May 28, 1929. A. STOLLER 1,714,895

MAKE READY DEVICE

Filed June 2, 1927 2 Sheets-Sheet 1

Fig. 1.

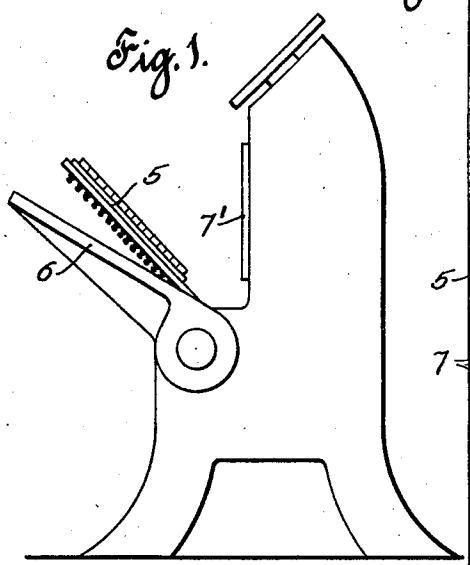
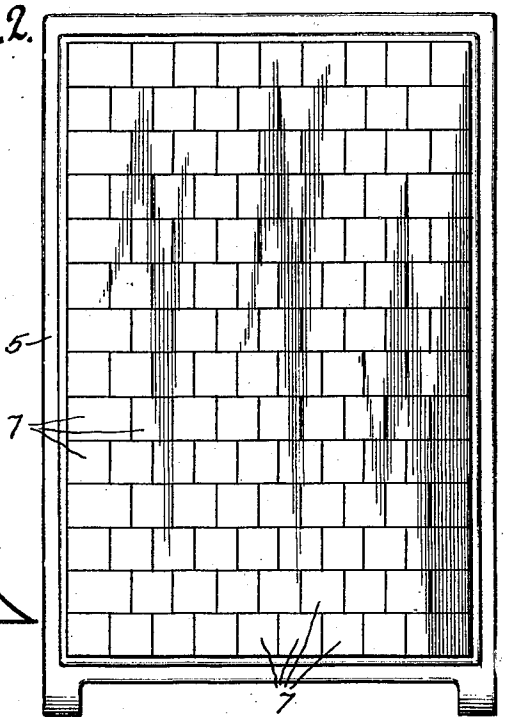


Fig. 2.



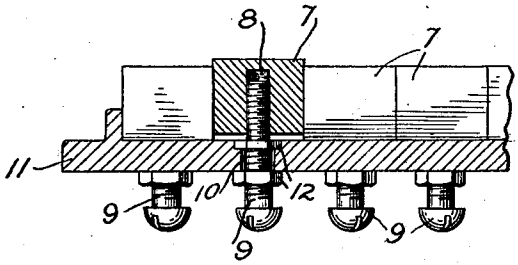


Fig. 3.

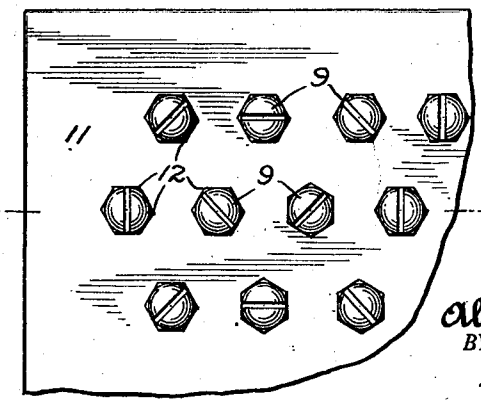


Fig. 4.

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Fig. 5.

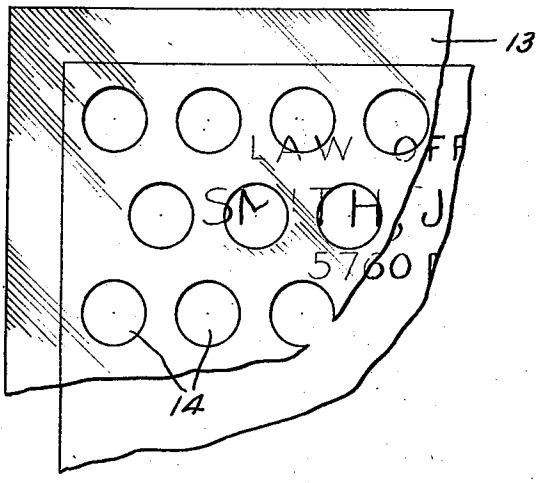


Fig. 6.

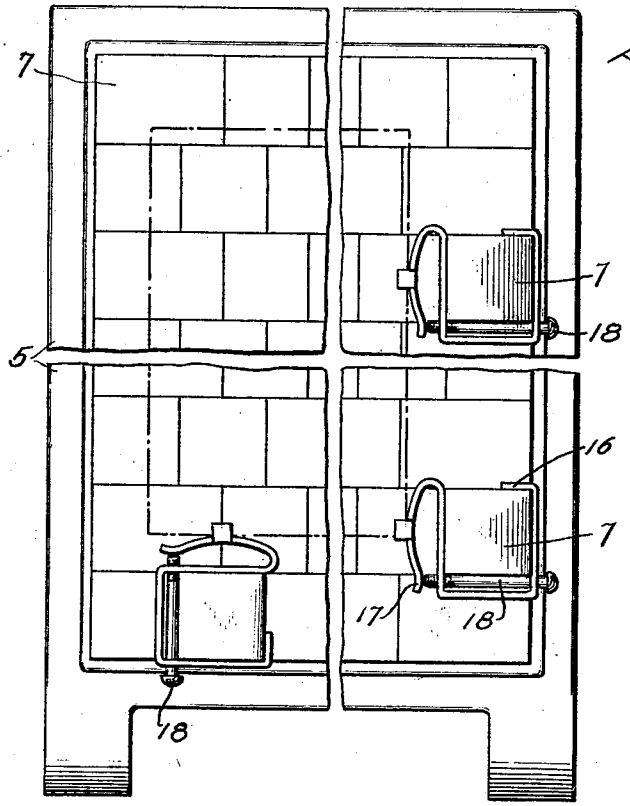
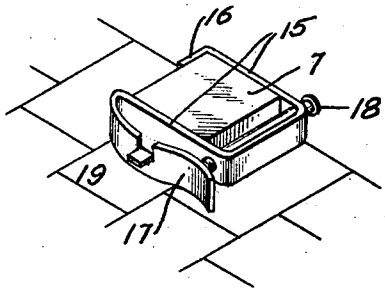


Fig. 7.



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UNITED STATES PATENT OFFICE.

ABRAHAM STOLLER, OF NEW YORK, N. Y.

MAKE-READY DEVICE.

Application filed June 2, 1927. Serial No. 195,917.

My invention relates to the printing art and particularly to a make ready and a quad device.

At the present time, a great deal of time is spent by printers in shimming up the sheet or plate upon which the sheet to be printed rests, so that the type will give an impression of substantially uniform blackness. After a proof is taken under present practice, the light parts are marked, and then by quite a tedious process sheets of paper, sometimes thick and sometimes thin, are placed on the bed beneath the light spots and then another impression taken until finally the proof shows up uniformly. This process often requires hours.

It is the principal object of the present invention to provide a bed or plate for sheets to be printed, with means to facilitate raising or lowering parts thereof with a view to dispensing with the tedious work of preparing the usual make ready.

It is a more specific object to provide a bed or frame having a plurality of relatively small blocks, each preferably independently movable so that small areas may be raised without disturbing other areas of the bed.

It is another object to provide an improved means of accurately locating and remedying light or dark spots on the printing.

It is another object to provide an improved quad device.

In said drawings which show, for illustrative purposes only, a preferred form of the invention—

Fig. 1, is a partially diagrammatic view of a simple press illustrating features of the invention;

Fig. 2, is a plan view of a bed or a frame having movable surface areas illustrative of my invention;

Fig. 3, is a sectional view taken substantially in the plane of the line 3—3 of Fig. 4;

Fig. 4, is an enlarged fragmentary view of the underside of one corner of the frame shown in Fig. 2;

Fig. 5, is a fragmentary view of the corner of a printed proof and a translucent member superposed thereon;

Fig. 6, is a fragmentary view similar to Fig. 2 and illustrating an improved quad device;

Fig. 7, is an isometric view illustrating in detail one of the quad devices shown in Fig. 6.

In said drawings, 5 indicates a frame or bed of a printing press and upon which the sheet to be printed rests. In the form illustrated, the frame 5 is adapted to rest on a foundation or bed plate 6, which is moved up to the type 7′ as is common with simple presses of this type.

The invention relates particularly to means for preparing the surface upon which the sheets to be printed rest. In the illustrative form shown, I provide a relatively great number of blocks 7, preferably of metal, which may substantially fill the frame 5. These blocks, as shown more particularly in Fig. 2, are arranged in staggered relation for a purpose to be described. The blocks are arranged for independent adjustments up and down, so that one or more blocks may be raised at substantially any part of the surface of the frame. In the particular illustration, each block 7 is provided with a threaded bore 8 for receiving a screw 9, which is rotatable in a passage 10 in the base 11 of the frame. Suitable abutments 12—12 serve to position the screw longitudinally relatively to the base 11 so that upon turning any particular screw 9, the block 7 associated therewith may be raised or lowered relatively to the base 11 and the adjacent blocks. Obviously, other means may be employed for effecting the raising or lowering.

The sheet to be printed is placed on the frame 5, and, as is usual, a suitable backing of cardboard or the like is positioned between the paper and the blocks forming the bed. Now, when a proof is struck off, the proof is examined, and often there are light spots indicating that at these spots the bed is relatively too low to properly engage the type. One or more blocks in the light area may then be raised until, when the next proof is struck off, a uniformly printed sheet will be produced.

In order to facilitate locating the particular block or blocks to be raised, I have devised means preferably a transparent or translucent sheet. This sheet 13, as shown more particularly in Fig. 5, may be of celluloid or the like, the surface of which may be roughened slightly so as to take a pencil or chalk mark. When a proof is struck off, the sheet 13 may be laid over the proof and the light spots may be viewed through the celluloid or other translucent sheet. The light area may then be marked off on the sheet 13 and the sheet then removed and applied to the rear side of the frame 5. The sheet 13 is provided with a plurality of apertures 14—14, which register

with the adjusting screws 9. It will be clear that the sheet 13 may be aligned with the corners of the frame 5, or with other suitable marks, and when applied to the rear of the frame or bed 5 and registered with suitable marks will be substantially in the same position as it occupied on the front of the frame. One or more of the adjusting screws 9 coming within the light areas previously marked on the sheet 13 will then be turned so as to raise one or more of the blocks 7 to the desired extent so as to provide for a substantially uniformly printed sheet when the next proof sheet is struck off. By the means above described, it will be a relatively simple matter to vary the surface of the bed which receives the sheet so that uniformly printed sheets may be produced. In place of a transparent sheet, a sheet of steel or the like provided with perforations may be employed. The irregularities in the printed proof could thus be seen through the perforations. Such a sheet I consider the equivalent of the transparent or translucent sheet above described.

The blocks 7—7 are preferably arranged in staggered relation so that smaller areas may be raised when desired. If the joints between adjacent blocks are matched and the light spots happen to be located substantially over the corners of four blocks, all four blocks would have to be raised. In the staggered arrangement, an area enclosed by only three blocks may be raised thus providing for a raised area of only three-quarters the size of that which it would be necessary to raise if the joints all matched.

My invention is also susceptible of use in connection with improved quads, thus doing away with the relatively unsatisfactory quad devices now in use. As illustrated particularly in Figs. 6 and 7, I may raise one or more of the blocks 7 and abut the sheet to be printed against these blocks, the blocks themselves in that case serving as quads. It sometimes happens that the fixed positions of the blocks 7 in the frame would not be in exactly the desired positions for the quads. In that case, I may attach a device, which is adjustable, to vary the positioning of the sheet. In the form shown, a spring clip device which may be a substantially U-shaped frame having legs 15—15 and a flanged over end 16 fits three sides of the block 7. A return bent spring end 17 may be formed on the leg 15 and be adjustable as by means of a screw 18 so as to move the same sufficiently to accurately position the paper shown in dot and dash lines in Fig. 6. Each spring end 17 may have a little lip or tongue 19 struck out from the upper surface so as to form an undercut space for holding the paper to be printed. Accurate adjustment of the position of the sheet on the bed may thus be made.

I have shown the improved frame and blocks in the form of a flat bed, but the invention is susceptible of embodiment in beds of curved or other shape.

While the invention has been described in some detail, I do not wish to be strictly limited to the form shown, nor to the particular mechanism employed for carrying out the desired results for changes may be made within the scope of the invention as defined in the appended claims.

I claim:

1. In a make ready device, a plurality of adjacent blocks forming a bed and means for independently moving said blocks for the purpose described.

2. In a make ready device, a plurality of blocks arranged in staggered relation forming a bed, and means for independently moving said blocks for the purpose described.

3. In a make ready device, a supporting frame, a plurality of blocks supported therein forming a bed, and means accessible from the rear of said frame for moving said blocks independently.

4. In a device of the character described, a bed to support a sheet to be printed, a plurality of blocks, and means for raising the same above the surface of said bed for forming positioning means for a sheet.

5. In a device of the character described, a bed to support a sheet to be printed, a plurality of spaced apart blocks, means for raising the same above the surface of the bed, and adjustable abutment means to be secured to said blocks for forming positioning means for a sheet to be printed.

6. In a device of the character described, a bed having independently movable parts therein for raising and lowering surface areas, means for moving said parts, and a translucent member for said bed to receive markings to indicate irregularities on a printed proof.

ABRAHAM STOLLER.