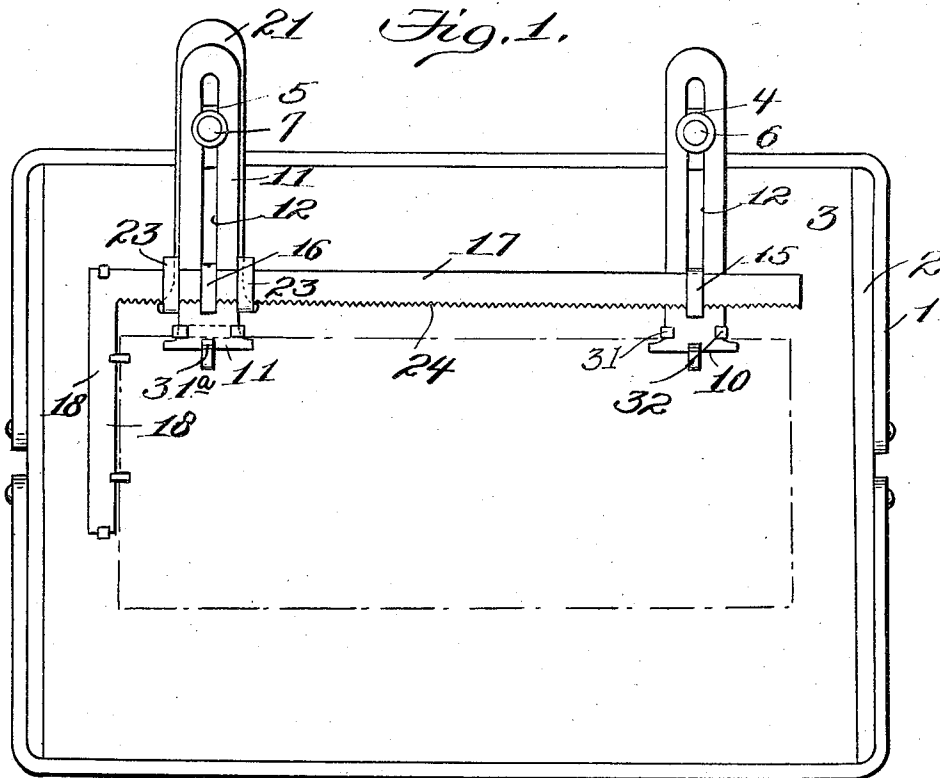
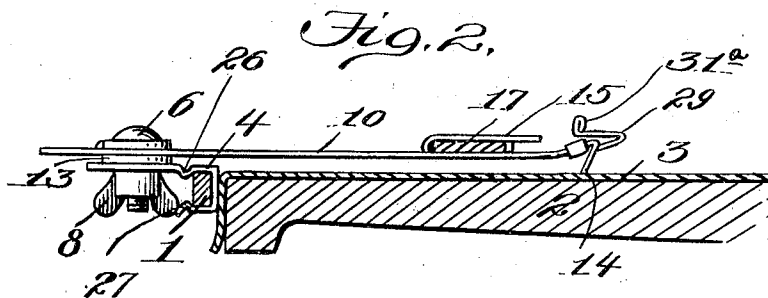


No. 893,587.

PATENTED JULY 14, 1908.

J. H. HOWARD.
PAPER GAGE FOR PRESSES.
APPLICATION FILED OCT. 11, 1907.

2 SHEETS—SHEET 1.



Witnesses:

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att'y

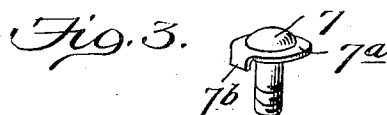
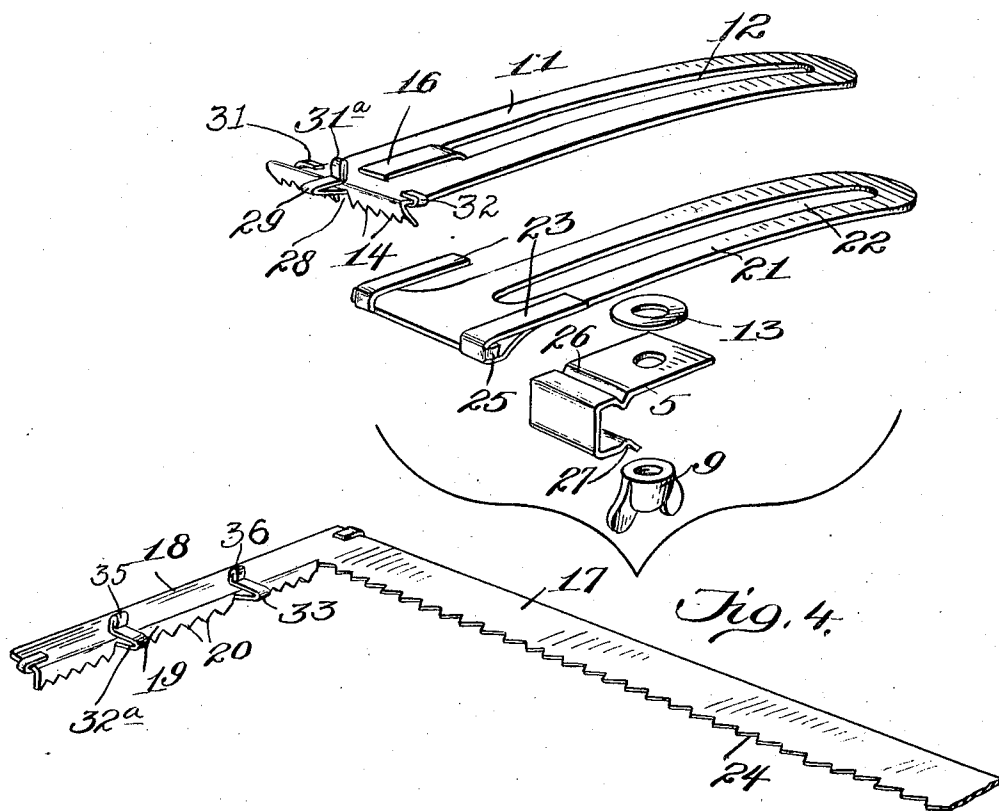
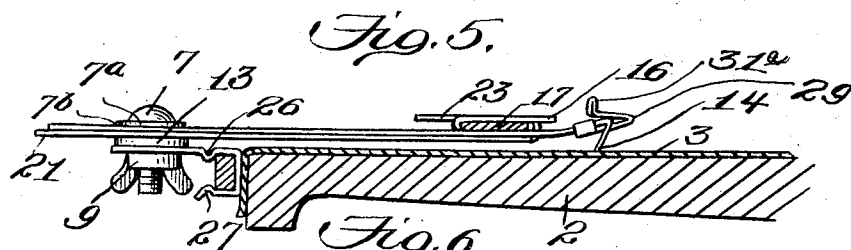
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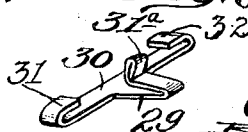
2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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PAPER-GAGE FOR PRESSES.

No. 893,587.

Specification of Letters Patent.

Patented July 14, 1908.

Application filed October 11, 1907. Serial No. 396,978.

To all whom it may concern:

Be it known that I, JAMES H. HOWARD, a citizen of the United States, residing at Baltimore city, State of Maryland, have invented new and useful Improvements in Paper-Gages for Presses, of which the following is a specification.

My present invention relates to improvements in platen gages for presses, and more especially to the class adapted for use in centering or positioning the paper to insure its proper registration with the type form, and it has for its object primarily to provide a gage of this character which is capable of being readily adjusted so as to accommodate sheets of different dimensions and to accurately position the same relatively to the type form, the gages being adjustable in directions both vertically and laterally of the platen in order that the sheets may be placed at any desired position thereon.

Another object of the invention is to provide a gage of this character wherein those parts thereof which engage the horizontal and vertical edges of the sheet may be secured in the different adjusted positions by means of securing devices that are common to both.

Further objects of the invention are to provide such a gage which coöperates with the backing on the platen in such a manner as to prevent entrance of the sheet beneath the gage, and to provide a gage of this character that may be manufactured inexpensively and is capable of being readily applied to the platens of presses of different forms.

To these and other ends, the invention consists in certain improvements, and combinations and arrangements of parts, all as will be hereinafter more fully described, the novel features being pointed out particularly in the claims at the end of the specification.

In the accompanying drawings:—Figure 1 is a plan view of a platen provided with a gage constructed in accordance with the present invention, the position of the sheet being indicated by dotted lines; Fig. 2 represents a section through one edge of the platen showing the manner of applying the gage thereto; Fig. 3 is a collective view showing the separated parts of one of the adjustable stops; Fig. 4 is a perspective view of the vertical stop; and Fig. 5 is a view similar to

Fig. 2 showing the left-hand stop in Fig. 1. Fig. 6 is a perspective view of the adjustable sheet retaining device removed from the gage.

Similar parts are designated by the same numerals of reference in the several views.

Paper gages constructed in accordance with the present invention are capable of being applied generally to platens of presses of various kinds, the gage shown in the present instance being illustrated in connection with an ordinary swinging platen such as employed on job presses, and it may also be applied to the platen in different ways. It is preferable, however, to utilize one of the clamps 1 which are arranged at the periphery of the platen 2 and serve to secure the ordinary blotting paper or backing 3 to the face of the platen, one of the clamps, the lower clamp in the present instance, engaging a pair of brackets 4 and 5 which support the adjusting devices for the gage. These brackets may be made in various forms, those shown being composed of sheet metal each having a down-turned arm lying in a plane substantially in alinement with that of the platen and is provided with an aperture to receive a securing device, a pair of screw clamps 6 and 7 being employed in the present instance having thumb nuts 8 and 9, respectively, by means of which the several stops of the gage may be fastened and unfastened.

In order to prevent turning of each bolt during tightening or loosening of the thumb nut, it is preferable to provide the bolt head with an enlargement or washer 7^a non-revoluble thereon and having a projection 7^b adapted to engage in the slot 12 of the respective stops. The brackets that coöperate with the clamp for the backing to support the gage in position are also preferably so formed that they will not become accidentally disengaged from the clamp as the latter is swung clear of the platen to permit a new backing to be applied, a pair of ribs 26 and 27 being formed in each bracket in the present instance which coöperate with the clamp in such a way that they must be sprung apart in order to apply or remove the brackets, and when so constructed of course the brackets cannot become accidentally disengaged. The bracket when thus constructed may be applied and removed relatively to the clamp by a movement laterally of the back-

ing engaging portion of the clamp. These two brackets serve to support the gage relatively to the platen, and they in the present instance cooperate with a pair of stops 10 and 11 which serve to engage the lower horizontal edge of the paper sheet and thereby position it vertically. These stops in the present instance are substantially duplicates, each being composed of a strip of sheet material having a longitudinal slot 12 to receive the respective securing bolt, the strip lying beneath the head of the bolt and is clamped in the desired adjusted position by means of the corresponding thumb nut. A washer 13 may be interposed between each stop and its respective bracket so as to properly position the stops relatively to the surface of the platen. The upper ends of the strips composing the stops are bent laterally to form a pair of paper engaging surfaces, and the intumed edges of the latter are preferably serrated or provided with teeth 14 which are adapted to enter the relatively soft material composing the backing and thereby prevent entrance of the paper sheet between the stop and the backing. In order to facilitate application of the paper sheets to these stops, it is preferable to bevel or incline the paper engaging surface thereof downwardly in a direction toward the back, as shown in Figs. 2 and 5, and when the stops are so constructed, the weight of the paper will serve to carry the sheet into position against the backing.

In order to insure a firm hold of the teeth or serrations of these stops relatively to the backing, it is preferable to make them of resilient material and bow them as shown in Fig. 3, the clamping action of the screws serving to carry the paper engaging portions of the stops inwardly and exert sufficient pressure against the backing to cause the teeth to be embedded therein.

The stops just described are provided with guides 15 and 16 which serve to position the stop which engages the vertical edge of the paper sheet, the guides shown in the present instance being composed of tongues which are struck up from the sheet metal composing the stops, and the stop which engages the vertical edge of the sheet is composed in the present instance of an angle member having a horizontal arm 17 which passes beneath the guides 15 and 16, and a vertical arm 18 which is arranged preferably at right angles to the cooperating arm and is provided with an intumed flange 19 which is arranged at right angles to the length of the horizontal arm and is turned inwardly toward the backing at substantially right angles to the flat sides of the vertical arm and constitutes a paper engaging surface, the edge of the flange being serrated or provided with sharpened teeth 20 which are adapted to be embedded into the material composing the

backing for the purpose of preventing entrance of the sheets between the stop and the backing.

Any suitable means may be employed for securing the several stops in different adjusted positions, but it is preferable to provide a locking device of the character shown in Figs. 1, 3 and 5, comprising a slidable member 21 composed in the present instance of sheet metal having a longitudinal slot 22 to permit a longitudinal movement thereof relatively to the clamping screw which serves to secure one of the lower stops, and this member is provided with a pair of fingers 23 at its upper end which are arranged in folded relation to the body of the member and are adapted to engage above the arm 17. The latter is secured and released by sliding the said member longitudinally beneath the adjacent stop 11, a movement of the member in one direction causing the arm 17 to be clamped edgewise between the fingers of the member and the guide 16 on the stop. In order to produce a positive locking action that will prevent accidental displacement of the vertical stop, it is preferable to notch one edge of the said arm as shown at 24, and the fingers 23 of the locking member are provided with a pair of locking projections 25 which are adapted to cooperate with the notched edge of the arm.

In practice, it may be necessary to adjust the position of each stop according to the dimensions of the paper sheets to be printed, or to position the latter so as to insure registration with the type form, and these adjustments may be effected by loosening the thumb nuts 8 and 9 and then sliding the vertical stops 10 and 11 longitudinally, loosening of the thumb nut 9 also serving to release the locking member 21 so that the locking projections on the latter may disengage the notched edge of the arm which secures the vertical stop permitting the latter to be adjusted laterally of the platen, and all of the stops are locked in their respective adjusted positions by sliding the member 21 downwardly to engage the locking projections thereon with the notched edge of the arm 17 and finally tightening the thumb nuts, the latter operation serving to automatically embed the teeth on the vertical stops into the backing on the face of the platen, and the teeth on the lateral stop may be similarly embedded by a pressure on the vertical arm 18.

In order to enable the gage to handle very thin or flimsy sheets, it is preferable to provide them with suitable devices to engage the edge or edges of the sheet and retain it in proper relation with the respective stops, the lower stops in the present instance being each provided with a notch 28 to slidably receive a paper engaging projection 29, the latter being formed on a slide 30 which in the present instance is composed of sheet

metal or other material having inturned fingers 31 and 32 to slidably engage the longitudinal edges of the respective stop to permit the slide to be reciprocated to move the paper engaging projection to and from operative position relatively to the inturned flange on the stop. A portion of the metal is preferably doubled on the projection and provided with an inturned end 31 which is adapted to serve as a handle by means of which the paper engaging projection may be adjusted. A similar slide is also fitted to the arm 18 of the side gage, a pair of paper engaging projections 32^a and 33 being used in this instance and having a corresponding pair of handles 35 and 36 by means of which they may be manipulated.

A gage constructed in accordance with the present invention is capable of being readily adjusted for the purpose of accurately positioning the sheets relatively to the type form, the securing devices for the vertical stops serving also to effect the locking of the laterally adjustable stop, and the gage is capable of being manufactured inexpensively for the reason that it may be made readily from sheet metal by the use of dies and when applied to the platen, it occupies a position in very close relation thereto rendering it capable of application to presses of various kinds, and it does not interfere in any way with the paper feeding operation, nor does it mutilate the backing in such a way as to require its frequent removal.

I claim as my invention—

1. A paper gage for presses embodying stops adjustable in different relative directions and lockable both with respect to one another and to the platen by a common locking means.

2. A paper gage for press platens embodying vertically adjustable stops for engaging the lower edge of the sheet, a laterally adjustable end stop for engaging the vertical edge of the sheet, and a common locking device for retaining all the stops in adjusted position relatively to one another and to the platen.

3. A paper gage for press platens embodying a stop for engaging the lower edge of the sheet and having a guide thereon, and a laterally adjustable end stop having an arm cooperating with the said guide and provided with a portion for engaging a vertical edge of the sheet and a device cooperating with said arm and stop first mentioned for locking both stops in fixed relation to the platen.

4. A paper gage for press platens embodying a guide, and an end stop having an arm cooperating with the guide to permit a relatively lateral adjustment of the stop and provided with an arm extending angularly to the arm first mentioned and having an inturned sheet engaging flange extending at

right angles to the said arm and forming a paper engaging surface.

5. A paper gage for press platens embodying an end stop having a guiding arm, and a paper engaging arm arranged angularly thereto and provided with a sheet engaging flange extending at right angles to said arm and having a serrated edge to engage the backing on the platen.

6. The combination with a platen having a movable clamp thereon for securing the backing, of a bracket adapted to be applied to the clamp by a relative lateral movement and provided with a pair of oppositely arranged inwardly projecting ribs adapted to cooperate with the clamp to prevent accidental disengagement of the bracket, the said ribs capable of being sprung apart in applying and removing the bracket relatively to the clamp, and a paper gage secured to said bracket.

7. The combination with a platen having a pivoted clamp thereon for securing the backing, of a bracket composed of resilient sheet metal having portions adapted to straddle the clamp and provided with a pair of retaining ribs directed toward one another and adapted to engage the clamp to prevent disengagement of the bracket, said ribs being capable of a separating movement to permit a lateral disengagement of the bracket relatively to the clamp, and a paper gage carried by the bracket.

8. A paper gage for press platens embodying a pair of stops for positioning the paper vertically and having guides thereon, and a laterally adjustable end stop consisting of an arm slidably engaging both of said guides and guided for adjustment parallel to the plane of the platen, said slidable arm being provided with an upturned paper engaging arm.

9. A paper gage for press platens embodying a stop for positioning the paper vertically, an end gage for positioning the paper laterally, a slidable member for locking the end stop in different adjusted positions, and means for securing said member relatively to the stop first mentioned and the latter relatively to the platen.

10. A paper gage for press platens embodying a vertically adjustable stop having a guide thereon, a laterally adjustable end stop provided with an arm cooperating with the said guide, a slidable locking member cooperating with the arm on the end stop, and a device for retaining the vertical stop and the locking member in fixed relation to the platen.

11. A paper gage for press platens embodying a stop for positioning the paper vertically and having a guide thereon, an end stop having an arm cooperating with the said guide and provided with a longitudinally notched portion, and a locking member

having projections thereon adapted to co-operate with the notched portion of the said arm.

12. A paper gage for press platens embodying a vertically adjustable stop having an upturned guide thereon, a laterally adjustable end stop having an arm coöperating with the said guide, a locking member having a pair of overlapping fingers engaging the arm of the end stop and movable longitudinally to lock the said arm between them and the guide on the stop first mentioned, and a device for securing the vertically adjustable stop and the locking member in fixed relation.

13. A paper gage for press platens embodying a pair of vertically adjustable stops having paper engaging surfaces at their upper ends, and provided with upturned guides, a laterally adjustable end stop having an arm slidably engaging the said guides and provided with an upturned arm to engage a vertical edge of the paper, and a locking member slidably relatively to one of the vertically adjustable stops and having upturned fingers overlapping the guiding arm of the laterally adjustable stop, and a clamping screw for retaining the vertically adjustable stops and the locking member in fixed relation to the platen.

14. A paper gage for press platens embodying a pair of vertically adjustable stops having relatively inclined paper engaging surfaces at their upper ends, the latter being provided with serrated edges to engage the

backing of the platen, a guide being provided in proximity to the upper end of each of the said stops, a laterally adjustable end stop having a guiding arm slidably engaging the said guides and provided with an upturned arm having a paper engaging surface, a slidable member mounted in coöperative relation with one of the vertically adjustable stops having a locking engagement with the guiding arm of the end stop, and a device for securing the locking member in locked position and the vertically adjustable stops in fixed relation to the platen.

15. A paper gage for press platens, comprising a sheet engaging stop having an inturned portion adapted to coöperate with an edge of the sheet to position the latter, the said inturned portion being provided with a slot, a slide guided to reciprocate transverse to the said sheet engaging portion and having a projection arranged to operate through the slot therein and to project above the said inturned portion to provide a sheet engaging device, the end of the said projection being doubled and adapted to overlap the exposed side of the stop and being outturned to form a handle by means of which the slide may be moved to adjust said projection.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES H. HOWARD.

Witnesses:

W. R. BOWIE,

A. PARLETT LLOYD.