

UNITED STATES PATENT OFFICE.

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PRESS-BED.

No. 915,868.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK C. LEETHEM, a citizen of the United States, and a resident of Middletown, in the county of Orange and State of New York, have invented a new and Improved Press-Bed, of which the following is a full, clear, and exact description.

This invention relates to press beds such as used by printers.

10 The object of the invention is to produce a press bed having a construction which will enable plates to be attached in any position thereupon, and having special means for bracing the frame of the press bed.

15 More specifically the press bed may be described as comprising a frame having grooves cut in the upper face thereof. The opening of the frame is completely filled with square blocks, the faces whereof are channeled so
20 that when placed in the bed the entire face of the bed is covered with parallel channels extending completely across the bed. The channels in the blocks aline with the channels in the faces of the frame. The frame is provided with a transverse bar or brace which is
25 transposable with the blocks, and this brace acts as a rigid support for the sides of the frame and preserves an accurate alinement of the grooves thereof with the grooves of the
30 block. Further, by reason of the fact that this brace may be transposed, the retaining devices for the plates which run in the grooves may be applied at any point whatever on the face of the press bed. In this way plates may
35 be secured to the press bed with their edges at the normal position of the brace, and with their edges projecting over the side bars of the frame. In other words, by the arrangement which I adopt, printing plates may be
40 secured anywhere upon the press bed, and they may be set over so that their edges lie nearly in alinement with the outer edges of the side bars of the frame.

45 The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification in which similar characters of reference
50 indicate corresponding parts in all the figures.

Figure 1 is a plan of a press bed and illustrates the manner in which printing plates are secured thereupon; Fig. 2 is a vertical
55 cross section through one of the backing

blocks taken on the diagonal thereof at right angles to the grooves referred to above; this view is upon an enlarged scale; Fig. 3 is a cross section on the line 3—3 of Fig. 1 upon an enlarged scale, and illustrating the man-
60 ner of connecting the brace to the side bars of the frame; Fig. 4 is a cross section on the line 4—4 of Fig. 1, upon an enlarged scale; Fig. 5 is a perspective of one of the slugs which slide in the grooves or slots, and which back
65 up the hooks which retain the printing plates in position; and Fig. 6 is a perspective of one of the hooks which slide in the slots or grooves.

Referring more particularly to the parts, 70 1 represents the frame, which is of rectangular form, with side bars 2, 2, and end bars 3, 3. One of the side bars 2, and both end bars are formed with under-cut grooves 4 on their inner faces, and in these grooves, 75 locking sticks 5, or furniture, are received, as shown. These sides of the frame are provided with locking screws 6 which come up against the faces of the sticks so as to force them inwardly. Near their middle point, 80 the side bars 2, 2, are provided with dovetail notches 7 which receive the dovetail ends of the cross bar or brace 8, which is disposed across the body of the press bed, as indicated; I provide three pairs of these notches, 85 or more if desired. The two parts of the press bed which are divided from each other by the brace 8, are completely filled by blocks 9. These blocks are of square form, and are cut to the pica system so that they meas-
90 ure eight ems on the side; the form of one of these blocks is very clearly shown in Fig. 2. Its under side is formed with a chamber 10 so that the block is substantially hollow. The upper face of each block is provided
95 with a diagonal main groove 11, which extends across the center of the block, and similar small grooves 12 are formed in the corners of the block, which are in a line with the main groove. These grooves are under-
100 cut, as shown. From this arrangement it should be understood that when the blocks are arranged together, as shown, they will form continuous slots or channels 13 extend-
105 ing completely across the press bed. In addition to this the side bars 2, 2, and the end bars 3, 3, of the frame are provided with similar under-cut channels or slots 14, which aline with the slots 13 so that these slots are
110 continuous across the face of the frame. On

account of the fact that the blocks completely fill the frame, the channels of the blocks can be made to aline accurately with the slots of the frame.

5 As indicated in Fig. 4, the under-cut grooves 4 for the sticks 5, are depressed below the bottoms of the slots so that they do not obstruct the passage of hooks 15 which run from the frame onto the blocks. These
10 hooks simply consist of small slugs having bevel edges, as indicated in Fig. 6, which are received in the slots. At one end each hook is provided with a hook proper 16, which engages an edge of the plate. The hook proper
15 is arranged so that it will be parallel with the side bars of the frame or end bars.

The hooks are held in place by backing slugs 17 which run in the slots behind them and are secured in the slots by screws 18 that
20 pass downwardly through the face of the slugs, as indicated in Fig. 5. In Fig. 1 I have illustrated a large plate 19 and it is proposed to secure the plate to the press bed in the position shown, that is, with its upper
25 edge lying on the side bars of the frame, and one of its long edges disposed over the brace 8. In this connection it should be understood that the width of the brace bar 8 is the same as the blocks, and in order to enable
30 the plate to be secured in the position illustrated, this brace is simply removed from the frame and transposed to either of the rows of blocks between another pair of the dovetail notches 7. Thus the bar could be
35 moved toward the left so as to lie under the body of the plate 19. The face of the bar is flush with the face of the blocks and with the frame so that it forms a substantial backing for the plate. With the bar removed from
40 the edge of the plate, the hooks 15 can then be placed in the slots of the blocks which will then lie under the edge of the plate and can be fastened in position by means of the backing slugs, as will be readily understood.
45 The brace 8 insures perfect rigidity of the frame so that perfect alinement will always exist between the blocks and the slots in the face of the frame. Where it is desired to secure a plate 20 very close to another, as the
50 plate 19, the hooks may be placed back to back with each other, as indicated at 21, so that there are no backing slugs between the plates.

As indicated in Fig. 3, the dovetails 7 do
55 not pass completely through the frame bar, but these notches are formed with supporting shoulders 22 for the ends of the brace. When using the press bed, it should be understood that in order to place one of the hooks at any
60 point in the bed, it is only necessary to pull out one of the blocks in the vicinity of the point where the hook is to be placed, whereupon the hook may be placed in the groove of the block and the block replaced. Atten-

tion is also called to the fact that any block 65 may be reversed, that is, it may be removed and turned through an angle of 180° and replaced.

It is evident with a press bed constructed as described, printing plates can be secured
70 at any point whatever, and their edges may project over the bars of the frame so as to lie near the outer edges of the press bed.

The distance between the notches on the sides of the frame is of course the same as the
75 width of the blocks, or a multiple of their width, so as to enable the brace to be transposed as suggested.

Having thus described my invention, I claim as new and desire to secure by Letters
80 Patent,—

1. A press bed comprising a frame, a plurality of blocks received in said frame and having alining grooves in the faces thereof whereby slots are formed extending contin-
85 uously across the press bed, with grooves in said frame alining with said slots, extending said slots across the faces of said frame, and fastening devices for printing plates secured in said slots. 90

2. A press bed comprising a frame, a plurality of blocks received in said frame and having grooves therein alining to form slots extending continuously across the press bed, said frame having grooves alining with said
95 slots and extending the same across the face thereof, a cross brace passing through the body of said blocks and connecting opposite sides of said frame, and hooks running in said slots. 100

3. A press bed comprising a frame, a plurality of blocks received in rows in said frame and filling the opening therein, said blocks and said frame having alining grooves forming continuous slots across the press bed, and
105 a cross brace connecting the sides of said frame and transposable with a row of said blocks, and means for securing said brace in said frame in different positions.

4. A press bed comprising a frame, a brace
110 bar extending across said frame, a plurality of blocks disposed in rows in said frame on each side of said bar, said blocks being interchangeable with said bar, means for clamping said blocks in said frame, and means for
115 securing said bar in different positions alining with certain of said rows of blocks.

5. A press bed comprising a frame, a brace extending across said frame and connecting the sides thereof, backing blocks disposed in
120 rows in said frame, the faces of said blocks being flush with the face of said bar, means for securing said bar in different positions, alining with certain rows of said blocks, and means for clamping said blocks in said frame,
125 said rows of blocks being interchangeable with said bar.

6. A press bed comprising a frame, a plu-

5 rality of blocks mounted in said frame and having alining grooves therein forming slots passing continuously across the press bed, said frame having grooves alining with said slots, said frame having under-cut grooves in the inner edges thereof, clamping sticks in said last grooves for clamping said blocks, and depressed below the bottoms of said slots, and hooks running in said slots and

adapted to retain printing plates on said 10 blocks.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK C. LEETHEM.

Witnesses:

F. D. AMMEN,
JOHN P. DAVIS.