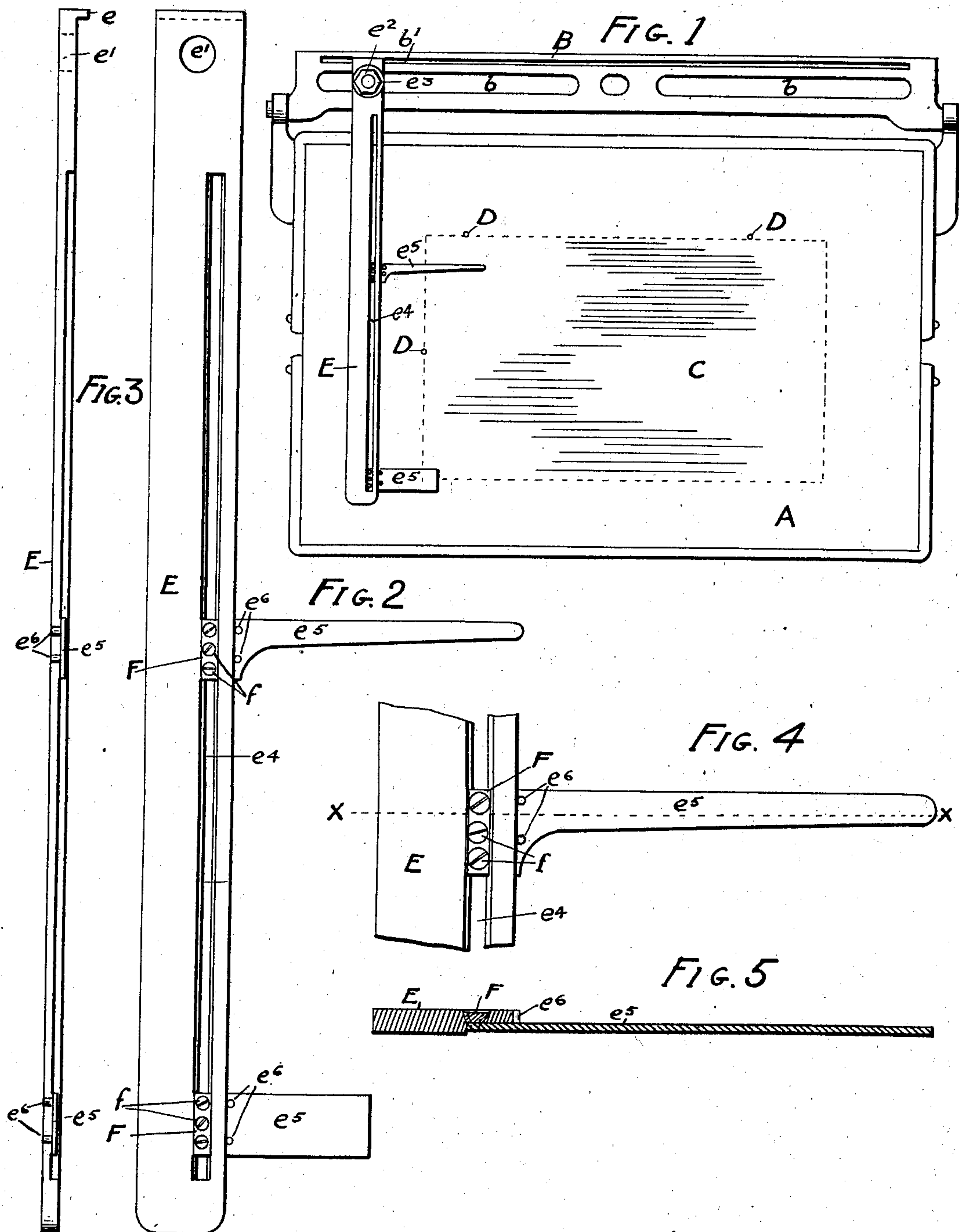


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F. I. MACAULEY.
GRIPPER FOR PRINTING PRESSES.
APPLICATION FILED JUNE 3, 1902.

NO MODEL.



WITNESSES:
Leon Boillot
Walter E. Vane.

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UNITED STATES PATENT OFFICE.

FRANK I. MACAULEY, OF SAN FRANCISCO, CALIFORNIA.

GRIPPER FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 721,377, dated February 24, 1903.

Application filed June 3, 1902. Serial No. 110,024. (No model.)

To all whom it may concern:

Be it known that I, FRANK I. MACAULEY, a citizen of the United States, residing in the city and county of San Francisco, 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 the class of grippers for the platens of printing-presses.

In ordinary practice the gripper is a narrow strip secured at one end to the oscillating gripper-bar of the platen and adapted by the movement of said bar to alternately descend upon and to rise from the platen to hold and to relieve the paper thereon. Usually the gripper is a plain strip with no attachments or extensions, and though it is adapted to be adjusted upon different portions of the platen by moving its connection with the gripper-bar, such adjustments, in addition to the disadvantage growing out of the time and trouble involved in loosening and tightening its securing-bolt, are not in all instances possible or sufficient for the particular cases in which a change of position is necessary. The chief interference to the proper adjustment of the ordinary gripper is from the gage-pins in the cardboard of the platen, which are inserted to define the proper registration of the paper to be printed. These pins stand in the way of the gripper, which cannot be set up to hold down the margin of the paper without riding down said pins or without raising the plane of the gripper by inserting under it pieces of cardboard, an expedient not always satisfactory, as it destroys the evenness of the pressure of the gripper. Necessity frequently arises, further, to hold down the paper in lines and places beyond the reach of the plain bar-gripper, both to keep the paper flat and to prevent it from pulling off the platen onto the form. To meet this, the practice is to stretch strings between the two grippers or to secure to the grippers arms or extensions projecting therefrom at right angles. These extensions usually consist of reglets (small pieces of wood, available furniture of a printing-office) tied onto the gripper, or pieces of cardboard stuck underneath the gripper and provided with a pressure-cork

at the other end. These involve time and trouble in their application and are at best unsatisfactory in their operation. Finally, specially prepared arms or extensions have been suggested which are provided with end loops or sockets adapted to slip over and embrace a gripper-bar and to be adjusted thereon by set-screws or other means; but these being separate from the gripper and intended for more or less contingent application are not satisfactory in their use, as they require selection and adjustment and they also tend, by reason of their fittings and connections with the grippers, to prevent accurate operation of parts.

The object of my invention is to remedy these and other difficulties and disadvantages unnecessary to further describe of the present grippers by providing a gripper capable of rapid and accurate adjustment to all situations and conditions; and to this end my invention consists in the novel gripper, which I shall now describe by reference to the accompanying drawings, in which—

Figure 1 is a plan view of the platen of a printing-press, showing the general application of my gripper thereto. Fig. 2 is a plan of my gripper. Fig. 3 is an edge view of same. Fig. 4 is an enlarged plan of a portion of the gripper. Fig. 5 is a section on line *x x* of Fig. 4.

In Fig. 1, A is the platen of a printing-press. B is the oscillating gripper-bar carried thereby and provided with the usual longitudinal slot or slots *b* and with the groove *b'*, found in some forms of presses. C represents in dotted lines the paper on the platen, and D represents the gage-pins for registering the paper.

E is the gripper, provided at one end with a lip *e* to enter the groove *b'* of the gripper-bar B, and with a hole *e'* to receive a bolt *e²* and nut *e³* to adjustably secure the gripper in the slot or slots *b* of said gripper-bar. This is the customary way of securing the gripper to its bar and may represent herein any suitable means for adjustably securing the gripper to its bar.

My gripper consists of a flat strip E, having made in it the longitudinal slot *e⁴*, adapting it for the adjustable extensions or arms *e⁵*, of which there may be one or more. I have

here shown two such extensions or arms, which may be of any suitable shape—as, for example, one long and narrow and the other shorter and wider—so that either or both may be used, according to the necessities of the paper on the platen with respect to the places where it may be best held and flattened. The thickness of the gripper-strip E on that side of the slot e^4 which is traversed by the extensions e^5 is less than that of the remainder of the gripper-body, the material being recessed or taken away from the under surface, so that the extensions or arms e^5 may pass under the thin or recessed part of the gripper-strip and adding their own thickness thereto make the under surface of the whole gripper, both strip and arms, substantially flush, thereby enabling them to press flat down upon the paper. Each arm or extension e^5 is adjustably connected with the gripper strip or body E by means of a small clamp F. The side edges of these clamps are beveled downwardly and convergingly, and the side walls of the slot e^4 are correspondingly beveled to receive and seat the clamps. Screws f pass down through the clamps into the extensions or arms e^5 . Upon these arms are shoulders formed in suitable manner, as by the pins e^6 , which said shoulders bear against the outer edge of the gripper strip or body, but rise no higher than the surface thereof, so that they are not above type-high. Now by setting up the screws f the beveled seated clamps will draw the arms up tightly, pressing the gripper edge and the pin-shoulders of the arms together and firmly holding said arms in any position to which they may be adjusted. By loosening the screws f slightly the clamping effect is sufficiently relieved to enable the arms to be slipped readily and accurately along the gripper-strip to any desired position, in which they may be again tightened. This adjustable connection is one which insures the greatest accuracy, the parts pressing reciprocally in tightening in such manner as to equalize the pressure and hold all surfaces and edges true. With such a gripper there will be no necessity to change its position on the gripper-bar by frequent changing of the bolt connection e^2 . It can be set initially in convenient proximity to and back and clear of the gage-pins D and its arms e^5 moved to such positions over the paper as may be determined upon without interfering with the pins. The arms will flatten the paper, prevent blurring of letters, and avoid any pulling off of the paper by and on the form, or if it be desired to set the gripper up closer still its slot e^4 may be fitted over the gage-pins, so that the latter project into the slot without interference, and thus the gripper-strip can itself lie upon the margin of the paper; also, by reason of the recessed or mortised under surface of the forward edge of the gripper-strip forward of the slot the said strip may be fed up to a quad or any similar gage when used as a side gage

and which is as high as the mortise, so that the gripper-strip may fall or ride over said quad or gage and overlap the paper. In all cases the adjustments may be made as required and will be found sufficient, thereby dispensing with the inconvenient and inaccurate expedients heretofore noticed.

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 longitudinally-slotted strip having means at one end for connecting it with the gripper-bar of the platen, said strip having its under surface, forward of the slot, recessed or mortised away.

2. A gripper for printing-presses consisting of a longitudinally-slotted strip having means at one end for connecting it with the gripper-bar of the platen, said strip having its under surface, forward of the slot, recessed or mortised away, an arm or extension projecting under the recessed or mortised under surface of the strip, and traversing the plane of its slot, a bevel-sided clamp seated in the correspondingly-beveled slot of the strip, and a screw passing from the top down through the clamp and into the arm or extension, for holding and tightening the latter on the strip.

3. A gripper for printing-presses consisting of a longitudinally-slotted strip having means at one end for connecting it with the gripper-bar of the platen, an arm or extension projecting from said strip and traversing the plane of its slot, a shoulder on said arm or extension bearing against the edge of the strip, a bevel-sided clamp seated in the correspondingly-beveled slot of the strip and a screw for securing the clamp and arm or extension together and tightening the latter on the strip.

4. A gripper for printing-presses consisting of a longitudinally-slotted strip having means at one end for connecting it with the gripper-bar of the platen, the under surface of said strip on one side of its slot being recessed, an arm or extension fitted to and traversing said recessed under surface, and means for adjustably connecting said arm or extension with said strip, through its slot.

5. A gripper for printing-presses consisting of a longitudinally-slotted strip having means at one end for connecting it with the gripper-bar of the platen, the under surface of said strip on one side of its slot being recessed, an arm or extension fitted to and traversing said recessed under surface and the plane of the slot, a bevel-sided clamp seated in the correspondingly-beveled slot of the strip and a screw for securing the clamp and arm or extension together and tightening the latter on the strip.

6. A gripper for printing-presses consisting of a longitudinally-slotted strip having means at one end for connecting it with the gripper-bar of the platen, the under surface of said strip on one side of its slot being recessed, an arm or extension fitted to and traversing said

recessed under surface and the plane of the
slot, a shoulder on said arm or extension bear-
ing against the edge of the strip, a bevel-sided
clamp seated in the correspondingly-beveled
5 slot of the strip and a screw for securing the
clamp and arm or extension together and
tightening the latter on the strip.

In witness whereof I have hereunto set my
hand.

FRANK I. MACAULEY.

Witnesses:

WALTER F. VANE,
D. B. RICHARDS.