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W. G. READ
PRINTING MECHANISM

2,265,005

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Fig. 1

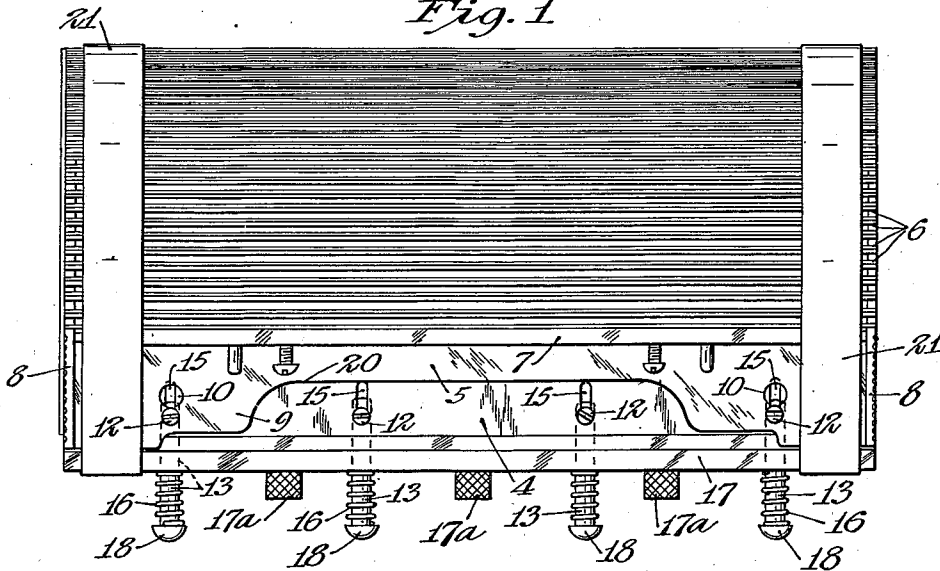


Fig. 2

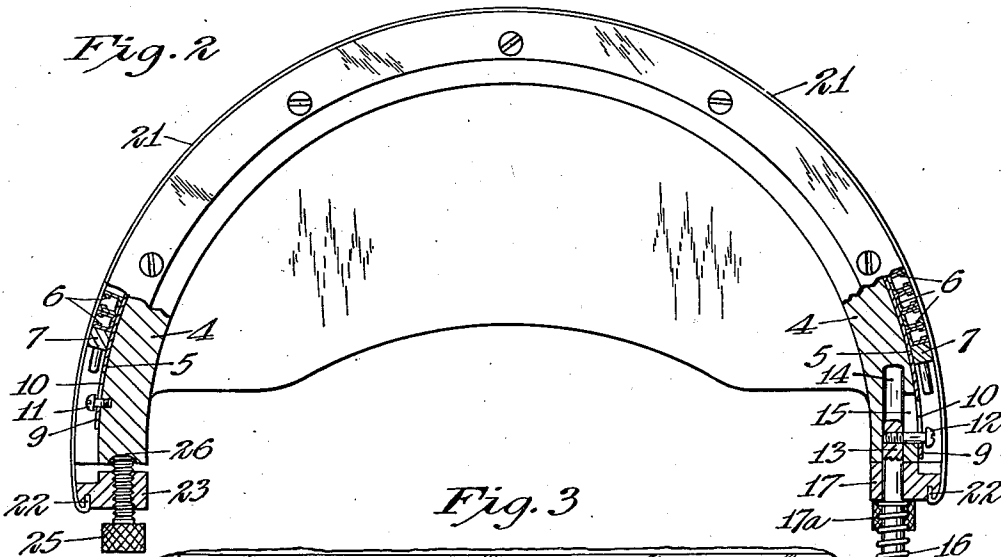


Fig. 3

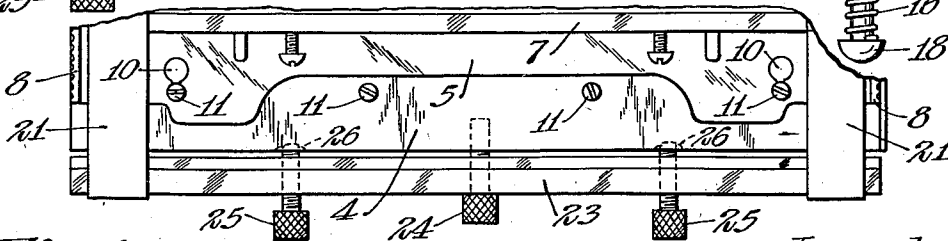
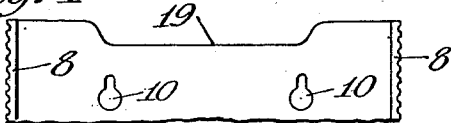


Fig. 4



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2,265,005

PRINTING MECHANISM

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2 Claims. (Cl. 101—415.1)

It is an object of this invention to provide improved means for detachably fastening a flexible form holder to a chase, the device being an improvement on the fastening means described in my patents numbered 2,025,307 and 2,045,408, granted respectively December 24, 1935, and June 23, 1936.

A particular object is to provide in mechanism of this class novel means for facilitating the placing of holders of various widths under predetermined spring tension circumferentially or longitudinally of the chases.

A further object is to provide novel attaching means for flexible form holders having ends which are flat and without obstruction to the removal of individual line holders by sliding the latter off the end of the form holder.

Referring to the accompanying drawing which illustrates the best form of my invention at present known to me:

Figure 1 is a side elevation of my improved fastening means applied to a cylindrical chase and flexible form holder extending the entire width of the chase;

Fig. 2 is a part end view and part longitudinal section of the same assembly of chase and form holder;

Fig. 3 is a fragmentary side elevation showing the side opposite that illustrated in Fig. 1, and

Fig. 4 is a fragmentary plan view of one of the narrower form holders which may be attached to the cylindrical chase.

In the drawing the numeral 4 indicates an arcuate chase for use in connection with printing machines of the type sometimes called duplicating machines. This chase has a cylindrical outer periphery on which is detachably mounted a flexible form holder indicated generally by the numeral 5. Being constructed from thin sheet metal, the form holder is adapted to be laid flat when removed from the chase. A multiplicity of parallel line holders 6 of channel shape are removably attached to the outer surface of the holder 5 to receive the type. These line holders 6 are confined between follower bars 7 and the ends of each line holder are slotted to slidably receive flanges 8 bent in from the side edges of the holder 5.

Flat, unobstructed end portions 9 of the holder 5 are each perforated by pairs of keyhole shaped slots 10. To engage in these slots at one end of the holder 5 I provide fixed screws 11 on the chase 4. The enlarged ends of the slots 10 may be passed over the heads of the screws 11 and then the holder 5 may be moved to engage the

screws in the smaller ends of the slots. Along the opposite edge of the chase 4, I provide pairs of movable screws 12 to engage the holder 5 in the slots 10. These screws 12 are threaded in spring-pressed pins 13 which are movable longitudinally in guideways 14 formed in the chase 4 at right angles to the end of the latter. Enlargements 15 of the guideways 14 extend to the outer periphery of the chase to guide and limit movement of the screws 12. Coiled springs 16 are confined on the pins 13 between a bar 17 attached to the end of the chase and heads 18 formed on the pins.

By pressing upward on the heads 18 the pins 13 may be actuated to move the screws 12 to register with the enlarged ends of the slots 10 and thereby free the holder 5 for removal from the chase 4. Normally, with the holder 5 in place on the chase 4, the springs 16 actuate the pins 13 to draw the screws 12 against the form holder at the outer, small extremity of the slots 10 and thereby tension the holder on the chase. Two pairs of the pins 13 are preferably arranged in spaced parallel relation to each other for engaging form holders of less width than the width of the chase, like the holder 19 shown in Fig. 4. Such narrow holders are used for special classes of work and may be attached either to the left or right pair of screws 12 as seen in Fig. 1. The end portion 9 of the holder 5 is preferably formed with a cut-out portion 20 to allow it to clear two of the screws 12.

It is frequently desirable to remove a number of the individual line holders from the form holder without disturbing the composition and to slide a group of the line holders from one form holder to another. The ends of my improved form holders are designed to facilitate this, being without obstructions when removed from the chase. After removing one of the follower bars 7, the line holders 6 may be moved individually or in groups to the end of the form holder whence they may be slid directly onto a similar form holder placed end to end thereto. As will be evident from a comparison of Figs. 1 and 3, opposite ends of the form holder are so shaped that one may be laid flat with its end fitting the end of another and in a common plane when it is desired to slide the line holders directly from one form holder to another.

To press the individual line or type holders 6 and holder 5 upon the cylindrical periphery of the chase 4, flexible steel bands 21 are placed circumferentially of the chase on the line holders and drawn tight thereon. The band fastening

means includes the bar 17 extending along one end of the chase and having a longitudinal slot to receive intumed ends 22 formed on the bands 21. The opposite ends of these bands are similarly bent to engage a bar 23 in a longitudinal slot. This bar 23 is adjustable to and from the edge of the chase, being mounted on a central guide screw 24 extending through a perforation in the bar 23 and threaded in the chase 4. A pair of thrust screws 25 are threaded in the bar 23 with their inner ends revolubly engaging steel inserts 26 fixed on the chase. By turning the screws 25 in the appropriate direction, the bar 23 may be drawn forcibly away from the chase to tighten the bands 21.

In the use of my apparatus, the type is first composed on one or more of the flexible holders 5 or 19 in the usual manner before attaching the holder or holders to the chase. With the following bars 7 confining the line holders and type, the form holder or holders may be quickly and easily placed under tension on the chase. This is accomplished by first passing the heads of a pair of the screws 11 into the larger ends of slots 10 and then moving the holder to engage the screws in the smaller ends of the same slots. As the next step the holder is bent to conform to the periphery of the chase and the heads of the screws 12 are passed into the larger ends of the slots 10, with the pins 13 pressed upward. Finally, by merely releasing the pins 13, the screws 12 are actuated by the springs 16 into the smaller ends of the slots 10 to draw the line holder or holders firmly against the periphery of the chase 4. The bands 21 are finally placed on the line holders 6 and are fastened, as hereinafter described.

It will be evident from the foregoing description that my improved apparatus greatly facilitates the attachment of flexible form holders having flat ends to the chases and that it maintains the holders under spring tension thereon irrespective of ordinary differences in the length

of the flexible holders relative to the periphery or longitudinal dimension of the chase. My invention may be used in connection with flat or plane chases as well as with arcuate chases of the type illustrated in the drawing.

Having described my invention, what I claim as new and desire to protect by Letters Patent is:

1. Printing mechanism having in combination, a cylindrical chase, a flexible, sheet metal form holder adapted to conform to the periphery of said chase and having a flat end portion formed with keyhole shaped slots, means for detachably securing an end of said holder on said chase, guideways extending circumferentially of said chase near the opposite end of said holder, plungers severally movable in said guideways and having ends projecting from an edge of said chase, pins mounted on said plungers and having heads projecting from said guideways to engage the holder in said slots and coiled springs disposed to actuate said plungers and pins to tension said holder on the chase, the projecting ends of said plungers being manually operable to disengage the pins from the holder.

2. In mechanism for securing a thin sheet metal form holder to the face of a chase, the combination of means for anchoring one end of said holder on said chase and means for engaging the other end portion of the holder for removably securing the holder under tension comprising, plungers projecting from an edge of said chase and movable in recesses therein, guide slots being formed in the face of the chase in communication with said recesses, pins projecting from said plungers respectively in said guide slots, the free end portion of said holder being formed with perforations to receive and engage said pins and coiled springs severally engaging said plungers to actuate said pins to tension the holder in engagement therewith, the projecting ends of said plungers being manually operable to relieve tension on the holder.

WORTH G. READ.