(No Model.)

B. HUBER.

GRIPPER MECHANISM FOR PRINTING MACHINES.

No. 347,487. Patented Aug. 17, 1886.

FIG. 2.

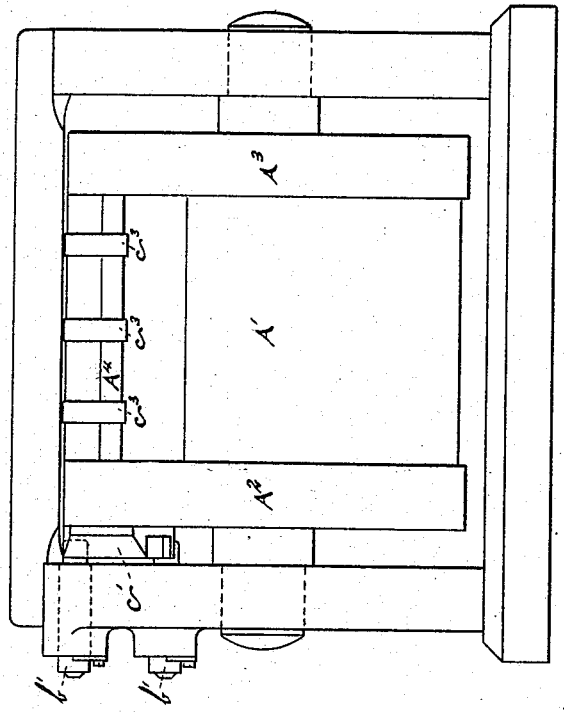


FIG. 7.

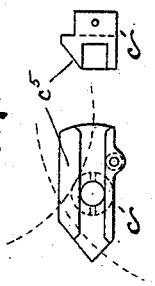


FIG. 6.

FIG. 5.

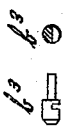


FIG. 1.

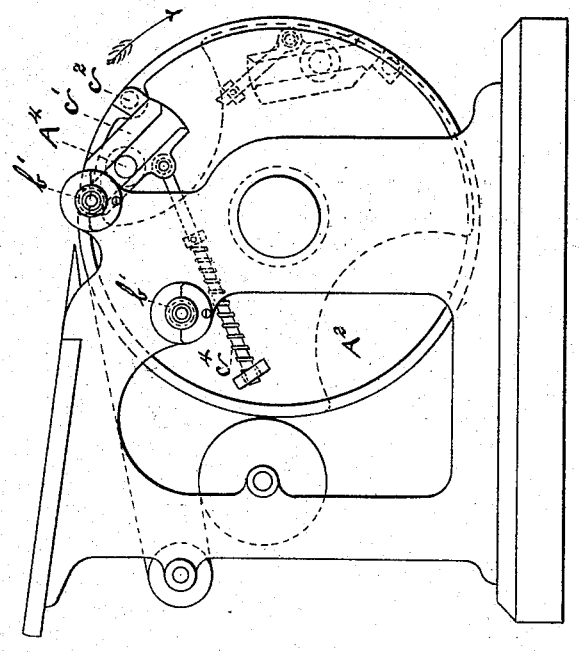
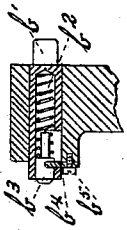


FIG. 4.

FIG. 3.



WITNESSES.
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GRIPPER MECHANISM FOR PRINTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 347,487, dated August 17, 1886.

Application filed December 26, 1885. Serial No. 186,813. (No model.)

To all whom it may concern:

Be it known that I, BERTHOLD HUBER, of Taunton, in the county of Bristol and State of Massachusetts, have invented a certain new and useful Improvement in the Gripper Mechanism for Printing-Machines, which improvement is fully set forth and illustrated in the following specification and accompanying drawings.

My invention relates to that class of printing-presses which have continuously-rotating impression-cylinders, and in which the sheet is held at its leading edge against the impression-surface by a number of grippers attached to a rock-shaft journaled in the ends of the impression-cylinder and operated by means of a slotted tumbler-cam secured to one end of said rock-shaft, the slotted tumbler-cam being operated by either fixed or movable studs, according as the cylinder makes one or more revolutions to each impression, which engage the slot in said tumbler-cam.

The object of my invention is to provide means to prevent the liability of any of the above-named parts being fractured, if by carelessness or ignorance the slotted tumbler-cam should be placed in a wrong position before starting the press, thereby making it impossible for the stud to enter the slot in the said cam.

In the accompanying drawings I have shown my invention as applied to a single-revolution impression-cylinder.

Figure 1 is an end elevation of the cylinder and attached gripper mechanism. Fig. 2 is a side elevation of the same. Fig. 3 is a section through a stud and part of the frame, showing all the parts of the stud. Fig. 4 is a section showing the hollow spindle of the stud. Fig. 5 shows the spring-step. Fig. 6 shows the spring-step stop. Fig. 7 shows the slotted tumbler-cam having its leading side beveled.

The dotted arcs, Fig. 7, show the paths taken by the studs in relation to the tumbler-cam when said cam is placed in the wrong positions.

In the drawings the several parts are respectively indicated by letters.

In the ends A^2 A^3 of the impression-cylinder A′ are the bearings for the gripper-shaft A^4. On the end of the gripper-shaft A^4, outside of the cylinder end A^2, is secured the slotted tumbler-cam c', and it is held against its stop c^2, when the grippers c^3 are either open or closed, by the coiled spring c^4, applied in the usual manner. One side, c^5, of the tumbler-cam c' is inclined or beveled. (See Fig. 7.) The spindle of the operating-stud b' is made hollow, and in the cavity is placed the coiled spring b^2 and the spring-step b^3. (See Fig. 3.) Near the outside end of said spindle is a notch, e', the depth of which is about one-half the diameter of the spindle, and the length equal to a little more than the thickness of the spring-step stop b^4, plus the distance that the engaging end of the spindle or stud projects out from the frame toward the cylinder end A^2. In the spring-step b^3 is a notch which fits on the spring-step stop b^4, said stop being fastened to the frame by a screw-bolt, b^5.

When the impression-cylinder A′ revolves in the forward direction indicated by the arrow, and the tumbler-cam c' is in its proper position, the slot in said cam engages the ends of the studs b', and the grippers are caused to open and close in the usual manner. Should, however, the grippers be left open when they should be closed, or vice versa, then the inclined or beveled side c^5 of the tumbler-cam c' will strike against the end of the stud b', causing it to contract the spring b^2 and slide back into its bearing in the frame until the tumbler-cam c' has passed.

I have shown my invention as applied to a continuously-rotating impression-cylinder, but am aware that it can be applied to an oscillating impression-cylinder, in which case it would be advisable to make both sides of the tumbler-cam inclined or beveled.

Having fully described my invention, I claim—

1. In a cylinder printing-press, the slotted tumbler-cam having its side inclined or beveled parallel to the slot in said tumbler-cam, in combination with the sliding operating-studs, substantially as and for the purpose set forth.

2. In the gripper mechanism of a cylinder printing-press, a slotted tumbler-cam, c', having its side inclined or beveled, in combination with the sliding operating-studs b', provided with hollow spindles, coiled springs b^2, spring-steps b^3, and spring-step stops b^4, substantially as set forth.

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