

J. H. MILLER.
CHECK PROTECTOR.
APPLICATION FILED JAN. 4, 1905.

3 SHEETS—SHEET 1.

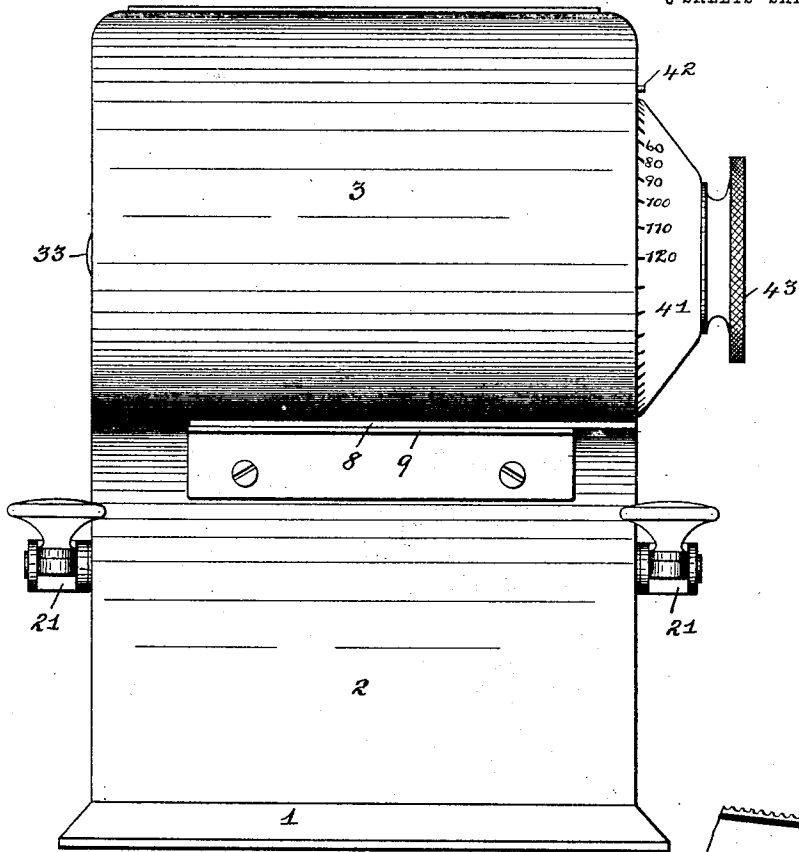


Fig. 1.

Fig. 7.

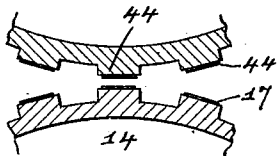
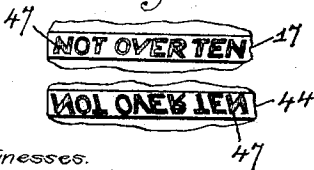


Fig. 8.



Witnesses.

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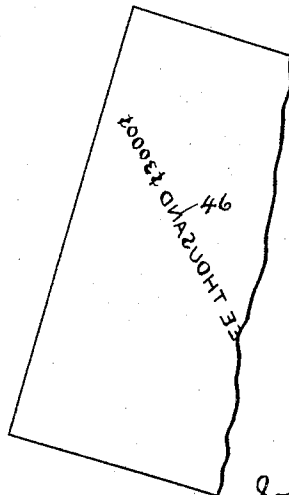


Fig. 10.

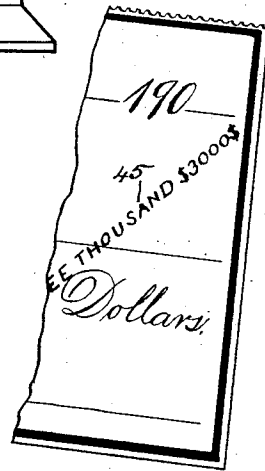


Fig. 9.

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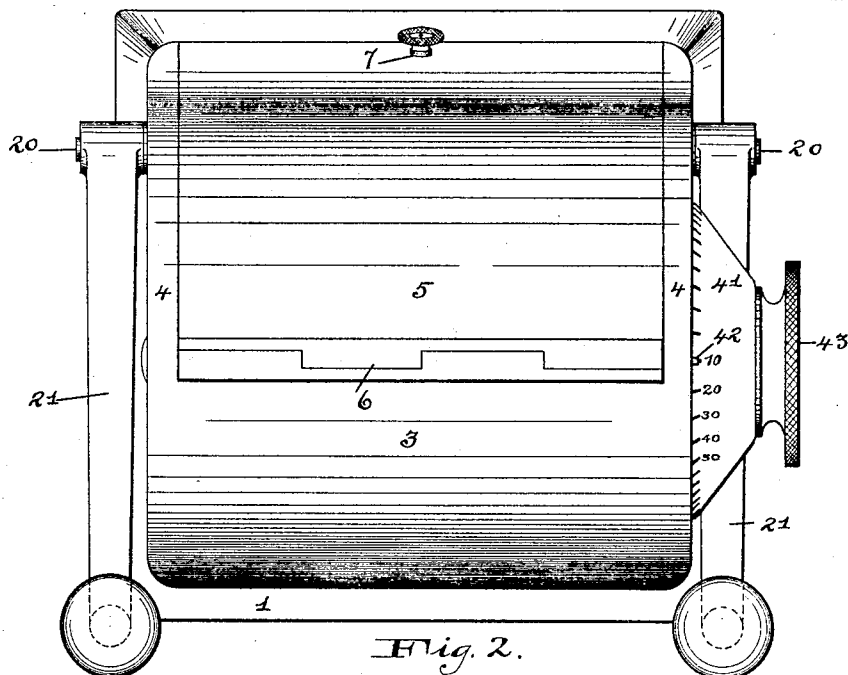
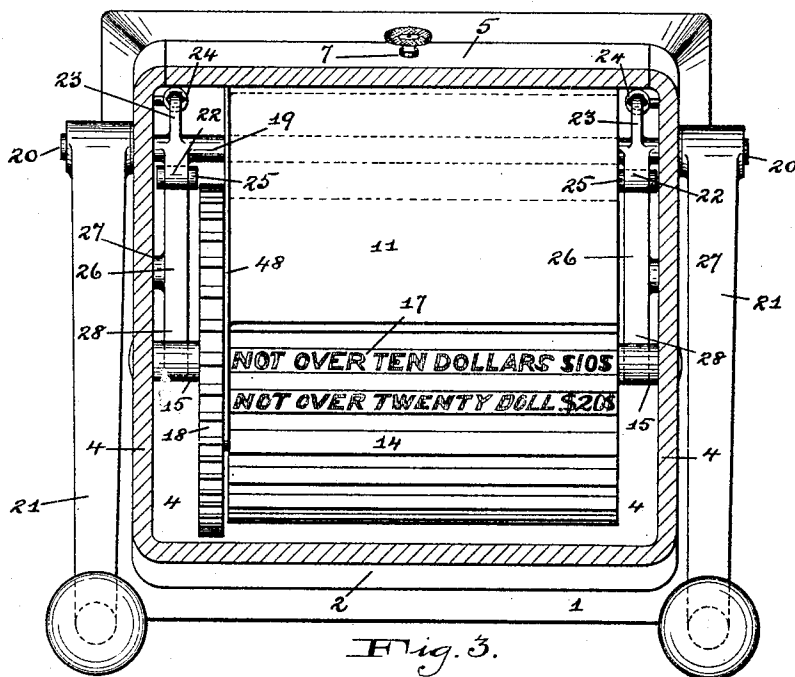
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3 SHEETS—SHEET 2.



Witnesses.

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3 SHEETS—SHEET 3.

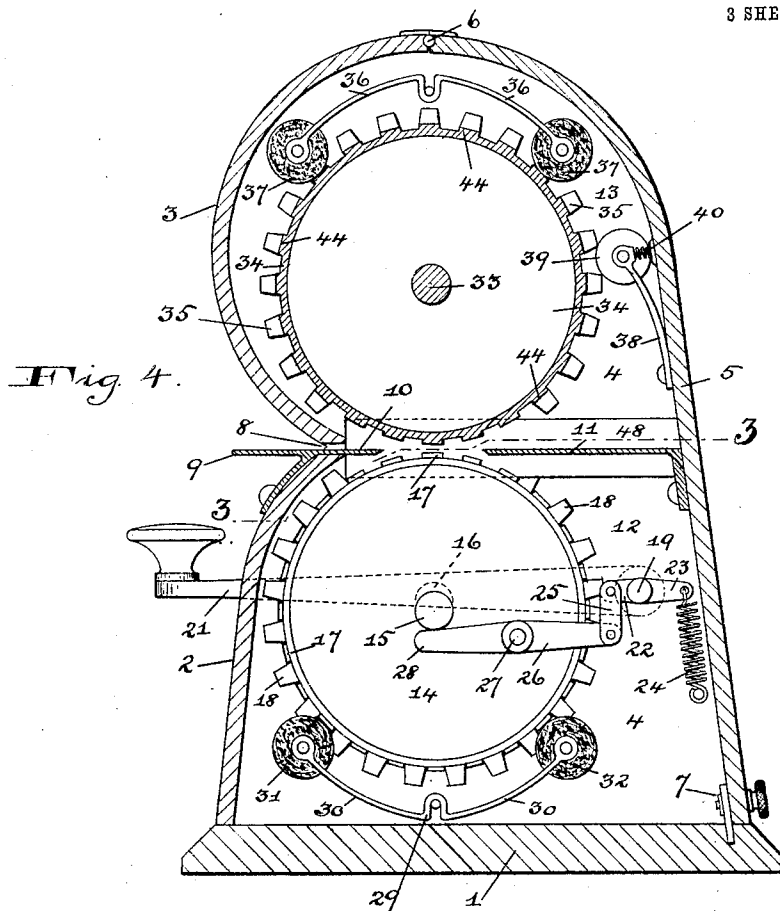


Fig. 5.

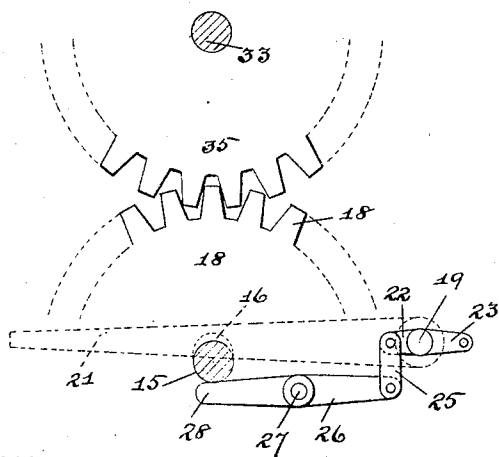
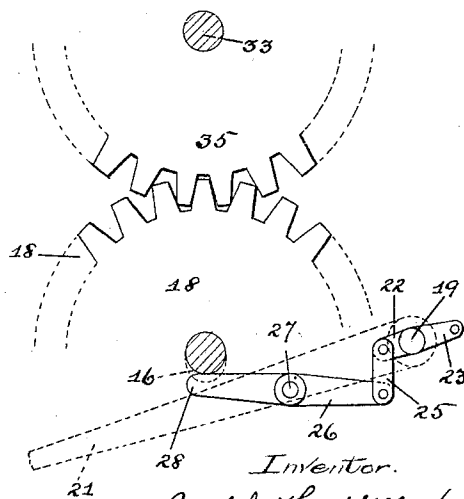


Fig. 6.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOSEPH H. MILLER, OF BALTIMORE, MARYLAND.

CHECK-PROTECTOR.

No. 803,298.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed January 4, 1905. Serial No. 239,574.

To all whom it may concern:

Be it known that I, JOSEPH H. MILLER, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Check-Protectors, of which the following is a specification.

My invention relates to printing or stamping machines, such as are commercially known as "check-protectors."

The object of my invention is to provide an improved construction of stamp or printing machine which will print or impress an amount simultaneously on both sides of the check or other instrument, so that the ink will penetrate and work entirely through the fiber of the paper and positively prevent the erasure or removal of the impressed or printed characters without disfiguring and otherwise injuring the paper to such an extent as to make the fact perceptible at a glance.

I am aware that it has heretofore been proposed to print or stamp an amount on one side of a check or other instrument and also that it is common to perforate an amount in such instruments, as well as to apply ink to the edges of the paper around such perforations, but in practical experience I have found it possible in many cases to alter the characters of such impressions without much difficulty, and I have been led to devise a machine by which the inked impression will be made on both sides of the check or instrument simultaneously and the surface of the paper so weakened, without entirely rupturing it, that the ink will penetrate entirely through the paper, and thereby make it impossible to erase or alter the characters.

With these and other objects in view the invention is illustrated in the accompanying drawings, in which—

Figure 1 illustrates a front elevation of my improved machine. Fig. 2 is a top plan view of the same. Fig. 3 is a horizontal section on the line 3 3 of Fig. 4. Fig. 4 is a vertical sectional elevation on the line 4 4 of Fig. 1. Figs. 5 and 6 illustrate diagrammatic views of the type-carrier gears and the mechanism for moving them with respect to each other. Fig. 7 illustrates the adjacent portions of the type-carriers and the types arranged thereon, between which the check is to be inserted. Fig. 8 illustrates two face views of the type-plates as arranged on the lower and upper carriers, respectively, the characters on the upper carrier being shown below those of the

lower carrier. Fig. 9 illustrates a fragment of a check as viewed from the face and shows the amount impressed thereon, and Fig. 10 illustrates the back of a check also provided with an inked impression of the amount.

Referring to the drawings by numerals, 1 designates a base which supports a casing having a curved lower front wall 2, a rounded upper front wall 3, and side walls 4. The rear wall 5 of the casing is preferably hinged or pivoted at 6 to the rounded upper wall 3 and at its lower end is provided with a suitable catch or lock 7, which engages the base 1. By this arrangement of pivoted rear wall the interior of the case may be readily inspected without disturbing or disconnecting any of the working parts of the machine.

A horizontal slot 8 is provided in the front wall of the case between the lower and upper curved portions, and a horizontal plate 9 extends through said slot and forms a support and guide 10 on the interior of the case. A similar plate 11 is secured to the rear wall 5 on the interior of the case and in line with the plate 9; but the inner ends of said plates are spaced from each other. By providing these horizontal plates the interior of the case is divided into lower and upper chambers 12 and 13, as plainly seen in Fig. 4.

In the lower chamber 12 I mount a type-carrier 14 on a horizontal shaft 15, and the ends of this shaft have bearing in elongated bearings or slots 16 in the side walls 4, so as to be capable of slight vertical movement therein. This type-carrier in the present instance is of a cylindrical form and is provided around its circumference with a cast-metal plate, such as a stereotype-plate, having a plural number of parallel type-lines 17, which extend in a direction on the cylinder parallel with the shaft 15. This integral plate of type lines or characters may be formed in numerous ways—for example, by individual characters or bars—or be formed in a single cylindrical stereotype-plate, such as is employed on the ordinary cylinder-presses of the present day. In the drawings the type-lines are cast on a cylinder. Adjacent one end of the cylindrical carrier the shaft 15 carries a gear 18, which is rigidly secured on said shaft and is revoluble only with the shaft and the type-carrier. A rock-shaft 19 extends horizontally across the chamber 12, and its ends have bearing in the opposite side walls 4 and at the rear of the type-carrier 14. The ends 20 of this rock-shaft project through the side walls to

the exterior of the case, and said ends each carry an operating-lever 21. These levers project along the side walls to the curved lower front wall 2, where either of them may be depressed to rock the shaft 19 in the chamber 12. On the interior of the chamber 12 and adjacent each of the side walls the rock-shaft is provided with laterally-projecting arms 22, which project toward the front wall, and rearwardly-projecting arms 23, which project toward the hinged rear wall. A spiral spring 24 is attached to the end of each rear arm 23 and serves to keep said arms and the levers 21 in a substantially horizontal position. A link 25 is pivotally connected by one end to the arm 22, and the lower end of said link is also pivotally connected to the rear end of a lever 26. This lever 26 is pivotally mounted at 27 to the side wall 4 and is capable of a rocking movement in a vertical plane between said side walls and the ends of the type-carrier. The forward or free end 28 of said lever projects beneath the carrier-shaft 15, so that when the operating-levers 21 are depressed the shaft 15 and lever 26 will be rocked and the forward end 28 of said levers will lift the shaft and carrier 14 for a purpose to be presently described. Beneath the type-carrier and within the chamber 12 is a roller-support 29, comprising two oppositely-projecting spring-arms 30, and each of these arms serves to sustain an inking-roller 31 and 32, which contact with the type-faces as the carrier is revolved within the chamber 12 and applies ink to the latter. Two of these rollers are provided for the carrier in order that the ink may be applied to the type-faces no matter in which direction the carrier may be turned. These inking-rollers serve only to apply the ink, and their contact against the type-faces is slight in order to prevent the application of an excessive quantity of ink. When the type-carrier is at rest and in condition to make an impression on a check, these inking-rollers are in contact with the faces of two rows of type-lines. It will thus be understood that at each end of the type-carrier the rock-shaft carries an arm which is connected by a link to a rocking lever and that there are therefore two rocking levers, two links, and two arms on the rock-shaft, so that the latter when elevated is sustained at each end by a rocking lever.

A shaft 33 extends horizontally through the upper chamber 13, and said shaft sustains a type-carrier 34. This shaft and carrier are supported by the side walls 4, but unlike the lower carrier 14 in that there is no vertical movement of the upper shaft and carrier, but only a rotary movement. A gear 35 is also mounted rigidly on the shaft 33 at one end of the carrier 34, and said gear meshes with the gear 18 on the lower shaft 15. The teeth of these gears are so formed as to permit the lower gear to have a slight radial movement independently of the upper gear without,

however, becoming disengaged from the latter. Roller-supporting arms 36 are also provided in the upper chamber for sustaining inking-rollers 37, which also rest on the type-faces when the carrier is in position to make an impression. A yielding spring-arm 38 is secured to the inner side of the pivoted rear wall 5 immediately behind the upper gear 35, and the free end of said arm carries a metal wheel 39, which contacts with the teeth of the gear 35 and holds the upper carrier from turning or revolving freely or accidentally and serves to center the upper and lower carriers with respect to each other. A spiral spring 40 serves to press the arm 38 and wheel 39 toward the gear and keep the wheel in contact with the teeth of said gear. The upper shaft 33 projects through one of the side walls 4 and on the exterior of the case at the side of the upper chamber 13. This projecting end of said shaft carries a conical dial 41, on which numerals are arranged to indicate the position of corresponding type-lines on the carriers. This conical dial is rigidly secured on the upper shaft and maintains a given position with respect to the upper carrier. The numerals have position on the dial, however, at diametrical opposite sides from the corresponding characters on the carrier, so that when the dial-numerals are registered with or at the side of the stationary indicator-pin 42 at the upper side of the case the corresponding type-line on the cylinder will have position midway between the horizontal plates 9 and 11 at the lower side of the carrier 34. A circular head 43 is provided at the side of the dial 41, by which the dial-carrier 34 and shaft 33 may be readily rotated. It is obvious that the head 43 will cause the carriers 14 and 34 to be rotated simultaneously, and as the gears 18 and 35 are always in mesh both carriers will rotate the same distance. The upper carrier 34 is also provided with a cylindrical cast-metal plate having parallel type-lines 44; but these type-lines on said upper cylinder are reversed with respect to the type-lines on the lower cylinder. As an illustration of this attention is directed to Fig. 8 of the drawings, in which the type-lines 17 of the lower cylinder are arranged in a correct reading position, whereas the type 44 on the upper cylinder are reversed. When a check is inserted between the two type-lines, the reversed type-lines 44 will make a correct impression on the face of the check, as seen in Fig. 9, while the types 17 on the lower cylinder will contact with the back of the check and make a reversed impression 46, as seen in Fig. 10. It will also be seen that each of the type-lines 44 on the upper cylinder will form a platen against which each line of the types 17 of the lower cylinder may seat. The faces of the type are preferably provided with serrations 47, so that when the check is clamped from both sides to impress the characters therein

the fiber at both surfaces of the paper will be stretched to permit the ink to penetrate entirely through the paper.

It will be understood that the characters of each type-line of the lower cylinder will always seat against a similar line of characters on the upper cylinder, so that the impression in the paper will be sharp and clear.

A plate 48 extends from the rear wall 5 between the gears and the ends of the carriers and forms a guard to prevent the edge of the check from getting between said gears.

In operation the check or other instrument to be stamped will be inserted in the slot 8 between the type-lines 17 and 44 and onto the plate 11. The dial may then be turned, or it may have previously been turned, so as to bring the figure to be printed on the check opposite the indicator-pin 42. When this has been done, the wheel 39 will contact with the teeth of the upper gear and hold the carriers against rotation. The upper carrier will then be held stationary, while the lower carrier will be moved vertically, as indicated in Fig. 6, through the operation of one or the other of the side levers 21. This upward movement of the lower carrier will clamp the check between the lower and upper type-lines 17 and 44, and a sharp inked impression of said type-lines will be transferred to both sides of the check, and as the opposite surfaces of the paper will be stretched and weakened the ink will penetrate and work entirely through the paper, and its removal will be impossible.

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

1. A printing-machine having two rotary carriers each of which is provided with a plurality of parallel lines of projecting printing characters and the lines of characters on one carrier being reversed with respect to the corresponding lines of characters on the other carrier and forming a platen for said characters, means connecting the two carriers whereby they may be rotated in unison, means for applying ink to the lines of characters on both carriers, means for sustaining the sheet to be printed between the projecting characters of both carriers and means for moving one carrier toward the other to transfer an inked impression simultaneously on opposite sides of the sheet.

2. A printing-machine having two cylindrical carriers whose circumferential surfaces are in close proximity to each other, a plurality of parallel lines of projecting printing characters on the circumferential surfaces of both carriers, means for inking the projecting characters on both carriers, means for rotatably connecting the two carriers, and means for moving one of the carriers and projecting lines of characters thereon toward the other carrier and its projecting lines of characters

whereby to print like characters on both sides of a sheet in substantial alinement.

3. A printing-machine having a rotary carrier provided with parallel lines of circumferentially-projecting printing characters said carrier rotating on a fixed axis, a second carrier also having parallel lines of circumferentially-projecting printing characters which are movable simultaneously with the characters on the first carrier, said second carrier and characters being sustained on a movable axis and capable of movement toward the first carrier, means for applying ink to the characters on both carriers, and means for moving the second carrier and its projecting characters toward the first carrier and its projecting characters.

4. A printing-machine having two cylindrical carriers mounted to revolve with their circumferential surfaces adjacent each other, projecting printing characters on both of said carriers, means connecting the two carriers whereby to revolve them in unison, means for applying ink to the characters on both carriers, one or more operating-levers, means coacting between the operating-lever and one of said rotary carriers whereby to move said carrier and its projecting characters toward the projecting characters in the other rotary carrier.

5. A check-printing machine comprising a case having two cylindrical carriers one above the other, projecting printing characters on both of said carriers, means for independently inking the characters on both of said carriers, means connecting the upper and lower carriers whereby to revolve them in unison to bring the corresponding projecting characters adjacent each other, means coacting with one carrier to lock it against accidental rotation and means for moving the other carrier toward the locked carrier to print like characters on opposite sides of a sheet simultaneously.

6. A check-printing machine comprising a case having a slot at one side, a rotary carrier in said case at one side of said slot and having a plurality of lines of projecting printing characters, a rotary carrier also in said case at the opposite side of said slot and also having lines of projecting printing characters, means connecting the two carriers whereby to revolve them in unison at each side of the slot, means for applying ink to the characters on both carriers, means for sustaining a sheet between said carriers and means for moving one carrier toward the other to clamp the sheet between the projecting characters on both carriers and transfer an inked impression on both sides of said sheet simultaneously.

7. A check-printing machine comprising a case having a slot at one side, two rotary carriers mounted on shafts within said case, one at each side of said slot, printing characters on both of said carriers, means for revolving said carriers simultaneously, means for applying ink to the characters on both carriers, and

operating-lever on the exterior of the case, a rocking lever coacting with the shaft of one of said carriers, and mechanism connecting said rocking lever with the operating-lever 5 whereby to move one carrier toward the other.

8. A check-printing machine comprising a case having a slot at one side, two rotary carriers mounted on shafts within said case, one at each side of said slot, printing characters 10 on both of said carriers, means for revolving said carriers simultaneously, means for applying ink to the characters on both carriers, a rock-shaft, an operating-lever mounted on said rock-shaft, rocking levers pivoted at the ends 15 of one carrier and having an end coacting with the shaft of said carrier, and mechanism connecting the other end of said rocking levers with the rock-shaft whereby to move one carrier and its printing characters toward the 20 other carrier and its printing characters.

9. A check-printing machine comprising a case having a slot at one side, two rotary carriers within said case and each having a plurality of projecting type characters, a gear rotating with each carrier and the gear of one 25 carrier meshing with the gear of the other carrier, a centering-wheel sustained by the case

and contacting with the gear of one of said carriers to lock the same against rotation, and means for moving the other carrier toward the 30 locked carrier whereby to simultaneously make an impression from the characters on both carriers on opposite sides of the sheet.

10. A check-printing machine comprising a case having a slot at one side, supporting-plates 35 in said case in line with said slot and dividing the interior of the case into a lower and upper chamber, a shaft extending through the lower chamber and movable in a direction toward the upper chamber, a carrier on said shaft, a plu- 40 rality of projecting type characters on said carrier, a rotary carrier in the upper chamber, a plurality of projecting type characters on said latter carrier, independent inking devices for the type characters on both carriers, and 45 means for raising the carrier in the lower chamber to clamp the sheet to be printed between characters on both carriers.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH H. MILLER.

Witnesses:

CHARLES B. MANN, Jr.,

JOHN A. HENKUS.