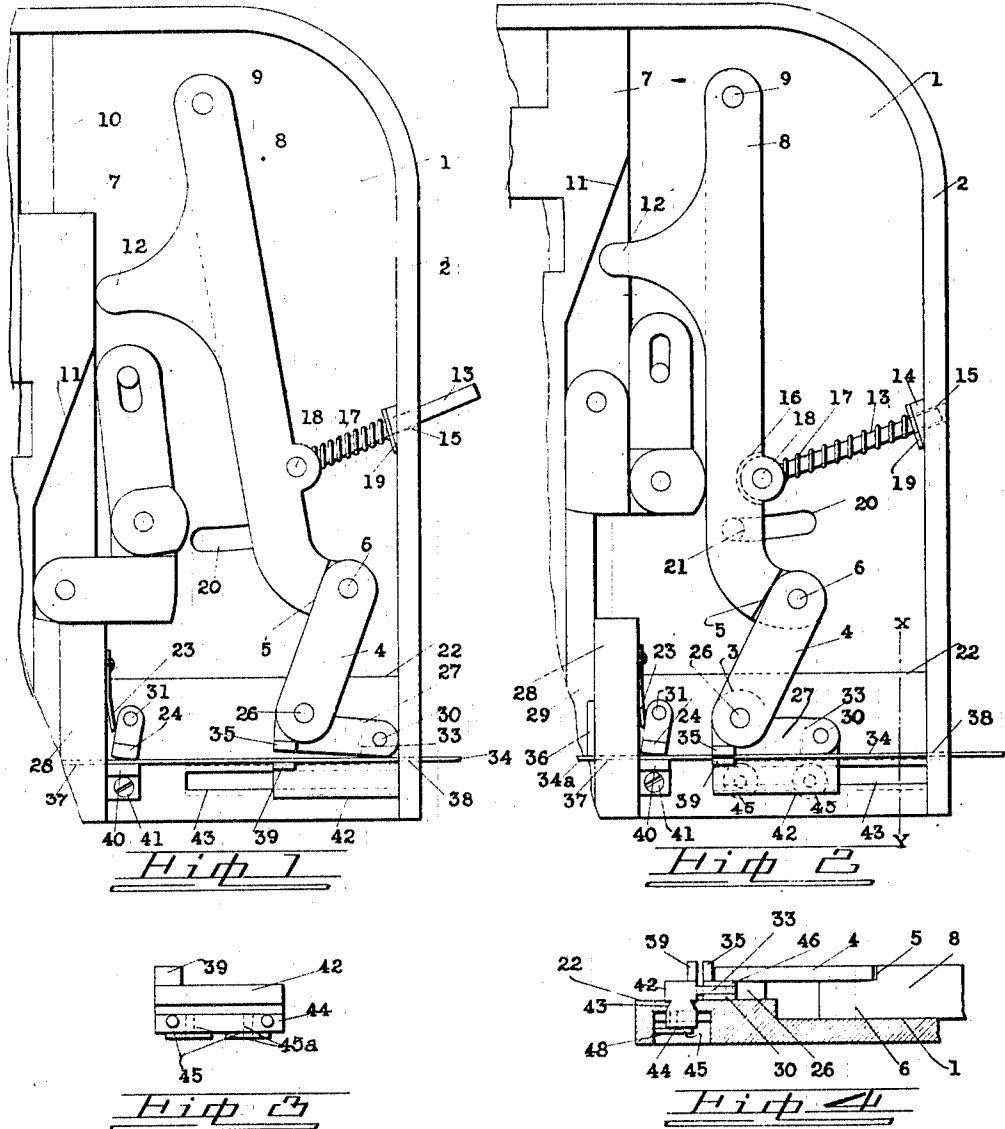


P. BAMMER.
WIRE GRIPPER.
APPLICATION FILED JUNE 20, 1911.

1,059,338.

Patented Apr. 22, 1913



Witnesses;
A. J. [Signature]
J. P. Hewitt

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UNITED STATES PATENT OFFICE.

PIUS BAMMER, OF ASHLAND, OREGON.

WIRE-GRIPPER.

1,059,338.

Specification of Letters Patent.

Patented Apr. 22, 1913.

Application filed June 20, 1911. Serial No. 634,387.

To all whom it may concern:

Be it known that I, PIUS BAMMER, a citizen of Germany, residing at Ashland, in the county of Jackson and State of Oregon, have invented certain new and useful Improvements in Wire-Grippers, of which the following is a specification.

This invention relates to improvements in wire grippers, and has for its object to provide a gripping lever for intermittently gripping and drawing forward a wire.

A further object is to provide a wire feeding attachment for shoe button fastening machines and for similar devices, which is simple in construction and effective for the purpose intended.

The device is especially adapted for use on machines of the character embraced in my application No. 611,866, for button attaching machines, filed March 2, 1911.

I accomplish these objects by the mechanism illustrated in the accompanying drawing, in which—

Figure 1 is a plan view showing the lever in outward position, with the jaws open ready to grip the wire. Fig. 2 is the same in returned position, gripping the wire. Fig. 3 is a bottom view of the gripper. Fig. 4 is a rear end view of the gripper on the line *x-y* of Fig. 2.

Similar reference characters designate similar parts in each view.

In the drawing, 1 is the floor of the casing in which is mounted the operative mechanism of a shoe button fastening device.

2 is the side or edge member of the casing.

In the upper portion of the casing at 9 is pivotally mounted the cam lever 8, having at its side the cam projection 12, against which the cam surface 11 of the plunger 7 operates as it reciprocates in the groove 10 of the casing floor. The downward movement of the plunger against the projection 12 forces the lever 8 outwardly against the spring 17, carried on the rod 13, which is mounted on the pivot 18 in the recess 16 of the lever. The outer end of the spring bears against the plate 19 resting on the support 14 against the rim 2, through which the rod passes by means of aperture 15. In the floor 1 is provided a groove 20 to receive the guide pin 21 on the lower side of the lever. The lower end of the lever is curved outwardly and reduced so as to form the angularly disposed shoulder 5. To the said reduced portion is secured the link 4,

by means of the pivot 6, and to the lower end of the link, by means of pin 26, is pivotally secured the upper jaw 27 of the gripper, in the slot 3 of said link.

In the floor of the casing, at the lower portion, is formed a transverse slot 43, having an enlarged rear portion 48, in which reciprocates the lower jaw 42 of the gripper. At the farther side of the jaw 42, is formed an upper and lower recess adapted to receive the correspondingly formed edges of the elevated portion 22 of the casing, forming the track in which the gripper reciprocates. The enlarged rear portion 44 affords a support for the antifriction rollers 45 which are supported on the bearing pins 45^a and which prevent the gripper from binding in its slot.

The upper jaw is provided at the rear end with a slot 33 in which is pivotally secured the lower jaw by means of pivot pin 30. At the lower front corner of the jaw 27 is a forwardly projecting lug 35, which is opposed by and contacts with a similarly formed lug 39 on the lower jaw.

Upon the frame work 28 of the casing, against which the plunger 7 reciprocates, is secured on the side adjacent the gripping jaws, a spring 23, adapted to bear against the eccentric lock 24, which is mounted on the pin 31 in the transverse portion 22. Opposed to said lock is a lug 40 secured by the screw 41, against which the wire is held.

In operation, the cam surface 11, of the descending plunger 7, contacts with the cam projection 12 forcing the lever 8 outwardly against the spring 17. In this movement the shoulder 5 contacts with the link 4 carrying it backwardly; but as the link is free to move on the pins 6 and 26 there will be a slight upward movement, before it strikes the said shoulder. This upward movement opens the jaws, separating the lugs 35 and 39 which, as shown in Fig. 2, are closed upon the wire 34. The jaws after being opened will be forced outwardly, until the return of the plunger releases the lever 8, when the spring 17 will force the lever forward again to its original position. With the forward movement of the lever, the link forces the jaw 27 downwardly, when the lugs 35 and 39 engage the wire 34 carrying it forward through the aperture 38 of the casing 2 and 37 of the frame piece 28, in position for the section 34^a to be severed by the knife 36, on the terminal member 29 of the

plunger. During such forward movement, the wire moves against the short side of the eccentric lock and is but slightly resisted by it, though the lock is held in contact with the wire by the spring 23, so that upon the return movement of the lever, or if from any cause, the wire is drawn backwardly, the lock will at once engage the wire and arrest such movement. It will thus be seen that the machine has perfect control of the wire so as to always deliver the amount required and to prevent a return movement.

Having thus described my invention so that others skilled in the art to which it pertains may make and use the same, what I claim as new and desire to secure by Letters Patent, is—

1. A wire gripper comprising a base having a transverse groove at its lower end, a lever pivoted on said base, gripping jaws pivoted together at their outer ends and reciprocating in said groove, a link connecting the inner end of one jaw to said lever, and means for operating the lever.

2. A wire gripper comprising a base having a transverse groove in its lower end, a lever pivoted to the upper end of the base with the lower end inclining to the side thereof, gripping jaws pivoted together at their outer ends and reciprocating in said groove, a link connecting the inner end of the upper jaw to the outwardly inclined end of said lever, and means for operating said lever.

3. In a wire gripping device, a casing having a transverse track at its lower side, gripping jaws mounted to reciprocate in said track, a lever pivoted to vibrate in the casing, a link connecting the lever with the gripping jaws, and actuating means within the casing for reciprocating said lever, whereby the jaws will be opened during their outward movement and closed during their return movement.

4. In a wire gripping device, a casing having a transverse track at its lower side, gripping jaws mounted to reciprocate in said track, a lever pivoted to vibrate in the

casing, a link connecting the lever with the gripping jaws, and means for preventing said jaws from binding in their track.

5. In a wire gripping device, a casing having a transverse track at its lower side, gripping jaws mounted to reciprocate in said track, a lever pivoted to vibrate in the casing, a link connecting the lever with the gripping jaws, and oppositely disposed lugs on said jaws for engaging the wire.

6. In a wire gripping device, a casing having a transverse track at its lower side, gripping jaws mounted to reciprocate in said track, a lever pivoted to vibrate in the casing, a link connecting the lever with the gripping jaws, oppositely disposed lugs on said jaws for engaging the wire, and means for preventing return movement of the wire.

7. In a machine of the character described, a casing, a plunger mounted to reciprocate therein, a lever having a cam projection bearing against said plunger, mounted to vibrate in the casing, a wire gripper mounted to reciprocate transversely in the casing, a link pivotally connecting the gripper with said lever, oppositely disposed lugs on the gripper for engaging the wire, means for preventing a return movement of the wire, and means for holding the cam lever in contact with said plunger.

8. In a machine of the character described, a casing, a lever mounted to vibrate therein, a gripper comprising upper and lower jaws adapted for engaging the wire, pivotally connected at their outer ends, a link pivotally connecting the inner end of the upper jaw with said lever, means for preventing the gripper from binding in its track, means for preventing return movement of the wire, and means for reciprocating the lever for operating the gripper.

In testimony whereof I affix my signature in presence of two witnesses.

PIUS BAMMER.

Witnesses:

L. G. VAN BELLEN,
M. E. BRIGGS.