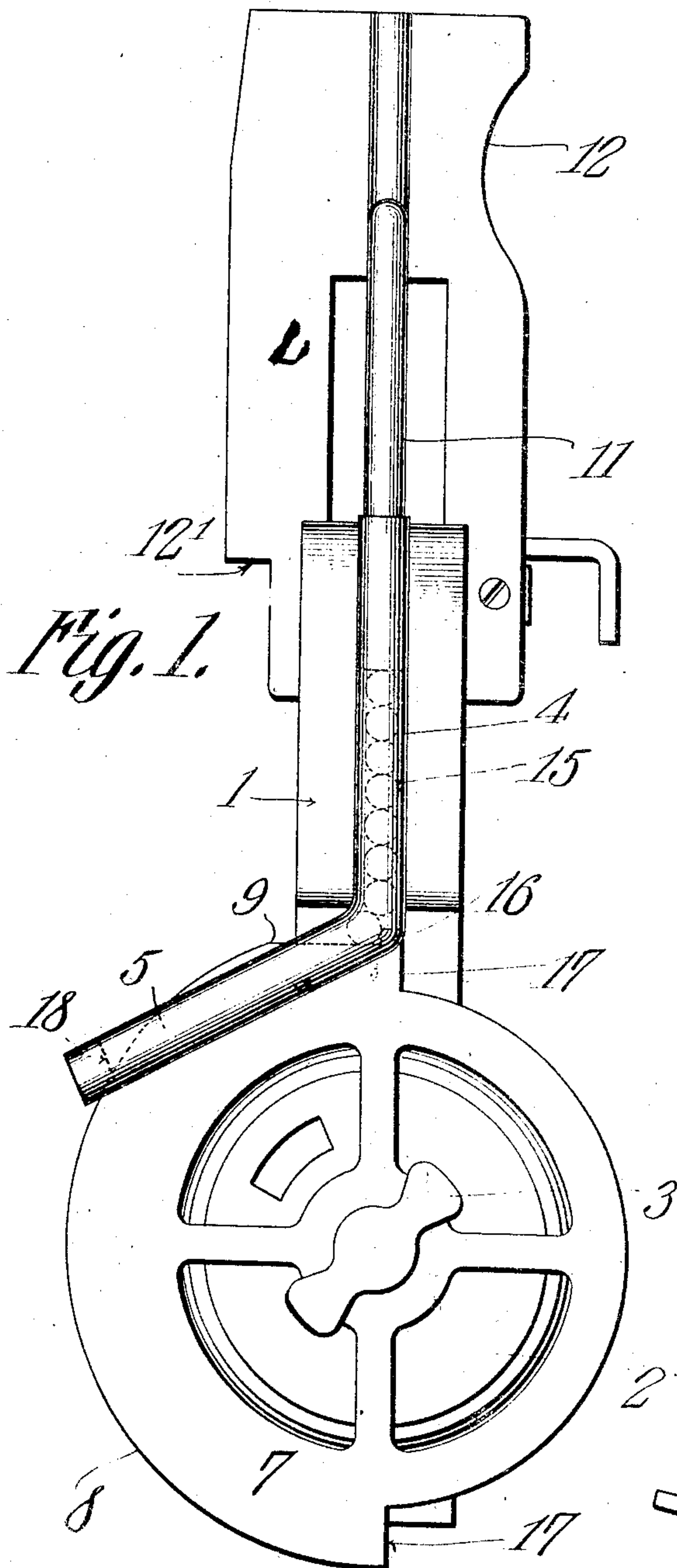


O. H. DESMARAIS.
ATTACHMENT FOR LINOTYPE MACHINES.
APPLICATION FILED AUG. 24, 1908.

907,754.

Patented Dec. 29, 1908.
2 SHEETS—SHEET 1.



Witnesses

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By

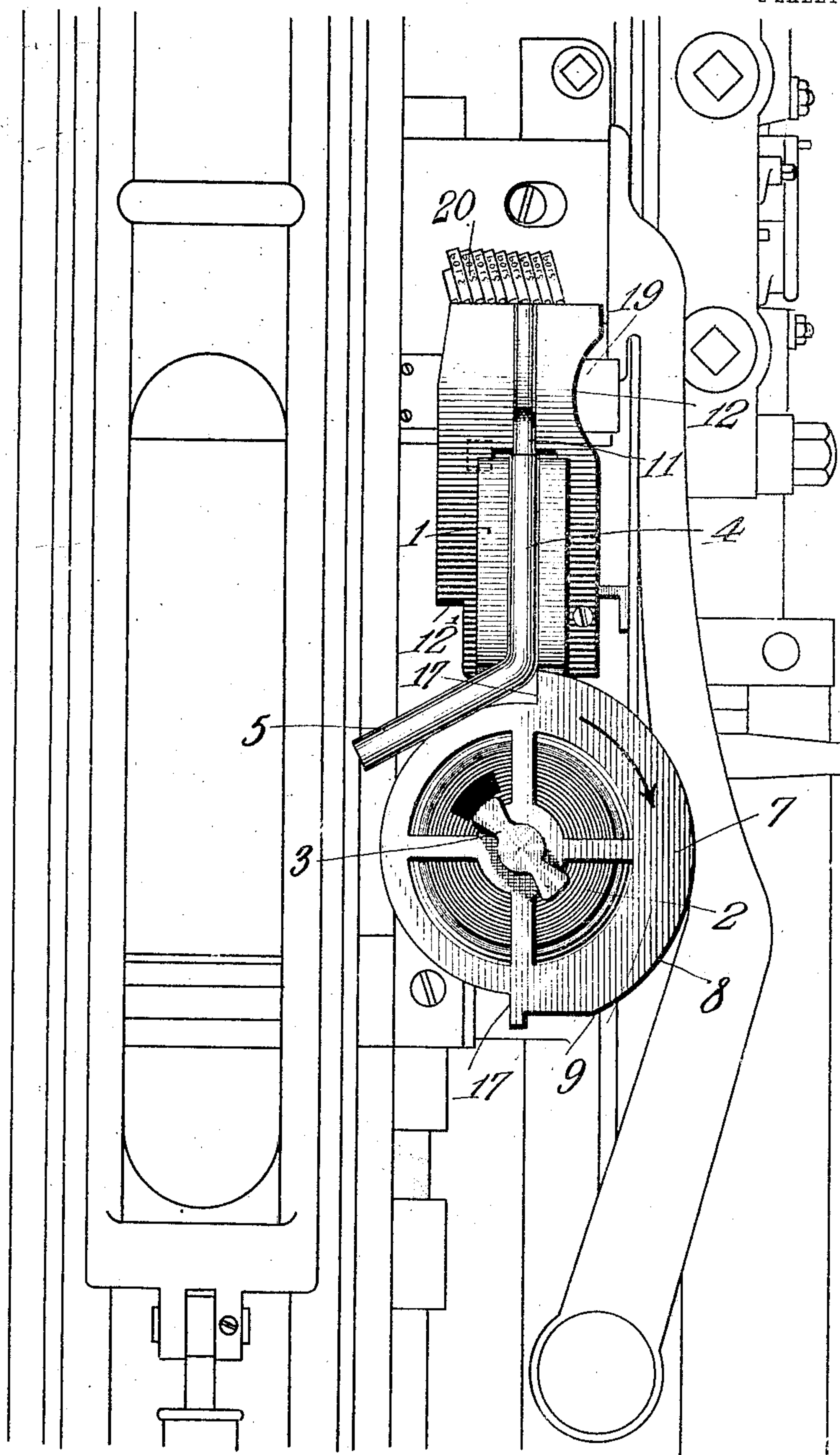
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Witnesses *Fig. 3.*

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UNITED STATES PATENT OFFICE.

OSCAR H. DESMARAIS, OF NEW YORK, N. Y.

ATTACHMENT FOR LINOTYPE-MACHINES.

No. 907,754.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed August 24, 1908. Serial No. 450,032.

To all whom it may concern:

Be it known that I, OSCAR H. DESMARAIS, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Attachment for Linotype-Machines, of which the following is a specification.

This invention has reference to improvements in attachments for linotype or other type setting or casting machines, and its purpose is to cause an economy in power in machines of this class.

When an operator has finished a take, it is customary to extract the cast lines in the galley and to place them on the bank. This takes an appreciable time and during such time the operator often fails to shut off the power and consequently for such a period of time the power is doing no useful work.

By the present invention it is made impossible to remove the lines in the galley until the power has been shut off. It is customary to use electric power for driving machines of the character to which this invention relates, and, consequently, the present invention is made applicable to an electric switch, so that the current must be turned off by a suitable manipulation of the switch before it is possible to remove the slugs in the galley, and the power will remain off until the operator returns to resume his work. By this means a material saving of power is effected, whether the operator so desires or not.

The invention comprises an attachment in the nature of a lock mechanism under the control of an electric switch and so arranged that when the switch is in the "on" or active position the galley which receives the lines as they are cast is locked in such a manner that the lines cannot be removed from the galley, and when the switch is in the "off" position, then the lock mechanism is moved out of the path of removal of the lines from the galley.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming a part of this specification, in which drawings—

Figure 1 is a face view of the attachment showing its relation to the electric switch. Fig. 2 is a side elevation of the same. Fig. 3 is a view similar to Fig. 1, but showing the

attachment applied to a linotype machine, the parts being in the position assumed when the power is shut off.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

Referring to the drawings there is shown a bracket or frame 1 carrying an electric switch 2, which may be of the ordinary snap type with its rotary member under the control of the usual manipulating button 3. The invention is not confined to the use of this particular type of switch since any suitable type of switch may be used, but a snap type of switch is in common use in type setting and casting machines, and such a switch has positive points of stopping, being usually rotated clockwise as viewed in Figs. 1 and 3 and indicated by the arrow in Fig. 3.

In Figs. 1 and 2 the typesetting machine has been omitted but is, in part, shown in Fig. 3.

Fast on the frame or bracket 1 is a tubular member 4 having one end bent at an angle, as shown at 5, and lying substantially tangential to an arc drawn from the center of the switch as an axis. This angle member 5 of the tube 4 is formed with a longitudinal slot 6 for the reception of an annular cam member 7 fast on the stem of the switch, so as to be rotated therewith when the button 3 is turned. The cam portion 8 extends through approximately one half the circumference of the cam member so as to be active when the switch is moved to the "on" position, and to be inactive when the switch is in the "off" position. The cam portion 8 is provided with a shoulder 9 formed by cutting away a portion of the cam surface, and this cam portion is adapted to extend entirely across the angle portion 5 of the tube 4 and through another slot 10 formed in the wall of the tube portion 5 opposite the slot 6.

Entering the upper end of the tube 4 is a rod 11, and the end of the rod remote from that entering the tube 4 carries a plate 12 adapted to move into and out of operative relation to the galley of the linotype machine, which galley is indicated at 19 in Fig. 3. The lower end of the plate 12 may be divided and straddle an offset portion 13 of the frame or bracket 1 and move in recesses 14 on opposite sides of the offset portion of the

frame 1, thereby co-acting with the rod 11 to cause a smooth and even movement of the plate 12.

Housed within the tube 4 between the lower end of the rod 11 and the cam 7 is a series of metal balls 15, the lower member of the series engaging either the shoulder 9 or the peripheral surface of the cam portion 8 of the cam member. At the end of the shoulder 9 remote from the point where it merges into the peripheral portion of the cam member is a projection or tooth 16. The cam portion 8 terminates at the two ends in abrupt radial shoulders 17.

In the position of the parts shown in Fig. 1, the plate 12 is in its active position, in which position it is in such relation to the galley that it is impossible to withdraw from the galley the cast lines, and in this position the switch is "on". By rotating the switch clockwise, as viewed in Fig. 1, a sufficient distance, the switch is turned to the "off" position shown in Fig. 3. When this position is reached, the cam section 8 has moved through the angle portion 5 of the tube 4, until the shoulder 17 remote from the shoulder 9 has reached substantially the position opposite that shown in Fig. 1. Under these conditions the cam section 8 is entirely out of the path of the balls 15 and these balls gravitate to the lower end of the angle section 5 of the tube 4 and the rod 11 and plate 12 follow the balls so that the plate 12 is correspondingly lowered, and is thereby moved out of coincidence with the galley, so that the cast lines or type the upper ends of which are shown exposed at 20 in Fig. 3 may be readily removed from the galley to be ultimately placed on the bank. The balls 15 are prevented from escaping from the lower end of the angle extension 5 by a suitable plug 18. Under these conditions the power has been cut off, and, consequently, there is no waste of power while the operator is away from the machine. When the operator returns he must further rotate the switch to again cut in the power, and in doing so the shoulder 17 adjacent to the shoulder 9 first engages the lowermost of a series of balls 15 and forces the same along the angle extension 5 of the tube 4 and up into the tube 4, elevating the rod 11 and the plate 12. Ultimately the projection or tooth 16 will ride under the lowermost ball and the series of balls will fall slightly until arrested by the shoulder 9. It is now impossible to reverse the direction of the switch since the tooth or projection 16 and shoulder 9 co-act to clamp the lowermost ball against the inner wall of the tube extension 5; this structure thereby providing a positive locking means which automatically acts when the switch is "on" to prevent a retrograde movement of the switch. Meanwhile, the electrical portions of the switch, if the switch be of the snap

type, have snapped into place, and the circuit is completed, while the plate 12 has been elevated to a position closing the galley chamber to access by the operator.

By means of the attachment forming the subject matter of this present application, the operator is forced, whenever he wishes to remove the type lines or slugs from the machine, to cut off the power, and since it is the rule to remove these type lines or slugs whenever the machine is to be left for a period of time, as when the operator leaves the room or the building, it will be seen that it is impossible for the operator to leave the machine running under any conditions when he would be away from the machine for any material period of time. The device, therefore, acts to economize power and the expense of running type setting and casting machines.

The operator may, instead of lifting the slugs from the galley, remove the galley itself with the contained slugs. To prevent the removal of the galley with the slugs therein, before the power is shut off, a lower part of the plate 12 is cut and turned up to form a tongue 12', but at substantially right angles to the plate, so that when the plate is raised, this tongue 12' is flush up against the bottom of the galley which latter at such point carries an extension then engaged by the tongue so that the galley is locked against removal as well as the slugs. Therefore, it follows that the slugs cannot be removed from the machine either by being lifted out of the galley or by lifting out the galley and contained slugs.

In Fig. 3 the attachment is shown applied to a machine known as the linotype machine, the galley 19 being shown with the attachment in place. Those parts of the machine to which the attachment is applied, which are shown in Fig. 3, being of well known construction, it is not deemed necessary to describe the showing in detail.

What is claimed is:—

1. In a machine of the class described, means for locking the galley for the reception of type lines or slugs, and a power controlling means acting to move the galley lock to the unlocked position when the power is turned off, and to move the same to the locked position when the power is turned on.

2. In a machine of the class described, a movable member adapted to cooperate with the galley for the type lines or slugs to close the said galley to access, a power controlling means movable to apply and cut off the power, and connections for transmitting the movement of the power controlling means to the said movable member for causing the actuation of the same by and in accordance with the movement of the power controlling means.

3. In a machine of the class described, a

movable member adapted to cooperate with the galley for the reception of type lines or slugs to close and open the same to access, an electric switch, and connections between the switch and the movable member for causing the actuation of the latter by and in accordance with the movements of the switch to its active and inactive positions.

4. In a machine of the class described, a gravity member adapted for cooperation with the galley for receiving the lines of type or slugs to close and open the same to access, an electric switch, connections between the switch and the gravity member for moving the gravity member against the action of gravity to close the galley when the switch is actuated to the active position, and to release the gravity member to the action of gravity for movement away from the galley when the switch is actuated to the "off" position.

5. In a machine of the class described, a guided plate adapted to cooperate with the galley for receiving the lines of type or slugs to close and open the same to access, a rotatable electric switch, and connections between the switch and the plate for causing the movement of the same in one direction when the switch is actuated to active position, and for permitting the movement of the plate to the other position when the switch is actuated to the "off" or inactive position.

6. In a machine of the class described, a movable member adapted to cooperate with the galley for the reception of type lines or slugs, an electric switch, a cam member carried by said switch, and connections between the cam member and the movable plate responsive to said cam member to actuate the plate to active position when the switch is moved to its active position.

7. In a machine of the class described, a movable member adapted to cooperate with a galley for the reception of type lines or slugs to close or open the same to access, an electric switch having a progressive movement to the active and inactive positions, connections between the switch and movable member for causing the movements of the movable member in accordance with movements of the switch, and means co-acting with the connections between the switch and movable member for preventing retrograde movement of the switch.

8. In a machine of the class described, a plate having reciprocatory movement, a rotary electric switch, a cam member carried by the switch and participating in its move-

ments, a tubular member entered by the cam on one phase of its movement, a rod carried by the reciprocatory plate and entering the tubular member, and a series of balls housed in the tubular member in the path of the cam during its active movement.

9. In a machine of the class described, a reciprocatory plate, a rod supporting the same, a tube entered by the rod and provided with a slotted angle extension, a series of balls housed in the tube and adapted to move into the angle extension and engaging the inner end of the rod, a rotary electric switch, and a cam carried by the switch having a cam section adapted to enter the angle extension of the tube through the slots therein.

10. In a machine of the class described, a reciprocatory plate, a rod supporting the same, a tube entered by the rod and provided with a slotted angle extension, a series of balls housed in the tube and adapted to move into the angle extension and engaging the inner end of the rod, a rotary electric switch, and a cam carried by the switch having a cam section adapted to enter the angle extension of the tube through the slots therein, said cam section having a shouldered portion terminating in a tooth or extension adapted to co-act with the balls to lock the cam and switch against retrograde movement.

11. In a machine of the class described, means for locking the galley for the reception of type lines or slugs both against the removal of the galley from the machine and the removal of the type lines or slugs from the galley, and a power controlling means acting to move the galley lock to the unlocked position when the power is turned off and to move the lock to the locked position when the power is turned on.

12. In a machine of the class described, a galley lock for preventing the removal of type-lines or slugs, and connections between the power controller of the machine and the galley lock for moving the lock to active position by the movement of the controller to cause the application of power, and for moving the lock to inactive position when the power is cut off.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

OSCAR H. DESMARAIS.

Witnesses:

JAMES A. BAIRD,
JOSEPH E. TULLY.