Oct. 14, 1941. J. M. HOTHERSALL 2,258,610

CONTAINER

Filed Nov. 12, 1938

Fig 1

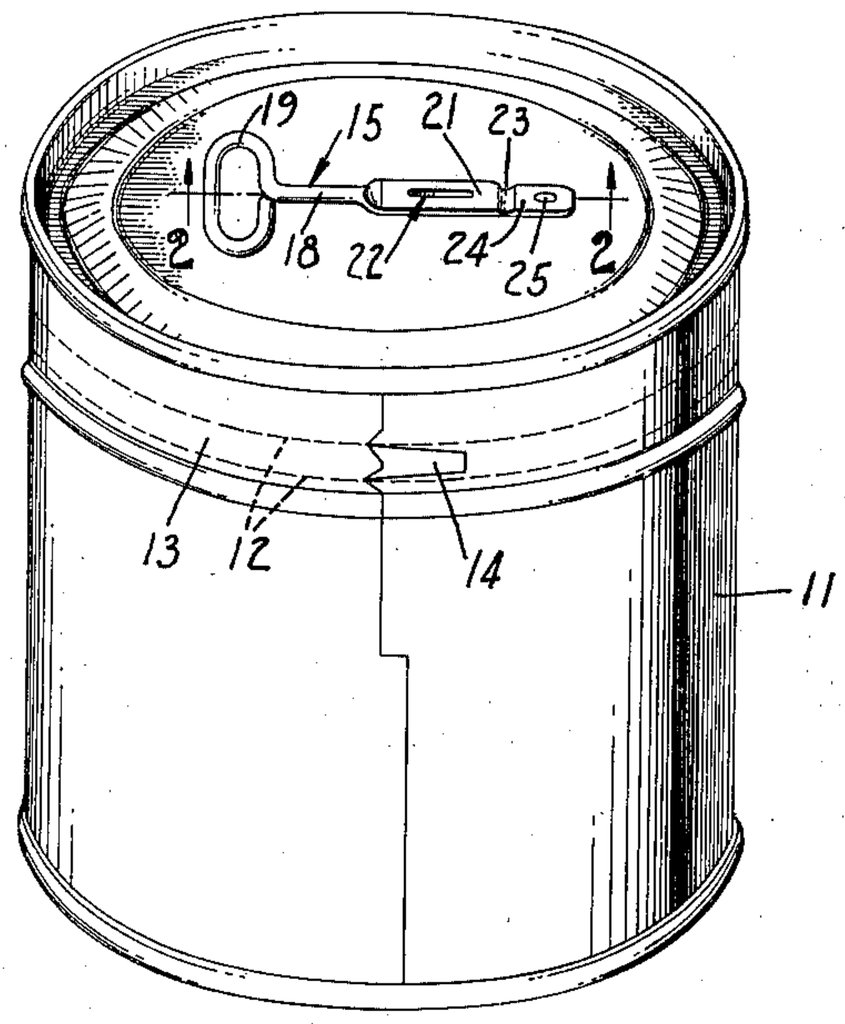


Fig 2

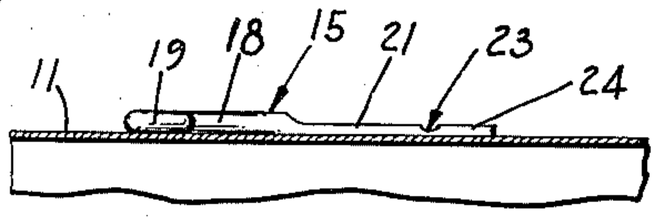


Fig 3

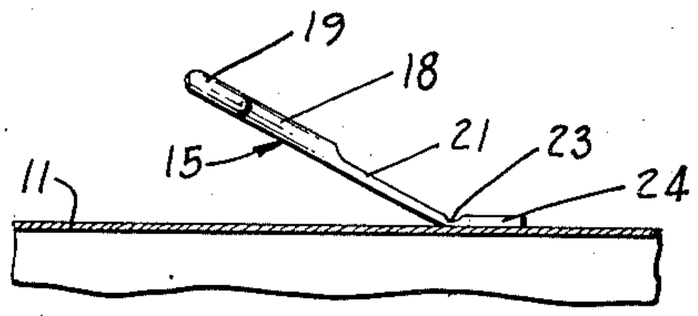
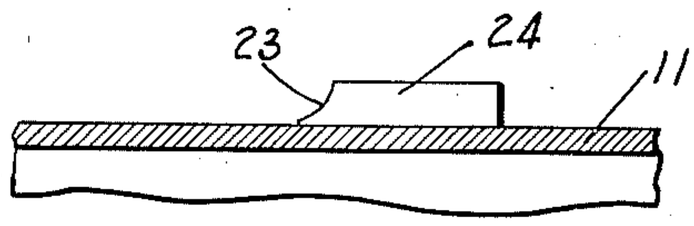


Fig 4



INVENTOR.
John M. Hothersall

BY Dean H. Thornbrugh
Charles H. Ernest

ATTORNEYS

Patented Oct. 14, 1941

2,258,610

UNITED STATES PATENT OFFICE

2,258,610

CONTAINER

John M. Hothersall, Brooklyn, N. Y., assignor to American Can Company, New York, N. Y., a corporation of New Jersey

Application November 12, 1938, Serial No. 240,162

3 Claims. (Cl. 220—52)

The present invention relates to containers or cans of the character which are opened by the removal of a tearing strip torn off by a break-off key temporarily attached to the can, the invention having particular reference to attaching the key to the can so that no rough edge will be left after the key is broken off. This is an improvement on the key disclosed in United States Patent 1,823,068, issued September 15, 1931, to C. Stollberg, and relating to a Method of spot welding keys to tearing strip cans.

In keys of the break-off character such as the one shown in the Stollberg patent it has been found that in breaking off the main portion of the key from that portion which remains on the can, a sharp burred or rough edge is left on this remaining portion adjacent the weakened area and owing to its construction is necessarily in a position where it is easily caught by the hand of the user and where it is capable of inflicting a serious cut on the hand. The present invention contemplates overcoming this difficulty by arranging the key so that the break will take place as close to the can as possible thereby keeping the broken edge of the portion of the key remaining on the can in an unexposed position where it is safely out of the way.

An object, therefore, of the invention is the provision of an attached break-off key for a tearing strip can, wherein the weakened key area at the region of severance from the can is located in such a manner that when the key is broken off the resulting rough edge of the portion of the key remaining on the can, will be disposed in the least exposed position which is substantially flush with the can wall thus providing safety against any accidental cutting of the hand of the user.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawing, discloses a preferred embodiment thereof.

Referring to the drawing:

Figure 1 is a perspective view of a tearing strip can having an attached opening key embodying the instant invention;

Fig. 2 is a sectional view taken substantially along the line 2—2 in Fig. 1; with parts broken away;

Fig. 3 is a view similar to Fig. 2 showing the key in a different position, as when breaking the key off; and

Fig. 4 is an enlarged sectional view of that portion of the key remaining on the can after the main portion of the key has been broken away.

As a preferred embodiment of the invention the drawing illustrates a sheet metal can 11 (Fig. 1) having encircling score lines 12 which set off between them a removable tearing strip 13 terminating in a tongue 14. Removal of the tearing strip opens the can. The tearing strip is adapted to be removed in the usual manner by a key 15 which is temporarily secured to the top of the can.

The key is of the break-off character and is preferably made of wire. This key is provided with a stem or shank 18 which at one end is bent into a loop or handle part 19. The opposite end of the shank is flattened as at 21 and this flattened section is provided with a slot 22 which is adapted to receive the tearing strip tongue 14. This is conventional key construction.

Adjacent the outer end of the slot the flattened section 21 of the key shank is provided on its upper exposed surface with a transverse groove 23 which provides a weakened area in the key and which sets off at the outer end of the flattened section a tail portion 24. This tail portion is secured to the can, preferably by a spot weld 25, thereby securely holding the key on the can. The exact manner of producing and locating such a weakened area in the key has certain important advantages as will now be pointed out.

By reference to Fig. 2 of the drawing it will be noticed that the back of the key is perfectly straight and when attached to the can it lies flat against the can wall. The flattened section 21 is located at the top side of the key and the weakening groove 23 is also at the top of the flattened section. This positions the straight key wall at the bottom of the groove directly in contact with the can wall.

To break off the key from the can for use in removal of the tearing strip it is merely necessary to lift the handle part 19 as shown in Fig. 3. The thickness of the key at the bottom of the weakening groove 23 being only a fractional part of the thickness of its main shank part, this thinned key part easily breaks at the groove being the axis of movement while the tail portion 24 remains secured to the can.

By referring now to Fig. 4 of the drawing it will be noticed that any rough edge produced at the bottom of the groove 23 by breaking off the main portion of the key from the tail portion 24 is at the can wall and is in close engagement therewith. Thus the rough edge is far below the top surface of the tail portion 24 and in fact is

covered or shielded by it. In this location it is safely out of the way and cannot cut or snag the fingers.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A break-off key adapted to be attached to a sheet metal tearing strip can, said key having a shank, a handle part at one end of said shank and a slotted depressed flat section at the other end disposed on the top of the key when the latter is on the can and with the back of the key straight, said key having a break-off groove disposed transversely of and on the upper surface of said depressed flat section and setting off a tail portion which is secured directly to the can wall, the described location of said groove disposing the thinnest part of the key at the bottom of the groove engaging the can wall, whereby any rough edge left on the attached tail portion when the key is broken away at the groove, is adjacent and in engagement with the can wall in unexposed position out of the way of accidental engagement by the hand.

2. A break-off key adapted to be attached by welding to a sheet metal tearing strip can, said key having a shank, a handle part at one end of said shank and a slotted depressed flat section at the other end disposed on the top of the key when the latter is welded on the can, the back of the key being straight and in close flush engagement with a wall of the can, said key having a groove disposed transversely of and on the upper surface of said depressed flat section and setting off a tail portion adjacent the outer end of said slot which is welded to the can wall, said groove facing upwardly to dispose the thinnest part of the key at the bottom of the groove in direct engagement with the can wall, whereby any rough edge left on the tail portion when the key is broken away at the groove, is adjacent and in engagement with the can wall in unexposed position out of the way of accidental engagement by the hand.

3. The combination of a sheet metal tearing strip can and an attached key for opening the same, comprising a flat wall can section, and a key having a shank with a handle part at one end and a flat slotted section at the other end terminating in a tail portion welded directly to the can wall, said key having a break-off groove formed in the side thereof which is opposite to the can wall and disposed transversely of said shank and intermediate said slotted section and said tail portion, whereby the key may be removed from the can by lifting at its handle part and by breaking across at said groove, whereby to leave any rough edge along its line of fracture in engagement with the can wall and out of exposed position likely to present a cutting hazard to the hands of the user.

JOHN M. HOTHERSALL.