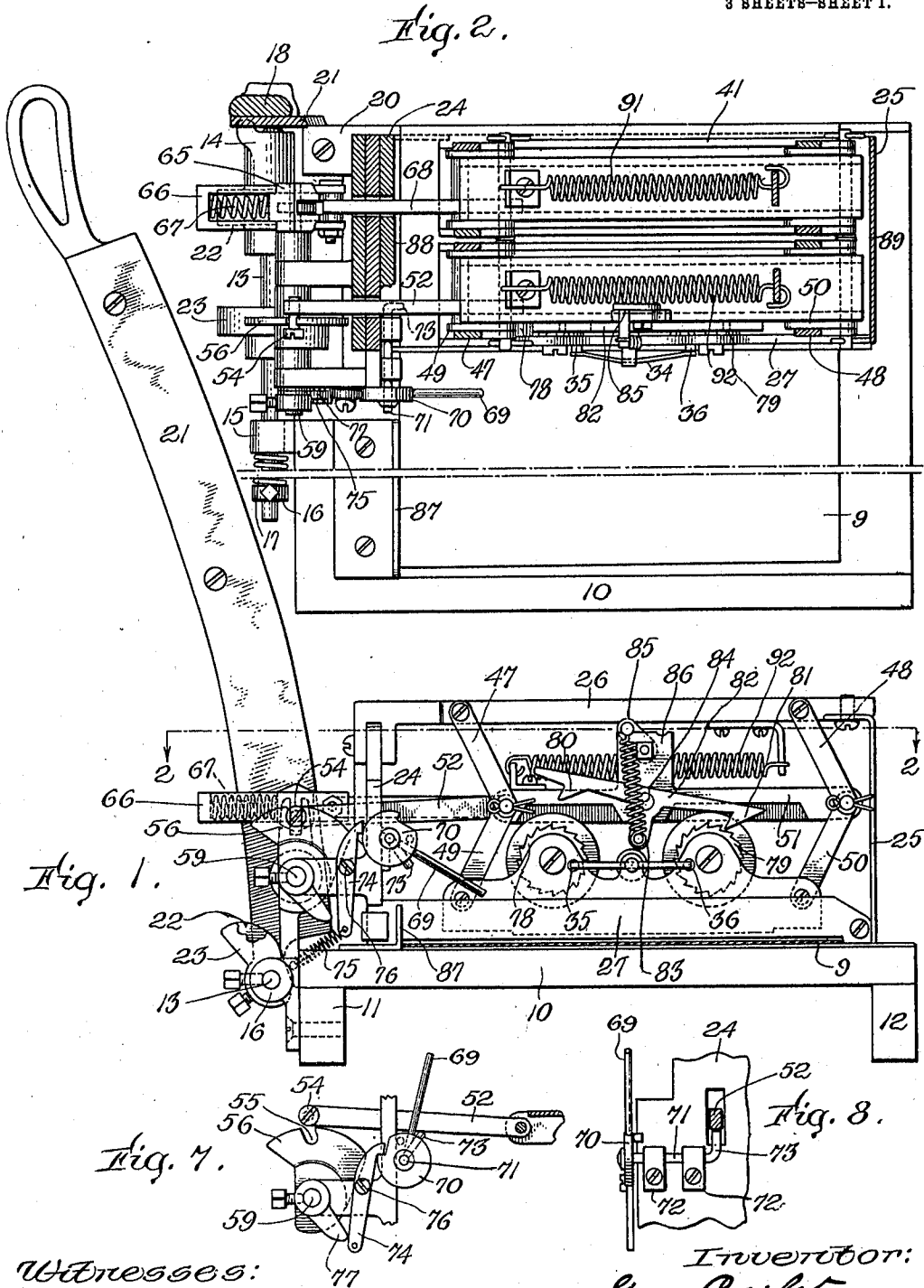


G. CARLETON.
MACHINE FOR STAMPING AND SEVERING BLANKS.
APPLICATION FILED OCT. 15, 1910.

982,475.

Patented Jan. 24, 1911.

3 SHEETS—SHEET 1.



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Fig. 9.

		
United States of America W^{EST} VIR^{GINIA} NATIONAL BANK FIVE DOLLARS John Doe <i>Richard Roe</i> CASHIER PRESIDENT		
John Doe Richard Roe		
John Doe Richard Roe		
John Doe Richard Roe		

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UNITED STATES PATENT OFFICE.

GUY CARLETON, OF CAMDEN, MAINE.

MACHINE FOR STAMPING AND SEVERING BLANKS.

982,475.

Specification of Letters Patent.

Patented Jan. 24, 1911.

Application filed October 15, 1910. Serial No. 587,182.

To all whom it may concern:

Be it known that I, GUY CARLETON, a citizen of the United States, residing at Camden, in the county of Knox and State of Maine, have invented new and useful Improvements in Machines for Stamping and Severing Blanks, of which the following is a specification.

My invention relates to improvements in apparatus for severing national bank notes and affixing signatures thereto, and its objects are to simplify and render more effective the operation of the several parts, to utilize the same source of power for affixing signatures and cutting apart the notes, and to combine in one machine the simultaneous use of both of said operations.

It is the well known practice of the Government to distribute its national bank notes to national banks in groups of four, which before being issued as legal tender must be signed by the president and cashier of the bank and then cut apart. Where thousands of these notes are used in banks of considerable magnitude it is manifestly impossible for the president and cashier to devote personally the required time to affixing their signatures, since were they to do so they would have no opportunity to do anything else connected with their official duties; and the practice of necessity has become established of delegating this duty to a printer who under careful restrictions is employed to print an electro-type reproduction of the signatures to each bank note in the spaces provided therefor, and also to cut apart and to trim the same. This practice has resulted in great expense: in the large banks amounting to thousands of dollars; and in the smaller banks where the expense does not warrant the employing of a printer, the president and cashier have been obliged to devote for this purpose time which they can ill afford and which impairs their capacity for their regular official duties. My invention is devised to prevent this expenditure of time and expense, and has the advantage of permitting the required work to be performed under the observation of the officers of the bank, without requiring the removal of the notes out of its place of business.

My invention consists in mounting one end of a knife upon a shaft journaled in bearings at the edge of a cutting board, said shaft carrying cams arranged to operate a

holding and stamping device, whereby the movement of the knife will simultaneously cause one blank to be severed from a sheet of blanks and the adjoining blank to be stamped with the characters desired.

My invention further consists in the various arrangements of parts and improvements illustrated in the drawings and more specifically hereinafter pointed out and claimed.

Attention is hereby directed to the drawing in which similar numerals of designation refer to similar parts throughout the several views.

Figure 1 is a rear end elevation of my invention showing the knife and stamp in a raised position. Fig. 2. is a horizontal section on line 2—2 of Fig. 1. Fig. 3. is an end elevation showing the shaft and its connections. Fig. 4. is a vertical section of the electro-type carrier. Fig. 5. is a horizontal section on line 5—5 of Fig. 4. Fig. 6. is a vertical section of the clamp and carrier for the same. Fig. 7. is an enlarged view in detail of mechanism for temporarily disconnecting the stamp from further operation. Fig. 8. is an end elevation partly in section of Fig. 7 looking at the same from the right. Fig. 9 is a view of one of the blanks indicating a strip of national bank notes, and the signatures thereto.

In the drawing, the cutting board 10 is suitably affixed to the transverse strips 11 and 12, the said board and strips being composed of wood or any other suitable material. At one edge of said board 10, is situated the rocking shaft 13 which is journaled in the bearings 14 and 15 secured to the strip 11 by screws or other suitable means. The collar 16 together with the spring 17 extending between the same and the bearing 15, permit a yielding limited forward movement of the shaft when subjected to longitudinal pull in the direction of the knife. The knife 21 is secured to the handle 18 which is mounted on the opposite end of the shaft, and is provided with a boss 19, which engages with the flaring outer surface of the bearing 14 and causes the edge of the knife 21 when revolved to come in close contact with the metallic plate 20 secured to the edge of the cutting board. (See Fig. 2.) Preferably the knife is made detachable, being secured to its handle by means of screws or the like and capable of being removed at any time to be sharpened or re-

placed by another blade. Between the bearings 14 and 15, the cams 22 and 23 are secured to the shaft 13, and have operative faces sufficiently broad to permit the slight longitudinal movement of the shaft above referred to.

In one side of the cutting board 10, adjacent to the rocking shaft, a recess is provided to permit free movement of the cams 22 and 23, and for conveniently securing the vertical plate 24 which is firmly fastened to said board by screws or other suitable means. To the opposite side of the board is suitably secured the thin metallic upright 25, which together with the cap plate 26 and said vertical plate 24, all being connected by bolts and screws, constitute the frame of the clamping and stamping device.

The carrier 27 which is preferably formed of one piece of metal, has mounted thereon the ink ribbon rolls 28 and 29 and has affixed to its under surface the electrotpe 30. (See Fig. 4.) In the bottom of said carrier are provided openings 31, in which are located the rolls 32, over which the ink ribbon 33 travels and comes in contact with the electrotpe 30 for the purpose of supplying ink to the same. In frictional contact with the outer surfaces of the ratchet wheels 78 and 79 secured to the ends of said ribbon rolls is the steel spring 34, the extremities of which are bent inwardly and extend through the holes 35 and 36 in the side of the carrier, and which is held in proper position by means of the bar 37 having an opening through which the said spring passes. The bar 37 is threaded for a portion of its length and is mounted in bearings formed in the walls of said carrier and extends across the same midway of the space between the ribbon rolls. A spring 38 and thumb nuts 39, and 40 serve to keep and maintain the bar in suitable relation with the spring 34. (See Figs. 1 and 5.)

The clamp 41, is of simple construction, and like carrier 27 is preferably formed of one piece of metal. Through two openings 42 and 43 in the bottom thereof extends the strip 44 which is composed of rubber, leather or any suitable material for contacting with the sheet to be cut, the ends of said strip being secured to the clamp by plates 45 and screws 46 or in any suitable manner.

The carrier 27 is actuated by a toggle joint composed of the links 47, 48, 49 and 50, and the plate 51, being suitably secured to the frame of the device as shown, and operated by the arm 52, the carrier 27 being attached to the lower extremities of the links 49 and 50. The outer end of the arm 52 extends through an opening 53 in the vertical plate 24, and has a stud 54 normally engaging with the recess 55 in the segment 56.

In suitable bearings 57 and 58 which are

preferably integral with the vertical plate 24, is mounted the counter-shaft 59 bearing thereon the collars 60 and 61 to which are respectively secured the segment 56 and the bar 62 each having fingers 63 and 64 respectively engaging with the cams 23 and 22. The upper end of the bar 62 is connected with the block 65 which is grooved at two of its sides to engage with the narrow sides of the box 66 and to slide back and forth therein, its movement being limited and controlled by the spring 67. To the inner end of the box is pivotally connected the bar 68, which is constructed to actuate the clamp 41 by means of a toggle joint similar to that actuating the carrier 27.

For the purpose of throwing the electrotpe out of engagement, and using the device solely for severing the outer edge of the bank notes, I have provided the handle 69 (see Figs. 1, 7 and 8) secured to the disk 70 mounted upon the rod 71 which is journaled in bearings 72, 72 secured to the inner surface of the vertical plate 24, and which has its outer end 73 turned upwardly at a slight angle to the handle 69. By moving said handle to an upright position, it will be seen that the turned up portion 73 will come in contact with the arm 52 and lift it out of engagement with the segment 56, (see Fig. 7), at which moment the detent on the lever 74 pivoted on the stud 76 will engage with the catch formed in the periphery of the disk 70, and will be held in position by the spring 75 secured to the other end of said lever and to the bearing 15. The stud 54, being released from the recess 55, will when the knife 21 is moved downwardly be kept out of engagement by the periphery of the segment 56, while the finger 77 mounted upon the shaft 59 will engage the lower end of the lever 74, and cause the detent to release the disk 70 which thereupon because of the weight of the handle 69 will drop to the position shown in Fig. 1. When the knife is again raised the stud 54 will drop into the recess 55, and the electrotpe will be connected for operation.

For securing a positive movement of the ink ribbon, I prefer to secure to the inner ends of the rolls 28 and 29 the ratchet wheels 78 and 79, (see Fig. 1,) the same being operated by either the catches 80 or 81 on the arm 82 pivotally mounted upon the plate 51 of the toggle joint. Integral with said arm is the lug 83, the end of which is connected by the spring 84 to the end of the lever 85 which is pivotally mounted upon a standard 86 secured to said plate 51. By moving the lever 85 to the right or left either of the catches may be thrown into operative relation with the respective ratchet wheel, the movement of the toggle joint being utilized to move the ratchet the distance of one tooth.

I also find it convenient to secure a guide 87 to the top of the cutting block in a suitable position in order to keep the sheet in proper relation to the knife.

5 For the purpose of keeping both the clamp and electrotype in proper alinement, I have provided the guides 88 and 89 (see Fig. 4), the former of which also has the groove 90 for guiding the edge of the blank.
10 Springs 91 and 92 each secured at one end to one of the toggles and at the other end to the frame, also serve to assist the operation, I having found in practice that a yielding movement contributes to the steadiness of
15 the machine.

To operate my invention the knife is first raised to the position shown in Fig. 1, and a sheet of bank notes similar to that indicated in Fig. 9, placed upon the cutting board and inserted underneath the electrotype and clamp so that the untrimmed outer edge of the sheet will protrude over the edge of the board. The handle 69 is raised and the electrotype thrown out of operation.
25 Then the operator seizes the knife and causes it to descend and cut off the said outer edge. Upon again raising the knife the arm 52 drops into position and is ready for both stamping and the cutting. The operator
30 now turns the sheet end for end, and proceeds to swing the knife downwardly, cutting and stamping with each complete movement of the knife. First the narrow untrimmed edge is cut off and the first bill
35 stamped with the signatures, then the sheet is advanced, the first bill cut off and the second bill stamped, and so continuing until the operation is finished. The reason for reversing the sheet after one of the outer
40 edges of the same is trimmed is I have found in practice that the operation proceeds with much greater facility, it being difficult to evenly cut the untrimmed edge from one remaining bill.

45 While I have found it desirable to use the clamping device for holding the sheet in position while it is being cut and stamped, it is by no means essential to the operation of my invention since in the hands of a careful and
50 skilful operator the paper may be held in operative position and the results of my invention secured though not with the same uniform success. In practice, I also find it desirable for the notice to adjust the cam for
55 the clamping device so as to start the operation of the same slightly in advance of the cutting and stamping in order that the sheet may be firmly secured before it is subjected to said operations, but obviously where the
60 machine is kept perfectly adjusted by a

skilful operator so that all the operations are practically simultaneous, no such advancing of the clamping movement will be necessary.

What I claim and desire to secure by Letters Patent is:—

1. In a stamping machine, a frame, two toggle joints mounted upon said frame, a clamp connected with the lower arms of one of said toggle joints, a stamp actuated by 70 the other toggle joint, a rocking shaft secured to one side of said frame, cams mounted upon said rocking shaft and operatively connected with said toggle joints.

2. In a machine for stamping and severing 75 blanks, a cutting block, a rocking shaft secured to one side of said block and bearing cams thereon, a knife pivotally secured to said shaft and swinging upon the same across the line of feed of the blanks, combined with two toggle joints mounted upon said block, a clamp and stamp operatively connected with said toggle joints, and means for actuating said toggle joints through the movement of said cams upon said rocking 85 shaft.

3. In a machine for stamping and severing blanks, a cutting block, a rocking shaft secured to one side of said block, said shaft bearing a cam thereon, a knife pivotally secured to one end of said shaft and swinging upon the same across the line of feed of the blanks, a counter shaft mounted upon said block adjacent to said rocking shaft, said counter shaft bearing thereon a finger engaging with said cam, combined with a toggle joint mounted upon said block, a stamp operatively connected with said toggle joint, and an arm pivotally connected with the center of said joint and operated 100 by said counter shaft.

4. In a stamping machine, a frame and a stamp mounted thereon, a rocking shaft journaled in bearings upon said frame, an arm operatively connecting said stamp with 105 a segment upon said shaft, said segment containing a recess in its periphery and said arm bearing a stud shaped to engage with said recess, combined with a lever for lifting said stud out of engagement with said 110 recess and means for automatically returning said stud to said recess when the said segment is rocked upon said shaft.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses, this 13th day of October 1910.

GUY CARLETON.

Witnesses:

ROBERT L. BEAN,
GEORGE MIXER.