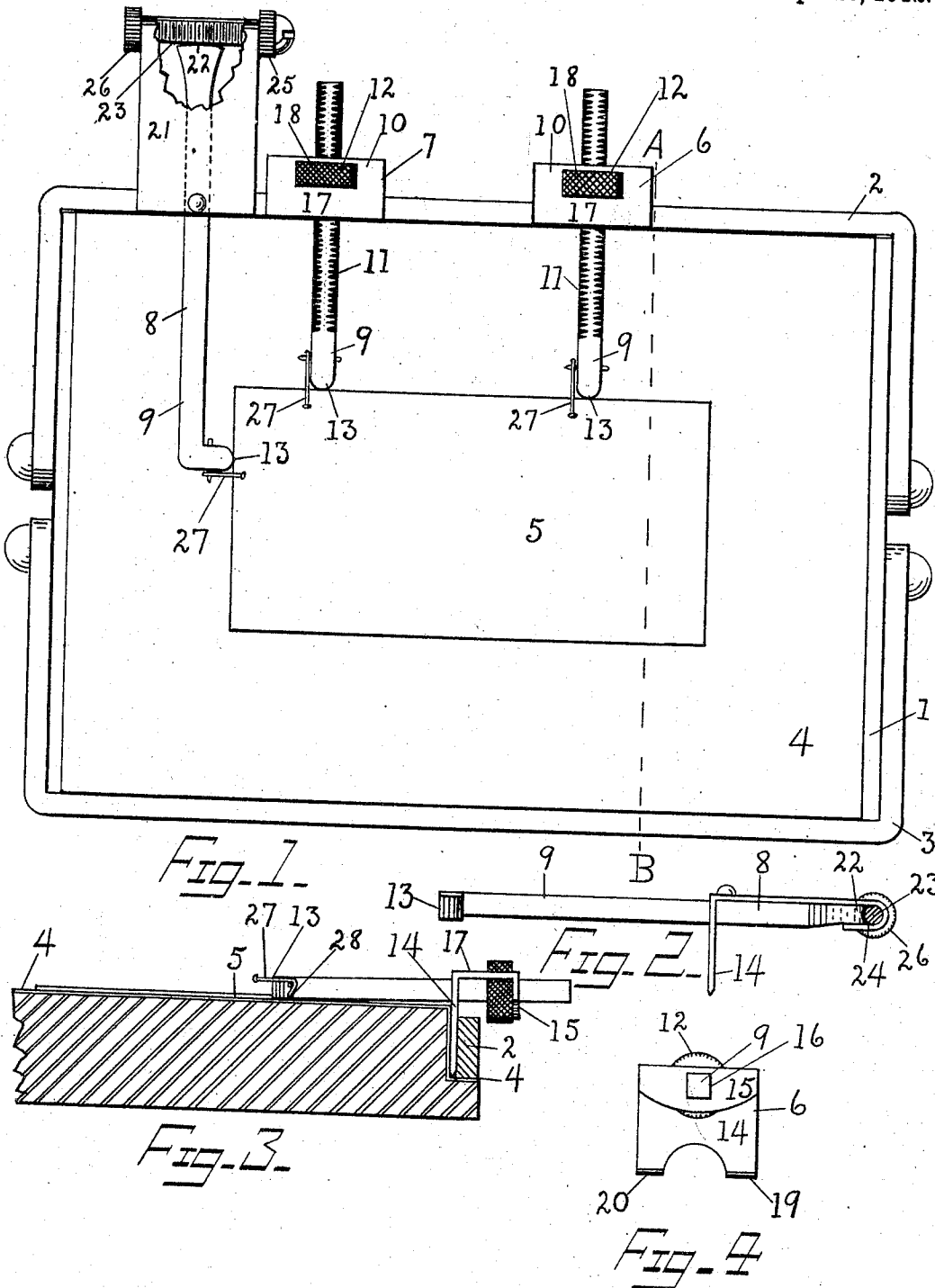


W. F. BREWER & A. KNOBEL.
 FEED GUIDE FOR PRINTING PRESSES.
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1,038,487.

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UNITED STATES PATENT OFFICE.

WILLIAM F. BREWER AND ABRAHAM KNOBEL, OF LOUISVILLE, KENTUCKY.

FEED-GUIDE FOR PRINTING-PRESSES.

1,038,487.

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To all whom it may concern:

Be it known that we, WILLIAM F. BREWER and ABRAHAM KNOBEL, citizens of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented a new and useful Feed-Guide for Printing-Presses, of which the following is a specification.

This invention relates to guides for printing presses, and some of the objects of our improvement are, simplicity of construction and operation, facility and rapidity of adjustment, firmness, permanence of adjustment, to avoid puncturing or otherwise injuring the tympan sheet, to quickly attain micrometric adjustment, easily and accurately to feed paper with rough edges, strength, and durability. These and other objects we attain by means of the devices illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view; Fig. 2, a side elevation of the side guide; Fig. 3, a side elevation of a bottom guide, showing the bail and the platen partly in section, the section being made on the line A—B of Fig. 1; and, Fig. 4 is a rear end view of the bottom guide.

Similar reference numbers refer to similar parts throughout the several views of the drawings.

The platen, 1, is of the type used on platen printing presses, such as are commonly known as Gordon jobbers, and the like. The platen 1 is provided with bails, 2 and 3, for clamping a tympan sheet, 4, in a manner well known.

In common practice it is customary to make ready for a job by sticking pins in the tympan sheet to serve as guides against which to feed the paper, 5, and to hold the paper in proper register to receive the impression. The practice of sticking pins or other guides into the tympan sheet is objectionable, because the tympan sheet usually consists of paper, which is easily torn, so that the guides shift out of register, and when shifted cannot be readjusted in the same place but must be moved to a fresh place in the tympan sheet; It is very difficult to insert a pin in the proper location, and therefore many trials must be made with each guide and much time is consumed before the guides are finally all properly located. Again, unless the press feeder is very careful in feeding the paper, that he

does not place the sheets against the guides with too much force, the guide pins are disarranged and they must be gone over again. This generally occurs anyhow when the job is a large one. Furthermore, if it is found that parts of the impression fail to come up properly and it is necessary to underlay corresponding parts of the tympan sheet, the tympan sheet must be released and raised, and the guides are very liable to become disarranged, and more of the pressman's time is consumed in readjusting them. In order to attain a perfectly smooth tympan surface, the platen is covered with a sheet of press board, which is quite expensive. To stick pins and other guides into this press board, spoils the surface, so that it cannot successfully be repaired, and the board consequently cannot be used again. Sometimes the edges of the paper fed to the guides are somewhat jagged and hang up on the pins or other guides which present a narrow surface or a sharp edge. We have overcome the difficulties just mentioned by means of our improved guide, in which we have provided a strong, substantial guide, which is not inserted in the tympan sheet nor attached thereto but is secured by the tympan clamping bail 2, is provided with a screw for micrometric adjustment, and presents a smooth rounded surface to feed against.

The set of guides which embody our improvement comprises bottom guides, 6 and 7, and a side guide, 8. The bottom guides 6 and 7 comprise a guide bar, 9, which is preferably square in cross section, and a clip, 10, in which the guide bar is slidably mounted. Bar 9 is provided with screw threads, 11, over a considerable length of its surface, on the four corners, adapted to receive an adjusting nut, 12. The front nose, 13, of the bar 9 is semicircular in horizontal plan and polished, so as to provide a smooth rounded surface against which the paper may be fed with a sliding motion. Even paper with jagged edges will slide freely over the noses 13.

The clip 10 is preferably formed of sheet metal of springy temper and formed into inverted U shape. The front and rear legs, 14 and 15, of the clip are formed with transverse square holes, 16, adapted to receive bar 9 with a snug sliding fit, so that bar 9 does not rotate when nut 12 is rotated and the rounded nose 13 is always kept up-

right. The horizontal portion, 17, of clip 6 is formed with a slot, 18, adapted to receive a nut, 12, the nut bearing against the front and rear walls of the slot. The free end of the rear leg 15 bears yieldingly against the rear side of the nut, so as to prevent the nut spinning or moving after it has been adjusted. The front leg 14 is longer than leg 15 and is adapted for insertion between the tympan sheet 4 or the platen and the clamping bail 2. The leg 14 is preferably formed with two feet, 19 and 20, which, by bottoming on the tympan paper or the rabbet of the platen 1, keep the clip 6 erect. The angle formed by leg 14 and horizontal part 17 is greater than a right angle, so that the nose 13 is pitched downward and presses (Fig. 3) firmly against the tympan sheet and the paper 5 cannot be fed under the nose. The spring temper of the clip 10 renders the pressure of nose 13 against the tympan sheet yielding.

The side guide is provided with a guide bar 9, similar to that of the bottom guides, but its nose 13 is on a bent portion, so as to engage the vertical edge of paper 5. The bar 9 is pivotally mounted on a clip, 21, and, instead of being threaded along its edges, its rear end, 22, is flattened and spread and provided with threads, after the manner of a worm gear, and meshes with a screw or worm, 23, mounted in clip 21. Clip 21 is provided with a leg 14, similar to clip 10, for insertion between the tympan sheet 4 or the platen and bail 2, and on its rear end is curved into a horizontal U shape, to form a bearing pocket, 24, for worm 23. A knurled head, 25, 26, is provided on each end of worm 23. It will be understood that by turning the worm 23 by means of one of the knurled nuts, and shifting part 22, nose 13 is moved in the opposite direction from part 22. The entire guide is first inserted approximately in proper position, and then may be adjusted by means of the screw or worm with micrometric accuracy. Nose 13 (Fig. 2) is bent downward so as to hug the tympan.

We also contemplate using a bottom guide (6 and 7) with a bent nose 13 as a side guide and adjusting it by tapping it and causing leg 14 to slip between the platen and the bail till the proper adjustment is attained.

Over guides and strippers for stripping the impression from the form are provided by pins or wires, 27. A hole is bored trans-

versely through bar 9 just behind nose 13, through which the point of the pin is pushed. The shank of the pin is then bent downward and across underneath bar 9 into a transverse slot or channel, 28, then upward on the opposite side, over the point, and finally forward, leaving the head extending over the paper 5. When a longer stripper is required, a fresh pin or wire can be quickly inserted.

It will be appreciated that these guides do not puncture or in any way mar the tympan sheet, and the tympan sheet may be raised at the upper edge for an underlay and may be shifted from its original position, without disturbing the guides. The bottom guides may even be removed from the press and replaced without disturbing the register and the side guide in this case may be quickly reinserted and adjusted. It is obvious also that the guides are firm and cannot be rammed out of register while feeding a heavy job.

The simplicity of construction of these guides renders them easily and comparatively cheaply manufactured, and thus they may be sold at a price within the reach of the majority of those engaged in the art to which they pertain.

Having thus described our invention, so that any one skilled in the art to which it pertains may understand its construction and use, we claim—

In a guide for printing presses, a clip, said clip being provided with a thin, flat leg adapted to be inserted between the platen and the bail of a printing press, for the purpose of securing the guide to the press, said clip being perforated to receive the guide bar, a threaded guide bar of polygonal cross section adjustably mounted in the perforation of said clip, a threaded adjusting and fixing element mounted in said clip in operative relation to said bar, said clip being formed of springy material and at such an angle that when inserted between the tympan and the bail it yieldingly presses the nose of said guide bar upon the tympan, cramps said leg so that it holds tightly between the tympan and the bail, and cramps said adjusting and fixing element to prevent its spinning and working loose in said clip.

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