

(No Model.)

S. E. BURKE.  
BUTTON REMOVER.

No. 601,943.

Patented Apr. 5, 1898.

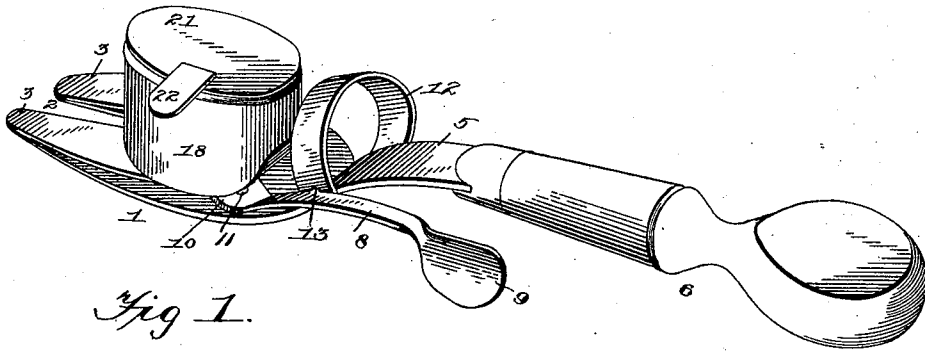


Fig. 1.

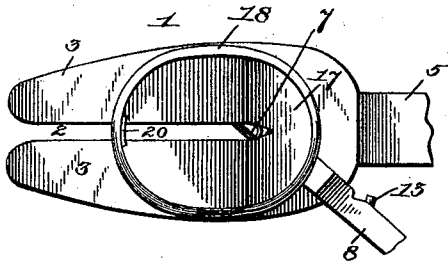


Fig. 2.

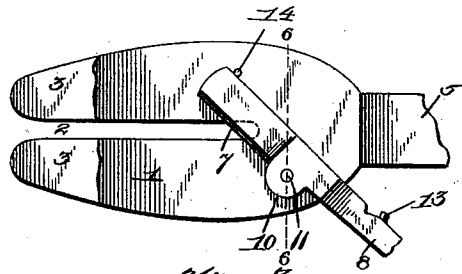


Fig. 6.

Fig. 3.

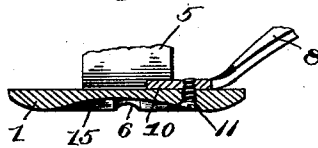
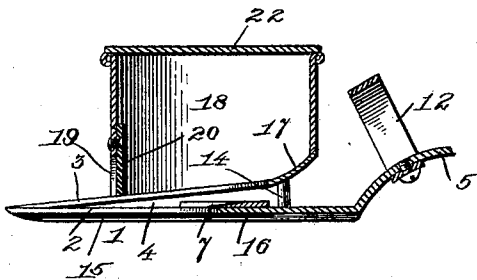
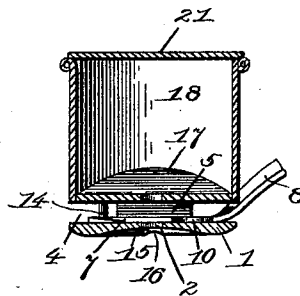


Fig. 4.

Fig. 5.



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# UNITED STATES PATENT OFFICE.

STEPHEN E. BURKE, OF EDON, OHIO.

## BUTTON-REMOVER.

SPECIFICATION forming part of Letters Patent No. 601,943, dated April 5, 1898.

Application filed October 14, 1896. Serial No. 608,864. (No model.)

*To all whom it may concern:*

Be it known that I, STEPHEN E. BURKE, a citizen of the United States, residing at Edon, in the county of Williams and State of Ohio, have invented a new and useful Button-Remover, of which the following is a specification.

This invention relates to button-removers, and is designed to facilitate the severing of the threads by which buttons are attached to shoes, &c.

The object of the present invention is to provide a simple and efficient device which may be operated with great rapidity and in which provision is made for raising the buttons or drawing the same away from the shoe preparatory to the severing of the threads, at the same time protecting the cutter from injury and also avoiding injury to the shoe.

A further object is to provide, in connection with the button-remover, a button-receptacle which receives the buttons as severed and forms a part of the device.

Other objects and advantages will be pointed out in the course of the ensuing description.

The invention consists in an improved button-remover embodying certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and incorporated in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a button-remover constructed in accordance with the present invention. Fig. 2 is a plan view of the same with the lid of the button-receptacle removed. Fig. 3 is a detail broken plan view with the button-receptacle removed. Fig. 4 is a longitudinal section through the complete article. Fig. 5 is a cross-section taken at the point where the threads are severed. Fig. 6 is a detail section taken on the line 6 6 of Fig. 3.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

The improved button-remover is intended for use by retailers of shoes, boots, &c., who frequently have to remove the ordinary buttons placed on the shoes at the factory in order to reset the same or apply others with patent fasteners. Buttons are ordinarily removed with the aid of a penknife, which is

liable to become dulled by contact with the eyes of the buttons and also to injure the leather.

Referring now to the drawings, 1 designates the head of the device, which is preferably of oblong form and substantially oval. This head may be made quite thin and composed of sheet metal and is provided with a longitudinal entrance-slot 2, opening out at the front end of the head and being flared at such point to facilitate the entrance of the eyes or shanks of the buttons.

3 designates a pair of spaced guards or risers rigidly connected to the head 1 upon opposite sides of the slot 2. These guards or risers slant upward toward the rear of the head 1 and have inclined upper surfaces, forming ways upon which the heads of the buttons slide as they move toward the inner end of the entrance-slot 2.

The guards 3 are secured at their advance ends to the front portion of the head on each side of the entrance-slot, and at their rear ends they extend over the head, so as to leave an intervening space, as indicated at 4, to provide for the movement of the cutter and to form overhanging guards for preventing objects from coming in contact with said cutter. The head 1 has a rearwardly-extending shank 5, to which a suitable handle 6 is attached.

The cutter (indicated at 7) is adapted to move across the inner end of the slot 2 and is provided with an operating-handle 8, which extends back obliquely to the shank 5 and is provided at its rear end with a thumb-piece 9. At the junction of the handle 8 with the cutter 7 is an integral offset 10, which receives a pivot 11, forming the fulcrum of the cutter, said pivot being threaded and passed through the head 1 from the under side and into the offset 10, which is formed with an internally-threaded opening to receive said pivot, the latter being thus removable through the head 1 when it is desired to detach the cutter.

The cutter is operated by pressing the handle 8 toward the shank 5, and the said cutter is retracted by means of a C-shaped leaf-spring 12, attached at one end to the shank 5 and curving thence over said shank and provided at its free end with an opening which engages a stud 13 on the handle 8.

The return movement of the cutter is limited by means of a stop-pin 14 on the upper side of the head 1. The shank 5 is given an upward deflection from the head 1, and the handle 8 of the cutter 7 is also deflected upward in rear of the pivot 11. The object of this is to enable the spring 12 to perform a twofold function, said spring not only serving to force the handle 8 away from the shank 5 for retracting the cutter, but also serving to lift the handle 8 and by exerting an upward pressure on said handle in rear of the pivot 11 to force the cutter 7 with the necessary pressure against the head 1 to preserve said cutter in effective operative contact with that edge of the slot 2 forming the stationary cutting edge. Upon its under side the head is concaved, as indicated at 15, to prevent the leather of the shoe from being drawn into the slot 2 and subjected to the action of the cutter. The under side of the head 1 is also provided with a longitudinal groove 16, extending from the rear end of the slot 2 to the rear end of the head 1, for adapting said head to slide more readily over the stubs of the threads left by cutting off the buttons.

The guards or risers 3 are united at their rear ends and deflected upward to form an inclined wall 17, and this inclined wall, together with the rear portions of the guards or risers, forms the bottom of a button-receptacle 18, which is superposed thereon. This button-receptacle may be of any desired shape or size and is provided at the front with a segmental opening 19, extending over the entrance-slot 2 and of sufficient size to allow the buttons to pass into the receptacle. Just inside of the opening 19 is a flap or gate 20, which may be formed of flexible material, such as leather, or of metal, said flap or gate being so arranged in the receptacle and connected thereto that it will yield inward to allow the ingress of the buttons and afterward close said opening to prevent the egress of said buttons. The buttons entering the receptacle crowd each other out of the way as they are severed from the shoe. The open top of the receptacle is closed by means of a hinged cover 21, provided at its hinged edge with a projecting lip 22, which facilitates the opening of the cover, and having a coiled spring adjacent to its pivotal connection with the receptacle, which acts to automatically close the cover when released.

In operation the head is advanced along the line of buttons, causing said buttons to ride upon the inclined guards or ways 3 and to be elevated thereby. The buttons pass into the receptacle, and the securing-threads of the buttons upon reaching the inner end of the slot will be acted upon by the cutter, the eyes of the buttons being raised sufficiently to clear the cutter. In this manner all the buttons may be quickly removed from the shoe.

While the device is particularly applicable to the purpose above described, the principles may be applied to the manufacture of such

articles as pruning-shears, &c., especially with reference to the form and arrangement of the cutter and the spring with its twofold function.

It will be understood that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

1. A button-removing device, comprising a head having an entrance-slot, ways at each side of said slot and inclined away from the entrance end thereof, and a cutter pivoted on the head and movable across the slot to cooperate with one of the edges of said slot to sever the button, substantially as described.

2. A button-removing device, consisting of a head provided with an entrance-slot, ways arranged at each side of said slot and inclined away from the entrance end thereof and having their rear ends arranged to form guards overhanging the cutter, and a cutter pivoted on the head and movable across the slot beneath said guards to cooperate with one of the side edges of the slot to sever the button, substantially as described.

3. A button-remover, consisting of a head having a concaved under surface and provided with an entrance-slot, guards arranged at each side of said slot and inclined away from the entrance end thereof, and a cutter operating across the rear end of said slot and between the head and the rear ends of the guards, substantially as described.

4. The herein-described device comprising a head constituting one of the cutters, a handle attached to said head, a cutter pivoted on and cooperating with said head and provided with a handle, and a spring interposed between and connected at its opposite ends to said handles, said spring being arranged to retract the pivoted cutter and at the same time to press said cutter against the head of the device, substantially as described.

5. The herein-described device, comprising a head constituting also a cutter and provided with a handle, a vibratory cutter having a handle which is deflected to one side of the plane of the cutters in rear of their pivotal connection, and a C-shaped spring having one end attached to one of the handles and its opposite end connected to the other handle, said spring operating to retract the pivoted cutter and to hold said cutter in working contact with the head, substantially as described.

6. A button-removing device comprising a head having an entrance-slot, ways at each side of said slot and inclined away from the entrance end thereof, a cutter pivoted on the head and movable across the slot to cooperate with one of the side edges of the slot to sever the button, and a button-receptacle superposed above the cutter to receive the buttons when severed, substantially as described.

7. A button-removing device comprising a head having an entrance-slot, inclined ways sloping upward rearwardly and united at their rear ends, a cutter operating across the inner  
5 end of said slot, and a button-receptacle mounted on said ways at their rear ends, substantially as described.

8. A button-removing device, comprising a head having an entrance-slot, inclined ways  
10 at each side of said slot extending over the cutter and having their rear ends united and turned upward to form an inclined wall, a cutter operating across the inner end of said slot, and a button-receptacle mounted on said  
15 ways, the rear upturned portion of which forms a portion of the bottom of said receptacle, substantially as described.

9. A button-removing device, comprising a head having an entrance-slot, a cutter oper-  
20 ating across the inner end of said slot, upwardly and rearwardly inclined ways at each side of said slot and extending over the cutter, a button-receptacle mounted on said ways and having an entrance-opening for the but-

tons, and a flap or gate normally closing said 25 opening but adapted to yield to allow the ingress of the buttons and to prevent the egress thereof, substantially as described.

10. A button-removing device, comprising a head having an entrance-slot, a cutter oper- 30 ating across said slot, upwardly and rearwardly inclined ways at each side of said slot extending over the cutter, a button-receptacle having an entrance-opening for the buttons, a movable gate operating automatically 35 to allow the ingress and prevent the egress of the buttons, a spring-actuated lid or cover for said receptacle and a projecting lip on said cover, substantially as and for the purpose described. 40

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

STEPHEN E. BURKE.

Witnesses:

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