(No Model.)

F. NEUMER.

ATTACHMENT FOR BOTTLE WIRING MACHINES.

No. 332,547. Patented Dec. 15, 1885.

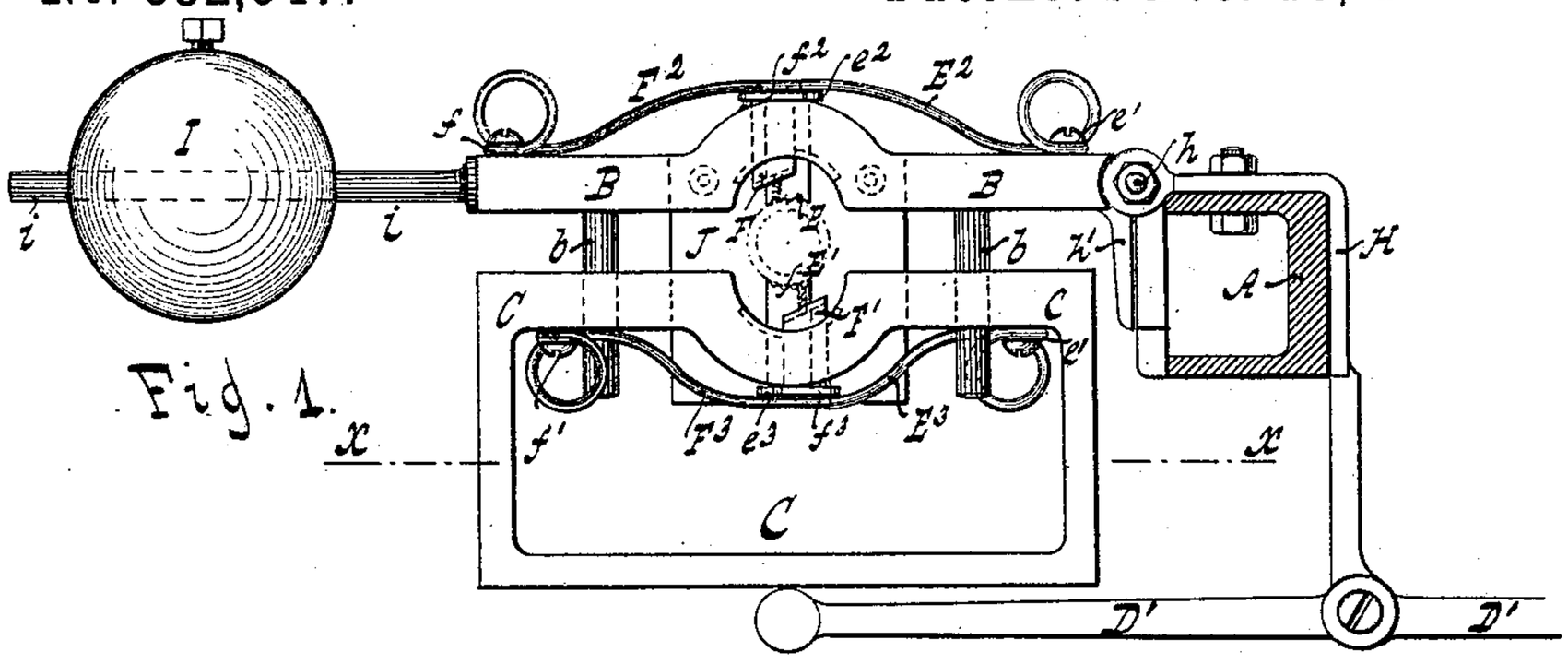


Fig. 1.

Fig. 2.

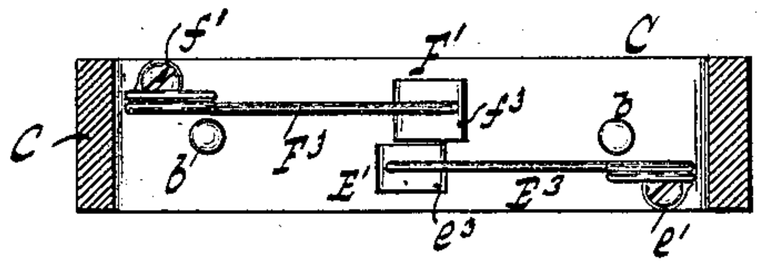


Fig. 3.

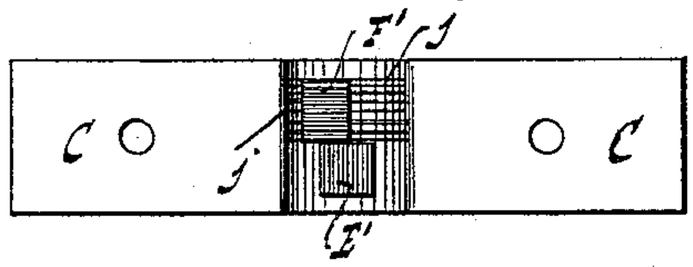


Fig. 4.

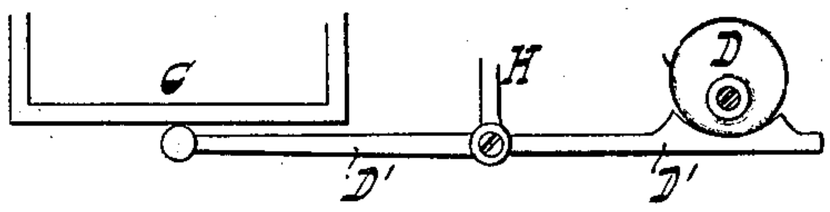


Fig. 5.

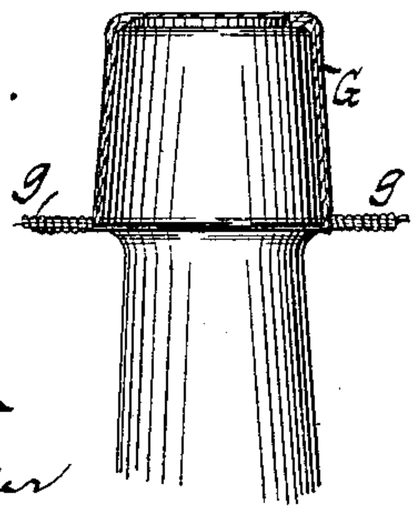
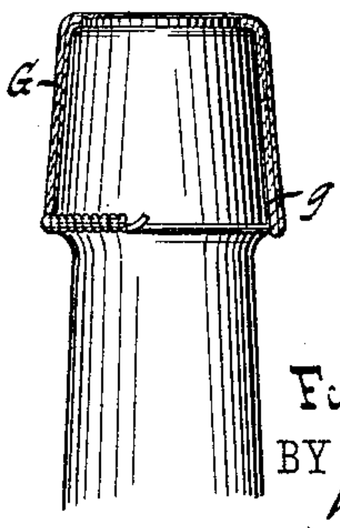


Fig. 6.



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UNITED STATES PATENT OFFICE.

FERDINAND NEUMER, OF NEW YORK, N. Y.

ATTACHMENT FOR BOTTLE-WIRING MACHINES.

SPECIFICATION forming part of Letters Patent No. 332,547, dated December 15, 1885.

Application filed October 15, 1885. Serial No. 180,006. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND NEUMER, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Attachments for Bottle-Wiring Machines, of which the following is a specification.

My invention relates to an attachment to machines for wiring corks to bottles; and it consists in a device adapted to bend down the free ends of the wire, which are usually left extending outward from the neck of the bottle after the wiring has been effected by the machines in use at the present time.

The novel mechanism employed to effect the above-described object consists, essentially, of a stationary jaw-frame and a movable jaw-frame, each of which is provided with a yielding punch. An additional yielding jaw may be added to each of the jaw-frames, the function of which jaws is to clamp the neck of the bottle, so as to hold the latter during the operation, all of which, together with other novel features of construction, is more fully pointed out in the following specification and claims, and illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of the machine. Fig. 2 is a horizontal section in the plane *x x*, Fig. 1, of the movable jaw-frame. Fig. 3 is a face view thereof. Fig. 4 is a side elevation, on a smaller scale than the preceding figures, of the mechanism for actuating the device. Fig. 5 shows an elevation of the bottle after it is properly wired by ordinary wiring-machines. Fig. 6 is a similar view of the bottle after the extending free ends of the wire are bent down upon the neck of the bottle.

Similar letters indicate corresponding parts.

In the drawings, the letter A, Fig. 1, designates a suitable frame to which the device is attached. B is a stationary jaw-frame, and C is the movable jaw-frame, which is guided in its rectilinear motion by guide-posts *b b*, extending from the jaw-frame B. A reciprocating motion is imparted to this jaw-frame C by means of a rotary cam or eccentric, D, Fig. 4, which engages a lever, D′, one arm of which is in connection with the movable jaw C. To hold the bottle in position during the operation of bending over the wires, a set of jaws, E E′, are mounted in the jaw-frames B C, and the said jaws are subjected, respectively, to the action of springs E^2 E^3, secured at one end to the frames at *e e′*, and their other ends extending forward, so as to bear against the ends of the jaws. In the example shown in the drawings the jaws are of a rectangular cross-section, and are provided with heads e^2 e^3, which arrest the inward motion of the said jaws. A set of benders, F F′, is also located in the jaw-frames B C, above the first-mentioned clamping-jaws, and these benders F F′ are adapted to engage with and bend over the extending wire ends *g g*, Fig. 5, of the cork-fastener G, which ends are thus left after the bottle is wired in any of the machines of well-known construction. The benders F F′ are similarly provided with heads f^2 f^3, and subjected to the action of springs F^2 F^3, which latter are secured to the respective frames at *f f′* and bear against the heads f^2 f^3, as before. The stationary jaw-frame B could be rigidly secured to the frame A; but in order to prevent breakage of the bottles the said frame is hinged, Fig. 1, at *h* to a yoke, H, which fits over the frame and is held in a horizontal position by a stop, *h′*. To retain the jaw in its proper position, a weight, I, is adjustably secured on an arm, *i*, extending from said jaw, the said weight being so regulated in position that before a sufficient force can be exerted on the bottle to cause breakage the jaw-frame will yield, while with the ordinary working-pressure the jaw remains perfectly stationary. Each of the jaw-frames B C is provided with a recess to conform to the neck of the bottle, and a plate, J, is secured to the back of the stationary frame B, against which the neck of the bottle, when introduced, abuts. The clamping-jaws are located centrally with regard to recesses in the jaws, while the punches are situated somewhat off on the opposite sides of the center line, and their faces are oblique, in order to effect the proper bending of the wire.

In ordinary wiring-machines the process of wiring the bottle is completed as far as shown in Fig. 5—that is to say, the free twisted ends of the wire are left extending out as shown in Fig. 5—and the function of my device is to complete the operation by bending down said ends, which was formerly done by hand. In

the operation of my device the bottle is introduced between the jaw-frames B C until its mouth strikes the plate J. Now, as the movable jaw-frame C moves upward the jaws E E′ clamp the neck of the bottle, but yield as the jaw-frame advances toward the stationary jaw B, so as to prevent breakage, while at the same time the bottle is firmly held, since the said jaws are under the pressure of the springs E^2 E^3. As the movable jaw-frame C continues its motion, the benders F F′ engage the wire ends *g g* and force the same against the neck of the bottle, whereby the operation is completed.

It will be observed that since all the operating parts of my device are under spring-pressure or properly weighted the bottles are not liable to be fractured during the operation, while at the same time the bending of the wire ends can be effected quicker than by hand, especially if the device is attached directly to the frame of a wiring-machine of the usual construction, and the movable jaw is operated by one of the moving parts of such a machine, so that the operation of wiring the bottle is made continuous.

In order that the wire may be bent over so as to lie in a horizontal plane, Fig. 6, the grooves *j* are formed in the jaws, which grooves extend outward from the slots wherein the benders lie and form continuous grooves with the grooves in the benders, Fig. 3.

What I claim as new, and desire to secure by Letters Patent, is—

1. The yielding benders F F′, in combination with the jaw-frames B and C and guide-posts *b b*, substantially as shown and described.

2. The yielding benders F F′ and the yielding clamping-jaws E E′, in combination with the jaw-frames B and C and guide-posts *b b*, substantially as shown and described.

3. The combination, with the stationary jaw-frame B and the movable jaw-frame C, of the yielding benders F F′, aligned in the said jaw-frames, and guide-posts *b b*, substantially as shown and described.

4. The combination of the weighted hinged jaw-frame B, the reciprocating jaw-frame C, the spring-pressed benders F F′, the spring-pressed jaws E E′, aligned in the said jaw-frames, and the guide-posts *b b*, substantially as shown and described.

5. The combination, with the weighted hinged jaw-frame B and the reciprocating jaw-frame C, of the spring-pressed benders F F′ and guide-posts *b b*, substantially as shown and described.

6. The combination, with the weighted hinged jaw-frame B and the jaw-frame C, guided by posts mounted on the jaw-frame B, of the yielding benders F F′, the yielding jaws E E′, operating in advance of the punches to clamp the bottle, and means, such as described, for reciprocating the jaw-frame C, substantially as shown and described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

FERDINAND NEUMER. [L. S.]

Witnesses:
W. HAUFF,
E. F. KASTENHUBER.