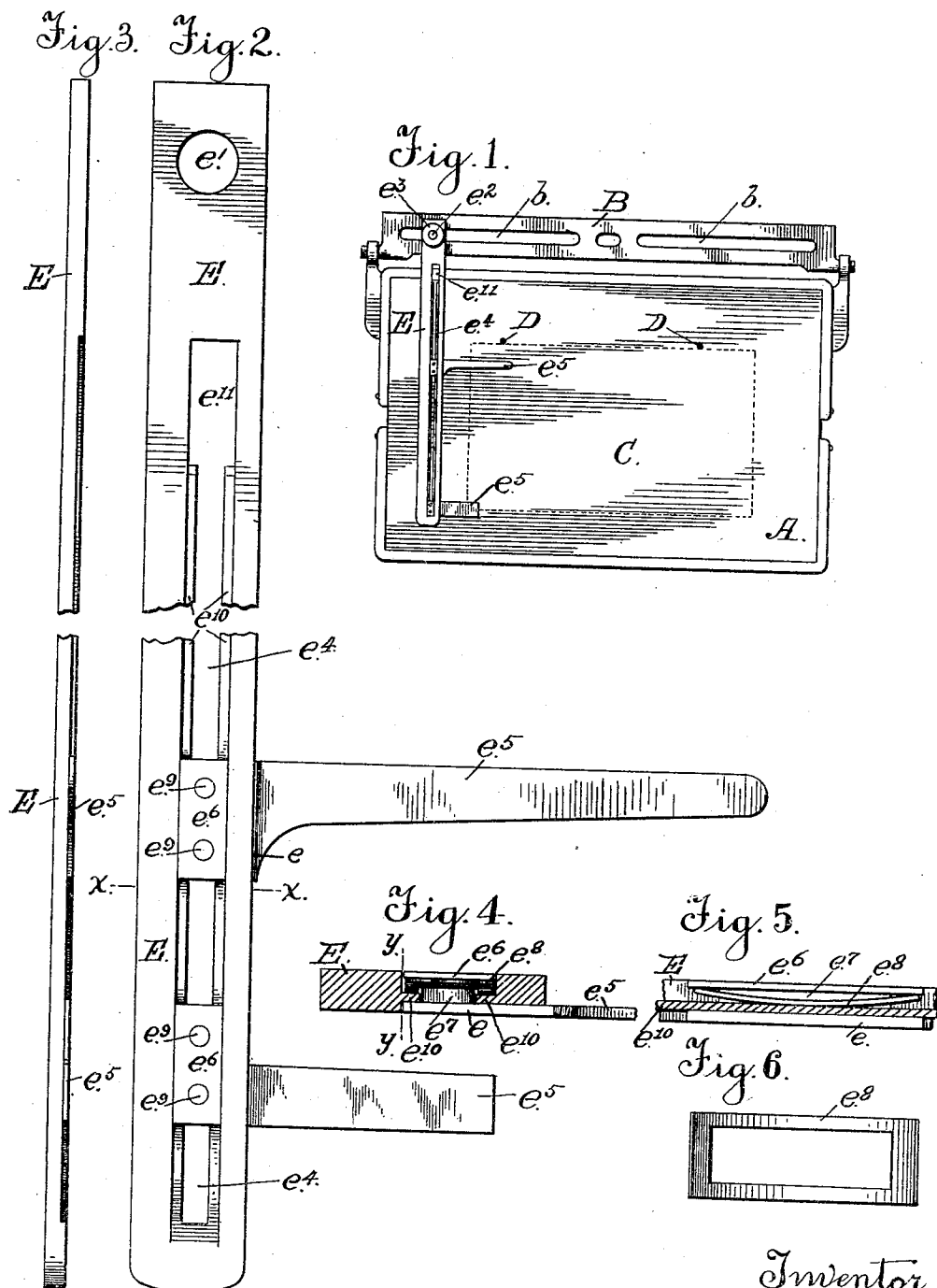


No. 822,967.

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F. I. MACAULEY.
GRIPPER FOR PRINTING PRESSES.
APPLICATION FILED NOV. 11, 1905.



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANK I. MACAULEY, OF ALAMEDA, CALIFORNIA.

GRIPPER FOR PRINTING-PRESSES.

No. 822,967.

Specification of Letters Patent.

Patented June 12, 1906.

Application filed November 11, 1905. Serial No. 286,785.

To all whom it may concern:

Be it known that I, FRANK I. MACAULEY, a citizen of the United States, residing at Alameda, county of Alameda, State of California, have invented certain new and useful Improvements in Grippers for Printing-Presses; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of grippers for the platens of printing-presses in which the gripper-strip is formed with a longitudinal slot, serving as a means of connection and a guide for adjustable extensions or arms fitted thereto.

My present invention consists in certain improvements in that form of gripper for which Letters Patent of the United States No. 721,377 were granted to me February 24, 1903, said improvements lying in the form of the guide-slot and the construction of the clamp-head of the adjustable extension or arm, as I shall hereinafter fully describe.

The objects of my invention are to simplify the clamp-head both in construction and use and to provide for readily fitting it to and removing it from the gripper.

Referring to the accompanying drawings, Figure 1 is a plan view of the platen of a printing-press, showing the general application of my gripper. Fig. 2 is a plan, enlarged, of my gripper. Fig. 3 is an edge view of the same. Fig. 4 is a cross-section on the line $x x$ of Fig. 2. Fig. 5 is a section on the line $y y$ of Fig. 4. Fig. 6 is a top view of the spring of the clamp-head.

In Fig. 1, A is the platen of a printing-press.

B is the oscillating gripping-bar carried thereby and provided with the usual longitudinal slot or slots b .

C represents in dotted lines the paper on the platen, and D represents the gage-pins for registering the paper.

E is the gripper-strip, provided at one end with the hole e' to secure a bolt e^2 and nut e^3 to adjustably secure the gripper in the slot or slots b of the gripper-bar.

The gripper consists, as in my previous patent, of a flat strip formed with the longitudinal slot e^4 , adapting it for the adjustable extensions or arms e^5 , of which there may be one or more, two being here shown, of different shapes to suit various situations. The thickness of the gripper-strip E on that side of the slot e^4 which is traversed by the ex-

tensions e^5 is less than that of the remainder of the strip, the material being recessed or taken away from the under surface, so that the extensions may pass under the thin or recessed part of the strip and may thus lie practically flush with the general under surface of the gripper, and so press flat down on the paper. This feature is the same as in my previous patent; but the clamp-heads of the extensions e^5 and the manner of inserting them in and removing them from the gripper are different. The head comprises the widened end e of the extension, a cap-plate e^6 having a seat-block e^7 on its under surface, and a bent spring e^8 , having an open center, as seen in Fig. 6, fitted over the block e^7 , so that its upturned ends, as seen in Fig. 5, rise to the cap-plate, leaving its center free to yield. The spring lies between the end e of the extension and the cap-plate e^6 , and screws or, better still, rivets e^9 , passing through cap-plate, block, and the flat end of the extension, hold the parts of the head together.

The walls of the slot e^4 are formed with thin ribs e^{10} , and at one end said slot is formed with an entrance-aperture e^{11} large enough to receive the whole head of the extension e^5 and to permit its removal.

To fit the extension e^5 to the gripper-strip E, its head is entered from below into the aperture e^{11} , so that the cap-plate e^6 lies flush with the top of the gripper-strip and the wide end e lies flush with the bottom. Now by a slight pressure on the extension, tending to advance its head into the slot e^4 , the side ribs e^{10} of said slot are caused to enter under the spring e^8 , which yielding passes on top of the ribs, while the upper surface of the wide end e of the extension passes below said ribs. Continued pressure then enters the head fully in the slot e^4 , and the ribs e^{10} are thus clamped between the spring and extension, and the extension is thus gripped with a clamping-pressure sufficient to hold it in place for any use to which it is put, and yet sufficiently yielding to allow it to be slipped along to any desired position. If greater friction be desired, the under surface of the recessed or thin portion of the gripper may be slightly roughened, though this will be found unnecessary, as the spring will hold the extension properly for all purposes.

The extension may be readily removed from the gripper-strip by sliding it back clear of the ribs e^{10} to the aperture e^{11} , in which the head is free. By this construction the ex-

tension may be easily fitted to, adjusted upon and removed from the gripper without delay or the use of tools, and when in place it is properly and truly held in the position desired. The seat-block e^7 of the extension-head cap-plate not only serves as a seat for the spring to hold it true, but its sides serve as abutting guides against the ribs e^{10} , so that the head slides true and is held steady without play or lost movement.

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

1. A gripper for printing-presses consisting of a strip formed with a longitudinal slot, said strip having its under surface, forward of the slot, recessed; and an extension provided with a head slidably fitting the slot of the strip and comprising the extension end passing under the recessed under surface of the strip, a cap-plate fitted to the slot and secured above said end, and an intervening spring for clamping said head to said strip.

2. A gripper for printing-presses consisting of a strip formed with a longitudinal slot provided with ribs on its side walls, and an extension provided with a head slidably fitted to the ribs of the slot, and comprising the extension end, a cap-plate secured above said end and an intervening spring for clamping the head to the ribs of the slot.

3. A gripper for printing-presses consisting of a strip formed with a longitudinal slot, and an extension provided with a head slidably fitting the slot of the strip and comprising the extension end, a cap-plate secured above said end, an intervening spring for clamping the head to said strip, and a block between said end and cap-plate, for seating the spring and guiding the head in the slot.

4. A gripper for printing-presses consisting of a strip formed with a longitudinal slot provided with ribs on its side walls, and an extension provided with a head slidably fitted to the ribs of the slot, and comprising the extension end, a cap-plate secured above said end, an intervening spring for clamping the head to the ribs of the slot and a block between said end and cap-plate for seating the spring and guiding the head in the slot.

5. A gripper for printing-presses consist-

ing of a strip formed with a longitudinal slot having an entrance-aperture, and an extension provided with a head adapted to be entered in and removed from said aperture and slidably fitting the slot of the strip, said head comprising the extension end, a cap-plate secured above said end and an intervening spring for clamping said head to said strip.

6. A gripper for printing-presses consisting of a strip formed with a longitudinal slot having an entrance-aperture and provided with ribs on its side walls, and an extension provided with a head adapted to be entered into and removed from said aperture, and slidably fitted to the ribs of the slot, said head comprising the extension end, a cap-plate secured above said end and an intervening spring for clamping said head to the ribs of the slot.

7. A gripper for printing-presses consisting of a strip formed with a longitudinal slot having an entrance-aperture, and an extension provided with a head adapted to be entered in and removed from said aperture and slidably fitting the slot of the strip, said head comprising the extension end, a cap-plate secured above said end, an intervening spring for clamping said head to said strip, and a block between said end and cap-plate, for seating the spring and guiding the head in the slot.

8. A gripper for printing-presses consisting of a strip formed with a longitudinal slot having an entrance-aperture and provided with ribs on its side walls, and an extension provided with a head adapted to be entered into and removed from said aperture, and slidably fitted to the ribs of the slot, said head comprising the extension end, a cap-plate secured above said end, an intervening spring for clamping said head to the ribs of the slot and a block between said end and cap-plate for seating the spring and guiding the head in the slot.

In witness whereof I have hereunto set my hand.

FRANK I. MACAULEY.

Witnesses:

J. COMPTON,

D. B. RICHARDS.