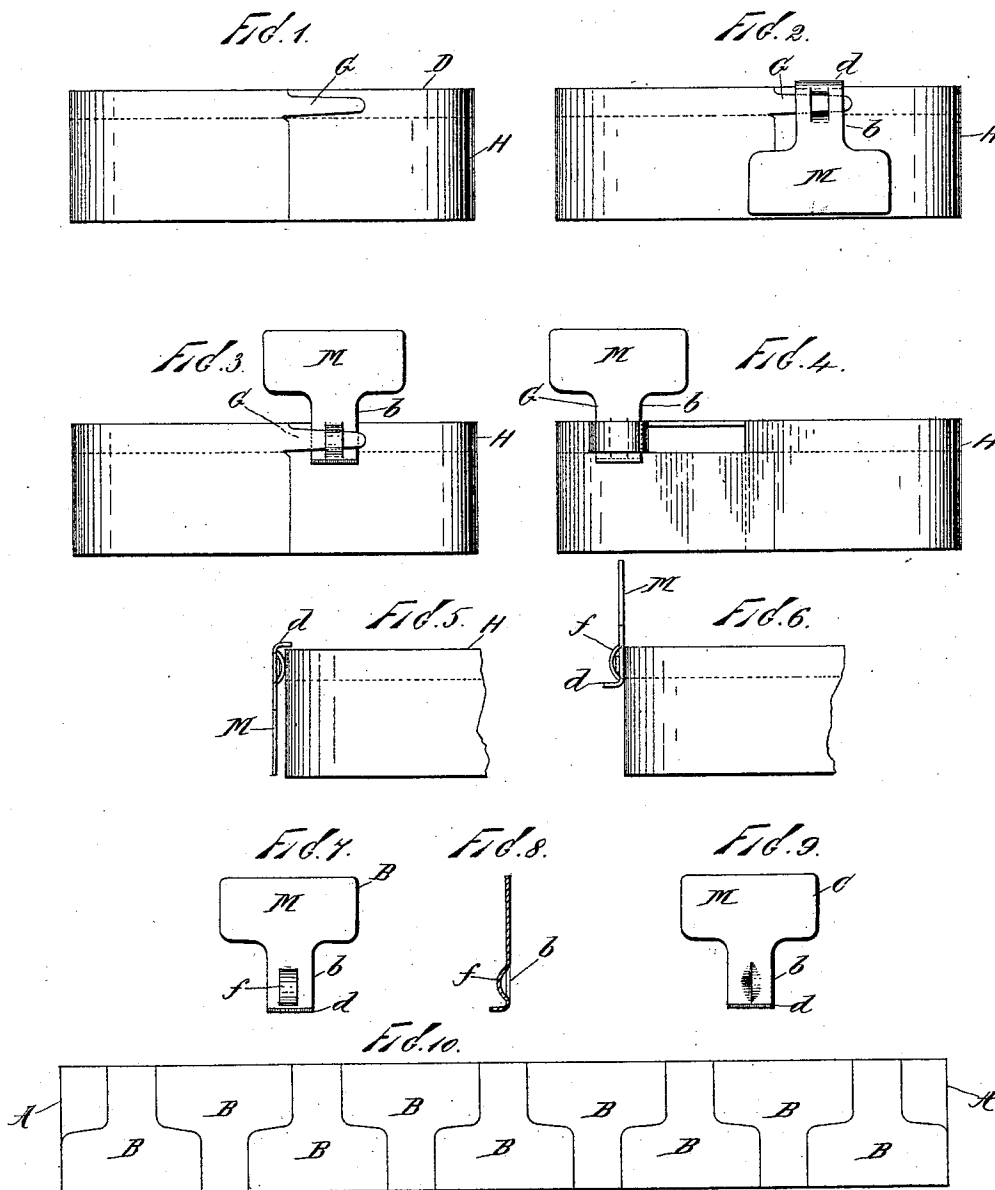


(No Model.)

A. KLEINFELDT.
KEY FOR OPENING METAL CANS.

No. 517,523.

Patented Apr. 3, 1894.



WITNESSES:

John Buckler,
R. Gibson

INVENTOR

Arthur Kleinfeldt,

BY

Spading & Strain
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ARTHUR KLEINFELDT, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE
EUREKA CAN OPENING COMPANY, OF NEW JERSEY.

KEY FOR OPENING METAL CANS.

SPECIFICATION forming part of Letters Patent No. 517,523, dated April 3, 1894.

Application filed March 8, 1893. Serial No. 465,204. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR KLEINFELDT, a citizen of the United States, residing in the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Keys for Opening Metal Cans or other Receptacles, of which the following is a specification.

My invention relates to means for opening metal cans or other receptacles and especially to such kind or class of metal receptacles as are designed to be hermetically sealed so as to effectually preserve their contents, and the particular object of my invention is to produce a device, tool or key by means of which such hermetically sealed can or receptacle can be easily opened, the key or other opening device of my invention being of such material and construction that it can be conveniently and securely attached to the metal receptacle ready to be employed at any time for the purpose of opening it.

In the accompanying drawings forming a part hereof, I have illustrated one kind of a metal receptacle and of a convenient shape, which can be readily opened after it has been effectually sealed, by means of the device embodying my invention; and in such drawings—

Figure 1. represents a metal receptacle or box hermetically sealed, constructed of a blank or strip of sheet metal with a projecting tongue cut thereon at one end, and which tongue when the ends of such blank are placed together in the usual manner and fastened by solder or other cement, will lap over the other abutting end as shown; and this tongue is designed to be grasped by the device of my invention by which a portion of the upper edge of the blank comprising the body or sides of the metal receptacle may be torn, cut or stripped, thereby opening the receptacle by cutting off that portion of the body or sides of the box or receptacle to which the cover was attached. There are at present in use keys or tools by which a portion of a metal receptacle may be cut away or stripped therefrom so as to open the receptacle in the manner indicated, but such keys or tools are bulky and expensive and cannot be conveniently attached or secured to the metal re-

ceptacle; and although they may be wrapped or tied to the metal receptacle so that they both may be sold or shipped together, yet they not infrequently become lost, and owing to their size and bulk they cannot be conveniently packed with the metal receptacle without making an awkward or cumbersome shaped article when packed. The device or key of my invention however can be securely attached preferably to the side of the metal container, as shown in the drawings, without materially affecting the exterior of the box or container, and when so attached cannot become accidentally detached or lost; the metal can or receptacle with my key attached can be conveniently packed and the key is at all times at hand ready to be applied so as to strip off a portion of the box or container whereby to obtain the contents.

Referring further to the drawings, Fig 2 illustrates a metal box or receptacle showing the key or tool of my invention fastened or attached thereto and its position at all times other than when it is desired to be used as a means for opening the box. Fig. 3. illustrates a box or container similar to the boxes or containers shown in Figs. 1. and 2. showing the device of my invention attached thereto, but in the position ready to be operated so as to strip off a portion of the side of the box. Fig. 4. shows the box partially stripped by the key after it has been turned a few times with the stripped portion wound or turned on the shank of the key. Fig. 5 is an end or side view of the box and key in the position shown in Fig. 2. Fig. 6. is an end or side view of the box and key in the position shown in Fig. 3. Fig. 7 is a plan view of one form of key embodying my invention removed from the box. Fig. 8. is a side or end view of the key shown in Fig. 7. Fig. 9. is a plan view of another form or modification of key embodying my invention; and Fig. 10 illustrates in plan a metal blank or strip out of which the keys embodying my invention are preferably cut or punched.

In the drawings the parts are represented as in full size for a metal box in which are intended to be packed sardines and A represents a sheet or strip of tin or other suitable metal of any desired length, width or thick-

ness, which is cut into, or out of which are cut or punched the keys shown in the drawings, and from which it will be seen that by this method of manufacture there is no waste material whatever, as the keys in configuration or outline having parallel ends and complementary sides so that they dove-tail together, the head of one key dove-tailing with the shank of the adjoining one from end to end of the sheet or strip as will be readily understood.

In Figs. 7, 8 and 9 B and C designate keys cut from the strip shown in Fig. 10 and the lower end of the shank *b* of the keys is bent over at right angles, forming thereon an elbow *d*, and which elbow or bent-over portion rests upon the upper edge of the body blank or one of the sides *H* of the box *D*, or on the cover which is secured thereupon, as shown in Figs. 2 and 5. The shank *b* of the key shown in Fig. 7 is cut or slit in two places and the portion between the slits punched in so as to form a curved portion or loop *f* in which loop the tongue *G* of the body or side blank *H* of the box is inserted, as shown in Fig. 2, or as otherwise expressed, over which tongue *G* the shank *b* of the key *B* is placed or sleeved by sliding the shank of the key over the tongue *G*, the tongue passing through the opening or loop *f* formed by the cuts or slits therein, as will be readily understood; and in the position of the key shown in Figs. 2 and 5 the head *M* of the key will hang down resting against the side of the box, but will not extend below it as the key is made of such a length as will not exceed the height of the box, appropriate keys being cut for each of the varying sizes of boxes or other receptacles, and as shown in those figures, the bent-over end or elbow *d* of the shank of the key rests upon the upper edge of the side or body blank or upon the superimposed cover, thereby securely holding the key in place, and since the key is not longer than the height of the box, and besides is held to the tongue *G*, it cannot be shifted or lost, but is always at hand ready to be used to open the box. When it is desired to open the box the key is removed or slid off from the tongue *G* and its position reversed as shown in Figs. 3, 4 and 6, Fig. 3 showing the position of the key applied to the tongue *G* with the head of the key uppermost and the shank resting against the side of the box with the bent-over end projecting outwardly, and although this is the preferred position of the key to open the box, it may nevertheless be opened by attaching the shank of the key to the tongue as shown in Fig. 3 with the bent-over end resting against the box, in either of which cases a greater rigidity is attained by reason of the bent-over portion or elbow, since when the key is turned, as shown in Figs. 4 and 6, a greater resistance to being turned back or bent is offered by the elbow of the key than is offered by the tongue of the box, and consequently the key obtains a greater leverage by reason of the elbow than

it otherwise would have, and more easily starts the stripping as shown in Fig. 4; so that therefore two advantages are attained by the use of the elbow, one when the key is in the position shown in Figs. 2 and 5, whereby the elbow or bent-over portion assists in preventing the key from shifting, and consequently prevents the tongue on the receptacle from being broken off and the key lost, and the other when the key is in the position shown in Figs. 3, 4 and 6 whereby greater rigidity is given to the shank of the key at the point where the greatest rigidity, leverage and resistance is required.

As will be readily understood, after the stripping has been started it can be very easily continued until the entire strip is severed and the cover completely removed, and it is of course to be understood that I do not limit my invention to the size of can, box, receptacle or other container, nor to the size or particular construction of opening device shown and hereinabove described, except that it is preferable that such devices or keys shall not be longer than the height of the box or receptacle for the reasons above stated; nor to the location or size of the tongue on such receptacles or the strip or portion intended to be cut or stripped therefrom; nor do I limit my invention to a key the shank of which is cut in two slits as shown in Fig. 7, since the same results may be attained by making but one slit or cut in the shank of the key as shown in Fig. 9, the opening or loop through which the tongue *G* is adapted to pass being made or left to be made by depressing one portion or side of the slit and raising the other portion if desired; nor do I limit myself to the particular shape of the key or the construction of the head and shank shown in the drawings, nor to the modification shown therein and hereinbefore described since, as before stated, the device embodying my invention may be of any desired size, shape and thickness, preferably made of sheet metal, as tin, of which metal it is usual to manufacture receptacles which are desired to be hermetically sealed. It is further to be understood that the loop on the key into which the tongue on the receptacle is adapted to be inserted may consist of a separate piece soldered or otherwise fastened to the key instead of being cut or punched out therefrom; and instead of having the projection or elbow on the lower end of the shank of the key made by bending the metal to procure the greater rigidity, a projection or lug may be fastened to that end or the end may be thickened or made heavier at that point thereby accomplishing the purposes hereinbefore described with regard to the elbow or bent over portion; it is also within the purview of my invention that instead of having the loop on the key or opening device through which the tongue on the receptacle is to be inserted for the purpose of stripping off a portion of the receptacle, a loop may be attached to the tongue, or if the tongue be

made large enough a loop, opening or slit made therein as above specified with regard to the shank of the key, in which event the shank of the key will be made of such size as will enable it to pass through the loop of the tongue and the key can be as effectually operated to open the box.

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

1. A key or device for opening metal receptacles which consists of a piece of sheet metal doubly slitted and having a loop between the slits at a sufficient distance from the body of the key to receive in the opening thus formed a tongue or projection on the metal receptacle, substantially as and for the purpose set forth.

2. A key or device for opening metal receptacles provided with an opening or loop which is adapted to engage with a tongue or projection on the metal receptacle, and having an elbow or bent over portion at the end thereof adjacent to said opening or loop, substantially as and for the purpose set forth.

3. A key or device for opening metal receptacles which consists of a piece of sheet metal doubly slitted and having a loop between the

slits at a sufficient distance from the body of the key to receive in the opening thus formed a tongue or projection on the metal receptacle, and having an elbow or bent over portion at the end thereof adjacent to said opening or loop, substantially as and for the purpose set forth.

4. A key or device for opening metal receptacles, which consists of a piece of sheet metal, having one end or portion larger than the other, comprising the head of the key, and the other portion the shank, said shank doubly slitted and having a loop between the slits at a sufficient distance from the body of the key to receive in the opening thus formed a tongue or projection on the metal receptacle, the lower end of the shank being provided with an elbow or bent-over portion, adjacent to said loop, substantially as described.

This specification signed and witnessed this 28th day of November, A. D. 1892.

ARTHUR KLEINFELDT.

In presence of—

M. GIBSON,

E. M. TAYLOR.