

No. 787,138.

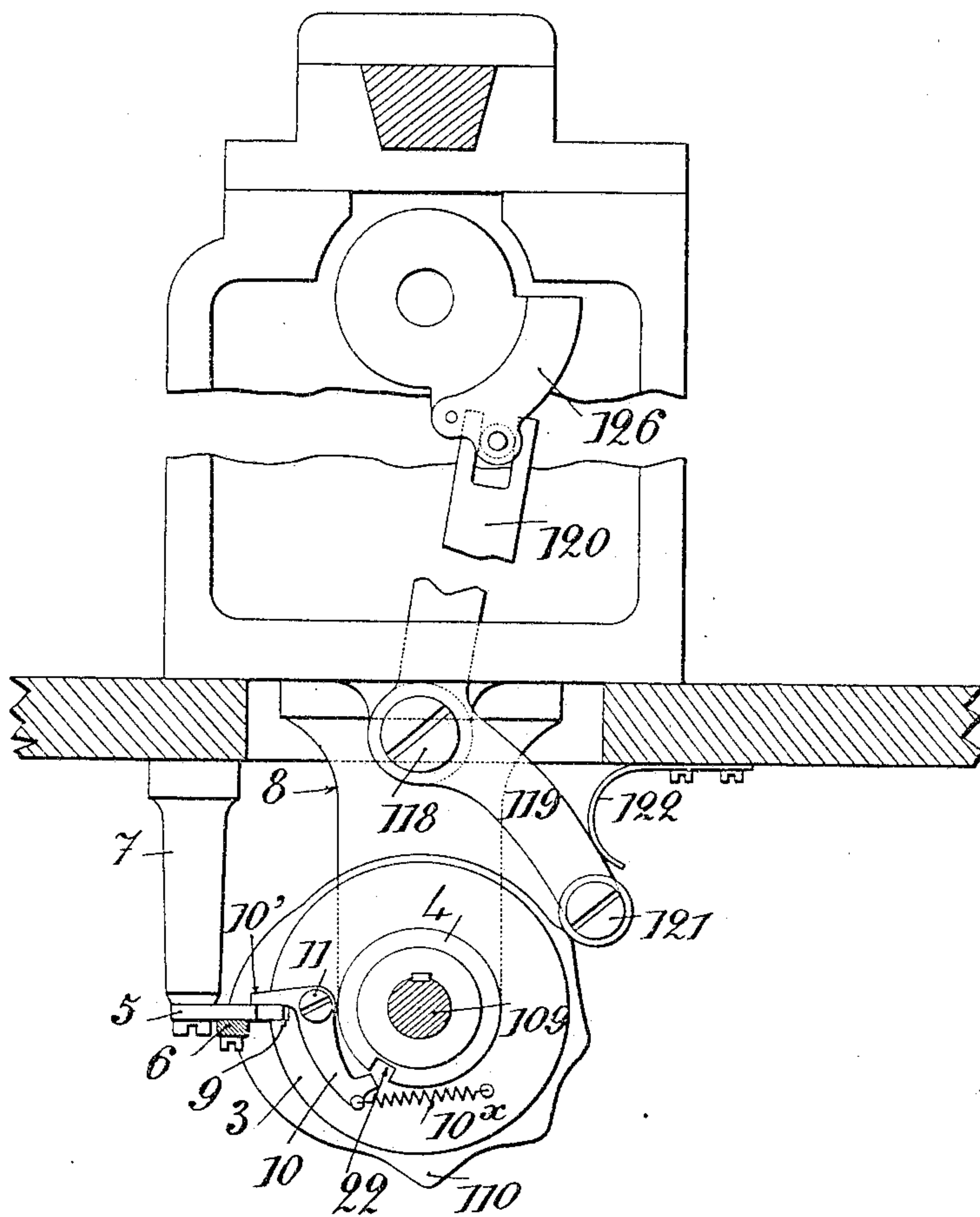
PATENTED APR. 11, 1905.

M. WEHRLIN.
INTERMITTENT CLUTCH DEVICE FOR TYPE CASTING AND TYPE COMPOSING
MACHINES.

APPLICATION FILED MAY 9, 1903.

3 SHEETS—SHEET 1.

FIG. 1.



WITNESSES :

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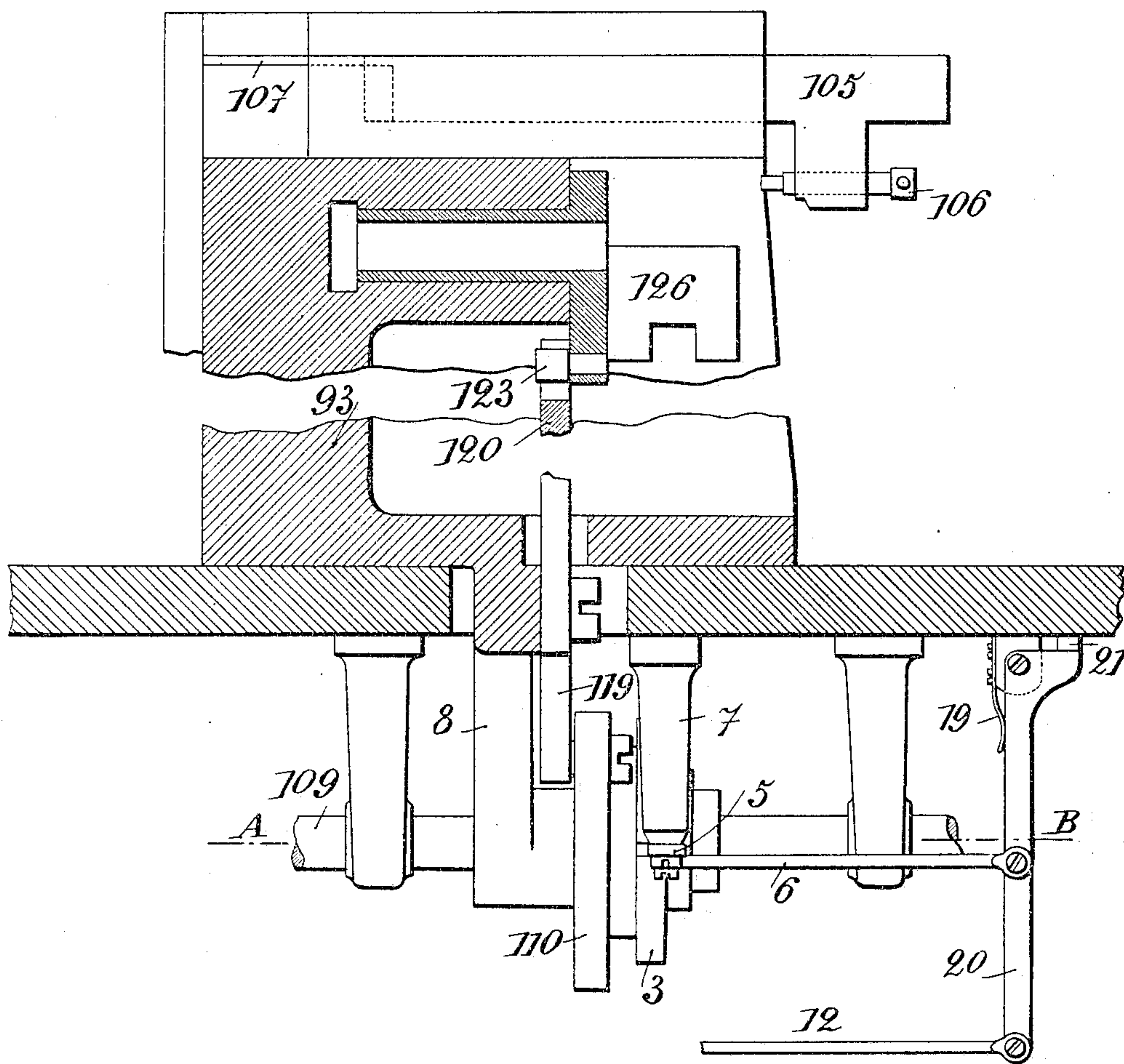
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3 SHEETS—SHEET 2.

FIG. 2.



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3 SHEETS—SHEET 3.

FIG. 3.

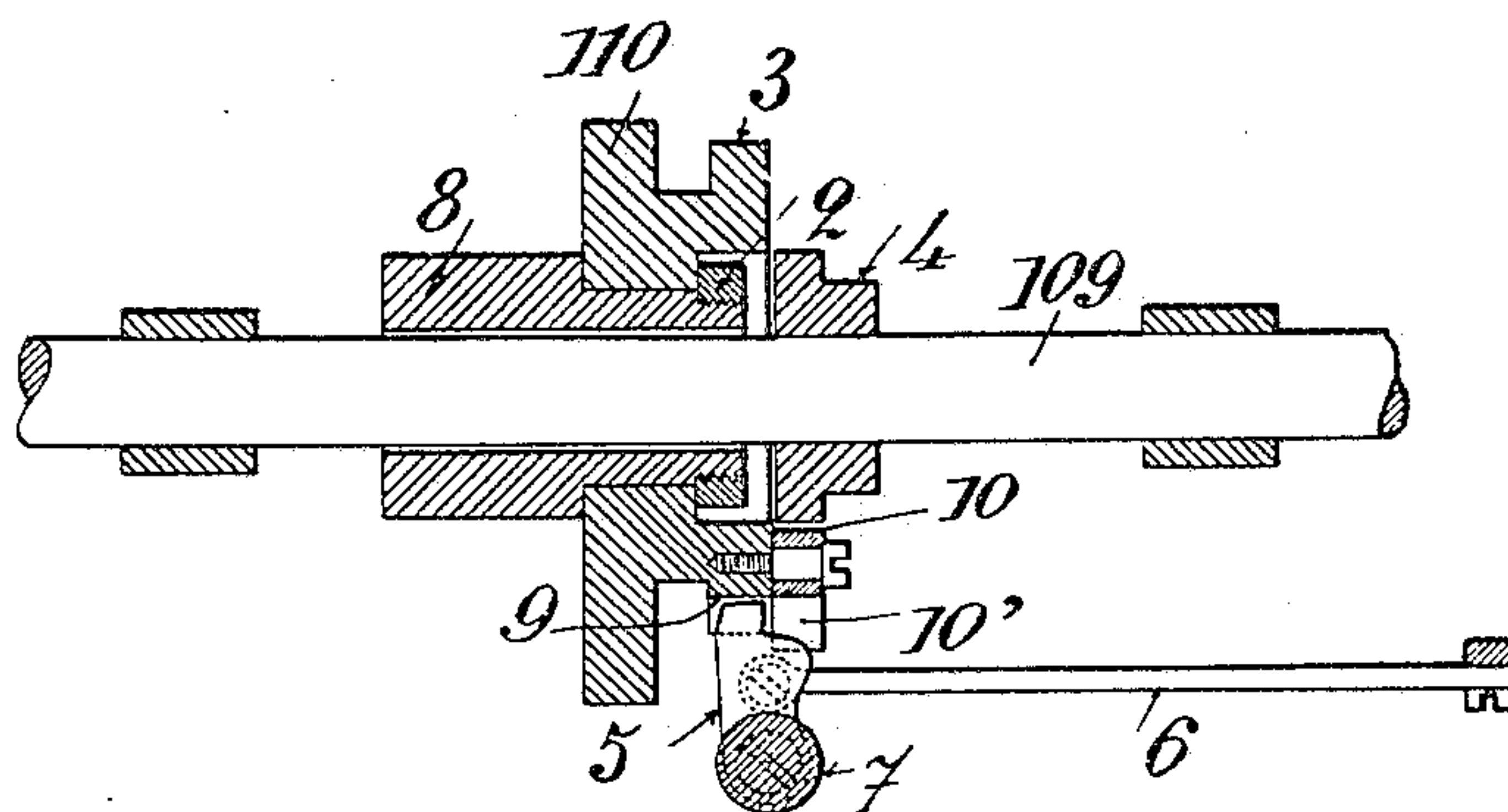
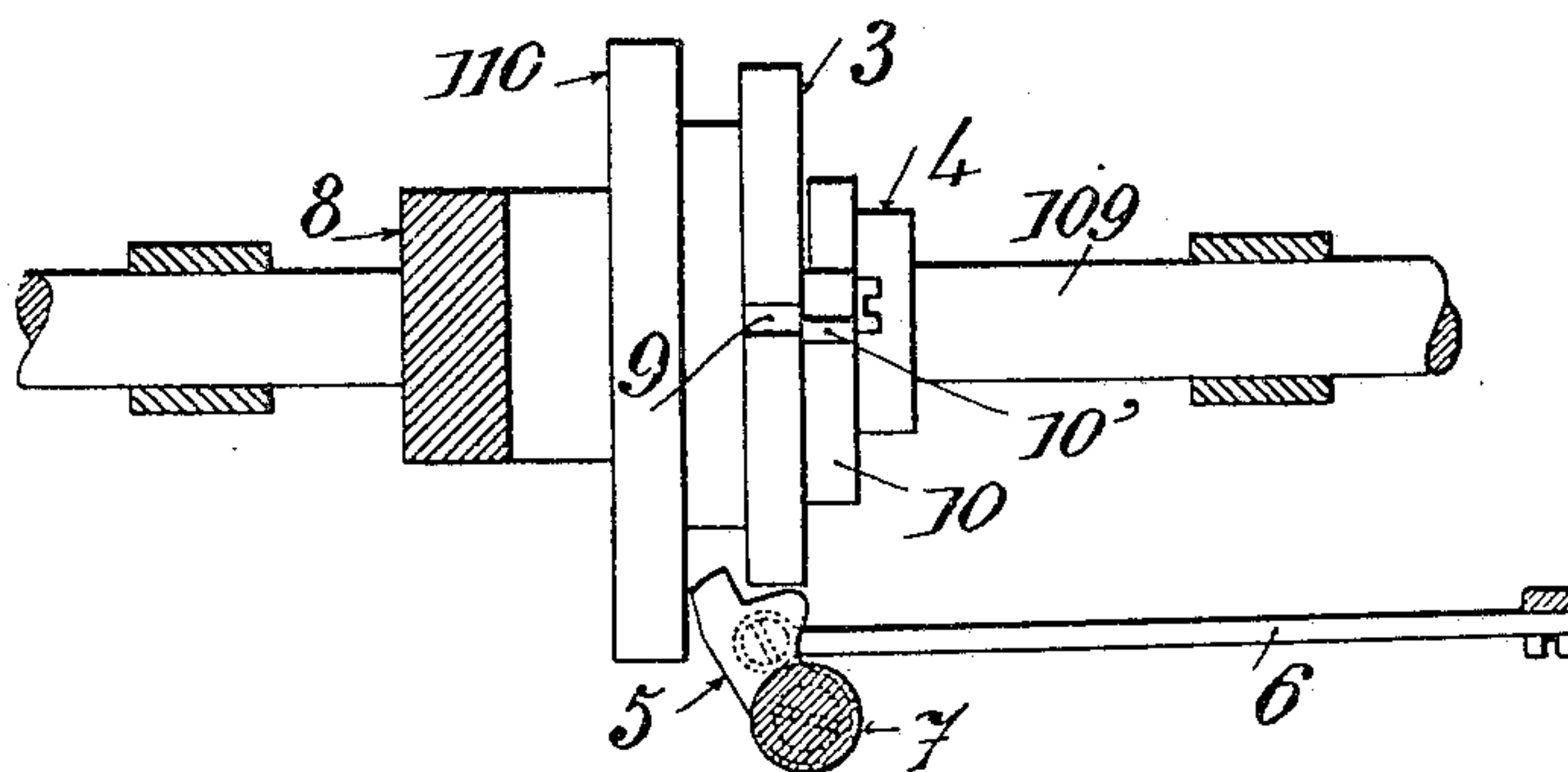


FIG. 4.



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UNITED STATES PATENT OFFICE.

MAURICE WEHRLIN, OF PARIS, FRANCE, ASSIGNOR TO COMPAGNIE INTERNATIONALE DE L'ELECTRO-TYPOGRAPHE MERAY & ROZAR, OF PARIS, FRANCE.

INTERMITTENT CLUTCH DEVICE FOR TYPE-CASTING AND TYPE-COMPOSING MACHINES.

SPECIFICATION forming part of Letters Patent No. 787,138, dated April 11, 1905.

Application filed May 9, 1903. Serial No. 156,450.

To all whom it may concern:

Be it known that I, MAURICE WEHRLIN, engineer, a citizen of the Republic of France, residing at 74 Rue de la Fictoire, Paris, in the Republic of France, have invented certain new and useful Improvements in Intermittent Clutch Devices for Type-Casting and Type-Composing Machines, of which the following is a specification.

This invention relates to machines for casting and composing movable type of the system made known by the English Patent No. 18,542 of 1900; and it has for its purpose to insure a longer duration of and greater security for the operation of the apparatus for justifying the lines described in the said patents, and that by means of a simplification of the movements of the said apparatus.

Heretofore all the mechanisms contemplated for preparing the striking of the mold-drawer in view of the justification of the line remained continuously in motion, although they were only used during two revolutions of the shaft before the beginning of each line. The continuously-rocking movements of the yoke 126 of the said machines, which follow each other in rapid succession, on account of the great speed of rotation led to such rapid and heavy wear and tear at the pivoting-points that the very strictly limited accuracy of the said movements was soon lost and the device for justifying no longer served its purpose. The present arrangement does away with this objection in that it allows of the rocking movements of yoke 126 being produced exclusively during the period of preparation for the justification before the beginning of each line and of keeping the yoke 126 at rest during the remainder of the time. The advantage of this arrangement is of very great importance even with short lines. For instance, with lines containing fifty characters the yoke 126 instead of remaining in motion, as in the previous arrangement made known by the aforesaid patents, during the casting of the type and then during the justification and the carriage of the line will only operate during

the justification—that is to say, instead of making fifty-three complete movements it will only make two.

The mechanical arrangements of this invention are shown in the accompanying drawings, in which—

Figures 1 and 2 are a front elevation and a side elevation, respectively, of the new arrangement. Fig. 3 is a horizontal section on the line A B of Fig. 2. Fig. 4 is a plan view of the same parts in a different position.

The cam-disk 110 is independent of the main shaft of the machine 109 and rotatably mounted on a hanger or sleeve 8, on which it is held by a nut 2. The said disk is provided with a lateral crown 3, provided in its turn with a notch 9. It also carries a pawl 10, mounted on a pivot 11 and subjected to the pull of a spring 10^x.

In the position of rest of the cam-disk 110 (see Figs. 1 to 3) a stop-bolt 5 is engaged in the notch 9 and serves also at the same time as a point of support for the pawl 10. The said stop-bolt 5 is rotatably mounted on the stud 7 and connected with a pull-rod 6, by means of which it can be moved away from the notch 9 and out of reach of the pawl 10.

The pull-rod 6 is pivoted to a lever 20, held in position by the action of the spring 19, which holds the heel of the lever against an abutting screw 21. To the lever 20 is also pivoted the pull-rod 12, so that the rod 6 follows the movements of the said rod 12, intermittently made at the beginning of each line, as shown by the aforesaid patents.

In front of the pawl 10 rotates a clutch-disk 4, keyed on the shaft of the machine and provided with a single notch 22. (See Fig. 1.)

When the rod 12 is put in motion by the action of a determined combination of perforations of the registering-band, as shown by the aforesaid patents, the stop-bolt 5 is withdrawn from the notch 9 of the crown 3 of the disk 110 (see Fig. 4) and at the same time carried out of reach of the pawl 10 through the medium of the lever 20 and the rod 6. The pawl 10 is thus rendered free to follow the

pull of the spring 10^x and falls onto the rim of the disk 4, which is revolving. Then when toward the end of this rotary movement of the disk the notch 22 of the latter comes under the pawl 10 the latter falls into the same, and the cam-disk 110 is thus caused to follow the rotary movement of the shaft 109. The parallel form of the striking edges of the notch 22 and of the corresponding meshing tooth of the pawl 10 insures a forward rotation of the cam-disk which is absolutely invariable with respect to the rotary movement of the shaft.

So long as the rod 12 remains in motion in the manner shown by the aforesaid patents the stop-bolt 5 also remains out of reach of the pawl 10 and out of the notch 9 of the crown 3; but when the rod 12 after the third revolution of the shaft of the casting-machine moves back toward its normal position the lever 20 under the action of the spring 19 also causes the rod 6, together with the stop-bolt 5, to move back toward their primary positions. Then the arm 10' of the pawl 10 comes and bears against the stop-bolt 5, and the clutch-disk 4 continuing its movement gradually disengages the said pawl from the notch 22. At the last moment and so soon as the pawl 10 leaves the notch 22 the notch 9 comes opposite the stop-bolt 5, which then following the pull of the spring 19 and of the pull-rod 6 falls at once into the said notch 9. The cam-disk 110 is thus brought to rest and the pawl 10 lies out of reach of the clutch-disk 4, so that the latter can continue to turn with the shaft of the machine. At the next line only will the cam-disk 110 be again brought into action, together with the mechanism of justification.

I claim—

1. In a justifying mechanism for type casting and composing machines, the combination of a shaft, a loosely-mounted disk provided with a notch, a second disk fixedly secured to the shaft and provided with a notch, a spring-pressed pawl carried by the first disk and adapted to engage the notch of the second disk, a stop-bolt mounted on a fixed support and adapted to engage the notch of the first disk and when in engagement with said notch to support and hold the pawl against the action of its spring, and means for operating the said bolt.

2. In a justifying mechanism for type casting and composing machines, the combination of a shaft, a cam-disk loosely mounted on a support concentric with the shaft, said disk having a lateral crown provided with a notch in its periphery, a clutch-disk fixedly secured to the shaft and provided with a notch in its periphery, a pivoted and spring-pressed pawl carried by the cam-disk and adapted to engage the notch of the clutch-disk, said pawl being provided with an arm, a bolt pivoted to a fixed support and adapted to engage the notch of the cam-disk and when in engagement with said notch to engage the arm of the pawl to support and hold the pawl out of engagement with the notch of the clutch-disk, and a lever mechanism for operating the bolt.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

MAURICE WEHRLIN.

Witnesses:

AUGUSTUS E. INGRAM,
MAURICE ROUX.