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2,267,040

REGISTERING GAUGE FOR PRINTING PRESSES

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Fig. 1

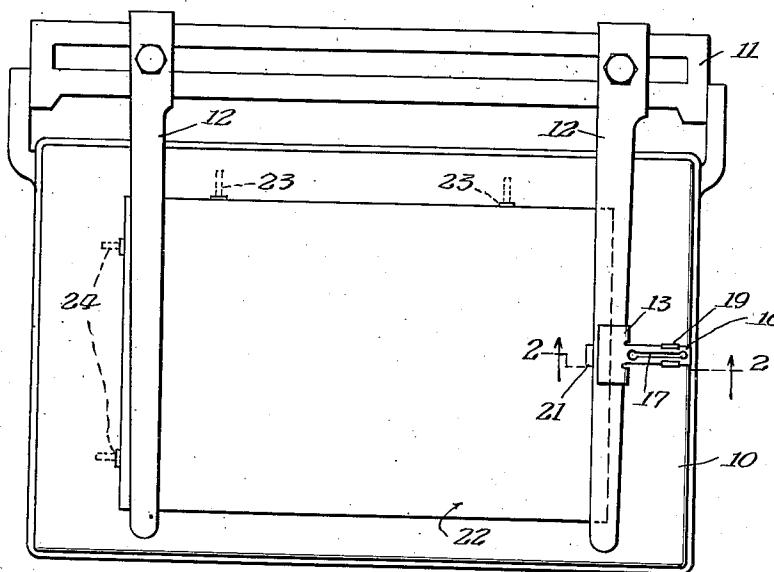


Fig. 4

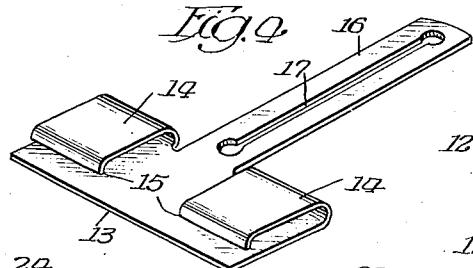


Fig. 2

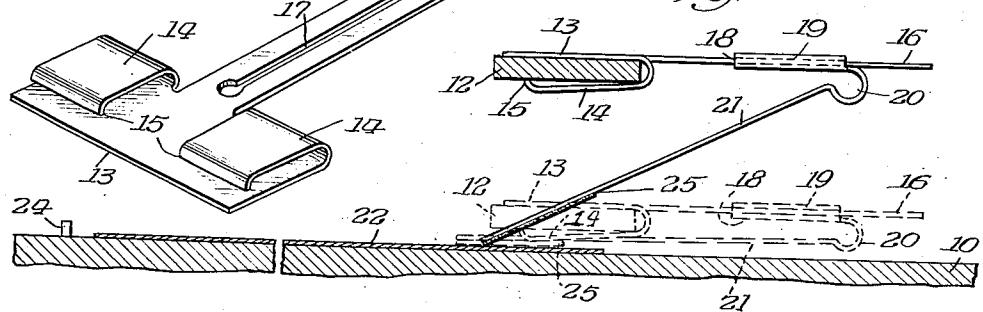


Fig. 3

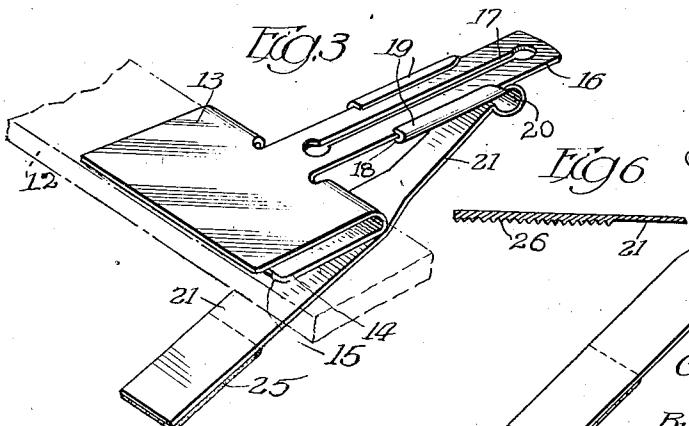
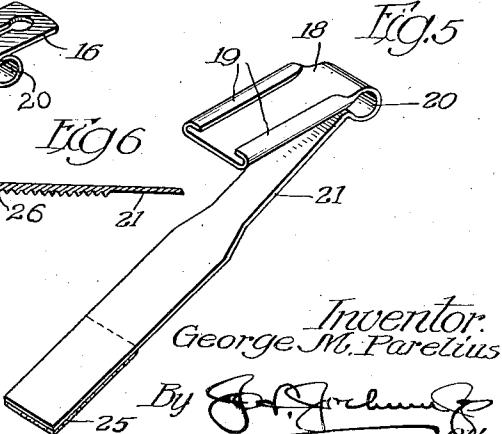


Fig. 6



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UNITED STATES PATENT OFFICE

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REGISTERING GAUGE FOR PRINTING PRESSES

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8 Claims. (Cl. 101—414)

This invention relates to improvements in register gauges for registering a sheet of paper on the platen of a printing press by accurately positioning the sheets that have been misplaced, usually as a result of feeding the sheets by hand, and one of the objects of the invention is to provide an improved, simple and effective device of this character which may be readily attached to the gripper finger and so positioned as to contact the surface of the sheet and automatically move the sheet edgewise upon the platen and into engagement with a stop pin or device during the relative movement of the platen and gripper finger.

A further object is to provide an improved device of this character which may be readily adjusted to any position lengthwise of the finger and which will be frictionally held in position with relation to the finger without the use of other fastening means.

A further object is to provide an improved device of this character which will also cooperate with the gripper finger for assisting in holding the sheet in position.

A further object is to provide an improved register gauge of this character which perfects the alining or register of the sheets without interfering with the gripper fingers or the operation thereof.

To the attainment of these ends and the accomplishment of other new and useful objects as will appear, the invention consists in the features of novelty in substantially the construction, combination and arrangement of the several parts, hereinafter more fully described and claimed and shown in the accompanying drawing illustrating this invention and in which—

Figure 1 is a plan view of the tympan, platen, gripper finger and the registering gauge attached to one of the fingers and forming the subject matter of the present invention.

Figure 2 is an enlarged detail sectional view taken on line 2—2 Figure 1.

Figure 3 is a detail perspective view of the registering gauge.

Figure 4 is a detail perspective view of one of the members of the gauge.

Figure 5 is a detail perspective view of the other member of the registering gauge.

Figure 6 is a detail sectional view of the sheet engaging end of the registering gauge, showing a modified form of that part of the invention.

Referring more particularly to the drawing, the numeral 10 designates generally the platen of

5 a printing press which is mounted to oscillate in the usual manner, and 11 designates the gripper bar upon which the fingers 12 are adjustably mounted and the bar 11 and platen 10 are oscillated in the ordinary well known manner.

The registering device is adapted to be applied to either of the fingers 12 and comprises essentially a body portion 13 which is of a substantially U-shaped configuration, a portion of the body being removed and the remaining portions being bent back upon itself, as at 14, to form spaced portions that cooperate with the body so that when the body is applied to the gripper finger 12 it will frictionally bind upon the finger and be held in proper position.

If desired, and in order to increase the friction, the free ends of the portions 14 may be deflected laterally, as at 15, as shown more clearly in Figures 2 and 4.

20 Projecting from the body 13 is an arm or extension 16 which may be of any desired size and length and is preferably disposed between the bent back portions 14 of the body. This arm 16 may if desired, be provided with a slot 17 for lightness and for the purpose of imparting a degree of lateral resiliency to the arm.

25 Cooperating with the arm 16 is a sheet engaging member which preferably comprises a body portion 18 having a portion of its lateral edges bent back upon itself, as at 19, to form a housing or base which is adapted to be sleeved upon the arm 16 and to be frictionally held in position upon the arm by the lateral resiliency of such arm.

30 One end of the body 18 projects for a considerable distance beyond the bent back portions 19 and is preferably formed into a loop 20 one end of which loop is shaped to form a member 21 which is of any desired length and configuration and is resilient with respect to the body portion 18.

35 The sheet engaging member is placed upon the arm 16 and the arm is then mounted upon the finger 12 by telescoping the base 13—14 with 40 the finger, and the device may be adjusted to any position lengthwise of the finger 12.

45 Similarly the sheet engaging member may be adjusted to any position lengthwise of the arm 16 and in a plane transverse to the plane of the 50 longitudinal dimension of the finger 12. With this construction it will be manifest that the device may be positioned at any point lengthwise of the finger 12 according to the size of the sheet 22 that is upon the platen 10. The sheet engaging member may also be adjusted to any

position transverse to the finger 12 so as to position the same according to the point at which it is desired that the free end of the member 21 shall engage the sheet 22.

When the gauge is in position upon the finger 12 it is disposed in the space between the finger and the platen, that is, it projects beneath the finger 12 and the resiliency of the member 21 tends to move the member 21 away from the finger 12 and in a direction toward the platen 10.

In operation when the fingers 12 are moved away from the platen to permit the feeding of the sheets, a sheet is placed upon the platen 10 in the usual manner until it contacts with the usual pins or stops 23. As the space between the finger 12 and the face of the platen 10 decreases during the operation of the press, the end of the member 21 will engage the sheet 22 as shown in Figure 2. As this space decreases, the member 21 will be pressed toward the finger 12 and in so doing, more of the surface of the member 21 will contact with the sheet 22, with the result that as this space decreases, the member 21 which engages only the outer face of the sheet, will move the sheet edgewise upon the platen 10 until one of the edges of the sheet contacts the stops or pins 24. This will assure a proper alignment or register of the sheet.

As the space between the finger 12 and the platen 10 increases after the printing operation, should there be any tendency of the member 21 to move the sheet 22 edgewise and away from the stop 24, this will be no objection as the printing operation will then have been completed.

In order to facilitate the movement of the sheet 22 by the member 21 there may be provided an element 25 of any suitable abrasive or roughened material, such as emery paper, sandpaper or the like, which is secured to the face of the member 21 in any desired or suitable manner, such as by means of an adhesive.

In Figure 6 there is shown a modified form of a portion of the member 21 and in this form of the invention in lieu of the roughened element 25 which is separated from the member 21 and secured thereto, the sheet engaging portion of the member 21 may be corrugated, serrated or roughened as at 26, in any other suitable manner.

The member 21 is of comparatively thin material so that it will not interfere with the gripping operation of the fingers 12 and it cooperates with the finger 12 in assisting and holding the sheet in position.

With this improved construction it will be manifest that the same registering device may be applied to either of the fingers of the press by simply reversing the position of the device with respect to the finger.

It will also be manifest that the registering device engages the surface of the sheet and the sheet is moved by such contact and by reason of the fact that the registering device does not move the sheet by engaging one of the edges thereof the possibility of the sheet buckling or of the registering device mutilating the edge of the sheet will be obviated.

While the preferred forms of the invention have been herein shown and described, it is to be understood that various changes may be made in the details of construction and in the combination and arrangement of the several parts,

within the scope of the claims, without departing from the spirit of this invention.

What is claimed as new is:

1. A registering gauge for printing presses embodying an arm, means for frictionally clamping the arm to a gripper finger, a resilient member frictionally clamped to said arm for adjustment in a different plane from the plane of adjustment of said arm with respect to said finger, the resiliency of said member tending normally to move it away from said arm, said member operating to first engage the outer surface of the sheet and while in contact therewith slide the sheets edgewise upon the platen, the sheet contacting portion of said member being roughened and slideable over the face of the sheet when the edge of the sheet contacts a stop on the platen.
2. A registering gauge for printing presses embodying a sheet engaging member, and means for mounting said member upon and removing it laterally from a gripper finger for adjustment in directions lengthwise of, and also in directions transverse to the longitudinal dimension of said finger, said member being disposed between said finger and the press platen and engaging only the outer surface of the sheet, said member operating to move the sheet edgewise upon the platen and movable across the face of the sheet when the movement of the sheet upon the platen is interrupted.
3. A registering gauge for printing presses embodying a sheet engaging member, means for laterally connecting said member to a gripper finger and laterally removing it from and for adjustment in directions lengthwise of, said member being disposed between said finger and the press platen and engaging only the outer surface of the sheet, and means tending normally to move said member away from said finger and towards the press platen, said member operating to move the sheet edgewise upon the platen and being movable across the face of the sheet when the edge of the sheet contacts a stop on the platen.
4. A registering gauge for printing presses embodying a body portion adapted to be laterally secured and laterally removable from a gripper finger, an arm projecting from said body, a sleeve freely slideable upon said arm frictionally gripping the same and a member resiliently connected to said sleeve and extending transversely across said finger, said member being normally spaced from said finger and having a portion adapted to engage the surface of a sheet to move the latter edgewise upon the platen, said body portion being substantially U-shaped and resilient and sleeved upon the gripper finger and frictionally gripping said finger, said arm being slotted lengthwise thereof to impart edgewise resiliency thereto.
5. A registering gauge for printing presses embodying a substantially U-shaped member forming a clamp adapted to be frictionally secured upon and detached from a gripper finger at any point intermediate the ends of the finger, an arm integral with the clamp and extending laterally beyond the gripper finger, a slide mounted upon said arm for adjustment lengthwise of the arm, said slide being frictionally held in position upon the arm, and a sheet engaging member resiliently connected with said slide for engagement with the face of the sheet to move the latter against a stop on the platen as the size of the space between the finger and platen decreases, said sheet engaging member being movable across

the said face of the sheet when the edge of the latter contacts said stop.

6. A registering gauge for printing presses embodying a substantially U-shaped member forming a clamp adapted to be frictionally placed upon and removed from a gripper finger at any point intermediate the ends of the finger, an arm integral with the clamp and extending laterally beyond the gripper finger, a slide mounted upon said arm for adjustment lengthwise of the arm, said arm being laterally resilient whereby to frictionally hold said slide in its adjusted position upon the arm, and a sheet engaging member resiliently connected with said slide for engagement with the face of the sheet to move the latter upon the platen, said member being movable across the face of the sheet when the edge of the latter engages a stop on the platen.

7. A registering gauge for printing presses embodying a substantially U-shaped member forming a clamp adapted to be frictionally connected to and disconnected from a gripper finger at any point intermediate the ends of the latter, the free edge of one of the sides of said member terminating short of the plane of the free edge of the other member and being deflected towards the

5 10 15 20 25
said other member, whereby to frictionally engage the face of the gripper finger, an arm integral with the clamp and extending laterally beyond the gripper finger, a slide mounted upon said arm for adjustment lengthwise of the arm, said slide being frictionally held in position upon the arm, and a sheet engaging member resiliently connected with said slide for engagement with the face of the sheet to move the latter upon the platen, said member being movable across the face of the sheet when the edge of the sheet contacts a stop on the platen.

8. A registering attachment for printing presses, embodying a body provided with a resilient clip portion to engage over the lateral edge of a gripper finger to be frictionally secured thereto and laterally removable therefrom, and a sheet engaging portion mounted and adjustable upon said body in directions transverse to the length of the gripper finger, said sheet engaging portion engaging the face of the sheet to move the latter upon the platen, and movable over the face of the sheet when the edgewise movement of the sheet upon the platen is interrupted.

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