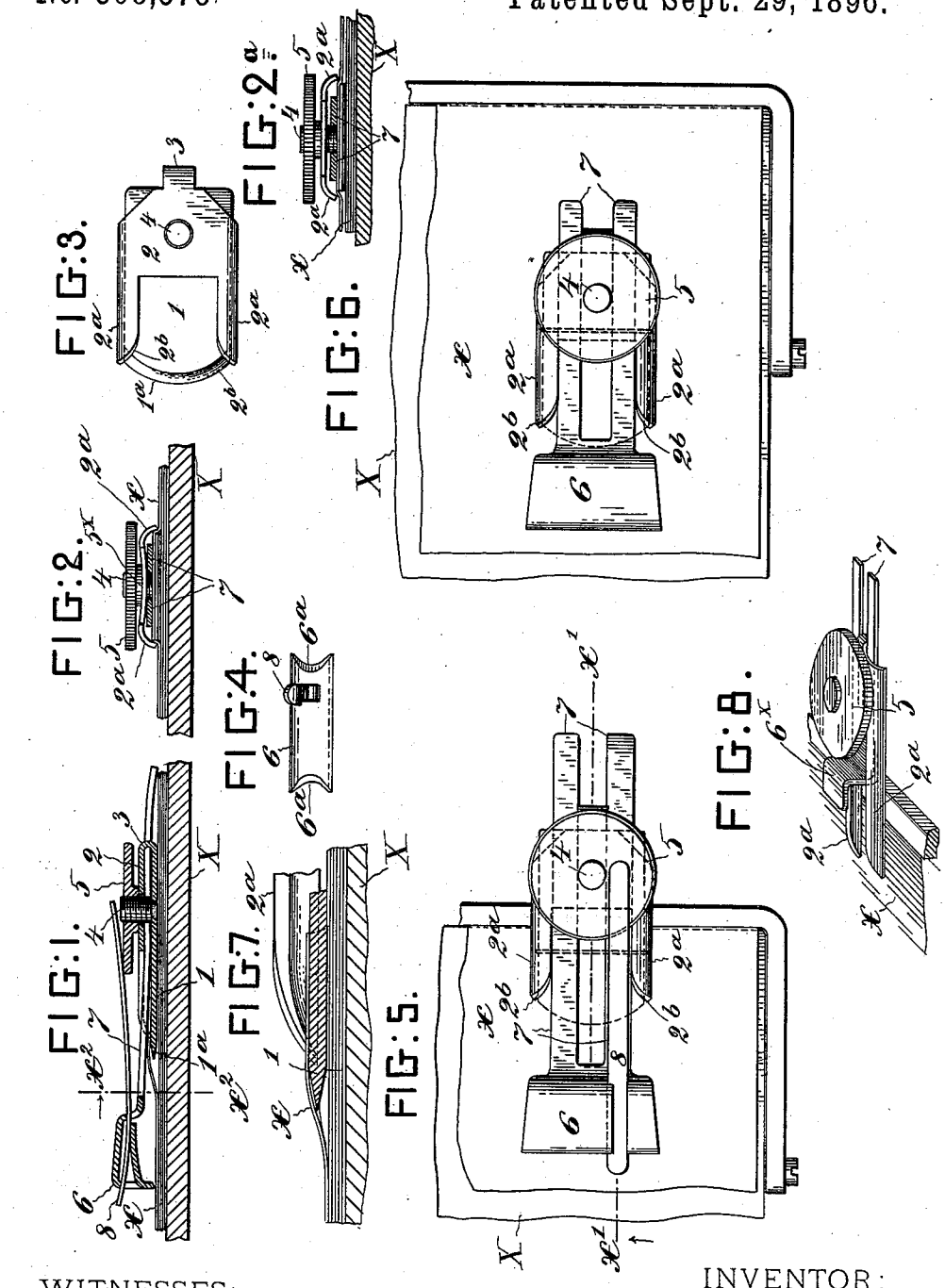
(No Model.)

E. L. MEGILL.

FEED GAGE FOR PRINTING PRESSES.

No. 568,578. Patented Sept. 29, 1896.



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FEED-GAGE FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 568,578, dated September 29, 1896.

Application filed January 26, 1895. Serial No. 536,317. (No model.)

To all whom it may concern:

Be it known that I, EDWARD L. MEGILL, a citizen of the United States, residing at Brooklyn, Kings county, New York, have invented certain new and useful Improvements in Feed-Gages for Printing-Presses, of which the following is a specification.

My invention relates to the class of devices to be secured in some manner to the platen of a printing-press to serve as guides or gages for placing the sheet properly on the platen so as to secure accurate register in printing; and it pertains especially to that class of such devices which are known to the trade as "gage-pins," the base of the gage having a pin which pierces the platen-paper. It has been a common practice to provide a feed-gage of this class or character with a base to be secured to the platen-paper and a gage-head mounted adjustably on said base, and I do not herein claim such a gage broadly; but my improved gage possesses some novel features of construction which produce important advantages, and these novel features will be fully described, and carefully defined in the claims.

In the accompanying drawings I have illustrated an embodiment of my invention, Figure 1 being a longitudinal vertical section of the gage on line x' in Fig. 5; and Fig. 2 a transverse vertical section thereof, taken substantially in the plane indicated by the line x^2 in Fig. 1. Fig. 2^a is a similar view to Fig. 2, but showing the parts in a different position. Fig. 3 is a plan of the base of the gage, the gage-head and the clamping-nut being omitted. Fig. 4 is a front or face view of the gage-head detached. Figs. 5 and 6 are plan views of the gage, showing how it may be applied to the platen of the press, a fragment of which is shown. Fig. 7 is an enlarged explanatory sectional view of a part of the base of the gage adapted to illustrate the construction and operation of the same. Fig. 8 is a view illustrating an adaptation of the gage, which will be hereinafter described.

X represents the platen of a printing-press, and x the top sheet of the paper stretched over the platen.

The feed-gage comprises two elements or parts, namely, a base and a gage-head. The base will be made of spring sheet metal, and by preference of sheet-steel. It comprises a broad blade-like "pin" 1 and a clamp-plate 2, these parts being integrally connected by a spring tie-piece 3. In constructing the base it will be preferably punched or cut out with a die, and the pin 1 will be brought under the clamp-plate by bending the tie-piece 3, as clearly shown in Figs. 1 and 3. The pin 1 is slightly narrower than the clamp-plate 2, and the margins of the latter are turned down to form jaws 2^a. The forward end of the broad pin is preferably rounded and shaped so as to produce a sharp cutting edge 1^a, which is employed for cutting a slit in the platen-sheet x when the gage is to be placed or set. Fixed in the pin 1 is an upright screw 4, which passes loosely through the clamp-plate 2 and has a clamp-nut 5 on its upper end.

The gage-head comprises the head proper, 6, and two tangs 7. These parts are formed integrally and of sheet metal, by preference, the general form and contour thereof (seen in Figs. 1, 5, and 6) being common in feed-gages of this general character. The gage-head may be furnished with an adjustable tongue or stripper 8, (seen in Figs. 1 and 5,) but this stripper is a well-known device.

When the gage-head is mounted on the base of the feed-gage, the tangs 7 are passed under the clamp-plate 2 of the base so as to straddle the screw 4, as clearly shown. However, in using the gage the gage-head may be mounted or placed on the base after the latter shall have been fixed on the platen. For example, the operator takes the base and, using the cutting edge 1^a on the pin as a knife, slits the top sheet x of the platen-paper, then pushes the pin through the slit and under the said sheet, as seen in Figs. 1 and 7, as far as desired, and turns the nut 5 so as to cause the jaws 2^a and the lateral edges of the broad pin 1 to clamp the sheet tightly and firmly between them. A slight movement of the nut 5 will suffice for this, and ample room will still be left between the clamp-plate 2 and the pin 1 for the insertion of the tangs 7 on the gage-head, Fig. 2^a.

The gage-head is now placed and adjusted and the nut 5 again turned. This has the ef-

fect to clamp the tangs 7 between the plate 2 and pin 1, and thus hold the gage-head from slipping on the base. (See Fig. 2.)

It will be noted from the above explanation that the characteristic feature, so far as described, lies in the ability to clamp and release the gage-head at will without necessarily releasing the hold of the base on the platen-sheet and in the employment of only one screw and nut to effect the two independent clampings. Fig. 2 shows the gage-head clamped to the base and the base clamped to the platen-sheet. By slacking the nut 5 the gage-head may be freed for removal or adjustment, leaving the base still clamped firmly on the platen-sheet, as seen in Fig. 2^a.

Fig. 5 shows how the base of the gage may be clamped to the platen-sheet at the extreme rear edge of the latter, and even so that the base projects rearwardly beyond the platen; and it shows a gage-head with long tangs, allowing for maximum adjustment.

Fig. 6 shows the base set farther in from the edge of the platen and a gage-head with shorter tangs. I may say that gage-heads having tangs of different lengths adapted to different conditions in printing may be used with the same base; or, it is possible, under some conditions, to dispense entirely with the detachable gage-head and use the boss $5^\times$, Fig. 2, on the nut 5 as a gage-head. To enable the sheet being fed to pass over the jaws 2^a readily and up to the boss under the above conditions, the said jaws are rounded or chamfered off at 2^b, as clearly shown. Otherwise the sheet would be apt to catch on the jaws.

In Fig. 8 I have shown a short gage-head $6^\times$, which is narrow enough to pass in between the jaws 2^a of the clamping-plate and up to the nut 4, and this view also shows how the base may be clamped to the platen-sheet at the extreme rear edge, so that the face of the gage-head, up to which the sheet of paper is fed, may be even beyond the rear edge of the platen X. The base of the gage is secured to the platen-sheet by being clamped between the jaws 2^a and the sides or lateral edges of the broad pin.

I may say here that in all the forms of gages illustrated the clamping of the platen-paper x between the jaws 2^a and the sides of the pin 1 is effected mainly, if not wholly, by flexure of the spring tie-piece 3, while the clamping of the branches 7 of the gage-head down upon the platen-paper and the pin 1 is due to depression of the spring clamping-plate 2, as may be clearly seen in Fig. 2. Normally this plate is elevated, as in Fig. 2^a.

The gage-head proper, 6, has some peculiarities. (Seen best in Figs. 1 and 4.) In order to avoid the liability of tearing the sheet x when adjusting the head over it, I omit the prongs or teeth commonly employed on gage-heads and make the lower edge of the gage-head where it rests on the platen-sheet x smooth and straight, but preferably slightly beveled at the back, as seen in Fig. 1. At the ends of the upright front plate of the gage-head are formed chamfered recesses 6^a, sloped down to the lower edge of said plate. These chamfers serve to prevent a sheet, if applied somewhat obliquely to the gage-head, from getting under the lower edge of the latter, the chamfer deflecting the edge of the sheet upward.

It is not essential that the sharp edge 1^a of the pin 1 shall be a part of a circle, as it is represented in Fig. 3, but this form is preferred. This cutting edge is useful in that it tends to prevent the user from carelessly thrusting the pin through more than one sheet on the platen. When the gages are secured only to the top sheet, this sheet may then be raised at one edge for underlaying, &c., without disturbing the gages on the sheet or altering the register.

Having thus described my invention, I claim—

1. In a feed-gage for printing-presses, the combination with the base, comprising the broad pin, and the clamping-plate having jaws, said pin and plate being connected by a tie, and said jaws adapted to clamp the platen-sheet to the lateral edges of the pin, of means for effecting said clamping and a gage-head having a tang adapted to play freely between the clamping-plate and the pin after the base is clamped to the platen-sheet, and be clamped fast by the further depression of the clamping-plate, substantially as set forth.

2. In a feed-gage for printing-presses, the combination with the base, having a relatively broad pin 1, and a spring clamping-plate 2 provided with jaws 2^a adapted to clamp the platen-sheet to the lateral edge of the pin, of the screw and clamping-nut adapted to draw together the pin and said jaws, and a gage-head having tangs adapted to play freely between the spring clamping-plate and the pin when the base is clamped to the platen-sheet, whereby the gage-head may be released and adjusted without releasing the base of the gage from the platen-sheet, as set forth.

3. A feed-gage having recesses 6^a in the lateral edges of the front plate of its gage-head 6, substantially as and for the purpose set forth.

4. The gage-head of a feed-gage having the upright front plate of the head against which the sheet rests in feeding, provided with chamfered recesses 6^a at its lateral edges and with a smooth, untoothed surface where it rests on the platen-sheet, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

EDWARD L. MEGILL.

Witnesses:
HENRY CONNETT,
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