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2,628,558

REGISTERING DEVICE FOR PRINTING PRESSES

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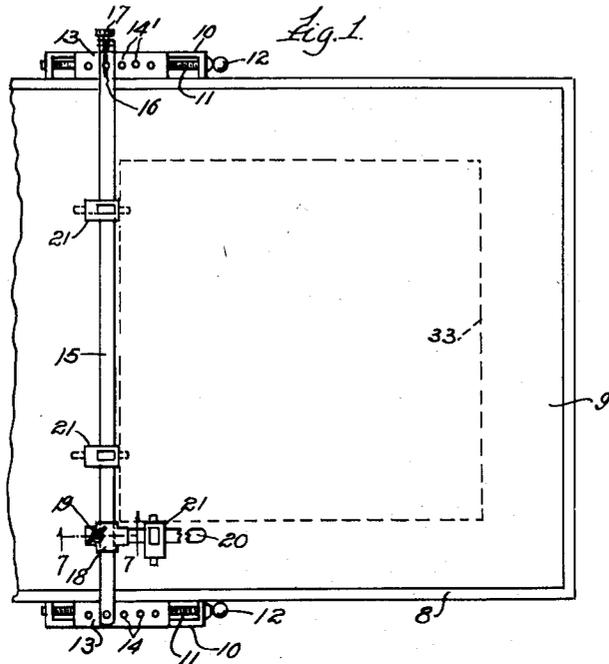


Fig. 2.

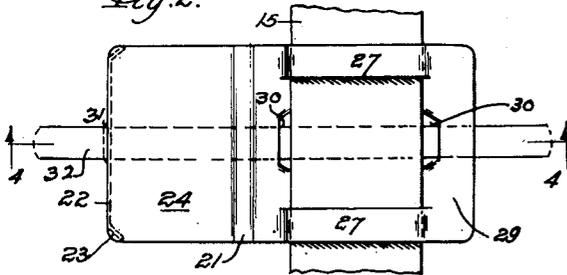


Fig. 5

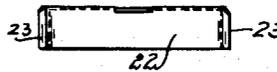


Fig. 3



Fig. 4.



Fig. 6.

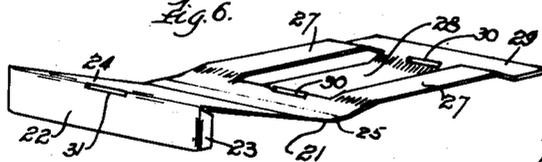


Fig. 7.



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UNITED STATES PATENT OFFICE

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REGISTERING DEVICE FOR PRINTING PRESSES

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1 Claim. (Cl. 101—413)

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This invention relates to register guides for printing presses, an improvement over my expired Patent No. 1,241,527, granted October 2, 1917. The present invention relates to guides or gauges used in connection with the platens of printing presses, through capable of other uses.

The instant invention avoids the former arduous methods requiring gluing on of quads and guides, changing of top sheets for every job, etc. One object is to provide a register guide particularly adapted for automatic job presses, automatic die cutting presses and hand fed job presses and employs two steel straps carrying movable quad guides and hoppers, preferably metal, the straps secured together at right angles to each other and held in place by steel pins or the like set in metal adjustment blocks at each side of the platen, these blocks screwed into metal plates which are secured to the press—thus they are held out side the width of the press bed beyond the possibility of contact therewith.

A still further object is to provide register guides capable of making a hair line register and one that can be adjusted to any position, any angle, any size and weight of stock and that can be set instantly for the closest work. A further object is to provide a register guide for printing presses and die cutting presses that is composed of few parts, that is positive and efficient in operation, inexpensive to manufacture, durable in use and that will not easily get out of order.

In using the instant guide should the lock-up be crooked it is not necessary to pause to straighten it but merely adjust the guide correspondingly at a less than one minute delay and proceed, and moreover, if a few hundred copies have been run and it is desired to put another overlay under the packing and a few sheets more impression it is but necessary to remove the guide from the side pins and improve the make ready any way desired, then replace the guide upon the same pins and exactly the same register will be found, and this without regard to whether more or less impression has been used.

Quick changes in all margins from one-thousandth of an inch are possible in an instant; and for color work the guide is particularly of great value. Other objects, novel features and advantages of arrangement, construction and design comprehended by the invention are hereinafter more fully pointed out or made apparent from the following description of a preferred embodiment as illustrated in the accompanying drawing forming part of this disclosure

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and wherein like reference characters denote corresponding parts throughout.

In the drawing:

Fig. 1 is a fragmentary plan view of the platen with tympan of a printing press illustrating the application thereto of the improved register guide.

Fig. 2 is a top plan view, enlarged, of the improved quad employed.

Fig. 3 is a view in side elevation of Fig. 2.

Fig. 4 is a longitudinal vertical sectional view through Fig. 2 on the plane of the line 4—4.

Fig. 5 is a view in rear end elevation of Fig. 6

Fig. 6 is a view of Fig. 5 in elevation perspective, and,

Fig. 7 is a longitudinal sectional view through Fig. 1 on the line 7—7.

The reference numeral 8 denotes the platen proper and 9 the tympan sheet or pad. Secured to the sides of the press by screws or other fastening means are the frames 10, one upon each side and directly opposite each other. Operatively supported in the ends of each frame 10 is a screw shaft 11 provided at one end with a head 12 for rotating the shaft. Arranged upon each shaft 11 is a nut adapted to travel thereover, said nut having fast thereto a traveling block 13, each block carrying a plurality of pins 14 or 14' approximately five in number.

The pins 14 of one block 13 are adapted for engagement selectively with the perforate end of a cross guide strap 15, the pins 14' of the opposite block adapted selectively for engagement with the slotted portion 16 of the strap, the slot 16 permitting adjustment of the strap longitudinally when its opposite end is disengaged from the pins 14, the slotted end of the strap having a downturned end or flange through which a screw 17 extends for frictional engagement with the side of block 13 for anchoring the strap in adjusted position when both strap ends are engaged by pins. By rotation of either shaft head 12 alone the cross strap may be disposed at any angle across the platen or when the screw 17 is free the cross strap may be disengaged from the pins and placed in engagement with any desired pins of the two blocks.

Adjustably arranged upon the cross strap is a sleeve 18 provided with a set screw 19 by means of which it may be anchored at any desired point to the strap, the sleeve being integral with or secured to a short guide strap 20 extending longitudinally of the platen at right angles to the strap 15. Readily adjustable upon both straps are the quads 21, two upon the cross

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strap and one upon the short guide strap, each of one-piece formation and of overall oblong shape, one end bent downwardly to form the leg 22 having lateral ears 23 and at its elevated end merging with the slanting wing 24 that extends to the foot 25 disposed in approximately the plane of the lower edge of the leg, the foot being of narrow shape and extending transversely of the member and merging into the body portion slotted longitudinally to form the lateral ribs 27 bent upwardly slightly and separated from the center depressed rib 28, said ribs merging into the flat lip 29 disposed in a plane midway between the planes of the ribs 27 and 28, the material formed with slots 30 at the opposite terminals of rib 28 and with a slot 31 at the juncture of leg 22 and wing 24.

The quad is formed of a resilient material and at rest is disposed upon the lower edge of leg 22, the foot 25 and rib 28 with strap 15 flat upon or flush with the bed of the press. The strap upon which a quad is received passes between the ribs 27 and rib 28 while a tongue 32 extends through the slots 31, 30 beneath strap 15 and longitudinally of and upon rib 28 and beyond the leg 22 and lip 29 at its ends, the tongue extending slightly over the sheet of stock 33 to prevent same from following the type of the press during the printing operation.

By rotation of one head 12 one block 13 is moved longitudinally of its frame to move one end of the strap 15 while movement of the heads together will move the strap longitudinally of the platen causing the quads to adjust the paper increasingly from one one-thousandth of an inch thus providing precision adjustment. The quads upon strap 15 are selectively adjustable longitudinally of same and transversely of the platen while the quad of strap 20 is adjustable longitudinally of the short guide and of the platen.

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What is claimed is:

In a registering device for a printing press including a guide strap, a quad of one-piece formation operatively associated with said strap, said quad having foot and leg portions disposed directly upon the tympan of the press, an inclined wing portion connecting said leg and said foot, a body portion formed by extension of said foot, said body portion including upwardly bent lateral ribs and a central depressed rib spaced therefrom, with openings provided therebetween, a lip terminating said ribs and disposed in a plane intermediate the planes of said upwardly bent and depressed ribs, a slot disposed between said depressed rib and said lip, a second slot disposed between said depressed rib and said foot, and a third slot disposed between said leg and said wing portion, said guide strap extending through said quad through the openings between said upwardly bent and depressed ribs, and a tongue extending through said slots and beneath said strap and extending beyond said leg and lip.

ISRAEL LEVIN.

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