No. 837,280. PATENTED DEC. 4, 1906.

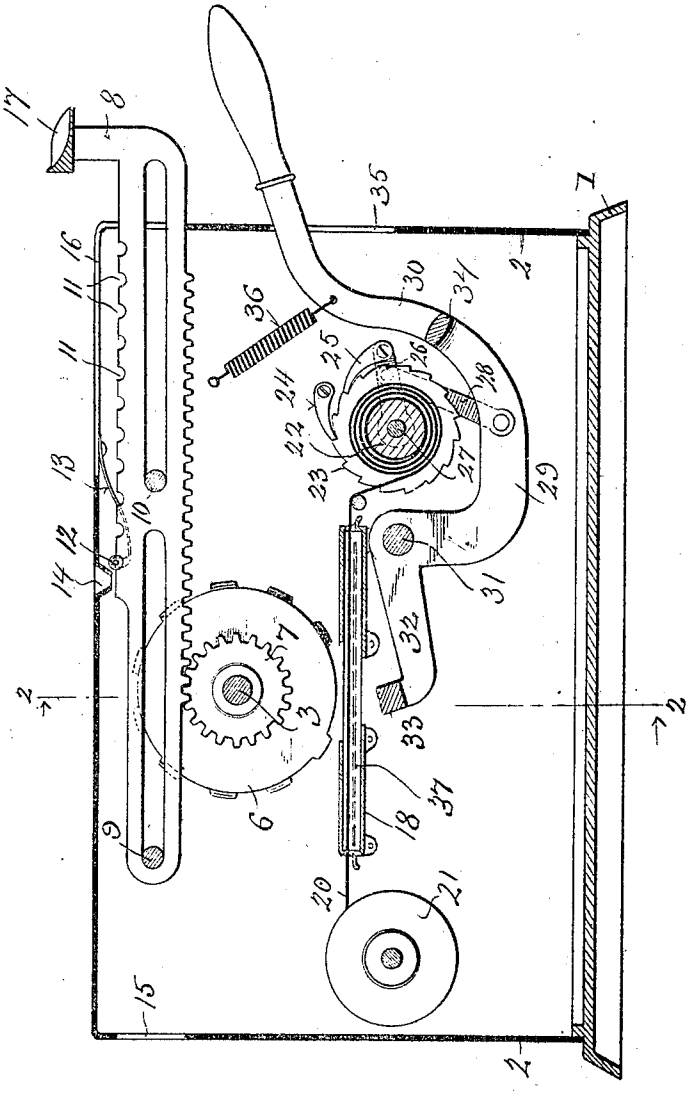
E. J. BRANDT.

PRINTING DEVICE.

APPLICATION FILED MAR. 26, 1904.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses
Geo W. Young
R. J. Barsch

Inventor
Edward J. Brandt
By H. G. Underwood
Attorney

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2 SHEETS—SHEET 2.

Fig. 3.

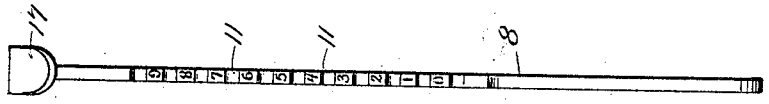
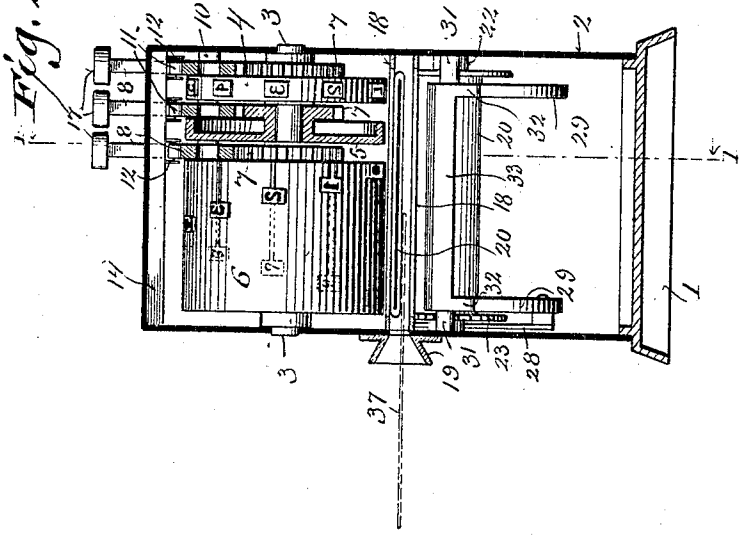


Fig. 2.



Witnesses
Geo. W. Young.
P. J. Barsch

Inventor
Edward J. Brandt
By H. G. Underwood
Attorneys

UNITED STATES PATENT OFFICE.

EDWARD J. BRANDT, OF WATERTOWN, WISCONSIN, ASSIGNOR TO BRANDT CASHIER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

PRINTING DEVICE.

No. 837,280. Specification of Letters Patent. Patented Dec. 4, 1906.

Application filed March 26, 1904. Serial No. 200,123.

To all whom it may concern:

Be it known that I, EDWARD J. BRANDT, a citizen of the United States, and a resident of Watertown, in the county of Jefferson and State of Wisconsin, have invented certain new and useful Improvements in Printing Devices; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates especially to machines or devices for imprinting figures or other characters upon paper slips or like articles; and it consists in certain peculiarities of construction and combination of parts, as will be fully set forth hereinafter in connection with the accompanying drawings and subsequently claimed.

In the said drawings, Figure 1 is a vertical longitudinal sectional view of a device embodying my present invention, taken on the plane indicated by the line 1 1 of Fig. 2. Fig. 2 is a vertical transverse sectional view of said device, taken on the plane indicated by the line 2 2 of Fig. 1, but showing the type-drum and one of the type-wheels in elevation. Fig. 3 is a plan view of one of the guide-racks.

Referring by numerals to the said drawings, 1 designates the base of the machine, 2 the casing, and 3 a shaft journaled in said casing. Loose on said shaft are a number of type-wheels, as 4 5, and one wide wheel or drum 6. The said type-wheels carry on their peripheries the cipher and nine digits in regular order, and the type-drum 6 in the illustration given carries the same characters, but arranged in a spiral or oblique line, with the first character at one edge of said drum and the last character at the opposite edge. If desired, said type wheels and drum or some of them may carry letters or any other characters desired in any given instance in place of the figures shown. Formed integrally with or rigidly attached to the said wheels and drum are toothed pinions 7 7, and said wheels and drum are revolved on the shaft 3 by means of the guide-racks 8, which engage with the said pinions 7. These guide-racks are formed with longitudinal slots therein, by means of which they are supported by transverse rods 9 10, the upper face of each rack 8 being formed with a series of rounded transverse grooves 11 11, which are for the reception of a stop-roller 12 at one end of a spring 13, whose other end is secured to the upper part of the casing 2 and those grooves 11 corresponding in number and location to the printing characters on the wheels and drum.

14 indicates a peep-hole in the casing-top, and the upper surface of each guide-rack 8 is numbered or lettered to correspond to the adjacent printing characters, and so when the said guide-rack is pushed under the peep-hole 14 until the desired character is seen this indicates that the printing-type corresponding to said character is on the printing-line, and the guide-rack is held in this position by the engagement of the stop-roller 12 within the adjacent groove 11. The casing 2 is slotted, as shown at 15 and 16, to permit the guide-rack to have free movement in either direction by pressure applied to its finger-stall 17.

The paper slip or like article to be imprinted is slipped under the type wheels and drum in a paper-support 18, having a flaring mouth 19 supported by said casing, and this support, which is preferably a flat tube, is centrally slotted in both its upper and its lower wall on the printing-line, and each end of the support is also cut away for the reception of an ink-ribbon 20, which passes through the support just above the line of the paper therein from a friction-drum 21 at one end of the device to a winding-drum 22 near the other end, this last drum having a ratchet-wheel 23, fast on one end of drum 22, and two dogs 24 25, the dog 25 being pivotally attached to a link 26, loose on the shaft 27 of the winding-drum 22, and said link 26 being pivotally connected to one end of a second link 28, whose other end is similarly connected to one of the central depressed parts 29 of the printing-lever. This lever is fulcrumed on the transverse rod 31 and has two of these central depressed portions 29, each ending in a forwardly-projecting portion 32, united by the printing-hammer 33, while back of the line of the winding-reel 22 the two depressed portions 29 are united by a cross-piece 34, from which point the shank or handle 30 of the lever extends up and out through a slot 35 in the rear wall of the casing 2. The said handle 30 is normally kept in an elevated position, with the hammer 33 away from the paper-support 18, by a retracting-spring 36, secured to said lever-handle and to the casing.

The operation of my device will be readily understood from the foregoing description of its construction, taken in connection with the

accompanying drawings. By means of the guide-racks 8 the type-wheels (of which there are any number desired) and type-drum are rotated to the desired point, so as to bring the proper printing characters over the printing-line (which will be when the index characters on the guide-racks show through the peep-hole 14) and lock them there by the stop-roller, and then the paper slip or other article to be imprinted (indicated by the dotted lines 37) is slipped through the mouth 19 and into the paper-support 18, and then the handle 30 of the printing-lever is depressed, which brings the hammer end 33 up through the slot in the lower wall of the paper-support 18, thus impacting the paper 37 and ink-ribbon 20 against the printing character on the type wheels and drum, as said characters are all set in the printing-line, after which the hammer 33 is drawn away from the paper-support again by the spring 36, and the guide-racks 8 may be again manipulated to set the type for the next printing-line.

By reason of the peculiar arrangement of the printing characters on the type-drum 6 no two are in annular line with each other, and hence in printing each figure or character printed by said drum 6 will be at a different distance from the characters printed by the type-wheels, and this is a matter of great importance in the use of my machine when it is desired to have several transverse printing-lines appear on the slips one under the other, but with the last figure or character in each transverse line out of vertical line with the last figures or characters of the other transverse lines.

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

1. In a printing device, the combination with a suitable casing of a revoluble type-drum, and series of revoluble type-wheels, the latter having printing characters arranged in annular lines on their peripheries and the said type-drum having printing characters spirally arranged on its periphery, out of annular line with each other, and said type-drum and type-wheels loosely mounted on a transverse shaft; pinions fast on said drum and wheels, and loosely surrounding said shaft; guide-racks in engagement with said pinions; detents in engagement with said racks; inking devices adjacent to said drum and wheels; a paper-support; and an impacting device for forcing the paper carried by said support, and the inked printing characters, together at the proper times.

2. In a printing device, the combination with a suitable casing of a revoluble type-drum, and series of revoluble type-wheels, the latter having printing characters arranged in annular lines on their peripheries and the said type-drum having printing characters spirally arranged on its periphery, out of annular line with each other, and said type-drum and type-wheels loosely mounted on a transverse shaft; pinions fast on said drum and wheels, and loosely surrounding said shaft; guide-racks in engagement with said pinions; inking devices adjacent to said drum and wheels; a paper-support; and an impacting device for forcing the paper carried by said support, and the inked printing characters, together at the proper times.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

EDWARD J. BRANDT.

Witnesses:
N. E. OLIPHANT,
R. J. BARSCH.