

B. S. BREDELL.
 STAMPING MACHINE.
 APPLICATION FILED JUNE 2, 1910.

998,274.

Patented July 18, 1911.

6 SHEETS—SHEET 1.

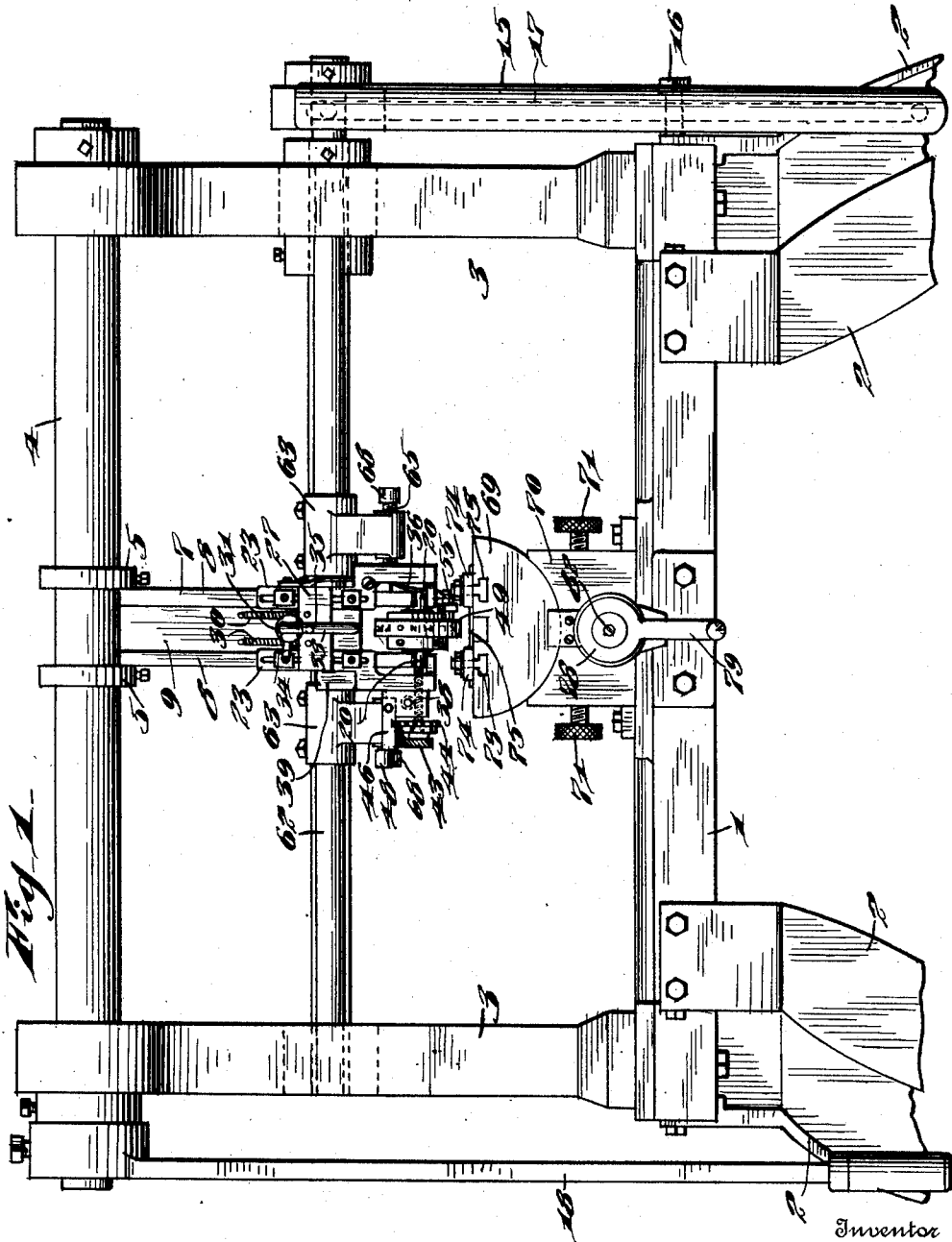


Fig. 1.

Witnesses
Thos. Roseman
R. S. Menkel

Baldwin S. Bredell,
 By *Joshua R. Pott*
 Attorney

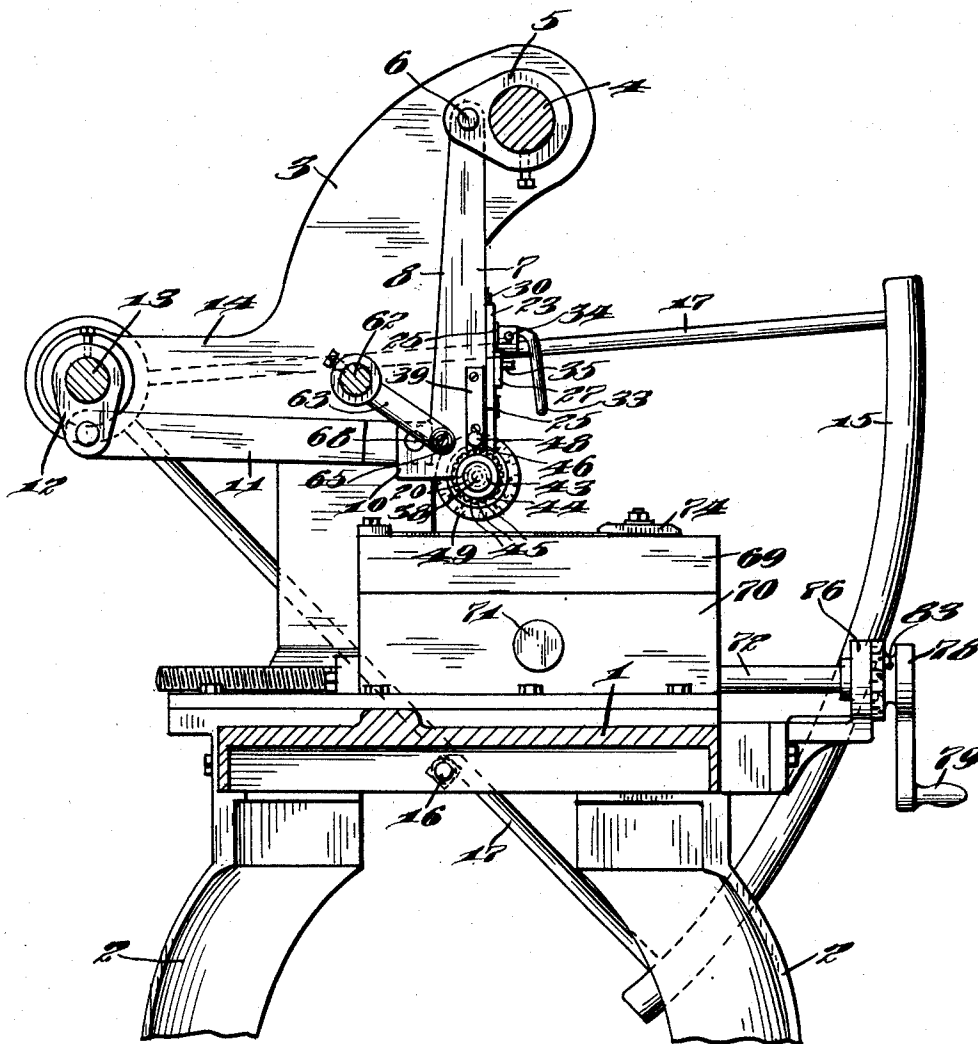
B. S. BREDELL.
 STAMPING MACHINE.
 APPLICATION FILED JUNE 2, 1910.

998,274.

Patented July 18, 1911.

6 SHEETS—SHEET 2.

Fig. 2.



Inventor

Witnesses

Geo. Prumard.
R. N. Krenkel.

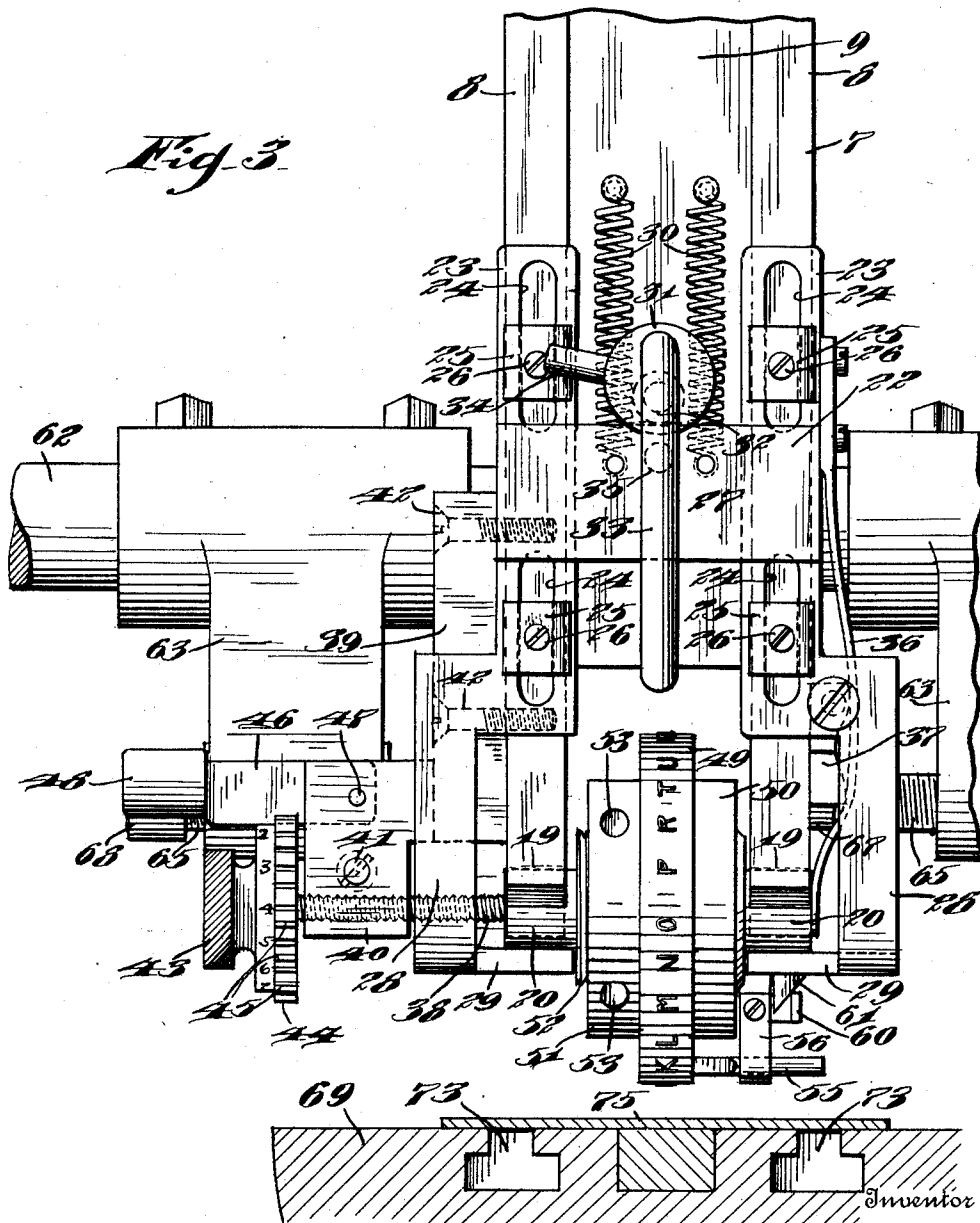
Baldwin S. Bredell,

By *Joshua R. Potts,*
 Attorney

998,274.

Patented July 18, 1911.

6 SHEETS—SHEET 3.



Witnesses
 Geo. P. Remond.
 R. H. Krenkel.

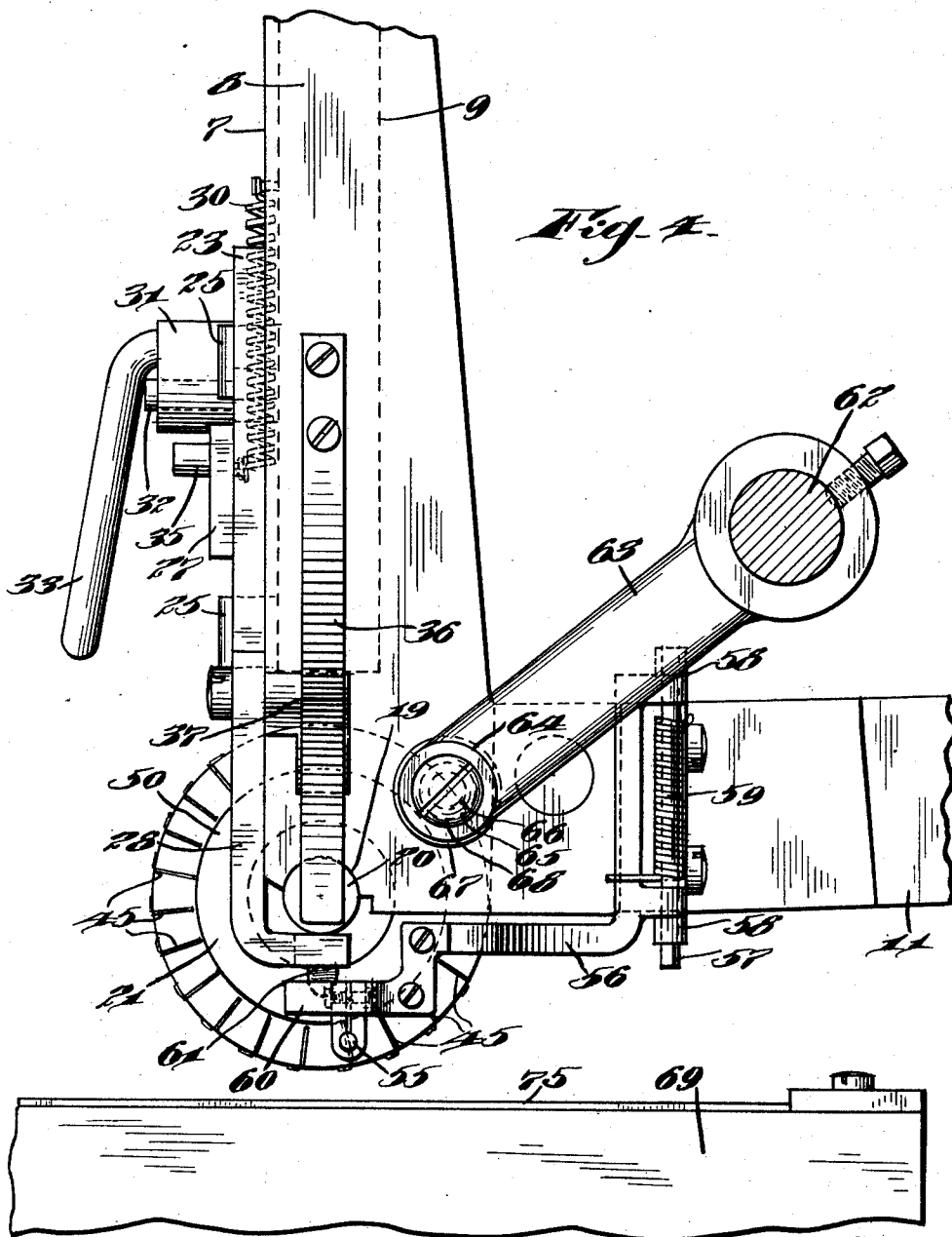
Inventor
 Baldwin S. Bredell,
 By Joshua R. Potts
 Attorney

B. S. BREDELL.
 STAMPING MACHINE.
 APPLICATION FILED JUNE 2, 1910.

998,274.

Patented July 18, 1911.

6 SHEETS—SHEET 4.



Inventor

Witnesses
Geo. Rosenbaum
R. A. Menkel

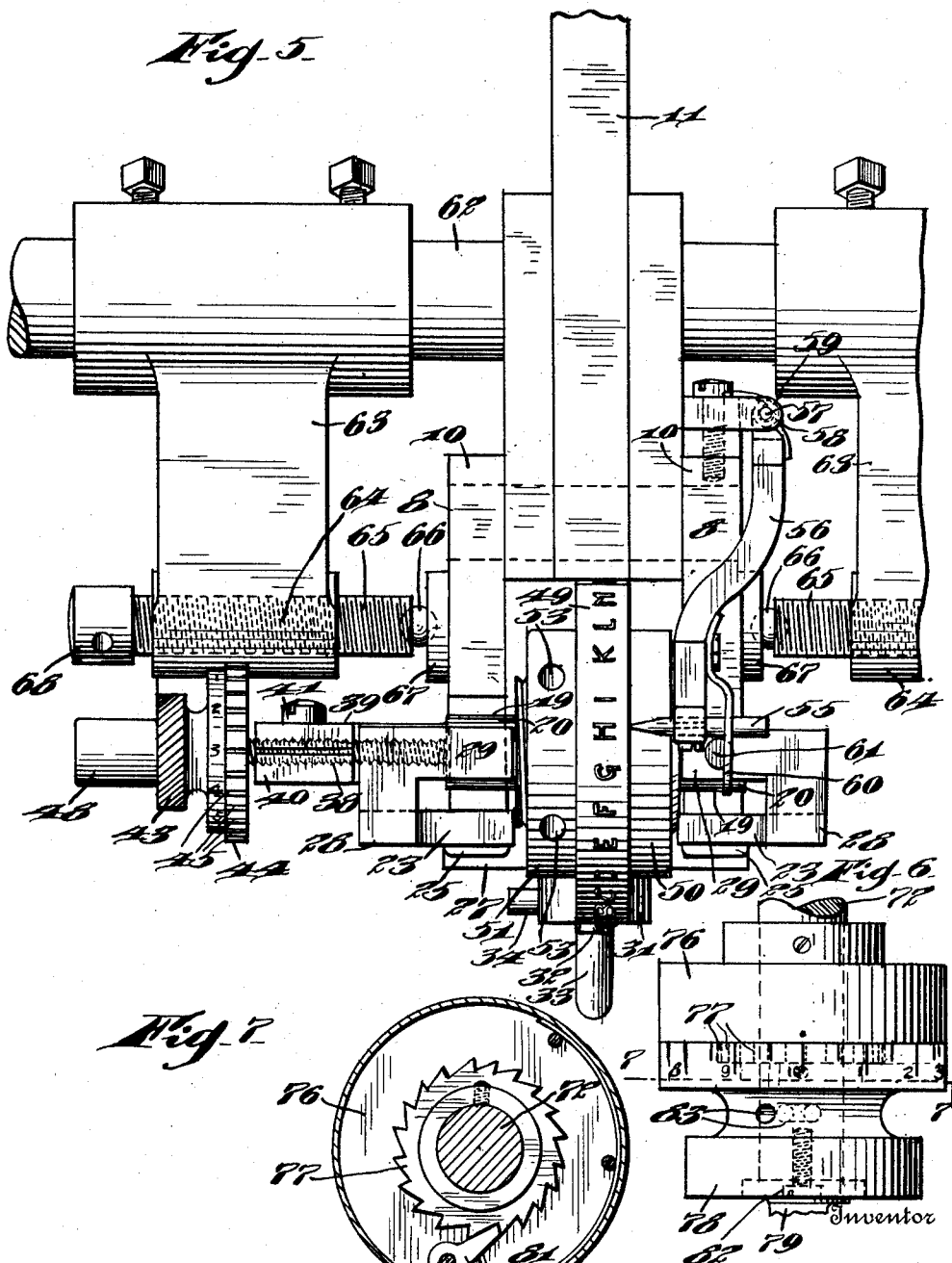
Baldwin S. Bredell,
 By *Joshua R. A. Potter*
 Attorney

B. S. BREDELL.
 STAMPING MACHINE.
 APPLICATION FILED JUNE 2, 1910.

998,274.

Patented July 18, 1911.

6 SHEETS—SHEET 5.



Witnesses
 J. W. Proemant
 R. N. Krenkel

Baldwin S. Bredell,
 By Joshua R. N. Potts,
 Attorney

B. S. BREDELL,
 STAMPING MACHINE.
 APPLICATION FILED JUNE 2, 1910.

998,274.

Patented July 18, 1911.

6 SHEETS—SHEET 6.

Fig. 8.

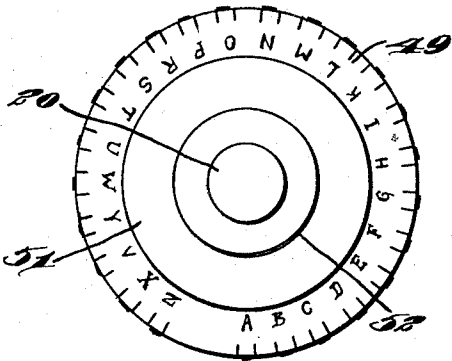


Fig. 9.

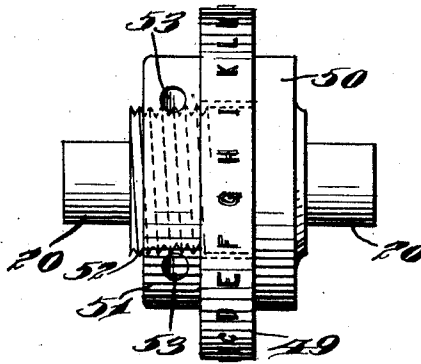


Fig. 10.

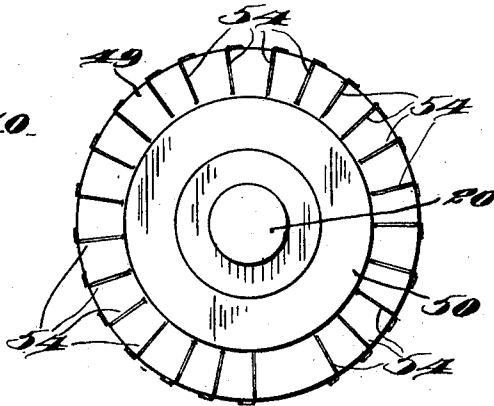


Fig. 11.

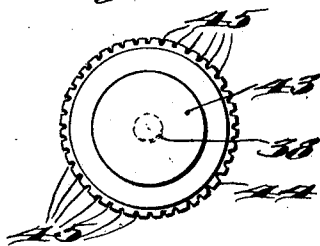
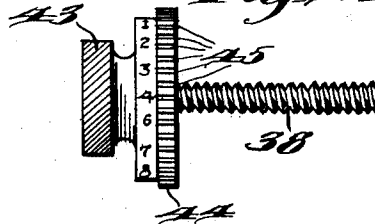


Fig. 12.



Inventor

Baldwin S. Bredell,

Witnesses

Geo. Prumann.
R. A. Menkel.

By *Joshua R. A. Pott,*
 Attorney

UNITED STATES PATENT OFFICE.

BALDWIN S. BREDELL, OF CAMDEN, NEW JERSEY.

STAMPING-MACHINE.

998,274.

Specification of Letters Patent. Patented July 18, 1911.

Application filed June 2, 1910. Serial No. 564,653.

To all whom it may concern:

Be it known that I, BALDWIN S. BREDELL, a citizen of the United States, residing at Camden, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Transferring-Presses, of which the following is a specification.

My invention relates to improvements in transferring presses, the object of the invention being to provide an improved press of this character which will cut or stamp into a plate, a single letter or character at each operation of the press.

A further object is to provide improved means for imparting a slight rolling action to the transferring wheel, when the latter is pressed down upon the plate, upon which the transfer is made, so as to cut the character sharply into the plate.

A further object is to provide an improved transferring wheel with improved means for centering the several characters around the periphery thereof, with relation to the plate upon which the transfer is made, and provide improved means for releasing said centering means when pressure is applied upon the roll to imprint the character in the plate, and permit the wheel a slight rolling movement to clearly cut the character into the plate.

A further object is to provide improved means for mounting the transfer wheel, improved means for adjusting the wheel laterally so as to properly position it relative to the plate, and provide improved means for moving the wheel mounting, vertically, and backward and forwardly.

A further object is to provide an improved mounting for the transferring wheel, which enables a wheel to be readily removed and replaced by another, and which permits the wheel to be readily turned to bring any of its characters into operative position.

A further object is to provide in combination with the improved transferring wheel and its mounting, an adjustable support for the plate upon which the transfer is made, which enables the plate to be clamped thereon and moved with great precision and accuracy, so as to position the plate to receive the characters from the wheel.

A further object is to provide an improved transferring press, which will greatly reduce the cost of transferring upon ordinary

plates, not only plates for cards, but for practically all similar matter in which individual characters are used, which will greatly reduce the cost of transferring, and which may be operated by any workman of ordinary intelligence, not requiring skilled labor, and which will do the work rapidly, neatly, and more uniformly than can be accomplished by hand transferring.

A further object is to provide an improved transferring press, which is capable of a wide range of utility in the manufacture of transferring plates, which is of extremely simple inexpensive construction, strong and durable, and not liable to become broken or injured in use, but which can be easily and quickly repaired should any of the parts become damaged.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings; Figure 1, is a view in front elevation illustrating my improvements. Fig. 2, is a view in vertical cross section taken at one side of the wheel mounting. Fig. 3, is an enlarged fragmentary view in front elevation of the wheel mounting showing the transferring plate support in section. Fig. 4, is a view in side elevation of Fig. 3. Fig. 5, is a bottom view of the plate support adjusting mechanism. Fig. 7, is a view in section on the line 7-7 of Fig. 6. Fig. 8, is a view in side elevation of one transferring wheel. Fig. 9, is a view in front elevation thereof. Fig. 10, is a view in side elevation of the opposite side to that shown in Fig. 8, and Figs. 11 and 12, are views in end and side elevation of the screw for adjusting the wheel laterally in its mounting.

1 represents a table supported on suitable legs 2 and provided at each end with uprights or standards 3, secured to the table and supporting at their upper ends a shaft 4 extending longitudinally of the table and above approximately the center thereof.

Two rearwardly projecting crank arms 5 are fixed to the shaft 4, and spaced apart at opposite sides of the center of the press, and are connected by a pin 6 on which a hanger 7 is pivotally supported and depends in a substantially vertical line therefrom. This

hanger 7 comprises two side bars 8, 8, with a connecting plate 9 between them and fixed thereto. The bars 8 extend below the plate 9 and at their lower ends are made with rearwardly projecting feet 10, which are pivotally connected by a link 11 with crank arms 12 on a shaft 13. This shaft 13 is mounted in the rear ends of extensions 14 on standards 3, and has secured on one end a large segmental hand wheel 15, the movement of which in one direction being limited by a lug 16 on one end of table 1 and located in the path of movement of one of the spokes 17 on said hand wheel. This segmental hand wheel 15 is preferably located at the right hand end of the press, while at the left hand end of the press a lever 18 is fixed to shaft 4, so that the operator with his right hand manipulates the hand wheel 15, and with his left hand, lever 18, the movement of the latter in one direction being limited by one of the legs 2.

The lower edges of the bars 8 of hanger 7 are made with curved recesses 19 forming bearings for the trunnions 20 of my improved transferring wheel 21, and the trunnions 20 are normally held in the bearings 19 by means of a vertically movable frame 22. This frame 22 comprises two vertical bars 23, 23, which are positioned against the front faces of bars 8, and are provided with longitudinal slots 24. In these slots guide blocks 25 of general T-shape in cross section are positioned, and secured to bars 8 by screws 26, permitting free vertical movement of the bars 23, but the enlarged outer ends of the blocks 25 prevent any escape from bars 8. These bars 23 are connected by a plate 27 which compels them to move together, and the two bars 23 and this plate 27 constitute the vertically adjustable frame 22 above referred to. The lower portions of the bars 23 are off set as illustrated at 28 and at their extreme lower ends project rearwardly and are provided with inwardly projecting fingers 29, which engage under the trunnions 20 and hold them up in the bearings 19. This frame 22 is normally held in its upward position by means of two coiled springs 30 fixed at one end to plate 27 and at their other end to the plate 9 of hanger 7. These springs 30 draw the frame 22 upwardly and hold plate 27 in engagement with a cam 31, the latter having rotary mounting on a pin 32 fixed to plate 9, and the upper edge of plate 27 engages in a recess or flat portion of the cam 31. An arm 33 is fixed to the cam and adapted to permit its turning to force the frame 22 downwardly when it is desired to remove a transferring wheel, and this movement of the cam is limited by a crank pin 34 projecting outward from the cam and adapted to engage a pin or lug 35 fixed to the plate 27.

A somewhat bowed spring 36 is secured

to the right hand bar 8 of hanger 7, and at its lower free end engages the right hand trunnion 20 of the transferring wheel 21, its lateral pressure, however, being limited by a block 37 fixed to bar 8. Against the left hand trunnion 20 of the transferring wheel, an improved adjusting screw 38 bears. This screw is mounted in a bracket 39 secured by screws 42 to the left hand bar 8 and this bracket, or rather the lateral extension 40 thereof, is preferably split or bifurcated and it is in this split or bifurcated portion that the screw threads which are engaged by the threads of screw 38 are located. A suitable set screw 41 connecting the two members of the bifurcated extension, serves to clamp with sufficient force against the screw 38 to insure a uniform movement, or in other words, prevents any wobbling of the screw when once adjusted.

On the outer end of screw 38, a milled head or finger hold 43 is provided and a disk 44 is also fixed to the screw and is preferably an integral part of the finger hold 43. This disk 44 is provided with a circular series of notches 45, and around the enlarged head back of this disk 44, numerals in a regular scale are located.

46 is a locking dog which is pivoted to the extension 40 by means of a pin 47, and has a finger hold 48 on its free end. This dog 46 is adapted to engage in any of the notches 45 in the disk 44, so as to lock the screw 38 at any adjustment.

While my improvement is in no wise limited to the particular number of notches in this disk 44, I preferably make forty notches and number each alternate notch, beginning with zero and numbering each alternate notch at each side of the zero mark from one to ten so that the head of the screw may be adjusted either right or left a distance equal to whole numbers or half numbers and a lateral adjustment of the transferring wheel may be had with great accuracy.

The transferring wheel preferably comprises a removable ring 49 which is clamped between a fixed head 50 and a clamping ring or nut 51, screwed onto a threaded portion 52 of the casting forming the two trunnions 20 and the head 50. This nut or ring 51 is provided with notches 53 to receive a spanner wrench or an ordinary pin for turning the same, and the ring 49 is provided around its periphery with raised characters constituting dies which are to be forced into the plate to be transferred, and while the left hand face of the ring contains characters corresponding with the characters on the periphery of the wheel so as to enable the operator to readily position the wheel for any character, the right hand side of the ring 49 is provided with notches or grooves 54 corresponding with the characters on the periphery and with these notches or grooves

54, a spring pressed pin 55 engages so as to hold the wheel against accidental movement. This pin 55 has a sharpened end to engage in the notches or grooves 54, and is secured in a swinging arm 56, the latter mounted upon a hinge pin 57, supported in suitable bearings 58 on the foot 10 of the right hand bar 8, and a coiled spring 59 is located on this hinge pin 57 and has one end bearing against the arm 56, to press the arm inward toward the transferring wheel, and hold the pin 55 in engagement therewith.

The arm 56 is provided with a finger 60 which is located in the path of movement of a lug 61, projecting downward from the right hand bar 23, said lug having a beveled or cam face to engage the finger 60 and draw the pin 55 away from the transferring wheel, to permit the latter to turn, as will more fully hereinafter appear.

A shaft 62 is fixed in standard 3, and on this shaft 62, forwardly and downwardly projecting arms 63 are fixed. The free ends of these arms 63 are located beside or spaced from the bars 8 of hangers 7 and are provided with screw threaded sleeves 64 in which adjusting screws 65 are mounted. The inner ends of these screws are concaved and engage balls 66 which are located in curved sockets in disks 67, said disks positioned against the bars 8 of hanger 7. The outer ends of these screws are provided with spanner wrench receiving heads 68 to permit their adjustment, so that the hanger, or in fact the entire transferring wheel mounting, may be adjusted laterally so as to produce the best results, and the movement of the transferring wheel mounting vertically by means of the shaft 4 and crank arms 5, and forward and rearward by means of the shaft 13 and crank arms 12, is guided by means of these screws 65, balls 66 and disks 67, as the bars 8 move between the disks.

I would have it understood that by use of the term "transferring wheel mounting" I mean this term to cover the hanger 7 and the parts supported thereby as distinguished from the other parts of the press. Below this transferring wheel mounting is an adjustable transferring plate support 69 which is of general semi cylindrical form having its upper flat face positioned below the transferring wheel and its lower curved face supported in a block 70, the latter concaved to receive the same and made hollow. This support 69 is adjusted on its axis by means of screws 71 and is moved longitudinally by means of a screw threaded rod 72, but as the particular construction of this support and its connection with block 70 forms no part of the present invention, it is not necessary to describe the same in detail, except the means for turning the rod 72 the exact distance, which will be hereinafter explained.

The upper face of the support is provided

with longitudinal grooves 73 in which plate engaging clamps 74 are mounted and by means of said clamps, the plate illustrated at 75, may be rigidly secured on support 69. The outer end of the rod 72 projects through a bearing 76 and a ratchet wheel 77 is secured on the rod 72 against the outer face of bearing 76. On the outer end of rod 72, a cup 78 is mounted to turn, and is provided with a crank arm 79 to turn the same. In this cup a pawl 80 is pivotally mounted and is held in engagement with the ratchet wheel 77 by means of a spring 81 secured in the cup, and the cup is held in position on the end of a rod by means of a headed screw 82 screwed into a threaded socket in the end of the rod. The outer face of the cup 78 is provided with a scale which registers with a point on bearing 76 so that when the crank arm 79 is turned, the scale will register the length of movement imparted to the support 69 by the screw threaded rod 72 and the pawl 80 will, upon the return movement of the arm, ride over the ratchet teeth without turning the rod.

In connection with my improved press, I employ certain charts which give the accurate measurement as accorded by this rod 72 for the movement of the support in accordance with the style of characters on the transfer wheel, so that the type may be spaced with absolute accuracy, but these charts form no part of the present invention, and are thus briefly referred to so that it may be understood how applicant obtains an absolutely accurate positioning of the plate below the transferring wheel to receive the several characters thereon.

When a line has been transferred on the plate, the cup 78 and the rod 72 are locked together by means of a suitable pin inserted through openings 83 in the cup and rod, when by turning crank 79, the support 69 may be returned to normal position.

The operation is as follows: When a plate 75 upon which the transfer is to be made has been secured on support 69 by the clamp 74, rod 72 is turned by means of crank arm 79 to position the plate to receive its first character. The operator then with his hand, turns the transfer wheel 21 until he brings the character desired to the lowest point of the wheel. He then draws lever 18 outwardly which, through the medium of shaft 4 and crank arms 5, forces the wheel mounting downwardly to press the transferring wheel 21 down upon the transferring plate 75, imprinting the character into the plate. This downward movement of the wheel mounting causes the beveled lug 61 to engage the finger 60, and move the pin 55 laterally to free the same from engagement with its notch or groove 54 in the transferring wheel. The operator then imparts to the segmental hand wheel 15, a slight os-

cillating movement, which, through the medium of shaft 13, crank arms 12, and link 11, the wheel mounting is given an oscillating movement pivoting the same upon the pin 6.

5 This causes the transferring wheel, while being pressed down on the plate, to roll slightly back and forth thereby cutting the character sharply into the plate. The operator then moves lever 16 and the seg-
10 mental hand wheel 15 back to normal position, which causes the wheel mounting and the wheel to be elevated. He then, by means of the crank 79, adjusts the support 69 to position the plate 75 for the next character.

15 He then turns the transferring wheel to bring the next character desired to the lowest point of the wheel, and this operation is repeated until the plate upon which the transfer has been made is completed.

20 A different style of type is on the different wheels, and should a different style of type be desired on the same plate the operator swings the lever 35 to one side pressing down the frame 22, when he can lift the
25 transferring wheel out of its mounting and place a new one therein, and it frequently happens in transferring that a number of these wheels containing different styles of characters are necessary to make the plate.

30 Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider
35 myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

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

1. In a transferring press, the combination with a supporting structure, of a transferring wheel having raised characters on
45 its periphery, centering means to hold the wheel in position to use any of its characters, means for adjusting the position of the wheel laterally, means for raising and lowering the wheel, and means for oscillating
50 said support to move the wheel forwardly and rearwardly, substantially as described.

2. In a transferring press, the combination with a supporting structure, of a transferring wheel having raised characters on
55 its periphery, means engaging said wheel to hold the wheel to position any of said characters, in operative location, means for raising and lowering said wheel, means for oscillating the frame to move said wheel back-
60 wardly and forwardly, a block located below the transferring wheel and having a concaved upper face, a semicylindrical plate support on said block, longitudinally movable plate clamps on said support, a screw
65 engaging said support and constructed to move it longitudinally, ratchet means for

turning said rod, and said ratchet means having a scale thereon whereby the support may be given a movement of any desired distance, substantially as described.

3. In a transferring press, the combination with a supporting structure, of a transferring wheel having raised characters on
70 its periphery, centering means to hold the wheel in position to use any of its characters, means for adjusting the position of the wheel laterally, means for raising and lowering the wheel, means for oscillating the
75 frame to move the wheel forwardly and rearwardly, a block located below the transferring wheel and having a concaved upper face, a semi cylindrical plate support on
80 said block, longitudinally movable plate clamps on said support, a screw engaging said support and constructed to move it longitudinally, ratchet means for turning said
85 rod, and said ratchet means having a scale thereon whereby the support may be given a movement of any desired distance, substantially as described.

4. In a transferring press, the combination with a supporting structure, of a transferring wheel having raised characters
90 around its periphery, a wheel mounting supported on said structure, trunnions on said wheel, bearings on the mounting, a spring pressed movable frame holding said trunnions in said bearings, a cam engaging said
95 frame, and a lever on said cam whereby when said lever is moved said frame will be moved to release the trunnions from said bearings, substantially as described. 100

5. In a transferring press, the combination with a support, standards on the support, and two horizontal shafts mounted in
105 said standards, one shaft located above and forward of the other, of crank arms on the upper shaft, a hanger depending from said crank arms, crank arms on the lower shaft, a link connecting said last mentioned crank
110 arms and the lower end of the hanger, a rotary transferring wheel supported on said hanger, and independent means for turning each of said shafts whereby said wheel will be raised and lowered and moved back-
115 wardly and forwardly, substantially as described.

6. In a transferring press, the combination with a support, standards on the support, and two horizontal shafts mounted in
120 said standards, one shaft located above and forward of the other, of crank arms on the upper shaft, a hanger depending from said crank arms, crank arms on the lower shaft, a link connecting said last mentioned crank
125 arms and the lower end of the hanger, a third shaft supported in said standards, arms on said shaft, laterally projecting screws in the ends of said arms, disks against the sides of said hanger, balls between the ends of
130 said screws and said disks, and a transfer-

ring wheel supported in said hanger, substantially as described.

7. In a transferring press, the combination with a support, standards on the support, and two horizontal shafts mounted in said standards, one shaft located above and forward of the other, of crank arms on the upper shaft, a hanger depending from said crank arms, crank arms on the lower shaft, a link connecting said last mentioned crank arms and the lower end of the hanger, a vertically movable frame having longitudinal slots therein, blocks located in said slots, and secured to said hanger, a cam mounted to turn and supported by the hanger, said wheel engaging a cross plate of said frame, a lever on said cam, a pin on said cam, a pin on said frame engaged by said first mentioned pin limiting the turning movement of the cam, springs connecting said frame with said hanger exerting an upward pull on the frame, a transferring wheel having raised characters around its periphery, trunnions on said wheel, bearings in said hanger, said trunnions held in said bearing by said frame, and means for moving the hanger vertically and forwardly and rearwardly, substantially as described.

8. In a transferring press, the combination with a support, standards on the support, and two horizontal shafts mounted in said standards, one shaft located above and forward of the other, of crank arms on the upper shaft, a hanger depending from said crank arms, crank arms on the lower shaft, a link connecting said last mentioned crank arms and the lower end of the hanger, bearings in said hanger, a transferring wheel having raised characters around its periphery, trunnions on said wheel mounted in said bearings, a flat spring bearing against one end of one of the trunnions, a set screw bearing against the other trunnion, a notched disk fixed to said screw, and a pivoted disk adapted to engage in any of said notches and lock the screw at the desired adjustment, substantially as described.

9. In a transferring press, the combination with a support, standards on the support, and two horizontal shafts mounted in said standards, one shaft located above and forward of the other, of crank arms on the upper shaft, a hanger depending from said crank arms, crank arms on the lower shaft, a link connecting said last mentioned crank arms and the lower end of the hanger, a third shaft supported in said standards, arms on said shaft, laterally projecting screws in the ends of said arms, disks against the sides of said hanger, balls between the ends of said screws and said disks, a transferring wheel supported in said hanger, a block located below the transferring wheel and having a concaved upper face, a semi cylindrical plate support on said block, lon-

gitudinally movable plate clamps on said support, a screw engaging said support and constructed to move it longitudinally, ratchet means for turning said rod, and said ratchet means having a scale thereon whereby the support may be given a movement of any desired distance, substantially as described.

10. In a transferring press, the combination with a support, standards on the support, and two horizontal shafts mounted in said standards, one shaft located above and forward of the other, of crank arms on the upper shaft, a hanger depending from said crank arms, crank arms on the lower shaft, a link connecting said last mentioned crank arms and the lower end of the hanger, a vertically movable frame having longitudinal slots therein, blocks located in said slots and secured to said hanger, a cam mounted to turn and supported by the hanger, said wheel engaging a cross plate of said frame, a lever on said cam, a pin on said cam, a pin on said frame engaged by said first mentioned pin limiting the turning movement of the same, springs connecting said frame with said hanger exerting an upward pull on the frame, a transferring wheel having raised characters around its periphery, trunnions on said wheel, bearings in said hanger, said trunnions held in said bearing by said frame, means for moving the hanger vertically and forwardly and rearwardly, a block located below the transferring wheel and having a concaved upper face, a semi-cylindrical plate support on said block, longitudinally movable plate clamps on said support, a screw engaging said support and constructed to move it longitudinally, ratchet means for turning said ratchet, and said ratchet means having a scale thereon whereby the support may be given a movement of any distance desired, substantially as described.

11. In a transferring press, the combination with a support, standards on the support, and two horizontal shafts mounted in said standards, one shaft located above and forward of the other, of crank arms on the upper shaft, a hanger depending from said crank arms, crank arms on the lower shaft, a link connecting said last mentioned crank arms and the lower end of the hanger, bearings in said hanger, a transferring wheel having raised characters around its periphery, trunnions on said wheel mounted in said bearings, a flat spring bearing against one end of one of the trunnions, a set screw bearing against the other trunnion, a notched disk fixed to said screw, a pivoted disk adapted to engage in any of said notches and lock the screw at the desired adjustment, a block located below the transferring wheel and having a concaved upper face, a semi cylindrical plate support on

said block, longitudinally movable plate
clamps on said support, a screw engaging
said support and constructed to move it
longitudinally, ratchet means for turning
5 said rod, and said ratchet means having
a scale thereon whereby the support may be
given a movement of any desired distance,
substantially as described.

In testimony whereof I have signed my
name to this specification in the presence of 10
two subscribing witnesses.

BALDWIN S. BREDELL.

Witnesses:

JOSHUA R. H. POTTS,
CHAS. E. POTTS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."

It is hereby certified that in Letters Patent No. 998,274, granted July 18, 1911, upon the application of Baldwin S. Bredell, of Camden, New Jersey, an error appears requiring correction as follows: In the grant and in the headings to the printed specification and to the drawings, the title of invention is given as "Stamping-Machines," whereas said title should have been given as *Transferring-Presses*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 8th day of August, A. D., 1911.

[SEAL.]

E. B. MOORE,
Commissioner of Patents.