No. 785,466. PATENTED MAR. 21, 1905.

G. W. BEEBE.

CHECK PROTECTOR.

APPLICATION FILED DEC. 17, 1901.

3 SHEETS—SHEET 1.

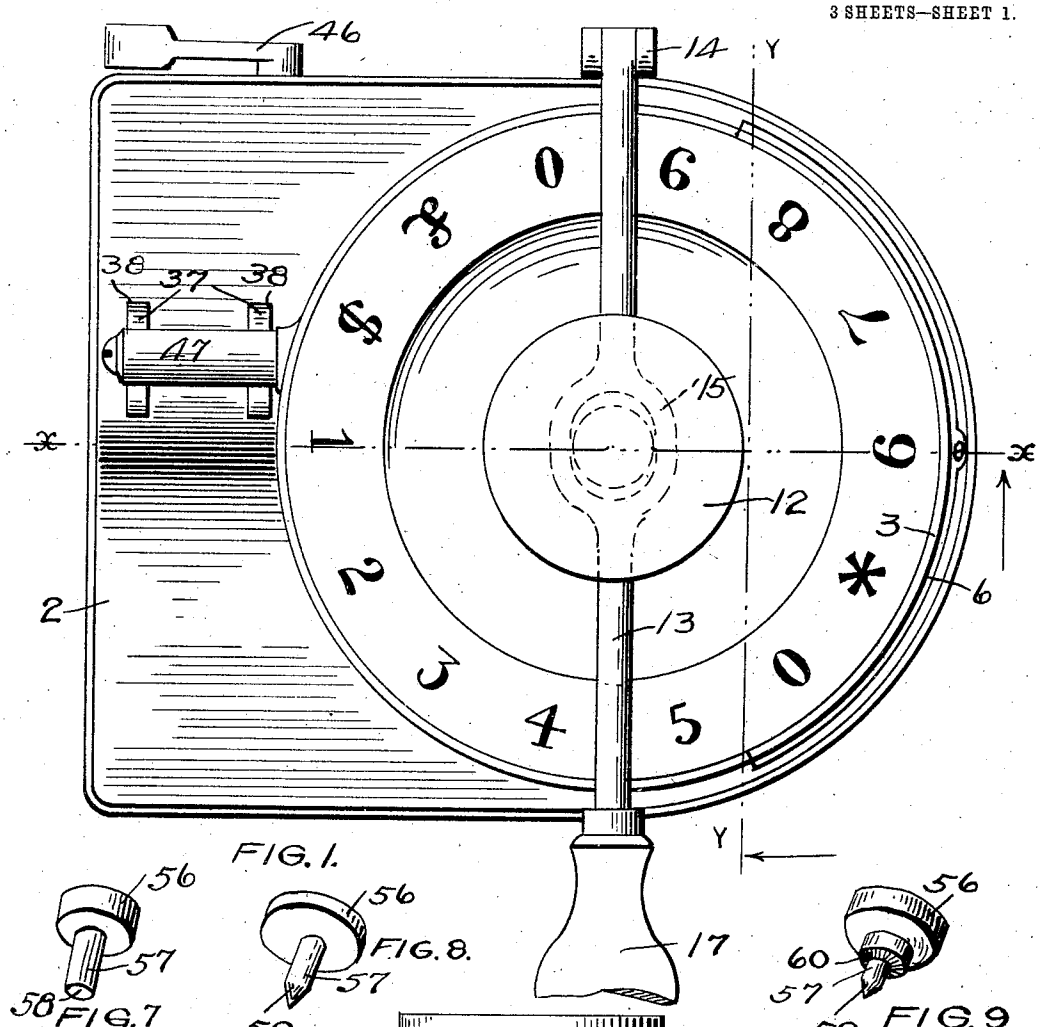



FIG. 1.




FIG. 7




FIG. 8.




FIG. 9.

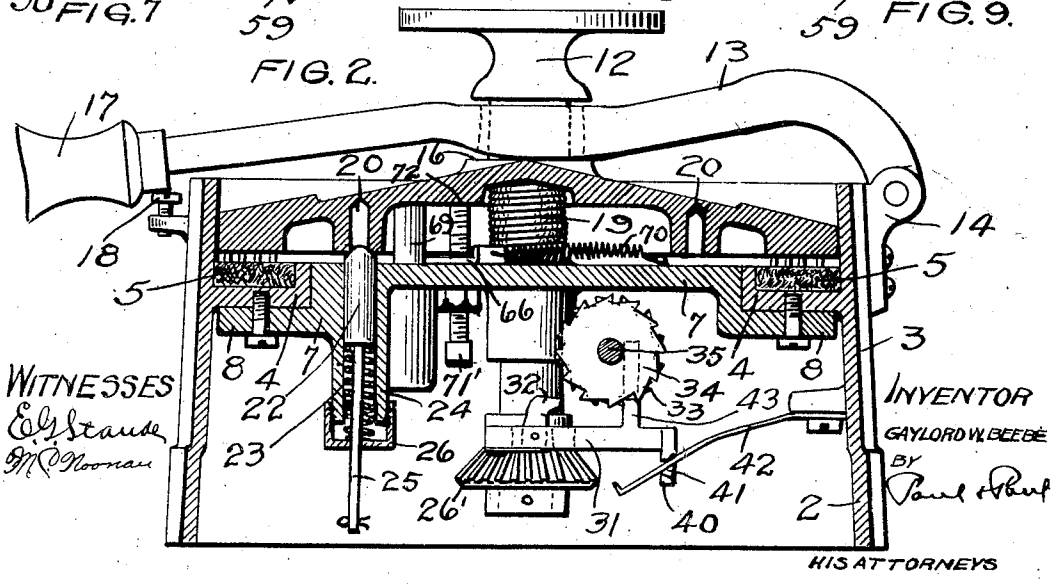



FIG. 2.

WITNESSES

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PHOTO LITHOGRAPHED BY SACKETT & WILHELMS LITHO. & PTG. CO. NEW YORK.

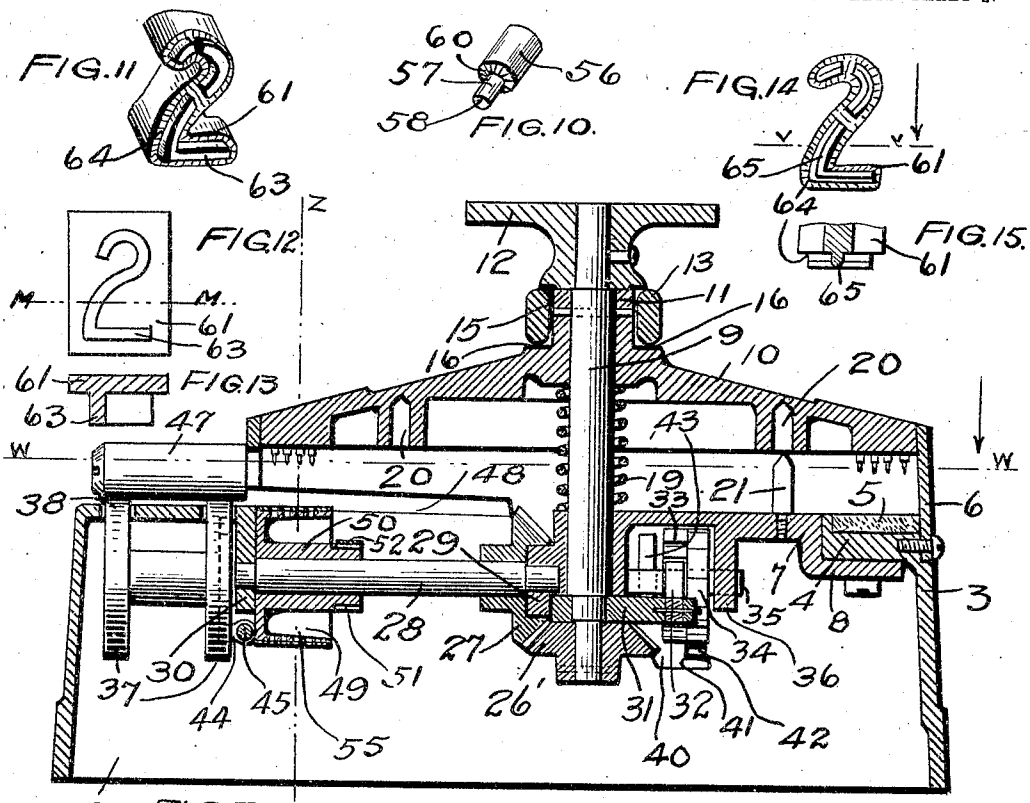
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3 SHEETS—SHEET 2.



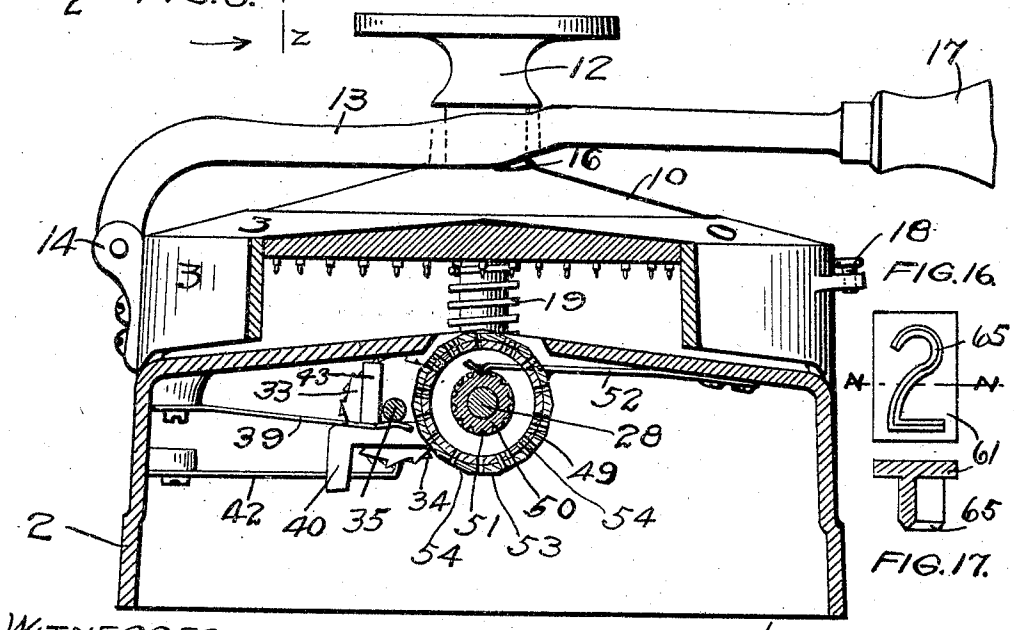




FIG. 4.

WITNESSES

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3 SHEETS—SHEET 3.

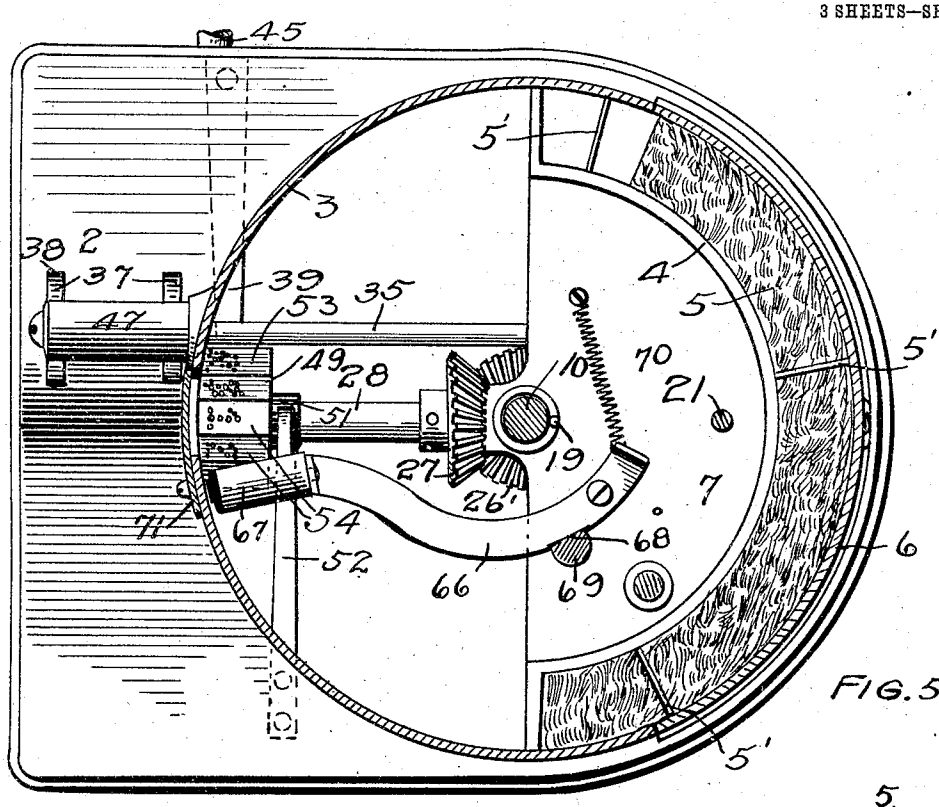



FIG. 5.

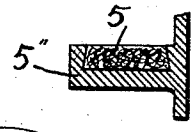



FIG. 18.




FIG. 6

WITNESSES

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No. 785,466. Patented March 21, 1905.

# UNITED STATES PATENT OFFICE.

GAYLORD W. BEEBE, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO G. W. TODD & COMPANY, OF ROCHESTER, NEW YORK.

## CHECK-PROTECTOR.

SPECIFICATION forming part of Letters Patent No 785,466, dated March 21, 1905.

Application filed December 17, 1901. Serial No. 86,253.

*To all whom it may concern:*

Be it known that I, GAYLORD W. BEEBE, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Check-Protectors, of which the following is a specification.

My invention relates to means for marking checks, drafts, bonds, or other instruments with figures or characters in such a manner as to prevent them from being altered or "raised."

The object of my invention is to provide a machine to puncture, cut, or crush the paper on the proper line to form the character desired and, if preferred, to ink the edges of the cuts or perforations to render it impossible without detection to make any change in the character or figure that has been made in or on the paper.

A further object is to improve the construction and operation of the check-protectors shown and described in Letters Patent of the United States Nos. 554,613, 576,999, 594,309, issued to me, respectively, February 11, 1896, February 16, 1897, and November 23, 1897.

Other objects of the invention will appear from the following detailed description.

The invention consists generally in providing an operating-handle for a rotating reciprocating die-holder.

Further, the invention consists in an improved form of male die.

Further, the invention consists in an improved form of female die.

Further, the invention consists in an improved feed-operating mechanism, and, further, the invention consists in various constructions and combinations, all as hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of a check-protector embodying my invention. Fig. 2 is a sectional view on the line *y y* of Fig. 1, showing the die-holder depressed. Fig. 3 is a sectional view on the line *x x* of Fig. 1. Fig. 4 is a sectional view on the line *z z* of Fig. 3. Fig. 5 is a sectional view on the line *w w* of Fig. 3. Fig. 6 is a sectional view corresponding to Fig. 2, showing the die-holder in its raised or normal position. Fig. 7 is an enlarged perspective view of the die with a square cutting end or face and without the inking-shoulder. Fig. 8 is a similar view showing the die with a beveled point. Fig. 9 shows the die with a conical point and an inking-shoulder. Fig. 10 illustrates the form of die shown in Fig. 7 provided with a serrated inking-shoulder. Fig. 11 illustrates a form of die where the entire character or figure is cut out with one stroke and the edges and top are inked. Fig. 12 is a view of the same form of die without the inking-shoulder. Fig. 13 is a view on the line *m m* of Fig. 12. Fig. 14 is a view of the form of die shown in Fig. 11 with a beveled or wedge-shaped face. Fig. 15 is a sectional view on the line *v v* of Fig. 14. Fig. 16 is a view corresponding to Fig. 14 with the inking-shoulders omitted. Fig. 17 is a section on the line *n n* of Fig. 16. Fig. 18 shows a modified form of ink-pad trough.

In the drawings, 2 represents a hollow base, preferably of metal, ornamented, if desired, in any suitable way and having, preferably, a straight face at one end and a curved face at the other and provided near its curved face with a circular vertical wall 3, within which the die-holder reciprocates. Within the casing 2 I provide a semicircular shelf or trough 4, adapted to receive a correspondingly-shaped inking-pad 5, which, as shown, may be shorter than the trough to permit adjustment for the purpose of presenting fresh inking-surfaces to the action of the dies. This pad is adapted to ink the dies upon the descent of the holder, and to prevent the pad from being drawn out of its trough when the holder ascends I prefer to provide pins 5′, extending across the trough at intervals over said pad. I may instead provide a trough 5″, dovetailed in cross-sections, wherein the pad may be wedged and securely held. Access may be had to said trough for the purpose of inserting or removing the pad or inking the same by means of the removable plate 6. 7 is a plate substantially semicircular in form, having ears 8 secured by screws or other suitable means to

the under side of the trough 4 and having a hole near the center of said circular wall to receive a vertically-reciprocating shaft 9. The die holder or carrier 10 has its hub 11 secured on said shaft by suitable means, and above said hub is a handle 12, secured on said shaft and grasped by the operator to rotate said disk.

13 is a lever pivoted at one end to an ear 14 at one side of the casing and provided with a loop 15 to receive the hub 11. The lever is prevented from movement independent of the holder by the engagement of the loop 15 with the handle 12 and with a bearing-shoulder 16 provided on the holder 10. The opening in the loop 15 is elongated sufficiently to allow the lever to oscillate freely on its pivot to depress the holder. The handle 17 on said lever projects beyond the wall of the casing and is struck by one hand, while the other hand is employed to rotate the holder. The operator is thus able to turn the holder with one hand and strike a quick sharp blow with the other on the handle and depress the holder to bring the dies into contact with the paper. Considerable time can thus be saved in the operation of the machine. To limit the downstroke of the operating-lever, I provide an adjustable screw 18 on the wall of the machine. The holder is normally held in its raised position by a spring 19. On the top of the holder near the edge thereof is provided a series of marks or characters from "0" to "9" and also with the dollars and pounds sign and a suitable mark, preferably a star, to be placed after the numerals on the paper. On the under side the holder is provided with a series of dies corresponding in number to the marks on the upper side, each die representing in outline the figure or character for which it is appropriated. The dies which I may use on this holder are varied in form and may ink the paper for a considerable space around the character or only the edges of the same, as preferred. These dies will be hereinafter described more in detail.

The die-holder is provided on the under side with a series of holes or sockets 20, there being one opposite each die, and upon the plate 7 I provide a pin 21, having a beveled upper end adapted to enter one of the sockets 20 and act as a guide for the holder during the descent of the same toward the paper. I also prefer to provide a click-pin 22, having a beveled upper end adapted to engage the lower ends of the socket 20. This click-pin is yieldingly held in contact with the holder by a spring 23, provided within a socket 24 in the plate 7. A rod or spindle 25, provided on the lower end of the pin 22, is slidable in a hole provided in a cap 26, that fits the threaded lower end of the chamber 24 and is adjustable thereon to regulate the tension of the spring. The spindle 25, sliding within said cap, acts as a guide for the click-pin, and a spring-pin in the lower end of said spindle prevents it slipping through the hole in the adjustable cap and limits the upward movement of the click-pin when the die-holder is raised.

On the lower end of the shaft 9 I secure a miter-gear 26′, that meshes with a similar gear 27, mounted on a shaft 28, that is supported in bearings 29 in the hub of the plate 7 and in a depending lug 30. The depression of the die-holder and the shaft 9 will move the gear 26′ out of engagement with the gear 27.

Above the gear 26′ on the shaft 9 is a casting 31, carrying a spring-pressed dog 32, that is adapted to engage the teeth of a ratchet 33. The ratchet 33 is secured to a similar ratchet 34, having oppositely-cut teeth that alternate with the teeth of the ratchet 33, and both ratchets are secured on a shaft 35, that is loosely supported at one end in a lug 36 and at its opposite end carries a feed-roll 37, that projects through slots 38 in the top of the base. A spring 39 engages the under side of said shaft near the feed-roll and normally holds the shaft and roll in their raised position with a yielding pressure. The casting 31 is provided with a depending arm 40, provided with a hole 41 to receive a spring 42, having a hooked end to engage the teeth of the ratchet 34. The edges of the hole 41 are beveled, as shown, and when said casting is depressed by the movement of its supporting-shaft the spring 42 will be disengaged from its ratchet and the dog 32 will slide over the teeth of its ratchet to the position shown in Fig. 2, where both the spring and dog are free from the teeth of their ratchets. On the upward movement of the shaft the dog 32 will strike the square face of a tooth on the ratchet 33 and revolve the shaft 35 one step or notch, and the hooked end of the spring 42 will engage a tooth on the ratchet 34 and prevent the shaft 35 and ratchet 33 from moving more than one step. The casting or bracket 31 is also provided with a vertical arm 43, extending up beside the shaft 35 and acting as a guide for said casting to prevent its turning on said shaft during the depression of the die-holder. The feed roller or wheel 37 is recessed at one end to receive an arm 44, mounted on a rock-shaft 45, that projects through the wall of the casing and is provided with an operating-lever 46. Depression of this lever will rock said shaft and cause the arm 45 to engage the feed-roller and depress it sufficiently to permit a check or draft to be inserted into the machine. Above the feed-roller and coöperating therewith is a roller 47, secured to the wall of the casing by a screw or other suitable means. The casing at this point is provided with a slot 48 to permit the insertion of the paper between the dies.

Upon the shaft 28 I provide a cylinder 49, having a hub 50, provided with a series of depressions 51 to receive the end of a spring 52,

that is bent to fit said depressions and act as a click for the cylinder to hold it in its proper position during the operation of marking the paper. Upon the cylinder 49 I arrange a ring 53, provided with a series of flat faces 54, corresponding in number to the dies on the holder above. These flat faces and the cylinder beneath them are provided with one or more holes, according to the style of male die used, to form female dies for the male dies carried by the holder above, and each face bears the outline of a character or figure corresponding to the one represented by the die above. For instance, for the figure "5" one of the flat faces will be perforated to represent a figure "5" and to receive the points of the male die that is appropriated for that figure. The edges of the holes in the female die are sharp and coöperate with the male dies to cut out a portion of the paper, which falling through the holes in the cylinder will slide out the end of the same over the inclined surface 55 into the space beneath the working mechanism of the machine.

The dies which I prefer to use with this machine are varied in form, but are adapted to cut out a portion of the paper in forming the outline of the character to be made therein.

In Fig. 7 I have shown a die having a base 56 and a pin 57, provided with a square or flat face 58. The edges of this flat face coöperating with the edges of the perforation in the female die will cut out a portion of the paper, and as the stud passes through the paper the ink thereon will be scraped off by the paper around the perforation. In Fig. 8 I have shown a similar die provided, however, with a beveled or cone end 59, which entering the perforation of the female die will center itself and insure the proper coöperation of the dies.

In Fig. 9 I have shown a die provided with a corrugated inking-shoulder 60, which will crush or bruise the paper around the hole and at the same time thoroughly ink the same.

In both the forms of dies shown in Figs. 8 and 9 a clear cut is made in the paper by the coöperation of the female die with the shoulder of the male die at the base of its beveled tip.

In Fig. 10 I have shown the die-base 56 provided with an inking-shoulder and with a square cutting end.

It will be understood that the dies shown in Figs. 7 to 10, inclusive, illustrate in each case one of the series that is employed to make up the figure or character composing the male die, the number used of course depending upon the size and shape of the figure.

In Fig. 11 I have shown a complete male die 61, having a square cutting-face 63, corresponding to the figure "2," and a corrugated inking-shoulder 64, that is adapted to crush and ink the surface of the paper around the character cut out by the male die. In Figs. 12 and 13 I have shown a similar form of die having a square cutting-face, but with the inking-shoulder omitted, the ink carried by the cutting-face and side of the die being deposited in the paper at the edges of the perforation. Figs. 14 and 15 show a similar form of die provided with a beveled cutting-face 65, and in Fig. 16 I have shown the die illustrated in Fig. 14 with the inking-shoulder omitted. These dies may be inked by engagement with the stationary pad, and I also prefer to provide the oscillating arm 66, pivoted on the plate 7 and carrying an inking-roller 67. This arm is engaged by the beveled surface 68 of a pin 69, that is depressed upon the descent of the die-holder to oscillate said arm and cause the inking-roller to sweep across the face of the die before it strikes the paper. A spring 70 normally holds said arm in engagement with the pin 69. A plate 71 (see Fig. 5) conceals a hole in the casing through which access may be had to the inking-roll. This inking arm and roll are described and claimed in an application for United States Patent filed by me January 28, 1901, Serial No. 45,011, and I do not, therefore, make claim, broadly, to the same herein.

The machine may be used without the operating-lever, if desired, and in such case I may prefer to provide a set-screw 71′, adjustable in the plate 7 and adapted to engage a flat surface 72 on the under side of the die-holder. This screw may be readily adjusted to limit the downward movement of the die-holder.

In the operation of the machine the paper to be marked is placed between the feed devices in the usual way, and the operator having set the die-holder to bring the required die over the paper will strike the lever 13 a quick sharp blow, causing depression of the holder and bringing one of the dies into engagement with the paper. The coöperation of this die with the female die beneath will cut out a figure or character in the paper corresponding in outline to the die and at the same time if the form of die shown in Figs. 7 and 8 is employed will ink the edges of the cuts or perforations, the cutting face or points of the dies having been previously inked by contact with the stationary inking-pad or with the inking-roller. If the form of die shown in Figs. 9 and 10 is employed, the surface and the edges of the paper around the cuts or perforations will be bruised and the ink carried by the inking-shoulders will be left in or on the paper, causing the edges of the cut portion and the surface of the paper around the cuts to be completely saturated with the ink and absolutely prohibiting any alteration in the character or figure. The result obtained by the use of the dies shown in Figs. 11 to 16 will be substantially the same except that the die is formed in one piece and cuts the figure or character completely out of the paper and either inks the edge of the character so formed or the edge and the surface of the pa-

per around the character. As soon as one character has been formed in the paper the die-holder will return to its normal position and the operator rotating the same will bring the next die desired to the proper operating position and at the same time rotate the female-die cylinder, so that the corresponding female die will always be beneath the male die when the machine is ready for operation.

I claim as my invention—

1. The combination, with a rotating reciprocating die-holder having a hub, of a shaft whereon said hub is secured and a pivoted operating-lever extending across the top of said holder and provided with a loop loosely inclosing said hub.

2. The combination, with a rotating reciprocating die-holder provided with a suitable hub, of a pivoted operating-lever extending across the top of said holder and having a loop loosely inclosing said hub, and an adjustable stop device provided near the free end of said lever.

3. In a check-protector, a die adapted to cut out a portion of the paper to form the figure or character therein and provided with a corrugated inking-shoulder which engages and bruises the surface of the paper around the cut portion thereof, and means for inking said shoulder, whereby the bruised surface of the paper around the cut will be saturated with ink.

4. In a check-protector, a die having a tapered face and adapted to cut out a portion of the paper to form the figure or character therein and provided with a corrugated inking-shoulder that engages and bruises the surface of the paper during the cutting and printing operation, and means for inking said shoulder whereby said surface will be saturated with ink.

5. In a check-protector, a male and a female die coöperating to cut out a portion of the paper to form the figure or character therein, and means for inking the cutting edge and sides of the male die prior to its engagement with the paper, whereby as said male die passes through the paper the exposed cut edges of the figure or character therein will be inked and said inking means being arranged to ink a die after its adjustment over the paper to be marked and to be actuated by the force that moves the die toward the paper.

6. In a check-protector, a male and female die coöperating to cut out a portion of the paper to form the figure or character therein, said male die being provided with a shoulder that engages the surface of the paper during the cutting operation, and means arranged to ink said shoulder after the die has been adjusted over the paper to be marked, and said inking means being actuated by the force that moves the die toward the paper, for the purpose specified.

7. In a check-protector, a male and a female die coöperating to cut out a portion of the paper to form the figure or character therein, said male die being provided with a corrugated or inking shoulder that is adapted to engage and bruise the surface of the paper around the cut portion thereof, and means for inking said shoulder, whereby during the cutting operation the surface of the paper around the figure or character cut therein will be saturated with ink.

8. In a check-protector, a male and a female die coöperating to cut out a portion of the paper to form the figure or character therein, said male die being tapered at its point and provided with a roughened shoulder that engages and bruises the surface of the paper around the character cut therein, and means for inking said shoulder.

9. In a check-protector, a die-holder having a series of dies provided with inking-shoulders, a cylindrical female-die holder carrying a series of dies coöperating with said male dies to cut out a portion of the paper to form a series of figures or characters therein, and means for inking the shoulders on said male dies prior to the engagement of said dies with the paper, whereby during the cutting operation the surface of the paper around the characters cut therein will be impregnated with ink.

10. In a check-protector, a die-holder having a series of male dies, a female-die holder having dies coöperating with said male dies to cut out a portion of the paper to form the figure or character therein, a stationary inking-pad, and a movable inking device for inking the cutting edges of the male dies prior to their engagement with the paper, substantially as described and for the purpose specified.

11. In a check-protector, the combination, with a die-holder carrying a series of male dies provided with inking-shoulders, of a cylindrical female-die holder provided with dies coöperating with said male dies to cut out a portion of the paper to form figures or characters therein, a stationary inking-pad, and a movable inking device actuated by the movement of said holder for inking said shoulders prior to the engagement of said male dies with the paper, whereby during the cutting operation the surface of the paper around the cuts therein will be inked.

12. A die-holder having a series of dies adapted to cut out a portion of the paper to form the figures or characters therein, in combination, with stationary and movable inking devices, the latter being actuated to ink a die by the force that brings the die and paper together, whereby one stroke or movement by the operator will cause inking of a die and engagement of a die and paper.

13. The combination, with a reciprocating die-holder carrying a series of dies, of a shaft whereon said die-holder is mounted, a shaft

35, ratchets secured thereon having oppositely-formed teeth, a casting 31 mounted on said die-holder shaft, a dog 32 adapted to engage the teeth of one of said ratchets upon the return stroke on said die-holder shaft, means for engaging the teeth of the other ratchet to limit the movement of said ratchets, a guide-arm 43 and a feed-roll 37 provided on said shaft 35.

14. In a check-protector, a die having a tapered face and adapted to cut out and detach a portion of the paper corresponding in shape and size to the figure or character represented by the die, and means for inking the cutting edge and sides of the die prior to its engagement with the paper, whereby as the die passes through the paper the exposed cut edges of the figure or character formed therein will be inked.

15. In a check-protector, the combination, with a reciprocating die-holder carrying a series of dies, of a cylindrical holder carrying a series of female dies adapted to coöperate with said male dies to cut out and detach pieces of the paper corresponding in shape and size to the series of figures or characters represented by the dies, and means for inking the cutting edges and sides of said male dies prior to their engagement with the paper, whereby as each die passes through the paper the exposed cut edges of the figure or character formed by the cutting edge of the die will be inked.

16. In a check-protector, the combination, of a reciprocating die-holder provided with a series of dies each adapted to cut out a piece of the paper corresponding in shape and size to the figure or character represented by the die, with horizontal reciprocating means provided between said holder and the paper and actuated by the force that moves the dies toward the paper for inking the cutting edge of each die prior to its engagement with the paper.

17. In a check-protector, the combination, of a reciprocating die-holder rotating in a horizontal plane and provided with a series of male dies having continuous cutting edges, with a female-die holder provided with a series of dies coöperating with said male dies to cut out pieces of paper corresponding in shape and size to the figures or characters represented by the dies, and horizontal reciprocating means provided between said holder and the paper and actuated by the force that moves said die-holder toward the paper for inking the cutting edges of said male dies prior to their engagement with the paper, whereby the exposed cut edges of the paper will be thoroughly inked as the dies pass through the same.

18. In a check-protector, the combination, of a reciprocating die-holder provided with a series of male dies having paper-inking shoulders, with a female-die holder having dies cooperating with said male dies to cut out pieces of the paper corresponding in shape and size to the figures or characters represented by said male dies, and a swinging inking-arm provided beneath said holder and actuated by the movement of the same toward the paper for inking the cutting faces of said male dies and said shoulders prior to the engagement of said dies with the paper, whereby the cut edges of the paper and the surface of the same around said edges will be impregnated with ink.

19. A reciprocating die-holder having a series of male dies adapted to cut out and remove pieces of paper corresponding in shape and size to the figures or characters represented by the dies, in combination, with an inking device actuated to ink a die by the force that moves said holder toward the paper to be cut after the die has been adjusted over the paper whereby said holder will be moved and the die inked by one stroke or operation.

20. A die-holder, carrying a series of male dies that are adapted to cut out and remove pieces of the paper corresponding in shape and size to the figures or characters represented by the dies, in combination, with an inking device actuated to ink a die after its adjustment over the paper to be cut by the force that brings the die and paper together, whereby one stroke or movement of the operator will successively cause the face of the die to be inked, the cutting of the paper and the inking of its exposed cut edges.

In witness whereof I have hereunto set my hand this 4th day of December, 1901.

GAYLORD W. BEEBE.

In presence of—

RICHARD PAUL,
M. C. NOONAN.