

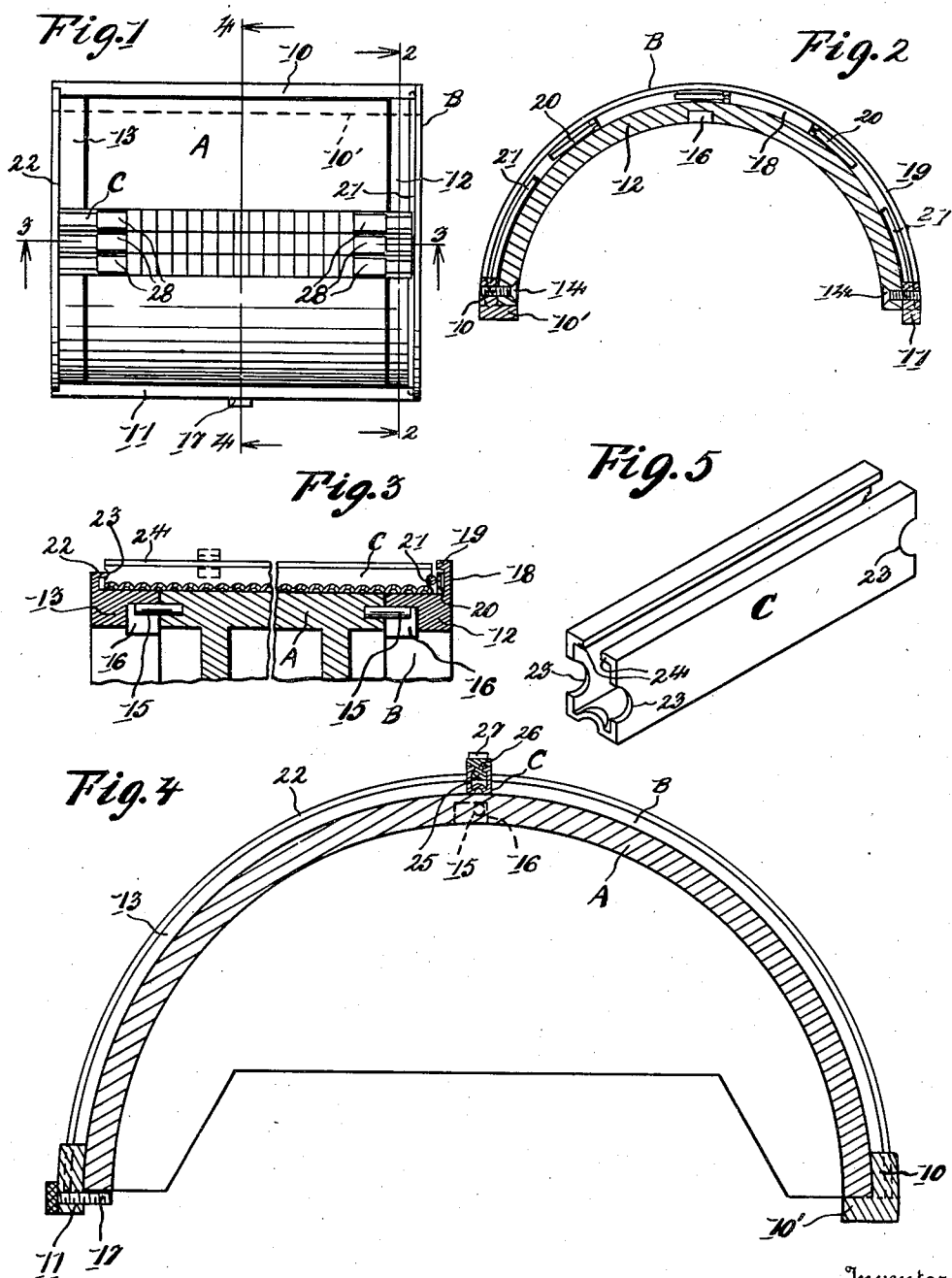
March 19, 1935.

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1,995,130

PRINTING DEVICE

Filed Dec. 3, 1931



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1,995,130

PRINTING DEVICE

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Application December 3, 1931, Serial No. 578,655

3 Claims. (Cl. 101—377)

My invention relates to improvements in printing devices and is particularly adapted for use on the small presses employed in accounting and similar departments of railroads and other corporations.

In the use of presses of this class, the setting of the type and making ready of the forms is usually performed by unskilled labor. A relatively small number of copies of the matter to be printed are required and it is customary to preserve the forms from which the printing is done as a part of the records of the department.

The object of my invention is to simplify the setting of the type and to increase flexibility in the making ready of the forms so that these services may be performed with little practice by regular employees of the office, such as clerks, bookkeepers and/or stenographers, without previous experience in the printing trade.

It is also an object of my invention to facilitate and make economical the preservation of the forms without the supporting segments or beds which, in the case of devices in general use, are an integral part of the forms and are stored as a part of the record.

It is a further object of my invention to provide a novel combination of chase and type tubes or rails which may be easily assembled and if the resulting forms are preserved may be stored economically because of the inexpensiveness of the parts and the relatively small storage space required after use in printing.

Further objects of my invention are pointed out in the following specification and claims.

In the accompanying drawing:

Figure 1 is a plan view of my device;

Fig. 2 is a cross section taken on the line 2—2 of Fig. 1, with the bail 21 broken away to show the springs 20 and the type rail C omitted;

Fig. 3 is a longitudinal section taken on the line 3—3 of Fig. 1;

Fig. 4 is a cross section taken on the line 4—4 of Fig. 1; and

Fig. 5 is an enlarged perspective of the type rail C.

Broadly, my improved device comprises a bed A, illustrated as a segment, adapted to support a chase B and the form which may be set therein; said bed being provided with means for detachably holding the chase and said chase being adapted to adjustably receive and hold in form a plurality of type tubes or rails C in each of which a line of type is set.

The bed A is illustrated as a segment, but may be of any common form adapted for use on any of

the small cylinder or platen presses employed for printing of the class above described.

The chase B is of skeleton form consisting of the side bars 10 and 11 and the end frames 12 and 13. The side bars and end frames of the chase are proportioned to conform to and snugly fit over the bed A, the side bars being rigidly attached to the end frames by means of screws 14. The side bar 10 is an angle iron, the horizontal flange 10' of which extends under the corresponding longitudinal edge of the bed A and the side bar 11 is a rod or strap adapted to fit slidably the opposite edge of the bed A. The connection between the bed A and chase B is made by means of the flange 10' in cooperation with pins 15 formed in the base and adapted to register with slots 16 in the end frames 12 and 13 of the chase and the chase B is finally locked in position on the bed A by the screw 17 which is applied to the side bar 11 of the chase and the adjacent edge of the bed.

The tubes or type rails C are positioned and locked in the chase B by the following described means. The frame 12 is formed with an upwardly projecting flange 18 having a shoulder 19. Beneath this shoulder, on the inner surface of the flange 18, a plurality of flat or leaf springs 20 are attached which are adapted to contact with a bail 21. This bail loosely conforms to the longitudinal surface of the end frame 12 and is pivoted at its ends in proximity to the junction of the side bars and end rail 12. A grooved flange 22 is formed on the outer edge of the frame 13 which is adapted to cooperate with the springs and bail on the frame 12 to engage the ends of the hereinafter described type rails C. Both ends of these rails are formed with notches 23, one of which is adapted to engage the bail 21 and press it resiliently against the springs 20 while the notch on the opposite end of the rail engages the rim of the grooved flange 22 on the end frame 13. When so engaged, the rail C is secured against end movement but is slidable on the frames 12 and 13 to permit adjustment of the line of type in the chase.

The type rails C consist of channel bars, U-shaped in cross section. The upper edges of these U-shaped bars are formed with inwardly extending flanges 24. The type used in these bars is of T-shape in longitudinal section, adapted to slide into and along the type rails with the lower flange 25 of the type beneath the inwardly projecting flanges 24 of the rail, and the vertical shank 26 of the type extending between said flanges so that the face 27 of the type projects

above the flanges. Obviously longer or shorter lines of type may be set in the rails. A line of type is locked in position in the rail by means of spring clips 28 at either end of the line, said clips being forced into position through the internally projecting flanges on the rails C. When a line of type has been set in a rail C, the rail is inserted in the chase B by pressing the notch at one end against the bail 21 and engaging the notch at the other end of the rail on the rim of the grooved flange 22. When the desired number of lines of type have been placed upon the chase in the manner above described, it is obvious that they are slidable on the end frames 12 and 13 and that the form may be completed and locked in position by bars, slugs or leads having end notches like those of the type bars C adapting them to be engaged by the bail 21 and spring 20 of the end frame 12 and the rim of the grooved flange 22 of the frame 13.

It will be obvious to those skilled in the art that my printing device is adapted for use on various forms of small printing presses now in service by railroads and other corporations and that after a number of rate schedules, statements of account or other documents have been printed, the chase carrying the form used may be filed away for future use. My device will produce substantial economy in initial cost of the form stored and in storage space because it is now common practice to file with the form the bed on which it is placed while with my device only the separable chase will be filed with the form. It is also evident that my method of setting the type and

making ready the form is more simple and flexible than analogous means now in common use for similar purposes.

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

1. The combination of a plurality of type rails each formed with a notched end, a skeleton chase having end members, one of which is adapted to engage the notched ends of said rails, the other end member being provided with springs and a flexible bail adapted to engage the opposite ends of said rails.

2. In a printing press having a bed, a chase having spaced, rigid side and end members rigidly connected together and adapted to engage the outer side edges of said bed, means for detachably connecting said chase to said bed, a multiplicity of type bars each having an end formed to detachably engage one of said end members of the chase and means mounted on the other of said end members for removably engaging the adjacent ends of said bars.

3. In a printing press having a bed, a chase having rigid, spaced end members adapted to embrace opposite outer side edges of said bed, means for detachably connecting said chase to said bed, a multiplicity of type bars each having an end formed to detachably engage one of said end members of the chase and resilient means mounted on the other of said end members of the chase for removably engaging the adjacent ends of said bars.

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