

G. E. WILLARD & C. N. COWDEN.
STAMPING MACHINE.

APPLICATION FILED JAN. 28, 1913.

1,100,641.

Patented June 16, 1914.

2 SHEETS—SHEET 1.

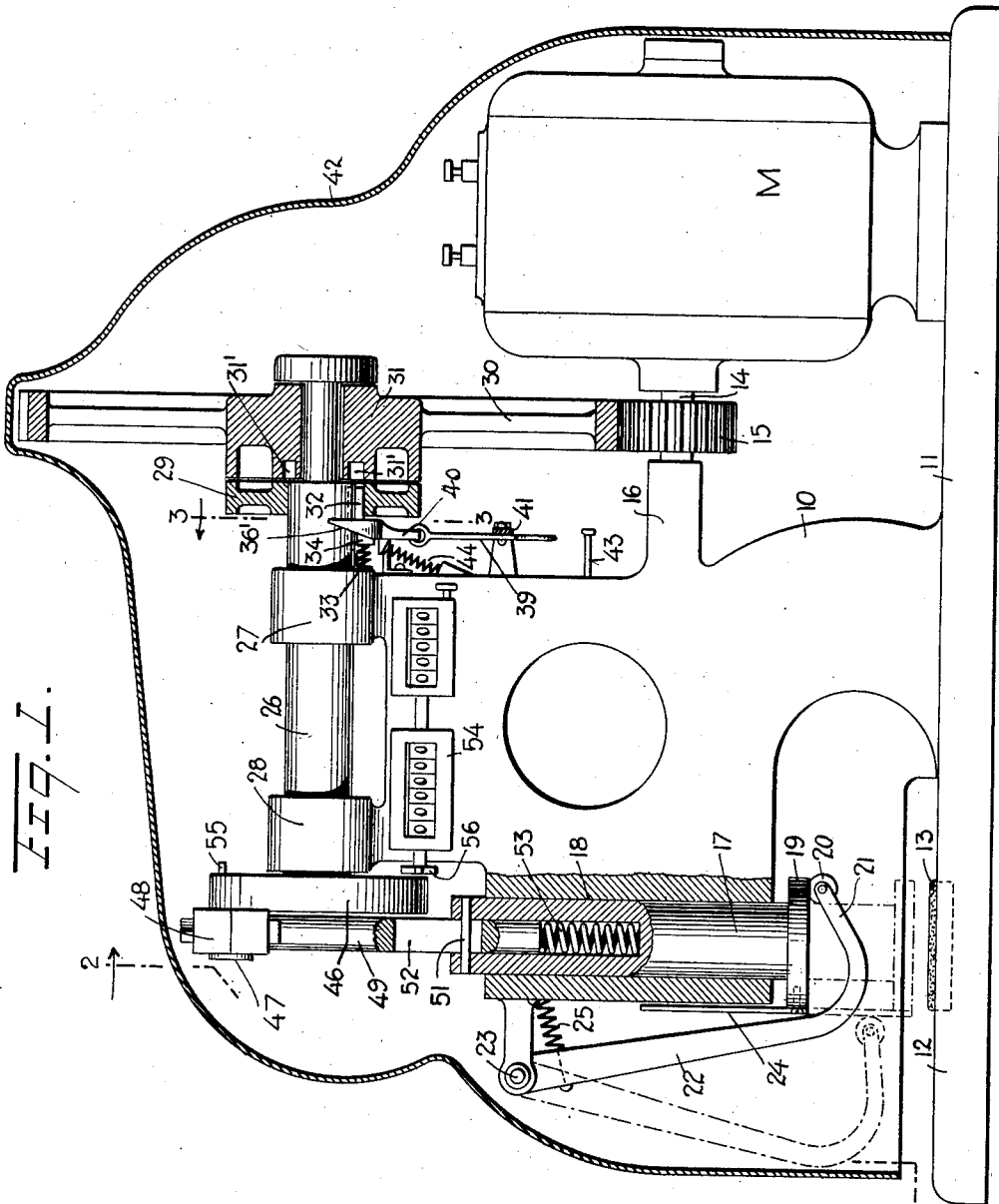


Fig. 1.

WITNESSES

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Geo. L. Seelen

INVENTORS

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Fig. 2.

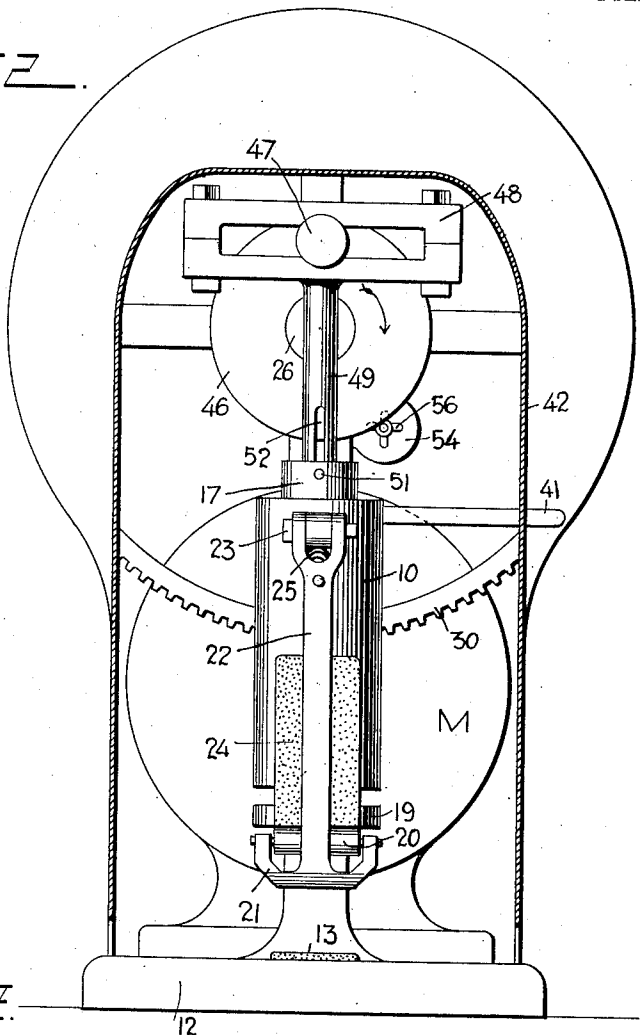
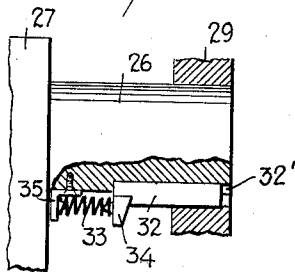
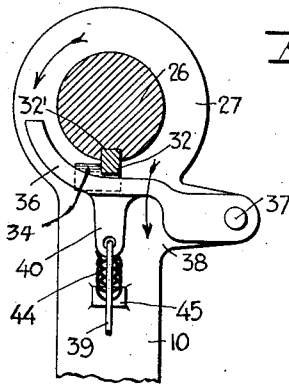


Fig. 4.



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Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE E. WILLARD AND CHARLES N. COWDEN, OF NASHVILLE, TENNESSEE.

STAMPING-MACHINE.

1,100,641.

Specification of Letters Patent.

Patented June 16, 1914.

Application filed January 28, 1913. Serial No. 744,635.

To all whom it may concern:

Be it known that we, GEORGE E. WILLARD and CHARLES N. COWDEN, citizens of the United States, and residents of Nashville, in the county of Davidson and State of Tennessee, have invented a new and Improved Stamping-Machine, of which the following is a full, clear, and exact description.

This invention relates to canceling, stamping or similar machinery, and has particular reference, as herein set forth, to a means for stamping letters or similar articles.

Among the objects of the invention is to improve this class of devices with respect to simplicity of construction and operation and efficiency of service.

A further object of the invention is to improve the means for applying ink to the die.

The foregoing and other objects of the invention will hereinafter be more fully described and claimed and illustrated in the drawings forming a part of this specification in which like characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a vertical longitudinal section of a preferred embodiment of the invention, certain parts being in elevation; Fig. 2 is a vertical transverse section on the broken line 2—2 of Fig. 1, showing the machine proper in elevation; Fig. 3 is a vertical transverse sectional detail on the line 3—3 of Fig. 1; and Fig. 4 is a detail described below.

The several parts of the machine may be made of any suitable materials and the relative sizes and proportions thereof, as well as the general design of the machine, may be varied in numerous immaterial particulars without departing from the spirit of the invention hereinafter claimed.

Referring more particularly to the drawings, we show at 10 a frame of any suitable design supported upon a base 11. The base includes a substantially flat extension or foot 12 carrying a cushion 13. On the opposite end of the base is shown, by way of illustration of any suitable power means, a motor M. A motor shaft 14 is fitted with a pinion

15, and the shaft may be journaled in an extension 16 formed integrally or otherwise secured to the main frame 10.

A plunger 17 is mounted for vertical reciprocations in a socket 18 of the frame above the cushion 13. The lower end of the plunger has secured thereto in any suitable manner, a head or die 19 which is adapted to operate directly upon the work introduced to the machine above the foot 12.

As a suitable means for applying ink to the active face of the die, we provide a roller 20 journaled transversely in a yoke 21 which occupies a plane substantially at right angles with an arm 22 to which the yoke is connected. The arm 22 is pivoted above the die and to one side of the plunger, as indicated at 23. An ink plate 24 is arranged substantially vertically with respect to the plunger and is shown carried by the die between the plunger and the arm 22, the lower end of the ink plate being substantially flush with the active surface of the die. The relative sizes and arrangement of the plunger, die and inking device are such that when the plunger is in normal position, the inking roller 20 will be in contact with the active face of the die as shown in full lines in Fig. 1, but when the plunger is depressed, the inking roller will be carried downwardly by the plunger, and because of the eccentricity of the pivot 23, the arm will be swung around the pivot causing the roller to travel across the face of the die and come into engaging coöperation with the plate 24, as indicated in dotted lines in said figure. The roller, when in engagement with the plate 24, will receive a fresh supply of ink, and when the roller is subsequently lifted, such ink will be transferred to said die by the return of the parts to the position shown in full lines, such return being effected by virtue of a spring 25, or by any other suitable means.

At 26 is shown a shaft constituting the principal element of a suitable means for operating the plunger, said shaft being journaled horizontally in bearings 27 and 28 at the top of the frame. Adjacent one end of

the shaft 26, a collar 29 is rigidly secured in any suitable manner, and a wheel 30 is journaled loosely upon such end of the shaft, the wheel having a hub 31 adjacent said collar
 5 29. The hub is provided with any suitable number of sockets 31' arranged in a circular series around the axis of the shaft 26 and said collar. The wheel 30 is secured upon the shaft for normal free rotation by any suitable means, and is in constant mesh with the
 10 aforesaid pinion 15 whereby the wheel 30 may be considered as a member rotating at a comparatively slow speed from the motor.

As shown especially in Fig. 3, we provide
 15 a key 32 slidable longitudinally of the shaft 26 into or out of engagement with any one of the sockets 31', said key being shown as being adapted to extend through said collar 29 for engaging purposes, and the normal
 20 tendency is for such key to be projected into engaging position by virtue of a spring 33, one end of which bears against the head 34 of the key and the other end of the spring is supported by any suitable means carried by
 25 the shaft and indicated, by way of illustration, as a clip 35 shown in Fig. 4. The key operates preferably in a groove 32' in the shaft and thereby, in connection with the collar 29, is maintained in position. While
 30 the normal tendency, as above stated, is for the key 32 to be projected into engagement with the wheel hub, we provide means normally preventing such action, such means including a peculiar form of wedge or cam
 35 36 shown in detail in Fig. 3 and pivoted at 37 to a lug or extension 38 carried by the frame. This cam device, by virtue of its inclined face 36', constitutes not only a means to positively withdraw the key from any one
 40 of the sockets 31' of the hub, but also serves as a brake insuring the proper stoppage of the shaft 26 at the proper moment after being detached from the running member 30. The cam 36 under normal conditions occupies
 45 the position indicated in Figs. 1 and 3, in which the wedge or inclined portion occupies a position either in contact with the head 34 or in the path of such head if the shaft 26 be rotated, and thereby the key will
 50 either be held out of engagement with the wheel hub 31 or else will be withdrawn and then held, as the case may be, against pressure of the spring 33. The wheel 30, therefore, may continue to rotate at a uniform
 55 speed assuming that the pinion 15 is connected to a constantly running shaft. The cam 36, however, being substantially stationary, will virtually constitute a brake serving to stop the rotation of the shaft 26
 60 as the head 34 of the key rides up the inclined face 36' as before described. The shaft may be started again so as to rotate with the wheel 30 by withdrawing the cam

36 out of contact with the head 34 by any suitable means. As herein shown, we provide a pull rod 39 connected to the cam
 65 through a lug 40, and said pull rod may be operated by any suitable means as, for instance, a lever 41 connected thereto and extending to the outside of the casing 42 surrounding the mechanism. Should it be desired
 70 to lock the cam out of the path of the key so that the shaft 26 may be operated continuously, this may be done by holding the pull rod down as, for instance, by engaging it over a pin 43. The cam is normally
 75 pressed upward and maintained in the position shown in Fig. 3 by virtue of a spring 44 having one end bearing against the cam and the other end supported upon a lug 45
 80 extending outwardly from the frame.

On the end of the shaft 26 opposite the wheel 30 is connected a crank disk 46 having a wrist pin 47 upon which is mounted a
 scotch yoke 48 connected to the upper end 85 of a shank 49 having a resilient connection with the plunger aforesaid. Said connection is effected by means of a pin 51 extending through a slot 52 from one member to the other providing for a certain amount
 90 of individual movement between the shank and the plunger, but is resiliently resisted by means of a cushion spring 53. By this means, when the crank and wrist pin force the shank and plunger downward, the extent
 95 of movement of the plunger may vary according to the thickness of the article being impressed by the die, but providing for a constant extent of movement of the shank without damage to the machine. We also
 100 prefer to employ, in connection with the device, an automatic counter or register 54 of any suitable type and the same to be actuated from any suitable moving part of the device as, for instance, a lug 55 connected
 105 to the crank disk and adapted to give a step-by-step rotation to a star wheel 56 connected to the counter.

Having thus described our invention, we claim as new and desire to secure by Letters
 110 Patent:

In a stamping machine, the combination of a rigid frame having a vertical socket, a plunger having a hollow center mounted in said socket, a die carried by the lower end
 115 of the plunger and having its face arranged in a horizontal plane at right angles to the axis of the socket, a vertically arranged inking plate connected to the die and extending thence upwardly in spaced parallel relation
 120 to the plunger, means to reciprocate the plunger including a shank extending into the center of the plunger and having pin and slot connection therewith and a spring within the plunger and below the
 125 center of the shank, an arm pivotally con-

5 nected at its upper end to the wall of the
socket, the inking plate being between the
arm and said socket, a yoke carried by the
lower end of said arm at a substantially
right angle thereto, a roller journaled in
said yoke and adapted to have rolling con-
tact with both the vertically arranged ink-
ing plate and with the horizontally arranged
die during the reciprocations of the plunger,
10 and means tending to cause the arm to co-
act with the plunger and parts carried
thereby.

In testimony whereof we have signed our
names to this specification in the presence of
subscribing witnesses.

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CHARLES N. COWDEN.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."