(No Model.)

J. ZIMMERMAN.

KEY ENGAGING DEVICE FOR CANS.

No. 568,222. Patented Sept. 22, 1896.

Fig. 1.

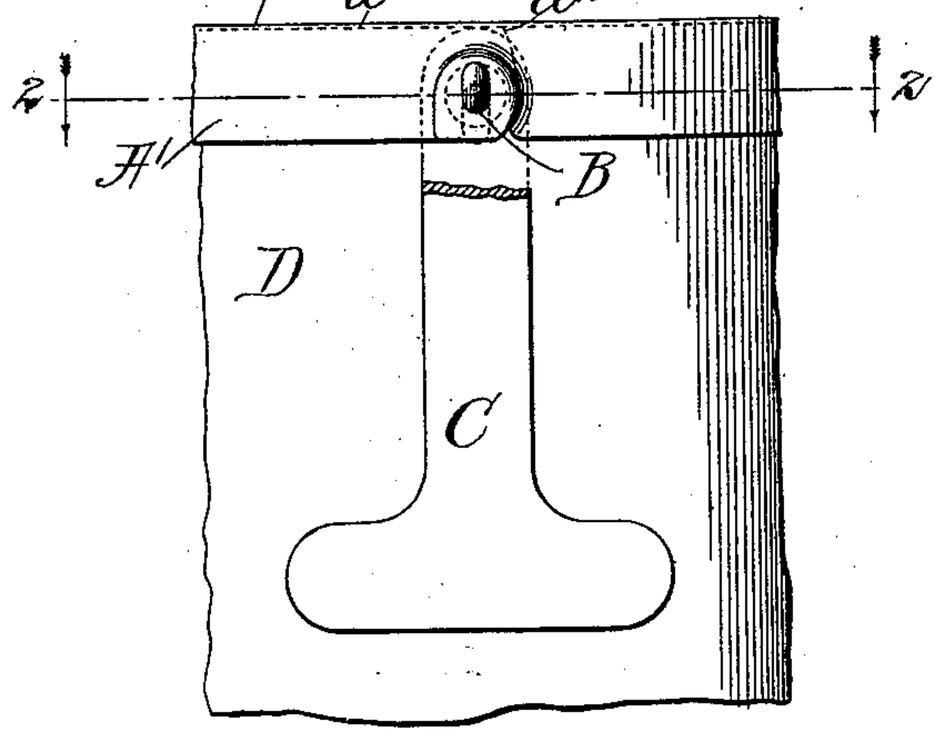


Fig. 2.

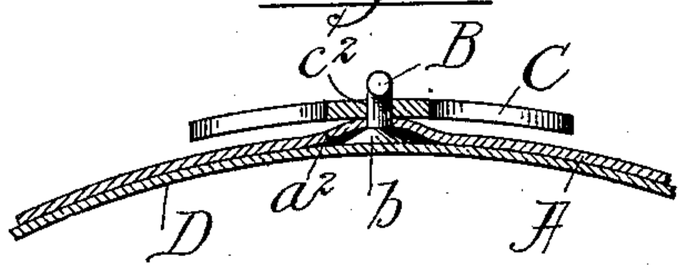


Fig. 3.

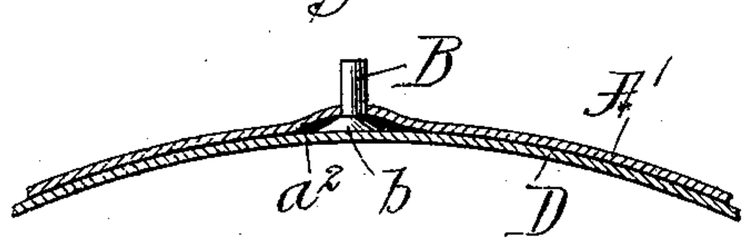


Fig. 4.

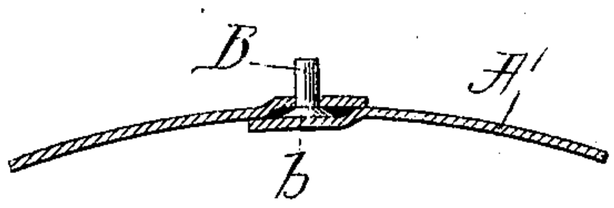
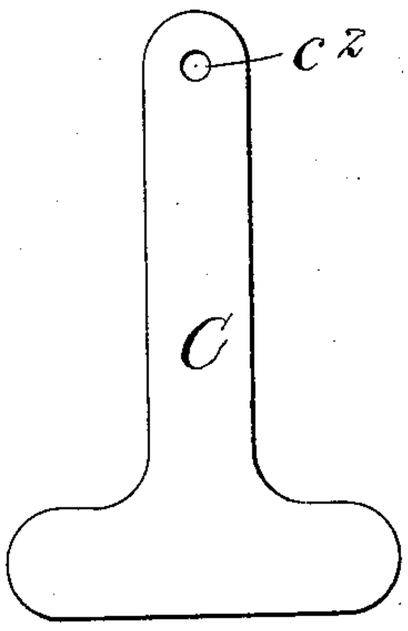


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN ZIMMERMAN, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE NATIONAL KEY-OPENING CAN COMPANY, OF SAME PLACE.

KEY-ENGAGING DEVICE FOR CANS.

SPECIFICATION forming part of Letters Patent No. 568,222, dated September 22, 1896.

Application filed January 2, 1894. Renewed August 5, 1896. Serial No. 601,801. (No model.)

To all whom it may concern:

Be it known that I, JOHN ZIMMERMAN, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Key-Engaging Devices for Key-Opening Cans; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to key-opening sheet-metal cans of the class in which a detachable part (usually in the form of a strip) is to be removed from the can-body or can-head by means of a key for the purpose of opening the can.

The primary object of the invention is to provide the detachable part at or near the end thereof which is to be first started in the operation of removing it with a device for giving positive engagement of a detached key or instrument with such detachable part or strip.

The invention is to be distinguished from those constructions in which the detachable part of the can is provided with a free tongue of sheet metal to be thrust into a slit of the key and also from those in which the key is permanently fastened to the detachable part.

In the accompanying drawings, which illustrate certain forms of my invention, Figure 1 illustrates in side elevation a part of a can in which the detachable part is the flange of the cover or head, and in which the key-engaging device is therefore applied to said flange. Fig. 2 is a section in the line 10 10 of Fig. 1. Fig. 3 is a modification of the construction of the key-engaging device shown in Figs. 1 and 2. Fig. 4 shows the same form of key-engaging device that is seen in Fig. 3, but applied to the end of a circumferential detachable strip in a lap-seamed can-body; and Fig. 5 illustrates a suitable key for use in connection with this last-mentioned form of the key-engaging device.

It is to be understood that this patent is in no way restricted to the particular form or situation of the detachable part of the can, it being well known that the detachable part is sometimes situated in the can-head and is or may be either annular, spiral, or of other form; that it is sometimes a circumferential strip in the body of the can; that it is sometimes the flange of the can head or cover, and that it is sometimes a separate strip, securing the head to the can-body.

In Figs. 1, 2, and 3 the key-engaging device B is shown as being applied to the detachable external flange A′ of a can head or cover A, the body of the can being represented at D. In this case the can-head is provided with a weakened line a at or near the angle of the flange, and also with a transverse severing-line a^2. Adjacent to this severing-line the flange is perforated and is shown as being slightly recessed on its inner surface. The key-engaging device, in the form of a stud B, having an inner head b, is inserted through the flange, the head occupying the recess and being confined between the flange and can-body, as clearly seen in Figs. 2 and 3. The stud B projects outwardly from the cover-flange far enough to be engaged by a key C, provided with a hole c^2, which is to admit such projecting portion of the stud. In Figs. 1 and 2 the stud is shown as being upturned at its outer end, such laterally-bent portion of the stud standing at a suitable distance from the outer surface of the cover-flange to admit the thickness of the key beneath it. This stud, if bent as shown in Figs. 1 and 2, may have its bent portion directed otherwise than toward the can-head, and, if so, it will preferably project toward the severing-line a^2. The stud B may, however, be straight, as shown in Fig. 3, in which case it should closely fit the hole in the key in order that the latter will not be drawn off the stud in rotating the key and starting the detachable strip. In Fig. 4 a similar stud is shown projecting through a circumferential detachable strip A′ in a can-body, the head b of the stud being confined between the overlapping margins of the can-body at the soldered side seam thereof. The key C (shown in Fig. 5 as having a circular hole c^2 to fit the stud) is the most desirable form of key for the straight stud represented in Figs. 3 and 4.

The key may be temporarily applied to the engaging device in any suitable position for packing and sale and there held either alone

by the device itself or with the aid of the superposed label commonly applied to the exterior of the can.

It is to be observed that in the construction shown in Figs. 1, 2, 3, and 4 the stud may be held outward by the subjacent portion of the can-body, and that the shank or body of the stud B may therefore be of uniform diameter and may be slipped outwardly through the hole in the overlapping member before the joint is made. Solder is in this case unnecessary for the mere purpose of closing the orifice through which the stud passes, albeit the application of solder for securing the can-head to the body or the side seam will incidentally result, usually, in filling the said hole. In case the joint uniting the head to the body is to be "floated" the stud B of Figs. 1, 2, and 3 should be of black iron, in order that solder may not adhere to the projecting portion of the stud and thereby prevent the ready application of the key thereto after the completion of the can.

An obvious advantage of the invention as distinguished from those constructions in which the key is permanently secured to the detachable part is that the can may be fully completed, or even filled, before the key is applied, and then it is not essential that the key be actually applied to the engaging device before it is required for use, but only an advantage that it may be conveniently applied thereto, if desired.

I claim as my invention—

1. A sheet-metal can provided with a detachable overlapping part having a headed stud projecting outwardly through and beyond it, the head of the stud being confined between the overlapping and the underlapping members of the structure.

2. In combination with a can-body, a sheet-metal external, flanged head the flange of which is detachable, and a stud projecting outwardly through and beyond the flange of the cover and having its head confined between said cover-flange and the can-body.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

JOHN ZIMMERMAN.

Witnesses:
M. E. DAYTON,
TAYLOR E. BROWN.