March 31, 1931. U. KOHLER 1,798,328

STAMPING MACHINE

Filed Jan. 14, 1928

Fig.1.

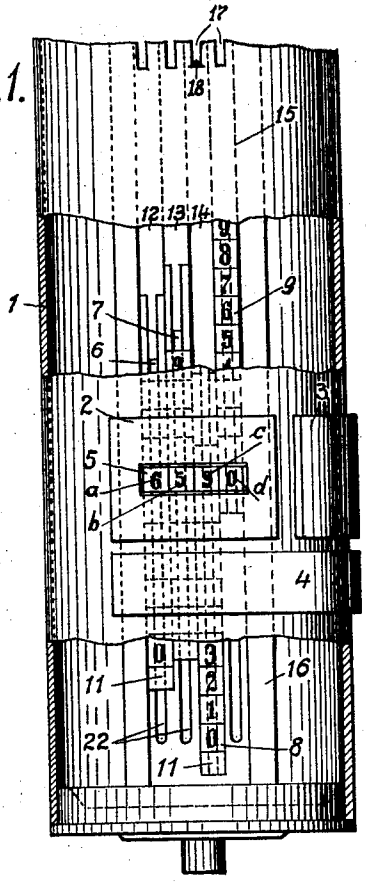


Fig.4.

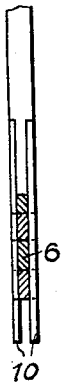


Fig.3.

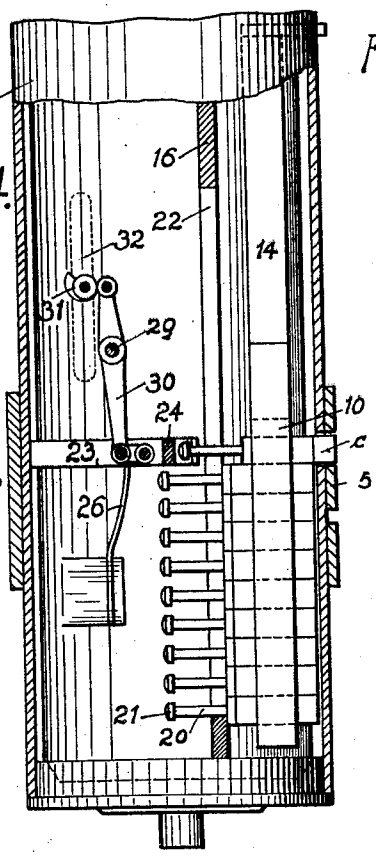
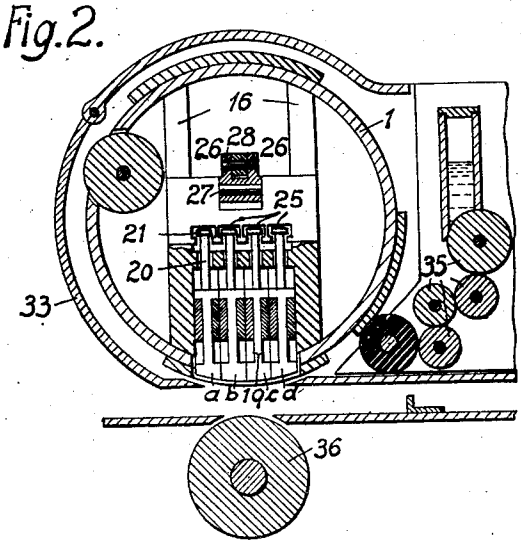


Fig.2.



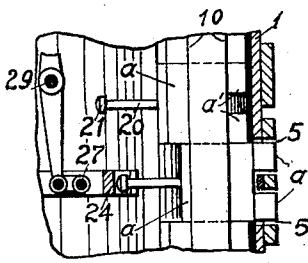
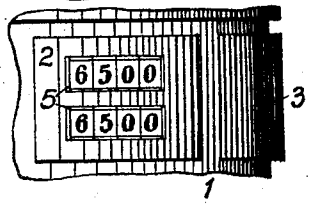


Fig.5.

Fig.6.



INVENTOR
ULRICH KOHLER
By. Marks & Clark
ATTORNEYS

Patented Mar. 31, 1931

1,798,328

UNITED STATES PATENT OFFICE

ULRICH KOHLER, OF BERN, SWITZERLAND

STAMPING MACHINE

Application filed January 14, 1928, Serial No. 246,835, and in Germany January 14, 1927.

My invention relates to stamping machines such as are used for marking postal letters. Existing machines of this kind, in which the stamps are arranged on the circumference of a rotary carrier, have the drawback that the stamps can only be used for one value. A stamping machine that can be used for variable values has the advantage over machines with set values that the stamps do not become useless when the postage rates are altered. The exchange of the stamps means interruption of operations and expenses. A stamping machine adapted for all values is, moreover, not restricted to stamping postal letters, like the machines used heretofore, but it can be used in all cases where any desired numbers are to be printed one or several times on certificates, bills, and such like.

The invention relates to a machine of this kind in which any desired numbers can be stamped. Each number is on a separate block, and these blocks are arranged in rows that can be moved parallel to each other. In certain positions in regard to an opening of the fixed or rotatable carrier showing the other stamp part the blocks can be moved by means of a common member across the direction of their rows into the said opening. As the additional stamps for postal purposes can be distributed over the circumference of the cylinder in the same, or approximately the same, radial plane, the length of the inking mechanism can be comparatively short, which is of advantage for the uniform inking of the entire printing surface.

In the accompanying drawing two constructions of the stamping machine are shown as far as is necessary to make the invention clear.

Fig. 1 is an elevation of the printing cylinder, partly cut away, as seen from below in Fig. 2.

Fig. 2 is a cross-section on the line II—II of Fig. 1.

Fig. 3 is a longitudinal section on the line III—III in Fig. 1.

Fig. 4 shows a detail.

Figs. 5 and 6 represent a part of the second construction in longitudinal section and in elevation.

According to the example shown in Figs. 1 to 4 the printing cylinder, consisting chiefly of a cylindrical tube 1, has, on its outside circumference, printing surfaces 2, 3 and 4 provided with the usual stamps, not shown in the drawing. The printing cylinder and the printing surface 2 have a rectangular opening 5, the longest side of which is at right angles to the cylinder axis, into which opening project from the interior of the cylinder usually four printing blocks *a*, *b*, *c*, *d*, carrying numerals which blocks belong to rows 6, 7, 8, 9. Each row of numeral printing blocks is arranged between two parallel flat guide rods 10, which, at the lower end in Figs. 1 and 3, are connected together by a piece 11, and, at the upper end, are fastened to a longitudinal slide 12, 13, 14 or 15. These slides and the guide rods 10 lie between the two cheeks of a frame of H-section, so fitted into the printing cylinder that, together with the respective row of numerals, they can be moved longitudinally. The length of this movement determines the amount of rotation given to the counting wheels of a counting device not shown in the drawing and not forming a novel part of the invention. The slides are each provided at the upper end in Fig. 1 with a projection 18 passing through a longitudinal slot 17 of the cylinder 1 and serving, at the same time, as a handle and index permitting the particular slide to be adjusted to a scale in the respective slot 17, so that the desired printing block will appear in the opening 5. In all other positions the numeral printing blocks are prevented from moving in a direction at right angles to the cylinder axis, because the printing surface slides along the inner surface of the printing cylinder and its shoulders 19 press against the guide rods 10. At the inner end each numeral printing block carries a stud 20, with head 21, which projects through a common longitudinal slot 22 in the cross member of the frame 16. In the plane of the opening 5 the cheeks of the frame have a slot 23 in which a slide 24 is guided. The slide 24 is common to the blocks 6 positioned opposite the opening 5 and is movable transversely in the cylinder

and independently of the slides 12, 13, 14 and 15. On the long side nearer to the cross member of the frame the slide 24 has four openings 25, narrowed on the outside, for taking up the ends of the keys. By means of two springs 26 the slide 24 is kept in its inner end position. To the pin 27 of the slide 24 is jointed through a link 28 a two-armed lever 30, turning about a pin 29, and bearing, at its top end, against a cam 31. The axis of this cam carries a handle 32 let into a groove on the outside of the cylinder, not shown on the drawing. By means of this handle 32 the cam 31 can be turned and the lever 30, together with the slide 24 will be moved, the latter being so advanced that the printing blocks connected therewith are pushed into, or pulled out of, the opening 5. When in the opening they are in a level with the printing surface 2, so that on turning the printing cylinder 1, supported at both ends in the end walls of the casing 33, the blocks will be inked by the roller 34 of an inking device of any known construction and printed, together with the printing surface 2, 3 and 4, on a letter, card, or the like, pressed by a roller 36 up against the printing cylinder. If a postal mark of other value is to be printed, the numeral printing blocks are pulled back out of the opening 5 by turning the handle 32. Thereafter every numeral row can be moved separately. By then again turning the handle through half a revolution all the numeral printing blocks opposite the opening 5 will be pushed by the slide 24 into this opening, that is to say, they are brought into the operative position.

The construction shown in Figs. 5 and 6 differs from that described above only by the fact that the printing surface has two similar openings 5, and that each numeral printing block *a* has two similar numeral types *a'*. This construction is suitable in all cases where the same number has to be printed double on a letter, card, or the like, and on a control certificate as well, and in this case neither a larger diameter of the printing cylinder nor a larger casing, or a different inking mechanism are required. The last feature is of particular importance, compared with existing devices, having a wheel-carrier for the stamps, because the limited space on a letter or printed certificate does not permit of any marked enlargement of the printing surface and every enlargement of the printing surface causes difficulty in obtaining a uniforming inking.

Instead of being cylindrical and rotatable the carrier for the printing surfaces can be flat and fixed, or segmental and oscillating, but the cylindrical form has the advantage that the printing takes place with greater specific pressure and less power, because then the momentary printing surface is a thin line.

What I claim and desire to secure by Letters Patent of the United States is:

1. The combination in a stamping machine of a printing element, a carrier for said printing element, printing blocks, longitudinally movable slides carrying rows of said blocks and adapted to position the desired block of each row opposite to an opening in said carrier, and an independently operable transverse slide common to all of the positioned blocks for simultaneously moving said blocks through the opening and flush with said printing element.

2. The combination with a stamping machine, of a printing element, a cylinder to carry said element and having a transverse slot in its circumference, numeral printing blocks inside the said cylinder, guide rods carrying said blocks, a frame to guide said rods longitudinally so that certain printing blocks of each row may be arranged opposite the slot in the cylinder, and an independently operable transverse slide common to all of the position blocks for moving said blocks transversely to the direction in which said rods are movable into and out of the slot in the cylinder.

3. The combination in a stamping machine of a printing element, a cylinder to carry said printing element and having a slot in its circumference, printing blocks arranged in rows inside the cylinder, means for supporting and guiding the rows of blocks in the cylinder so that any one of the blocks of each row may be brought opposite the slot in said cylinder, engaging means on the back end of said blocks, and an independently operable and transversely mounted slide adapted to engage with the engaging means of the positioned blocks for simultaneously moving said engaged blocks into and out of the slot in the cylinder.

In testimony whereof I affix my signature.

ULRICH KOHLER.