

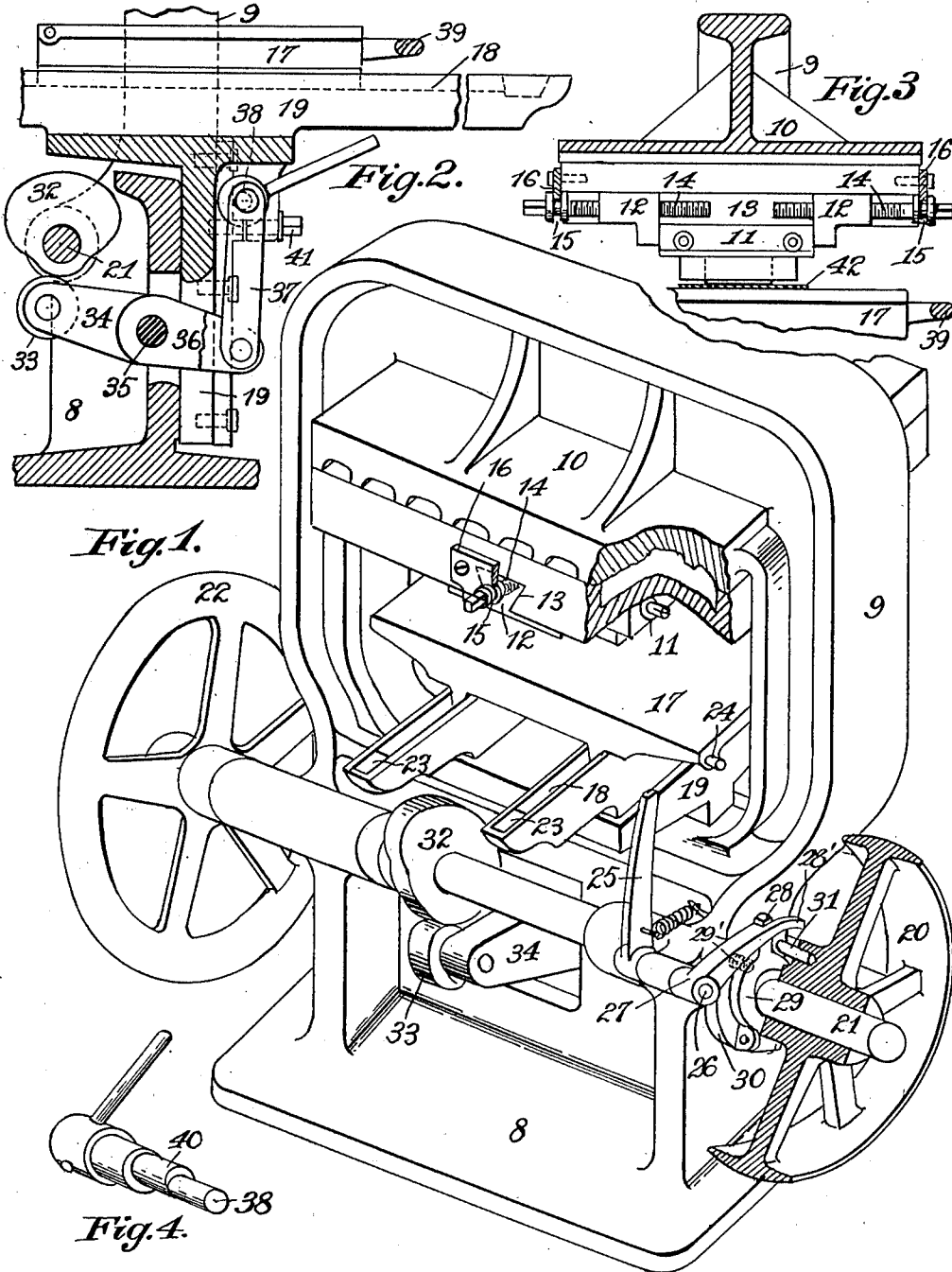
E. RAU.
PRESS.

APPLICATION FILED JAN. 25, 1912.

Patented July 8, 1913.

2 SHEETS-SHEET 1.

1,066,653.



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2 SHEETS—SHEET 2.

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Fig. 5.

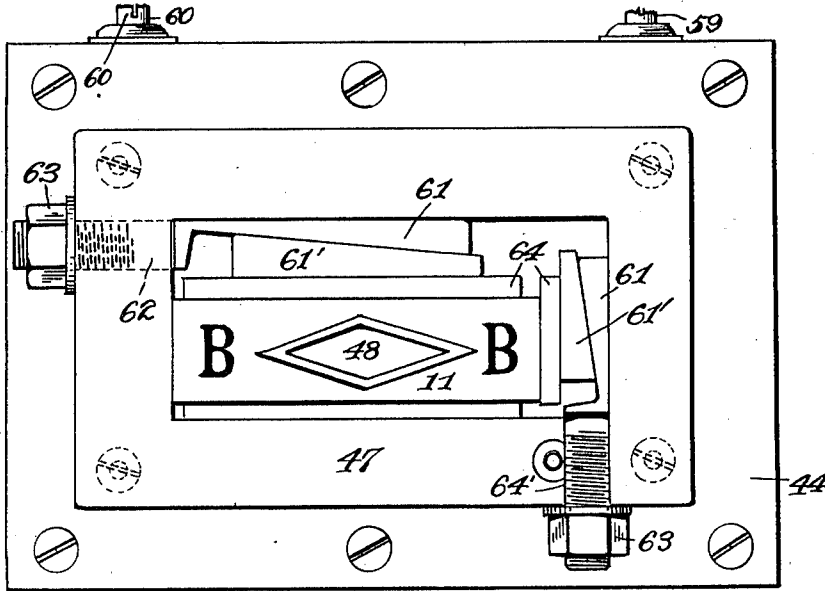


Fig. 6.

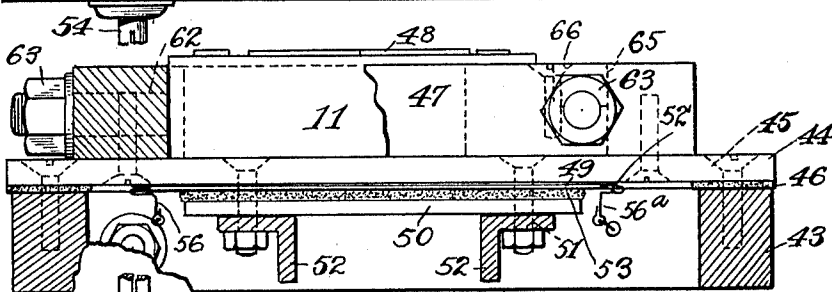
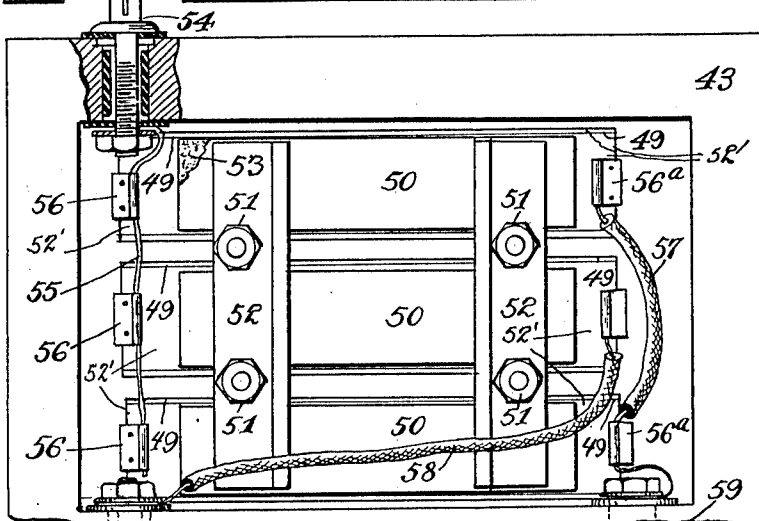


Fig. 7.



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UNITED STATES PATENT OFFICE.

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PRESS.

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To all whom it may concern:

Be it known that I, EMANUEL RAU, a citizen of the United States, and a resident of the borough of Brooklyn, in the county of Kings, city and State of New York, have invented new and useful Improvements in Presses, of which the following is a specification.

This invention relates to tip printing and embossing presses, and is particularly adapted for making impressions upon silk and other fabric, and embossing leather, celluloid and other material, although it will be obvious that it may be utilized for other purposes, and it is the primary object of the invention to provide a press of this character which is cheap and simple in construction and efficient in operation. With this object in view I provide a power driven press having a suitable support in which a suitably heated chase is adjustably supported, a platen having movement transversely to the impression device or devices in the chase, and as it reaches a predetermined point in its transverse movement throwing into operation mechanism to cause said platen to be moved toward and away from the impression device.

Further objects of the invention relate to an improved electrically heated chase, whereby the impression device or devices carried thereby will be heated to make the necessary impression, and to means to lock the impression devices in said chase.

In the drawings accompanying and forming a part of this specification, Figure 1 is a perspective view of a press embodying my invention, partly broken away. Fig. 2 is a sectional detail to illustrate the means to move the platen toward and away from the impression devices. Fig. 3 is a sectional detail to illustrate the means to adjustably support a chase with the impression devices in the press. Fig. 4 is a perspective detail view of the adjustable means to regulate the movement of the platen toward the impression devices. Fig. 5 is a plan view of an electrically heated chase with the impression devices locked therein. Fig. 6 is a side elevation of the chase, partly broken away to illustrate certain features of construction; and Fig. 7 is a bottom view of the chase, partly broken away.

Similar characters of reference designate

like parts throughout the different views of the drawings.

In the embodiment of the invention illustrated in the drawings I provide a suitable framework comprising a base 8 from which rises a yoke-shaped member 9, the lower face of the connecting leg of which is constructed to form the base of the press, as shown at 10. In the base is adjustably supported a chase (designated in a general way by 11 and to be hereinafter described,) carrying the impression device or devices, by means of a pair of clamps 12 to engage at opposite sides of the chase, said clamping members being slidably mounted in dovetail grooves or ways 13, and provided with lead screws 14, each screw having an annular groove or recess 15 in which engages a member 16 releasably secured to the base, whereby as the screws are rotated in one direction the clamping blocks 12 will travel in one direction and when rotated in a reverse direction the clamps will be retracted, the ends of the screws being so constructed that a wrench may be applied thereto.

A platen 17 is slidably mounted in ways 18 of a table 19 to have movement transversely of the impression devices, and the said table 19 slidably supported by the framework to have movement toward and away from the impression devices. The press is driven by a pulley 20 loosely mounted on the end of shaft 21 and driven by a belt from any suitable source of power. (Not shown.) The shaft is journaled in the framework and has at the opposite end a fly wheel 22. The pulley normally rotates idly on the shaft, but as the platen with the article 42 upon which an impression is to be made is moved under the impression devices, which movement is limited by stops 23 in the ways 18, a pin 24 projecting from the side of the platen engages with an arm 25 on a stud shaft 26 to which shaft is also fixed an arm 27, the end of which is notched and in which notch normally engages a projection 28 on a collar 29 pivotally supported by a collar 30 fixed to the shaft to have movement toward and away from the pulley 20. As the pin 24 engages with the arm 25 it will rock the shaft 26 and throw the arm out of engagement with the collar projection 28, a spring 29' between the collars 29, 30 rocking the collar 29 toward the

pulley, and as the latter rotates a pin 31 projecting from the hub thereof will engage with the collar projection 28 and rotate the shaft. As the shaft rotates a cam 32 thereon engaging with a roller 33 carried by an arm 34 fixed to the shaft 35 will rock a second arm 36 connected by a link 37 to a shaft 38 journaled in the table 19, thereby causing the table to move toward and away from the impression devices during the revolution of the shaft. After the table with the platen has been moved in contact with the impression devices the platen is withdrawn by the handle 39 from beneath the impression devices and the pin 24 out of engagement with the arm 25, the latter being returned by a suitable spring to initial position, and as the shaft completes its revolution the collar projecting curved cam portion 28' on the arm 25 and thereby thrown out of engagement with the pin 31 to again engage with the notch in the arm 27 out of engagement with the pin 31.

To regulate the movement of the table and the platen toward the impression devices, and consequently the impression, the shaft 38 is provided with an eccentric portion 40 whereby it is mounted in an arm on the table having a split portion to change the center of that portion of the shaft to which the link 37 is connected, the shaft being provided with a handle to adjust it in its bearings. When it is desired to adjust said shaft, a locking screw 41 is released permitting the rotation of the shaft, and when the table has been adjusted to the desired position said screw is again tightened drawing the split portions of the arm together and frictionally clamping the shaft in its adjusted position. It is contemplated that when the platen is moved beneath the impression devices that the shaft will make one revolution to move the platen toward the impression devices, and on the reverse of such movement the platen will be withdrawn from beneath the impression devices again throwing the mechanism to inoperative position with the pulley idly rotating on its shaft.

As already stated a suitably heated chase is to be used in connection with the press, whereby to heat the impression device and make the impression upon the article 42 by burning or searing the surface thereof, and for this purpose I provide a chase as shown in Figs. 5 to 7 adapted to be electrically heated. Said chase comprises a rectangular open frame 43 to which is secured a plate 44, as by screws 45, a suitable insulating material 46, such as asbestos or the like, being interposed between said plate and frame to not only insulate the plate from the frame, but also to prevent the transmission of heat to the frame. Fixed to the top of

the plate is a second rectangular frame 47 in which the impression devices 48 are locked in a manner to be hereinafter described. Lying adjacent to the bottom of the plate 44 are a plurality of metal resistance plates 49, in the present instance 3 in number, and secured to the plate by plates 50 extending parallel with and adjacent to the plates 49, pieces of angle iron 52 extending transversely to the plates 49, 50 and adjacent to the latter, and secured to the plate 44 by bolts 51. To insulate the plates 49 from the plates 50 strips of mica 52' are placed adjacent to the plates 49 and prevented from having lateral movement relative to the plates by engaging in hook shaped flanges extending the length thereof. Interposed between said mica strips and the plates 50 are strips of asbestos 53 to prevent transmission of heat from the plates 49 to the plates 50 and angle pieces 52.

A current of electricity is passed through the plates 49 from any suitable source connected to a plug 54 fixed in the frame 43 and insulated therefrom, as shown in section in Fig. 7, to which is connected a conductor 55 connected to a series of posts 56, one for each plate 49, said posts consisting of sheet metal pieces bent upon themselves and clamped to the mica pieces 52' with the portion below the mica contacting with the plates 49, the said plates being in the nature of resistance coils. To complete the electric circuit through said plates there is provided at the opposite ends of the mica pieces posts 56', similar to the posts 56, to which are connected conductors 57, 58, the conductor 57 being connected to a plug 59 and the conductor 58 to a plug 60, said plugs secured in and insulated from the frame 43 the same as the plugs 54. It will be noted that the two end plates 49 are connected in series, while the middle plate is separate. To pass an electric current through the chase and heat the same thereby a conductor is connected to the post 54, said conductor having a suitable contact maker to engage in a slot in the end of the plug 54 to readily connect and release the same therefrom, and conductors connected in a similar manner to the plugs 59, 60.

When it is desired to heat the chase the conductors are connected to the plugs 54, 59 and 60 to pass a current of electricity through all of the plates 49. Should it be found that the chase and the impression devices are being heated to too high a degree the conductor may be disconnected from the plug 59, whereby the current will only pass through the central plate 49. Should it be found that this does not heat the chase sufficiently the conductor is connected to the plug 59 and the conductor connected to the plug 60 disconnected, whereby the current passes through the two outer plates 49. It

will be apparent that said plates 49 are in the nature of resistance coils, and as they lie in contact with the plate 44, said plate and the connected frame 47 will be readily heated.

To lock the impression device or devices in the frame member 47 of the chase, I provide quoins comprising a pair of members 61, 61', having beveled contacting faces as usual, one of the members, as 61, having a screw threaded stem 62 to engage in an aperture in the frame 47, nuts 63 engaging with said stems outside of the frame 47 whereby the quoin members 61 are adjusted. Of course when found necessary the usual filler pieces 64 may be utilized between the quoins and impression devices.

While I have shown the impression device as consisting of a die or electrotype, it will be obvious that it may consist of assembled type locked in the chase. If desired instead of the threaded stems passing through apertures they may engage in recesses, as at 64' Fig. 5, whereby they may be quickly removed without removing the nuts, and the stems maintained in the recesses by a cap 65 and screw 66.

Variations may be resorted to within the scope of the invention, and portions of the invention may be used without others.

Having thus described my invention, I claim:

1. An electrically heated chase, comprising a plate having means whereby it is secured to and carried by the bed of a press; a frame secured to the face of the plate in which to lock the impression device or devices; a series of resistance members secured to the opposite side of said plate; and electric current conductors to connect said resistance members in series to cause the current to pass through one or more, or all, of said resistance members, substantially as and for the purpose specified.

2. An electrically heated chase, comprising in combination a rectangular supporting frame; a plate secured to said frame; insulation interposed between the frame and plate; a second frame in which to lock the

impression device or devices secured to and supported upon the face of the plate; a series of resistance members in the form of plates secured to the first mentioned plate; and means to secure said resistance members in place, consisting of plates lying contiguous to the resistance plates, insulation interposed between said plates, a pair of clamping members extending transversely of the said latter plates near the ends, and bolts passing through said clamping members and having screw threaded engagement with the impression-frame supporting-plate.

3. An electrically heated chase, comprising in combination a rectangular open frame; a plate secured to said frame; insulation interposed between the plate and frame; a second frame in which to lock the impression device or devices secured to and supported upon the face of the plate; a series of resistance members secured to the impression device supporting plate; and electric current conductors to connect said resistance members in series to cause the current to pass through all of the resistance members, or to cause the current to pass through one or more of said members, substantially as and for the purpose specified.

4. An electrically heated chase, comprising in combination a rectangular open frame; a plate secured to and insulated from said frame; a second frame in which to lock the impression device or devices secured to and supported upon the face of the plate; a series of three resistance members in the form of plates lying contiguous to the back of the plate; and electric current conductors to connect the said resistance members in series to cause the current to pass through all of the resistance members, or to pass the current through the middle resistance members only, or the two outer members, substantially as and for the purpose specified.

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