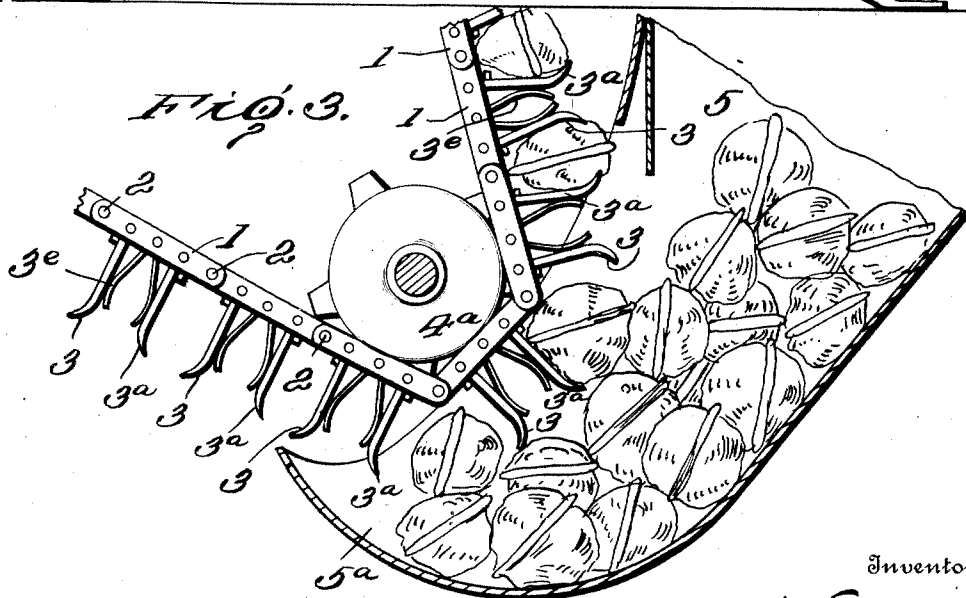
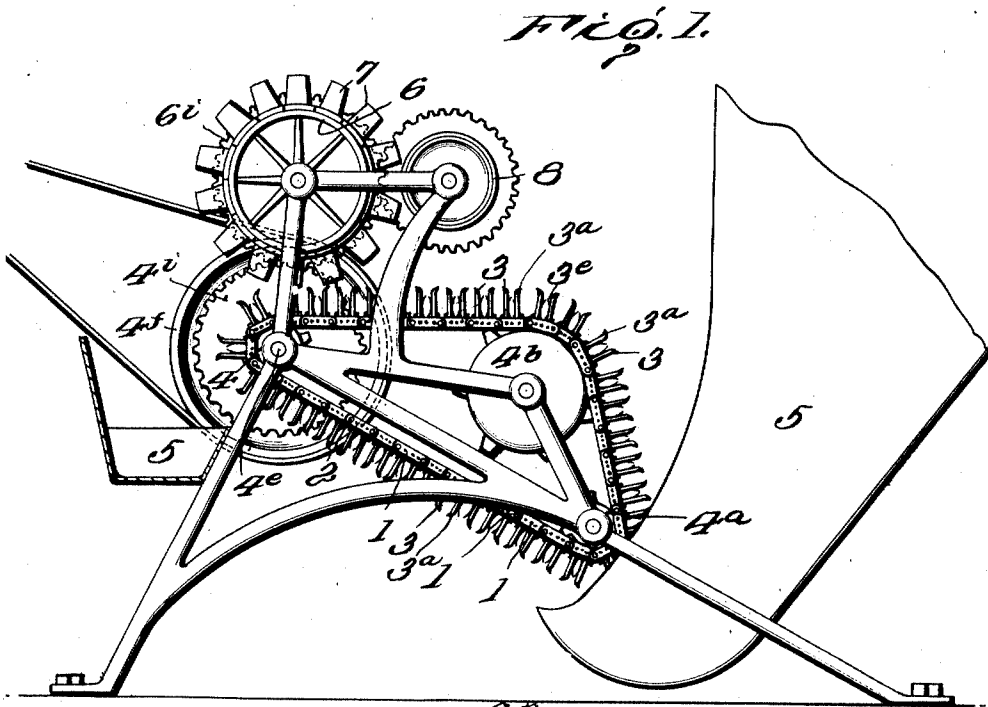


H. VARBLE,
MACHINE FOR PRINTING UPON NUTS, &c.
APPLICATION FILED JUNE 11, 1919.

1,334,822.

Patented Mar. 23, 1920.
3 SHEETS—SHEET 1.



Witness
Floyd P. Cornwall.

Inventor
Harold Varble

By
Alexander & Fowell
Attorneys

H. VARBLE.
 MACHINE FOR PRINTING UPON NUTS, &c.
 APPLICATION FILED JUNE 11, 1919.

1,334,822.

Patented Mar. 23, 1920.
 3 SHEETS—SHEET 2.

FIG. 2.

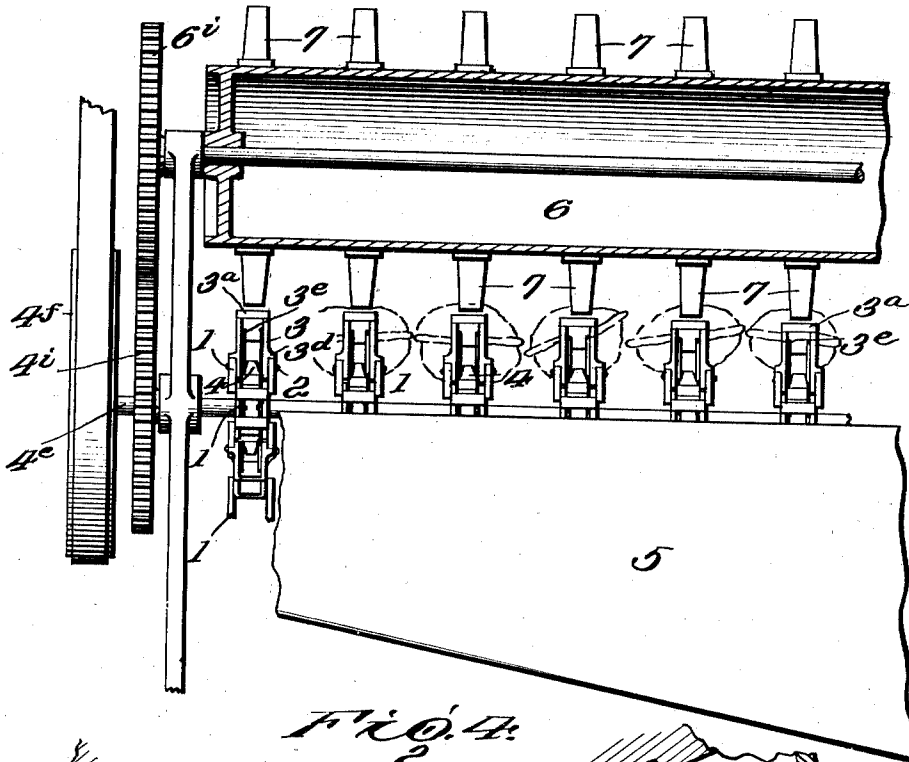
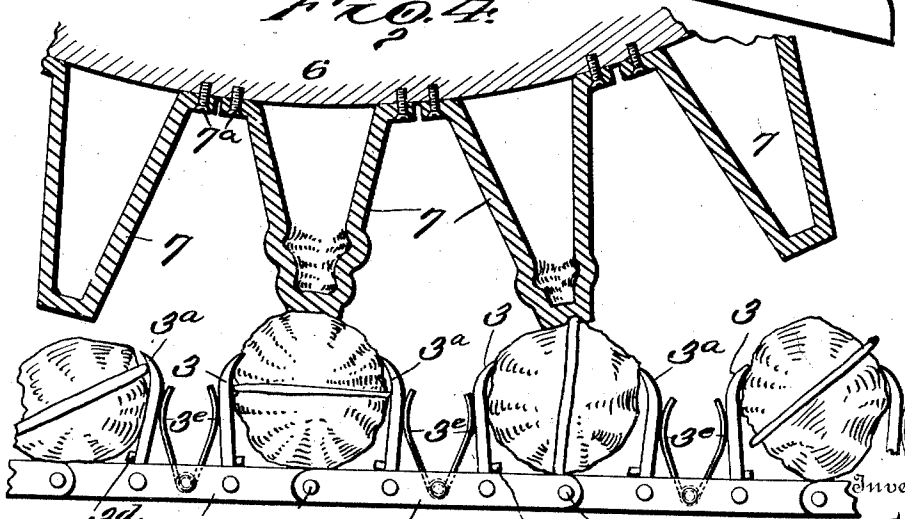


FIG. 4.



Witness
 Lloyd R. Cornwall.

Inventor
 Harold Varble
 By Alexander D. Swell
 Attorneys

H. VARBLE.
MACHINE FOR PRINTING UPON NUTS, &c.
APPLICATION FILED JUNE 11, 1919.

1,334,822.

Patented Mar. 23, 1920.
3 SHEETS—SHEET 3.

FIG. 5.

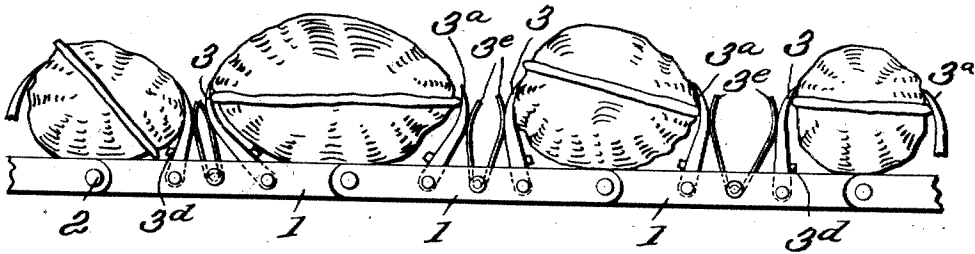


FIG. 6.

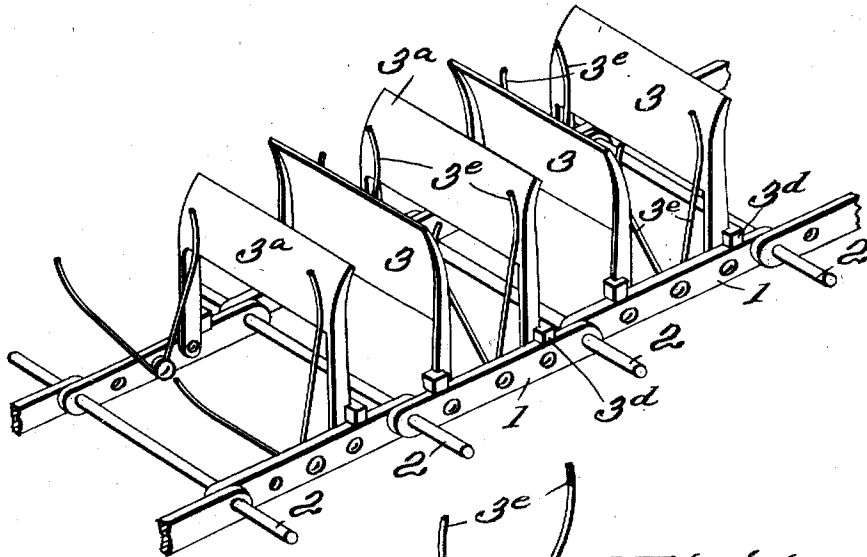
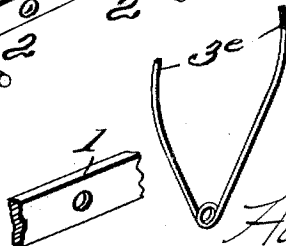


FIG. 7.



Witness
Floyd P. Cornwall.

Inventor
Harold Varble

By Alexander Sowell
Attorney

UNITED STATES PATENT OFFICE.

HAROLD VARBLE, OF EL MONTE, CALIFORNIA.

MACHINE FOR PRINTING UPON NUTS, &c.

1,334,822.

Specification of Letters Patent. Patented Mar. 23, 1920.

Application filed June 11, 1919. Serial No. 303,324.

To all whom it may concern:

Be it known that I, HAROLD VARBLE, a citizen of the United States, residing at El Monte, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Machines for Printing Upon Nuts, &c.; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is a novel machine particularly designed for marking or stamping trade-marks or other indicia on nuts such as walnuts so that the source or origin of the nuts will be known to the consumer or purchaser.

The invention is also useful for marking other objects, particularly of varying sizes, as will be readily appreciated when the machine is understood. I will, however, describe the invention as embodied in a machine particularly designed for stamping trade-marks upon English walnuts and like nuts and will thereafter set forth in the claims the essentials of the invention and the novel features of construction and novel combinations of parts for which protection is desired.

In said drawings:

Figure 1 is a side elevation partly in section of a complete machine for stamping or marking nuts.

Fig. 2 is a detail enlarged transverse section thereof.

Fig. 3 is an enlarged detail showing how the grippers on the carrier engage the nuts.

Fig. 4 is an enlarged detail showing how the nuts are printed.

Fig. 5 is an enlarged detail illustrating how the chain can carry nuts of different sizes.

Fig. 6 is a perspective view of part of the carrier chain.

Fig. 7 is a detail.

The machine as shown includes an endless carrier, or series of parallel carriers 1, each preferably composed of suitable links which may be strung upon rods 2 extending across the width of the carrier.

As shown in Fig. 2 of the drawings there

may be a number of such carriers arranged side by side and operating as one. The adjacent sets of carriers may be suitably spaced apart by collars or blocks 2^a on the rods 2 intermediate the side links of adjacent carriers as indicated in Fig. 6. As each one of the endless carriers may be constructed alike a description of one will explain all.

To each of the links are pivoted gripper jaws 3 and 3^a, which grippers face in opposite directions and may be pivoted on the links in any suitable manner, for example as indicated at 4^b. The grippers 3 and 3^a attached to the same links face oppositely, and preferably have their outer free ends curved oppositely as indicated at 3^c. The gripper 3 on one link coacts with the opposed grippers 3^a on the connected link; and vice versa.

The opposed but coöperating grippers 3, 3^a (on connected links) are placed equidistant from the pivots 2 or rods connecting such links so that as the chain passes around the guiding cylinders or sprockets, hereinafter referred to, opposed coacting grippers 3, 3^a will be caused to open or swing their outer ends apart (see Fig. 3) and thereafter they will close, or swing toward each other, as the links reassume their positions on a straight run of the carrier.

The grippers 3, 3^a are preferably provided with stop projections 3^d adapted to engage the links 1^a, 1^b and arrest the jaws in normal position (see Figs. 3 and 6) substantially perpendicular to the links 1 and they also prevent the coöperating grippers 3, 3^a attached to adjacent links from swinging to and from each other.

Each jaw is preferably provided with suitable spring means to hold it normally but yieldingly in a vertical position relative to the link to which it is pivoted. As shown a double spring 3^e may be attached to each link intermediate the grippers pivoted thereon, and the ends of the spring bear against the adjacent jaws 3, 3^a.

The endless carrier or carriers 1 may be supported on cylinders 4 and 4^a and a larger cylinder 4^b and be driven by suitable sprockets on the cylinders. The cylinder 4 is shown in Fig. 1 as arranged at the discharge end of the machine beneath the

printing roll 6, hereinafter referred to. The cylinder or drum 4^a is preferably arranged adjacent the lower end 5 of a suitable feed hopper in which the nuts are placed (as shown); and the cylinder 4^b is preferably arranged above the cylinder 4^a intermediate the cylinders 4 and 4^a. The cylinders are preferably so disposed that the endless carrier or carriers traverse a practically endless triangular path; the upper run of which, between the cylinders 4, 4^b is substantially horizontal, and the run thereof between the cylinders 4^a and 4^b is substantially vertical.

The cylinders 4, 4^a are preferably small and the cylinder 4^b of comparatively large diameter, and when the chain passes around the small cylinder 4^a (see Fig. 3) the links 1 pivot on each other, or tend to close together, and this causes the opposed grippers 3 and 3^a on adjacent connected links to swing apart or open up, as indicated in Fig. 3, so that nuts can enter between opposed grippers 3, 3^a on connected links 1, 1 (see Figs. 3 and 4) but the grippers 3, 3^a on the same link remain close together so that nuts cannot fall between adjacent grippers 3, 3^a connected to the same link. By reason of this construction as the grippers enter the foot of the hopper and turn around the cylinder 4^a the cooperating grippers 3, 3^a open as they begin to travel around cylinder 4, and then close upon the nut in the lower part of the hopper (as indicated in Fig. 3) the grippers closing on the nuts and yieldingly holding same as the grippers rise out of the foot from the cylinder 4^a toward the cylinder 4^b. Owing to the yielding spring-pressed closure of the co-acting grippers they will readily engage and hold nuts of different sizes and in any position, as indicated in Figs. 3, 4 and 5, and will carry the nuts along to and over the cylinder 4^b and to and under the printing roll 6 hereinafter referred to above the cylinder 4.

The roll 6 preferably extends across the entire width of the series of carriers 1 and is shown as provided on its periphery with a circumferential series of yielding stamping pads 7 for each carrier. The stamping pads 7 are preferably made of pliable rubber in the form of long hollow cones with flanges 7^a around their bases, by means of which they can be secured to the cylinder by screws as shown. The stamping pads carry the desired printing surfaces on their outer smaller ends and are preferably made hollow, as shown, to give them more resiliency than solid rubber would have, as they will have to be capable of yielding toward the cylinder when stamping the larger nuts; and also must be such that the stamping end or surface can make the proper impression upon the irregular face of the nut as indicated in

Fig. 4. I prefer to make the stamping pads out of rubber as shown as the most simple construction for easily self-adjusting pads; but I do not consider the invention restricted to the use of such hollow rubber stamping pads as various other kinds of yieldingly supported pads might be used.

These stamping pads receive ink from an inking roll 8. This may be a felt roll; and it may be supplied with ink in any desired and suitable way, so that as the printing cylinder rotates the printing surfaces of the stamping pads take ink from the roll 8 and thereafter apply it to the nuts presented by the carrier as indicated in Figs. 1 and 4.

The cylinder 6 and carriers should be driven in synchronism so that the stamping pads on the cylinder will properly co-act with the sets of nut grippers on the carriers; so that every nut brought by the carriers to and past the printing cylinder will be properly printed or stamped by some one of the pads thereon.

Power may be applied to the shaft 4^e of the cylinder 4 which may carry a driving pulley 4^f; and motion may be imparted from shaft 4^e to cylinder 6 by means of gears 4^g and 6^g as indicated in Fig. 1.

The ink roll 8 may also be driven at the same peripheral speed as the inking pads by means of a gear 8^h on its shaft meshing with the gear 6^h. Other suitable arrangements of gearing or driving means may be employed.

Any desired number of carriers 1 may be arranged side by side in the machine and operated over the cylinders 4, 4^a, 4^b as described; the adjacent carriers being suitably spaced apart.

The power is applied to the shaft of cylinder marked 4, which may have sprockets on each end to move the carriers in the proper direction. As cylinder 4^a is small in diameter the grippers open as they pass through the hopper 5 and the nuts fall between the jaws of the open grippers, then as the carrier assumes a straight line, as it passes from cylinder 4^a toward cylinder 4^b, the grippers close and firmly hold the nuts which have fallen into them. The small projections on the grippers which come against the chain links keep the grippers perpendicular to the links as they pass around the small cylinders, and the springs allow them to give when the different sized walnuts are held by them.

The vertical or nearly vertical position of the run of the carrier between cylinders 4^a and 4^b is necessary in order that loose walnuts from the hopper may not ride out on the chain.

Cylinder 4^b is simply used to change the direction of the chain from vertical to horizontal and is made of sufficiently large diameter to prevent the grippers opening

enough to allow the nuts to drop. Cylinder 4 is small so that the grippers will open and let the nuts fall into a receptacle, or a sacking trough or chute 9 shown arranged below and exterior to the cylinder 4, and which may be of any desired construction. The springs cause the grippers to tightly hold the nuts and at the same time allow the grippers to spread apart when large nuts are gripped, as shown in Figs. 4 and 5. The projections 3^a rest on the links to keep the grippers perpendicular to the links until a nut has fallen into them.

The nuts will always come in contact with the stamps because the ends of the stamping pads 7 which are yieldable are just the same distance apart as the joints in the carrier, and the nuts always come on the joints of the carrier as shown.

The general construction and operation of the machine will be obvious from the foregoing, but of course it will be readily understood by those skilled in the art that many changes can be made in features of construction while embodying the essentials of the invention.

It will be seen that with this invention I can very readily operate upon nuts or objects of different sizes; that the nuts will be separately automatically withdrawn from the mass of nuts in the hopper and individually presented to the stamps; and that the stamps are yielding and will adjust themselves to the opposed surface of the nuts or objects carried by the grippers whether it be small or large, regular or irregular; and each nut will be stamped; and further that any desired number of nuts may be operated upon simultaneously.

While I have described the machine as especially designed for marking nuts it is obvious that the machine is adapted for use in marking other small irregular objects which may be automatically taken from a mass of such objects in a hopper or receptacle; and I do not consider the invention restricted to the marking of irregular objects, as it could obviously be usefully employed for marking small objects of uniform size.

Claims.

1. In a machine for marking nuts the combination of a hopper for nuts; nut marking means adjacent the hopper, a carrier; a guide for the carrier adjacent the outlet of the hopper; a guide for the carrier adjacent the marking means; a guide for the upper run of the carrier arranged above the hopper outlet and intermediate the other guides; and oppositely movable swinging grippers pivoted on the carrier and adapted to open and grasp a nut as they pass around the guide in the hopper and carry the nut to the marking means, and then discharge it as

they pass around the guide adjacent the marking means.

2. In a machine for the purpose specified, the combination of a hopper containing objects to be marked; means for marking the objects; a carrier; a small guide for the carrier adjacent the outlet of the hopper; a small guide for the carrier adjacent the marking means; a larger guide for the upper run of the carrier arranged above the hopper outlet and intermediate the other guides; and grippers on the carrier adapted to grip an object as they pass over the small guide at the hopper, present the object to the marking means and release the marked object as the grippers pass around the small guide adjacent the marking means.

3. In a machine for the purpose specified, the combination of a receptacle for nuts; nut marking means arranged adjacent the hopper; an endless carrier consisting of pivoted links; a small guide for the carrier adjacent the outlet of the hopper; a small guide for the carrier adjacent the marking means; and a larger guide for the upper run of the carrier arranged above the hopper outlet and intermediate the small guides; and oppositely movable swinging grippers pivoted to the carrier links, the opposed grippers on adjacent links coöperating to grip a nut as the carrier passes around the guide adjacent the hopper, carry the nut past the marking means, and discharge the marked nut as they pass around the guide adjacent the marking means.

4. In a machine of the character specified having a hopper and marking means adjacent the hopper comprising a rotary cylinder having a plurality of circumferentially disposed yielding marking pads connected therewith;—the combination of an endless carrier formed of pivotally connected links; a guide for the carrier adjacent the outlet of the hopper; a guide for the carrier adjacent the marking means; a guide for the upper run of the carrier arranged above the hopper and intermediate the other guides; and opposed grippers connected with adjacent links and co-acting to hold an object; said grippers opening as they pass around the guide adjacent the hopper and taking a nut therefrom; and again opening as they pass around the guide adjacent the marking means to release the marked nut.

5. In a machine for marking nuts; marking means; a hopper for holding objects to be marked; a carrier comprising an endless chain formed of pivotally connected links; two pivoted grippers connected with each link; adjacent grippers pivoted on adjacent links co-acting to hold a nut; means yieldingly holding the grippers in normal position; a cylinder located adjacent the hopper, and of such diameter that as the

carrier passes around such cylinder the links are caused to pivot on each other and thus open the grippers so that they will take a nut from the hopper, the grippers closing on the nut as the carrier straightens out in passing away from such cylinder; a second small cylinder adjacent the marking means over which the carrier is caused to run and whereat the nuts are discharged by the grip-

pers opening as they pass over such second 10 small cylinder; and a third larger cylinder arranged above the first cylinder and between it and the second cylinder to direct the carrier past the marking means.

In testimony that I claim the foregoing 15 as my own, I affix my signature.

HAROLD VARBLE.