Dec. 11, 1928. 1,694,720

S. H. PLUM, 2D

SHEET HOLDING DEVICE

Filed Sept. 14, 1927

Fig. 1

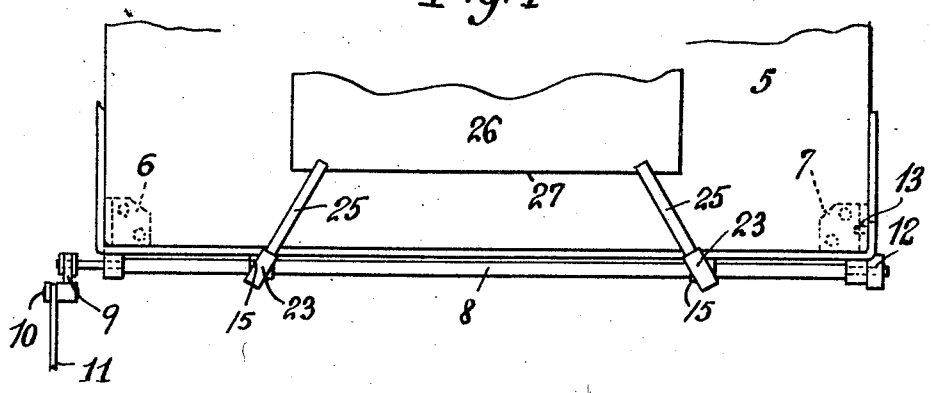


Fig. 2

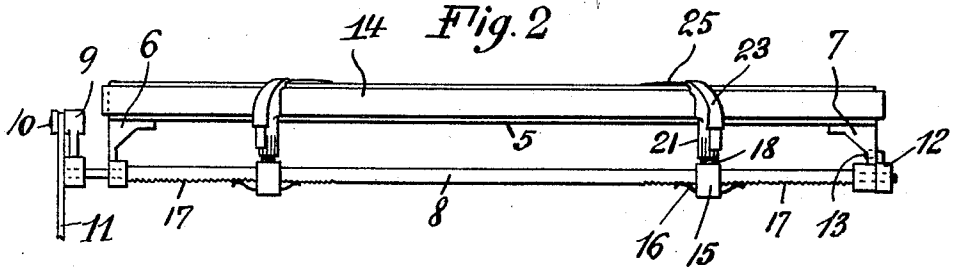


Fig. 3

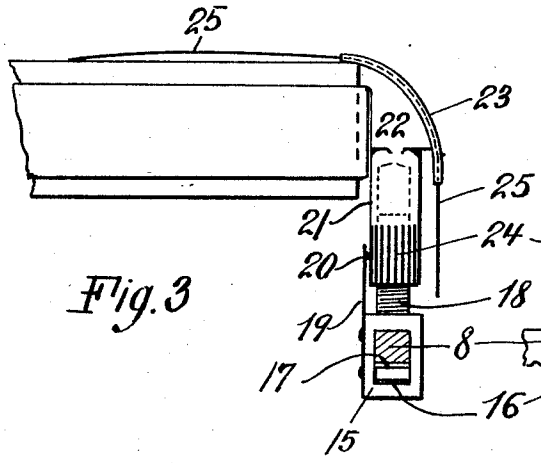
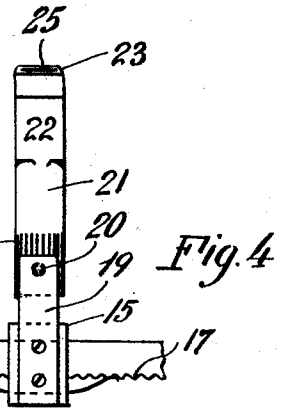


Fig. 4



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UNITED STATES PATENT OFFICE.

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SHEET-HOLDING DEVICE.

Application filed September 14, 1927. Serial No. 219,411.

This invention relates to improvements in sheet holding devices for use on platen printing presses. The object of the invention is to provide improved sheet holding devices or fingers adapted to be mounted on a platen adjacent its upper or forward edge for the purpose of holding down the edges or corners of a sheet after it has been printed, so as to prevent the sheet from curling or buckling and thus facilitate mechanical or pneumatic delivery.

The invention relates particularly to sheet holding devices of the kind disclosed in the U. S. patent No. 1,536,351, dated May 5, 1925. In this patent the sheet holding device comprises a finger bar mounted to oscillate near the upper edge of the platen. To the bar is secured a plurality of holders adapted to be adjusted parallel with the platen. The holders carry fingers adapted to reach in over the platen and catch the corners of the sheet.

It is a specific object of this invention to provide improved holders and fingers adapted to be mounted on the finger bar, the latter being operated in the manner shown in the patent referred to.

To this end the invention is embodied in a sheet holding device constructed and arranged as hereinafter set forth and as illustrated in the accompanying drawing in which

Fig. 1 is a plan view of a platen of the type used in a Chandler & Price platen press equipped with sheet holding devices embodying the invention, parts being broken away.

Fig. 2 is a view at right angles to Figure 1.

Fig. 3 is an enlarged detail view of the device.

Fig. 4 is a view at right angles to Figure 3.

Referring to the drawing, the reference numeral 5 denotes a platen which is operated and constructed like a platen in a Gordon press, or a platen press of the well known Chandler & Price type.

Underneath the rear corners of the platen there are secured two brackets 6 and 7 forming bearings in which is journaled a holder shaft 8, which at one end carries an arm 9 to which is pivoted at 10 an operating lever 11. The other end of the lever 11 is pivotally connected to the press in any suitable manner not shown, but disclosed in the said patent.

The other end of the shaft 8 carries a stop arm 12 having a stop 13 adapted to engage the bracket to limit the movement of the holder shaft in a direction away from the platen.

On the holder shaft 8 there are adjustably mounted two finger holders. Each holder comprises a base 15 mounted to slide on the shaft and held thereon in adjustable frictional relation by means of a spring 16 adapted to engage a serrated or toothed portion 17 of the shaft. The base carries an upstanding threaded stem or post 18 and a spring pawl 19 having a tooth 20.

A sleeve 21 is in threaded engagement with the post 18 and is at its upper end formed with a head 22 which carries a curved finger channel guide 23. The sleeve 21 is knurled as at 24. Through the channel 23 passes a finger 25 made of very thin spring steel.

The bail of the platen is marked 14 and the sheet 26.

In operation the holder shaft 8 is oscillated with respect to the platen in a well known manner and whereby the fingers 25 are caused to descend upon the sheet 26 to prevent its delivery edge 27 from curling so it cannot be gripped by the sheet removing means after it has been printed. At other times the shaft 8 is oscillated to remove the fingers from the platen as is obvious in order to permit the sheet to be printed.

The finger holders are adjustable along the holder shaft 8 by a mere pushing motion which causes the holding spring 16 to slide over the teeth 17. The fingers 25 are vertically adjustable by screwing the sleeve 21 up or down on the post 18 during which movements the spring tooth 20 slides or slips over the knurls 24. When it has been adjusted vertically, the spring tooth 20 prevents accidental rotation. On the other hand, when once the sleeve 21 has been adjusted vertically, it may be turned more or less on the post 18 to adjust the fingers angularly or laterally on the platen.

A further adjustment is provided in that the finger 25 may be pulled or pushed through the channel guide to adjust the finger reach in over the platen. A still further advantage of the construction is that by a mere turning movement the fingers may be moved away or outside of the platen to permit the platen bail to be lifted.

It will be seen therefore that the sheet holding fingers according to this invention are adjustable vertically, horizontally and longitudinally, i. e. lengthwise of the fingers 25, and that the holders are adjustable axially on the shaft 8. This invention therefore pro-

vides all the adjustments required in order to accommodate all sizes of matter to be printed. The entire absence of screws, clamps or bolts is a feature providing quick adjustment and efficiency.

I claim:—

1. The combination with the platen of a press, of sheet holding resilient fingers pivoted on said platen for momentarily holding the delivery edge of the printed sheet against the platen and means for adjusting said fingers vertically with respect to the platen.

2. The combination with the platen of a press, of sheet holding resilient fingers pivoted on said platen for momentarily holding the delivery edge of the printed sheet against the platen and means for adjusting said fingers vertically and horizontally with respect to the platen.

3. The combination with the platen of a press, of sheet holding resilient fingers pivoted on said platen for momentarily holding the delivery edge of the printed sheet against the platen and means for adjusting said fingers vertically, horizontally and laterally with respect to the platen.

4. The combination with the platen of a press, of sheet holding resilient fingers pivoted on said platen for momentarily holding the delivery edge of the printed sheet against the platen and means for adjusting said fingers vertically, horizontally, laterally and longitudinally with respect to the platen.

5. A sheet holding device of the character set forth comprising a base having an upright post, a member adjustably mounted on said post, a curved guide on said member and a resilient sheet holding finger in said guide.

6. A sheet holding device of the character set forth comprising a base, means for mounting said base in adjustable parallel relation to the platen of a press, said base having an upright threaded post, a sleeve in threaded engagement with the post, a channel carried by said sleeve and a yielding resilient sheet holding finger in said channel.

7. A sheet holding device of the character described comprising a base, a threaded post extending upwards from the base, a member in threaded engagement with the post to adjust said member thereon, a pawl on the base for maintaining said member in adjusted position on the post, a curved channel guide on said member and a resilient sheet holding finger passing through and mounted in said channel guide.

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