

(No Model.)

F. KINSEY.
KEY OPENING CAN.

No. 581,937

Patented May 4, 1897.

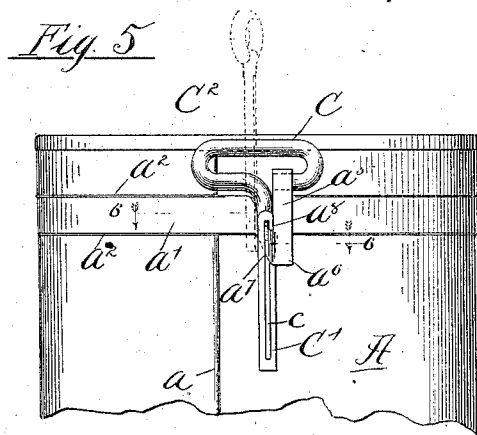
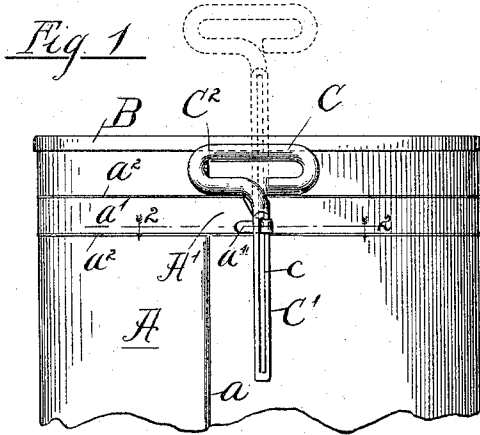


Fig. 2



Fig. 3

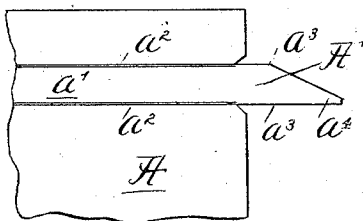


Fig. 6

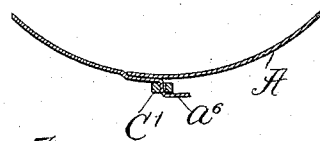


Fig. 7

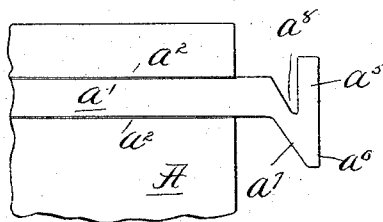


Fig. 4

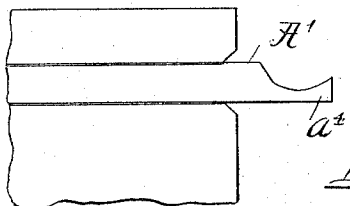


Fig. 8

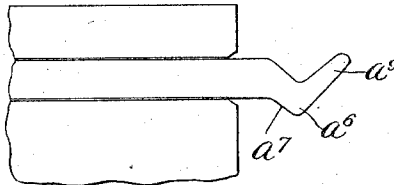
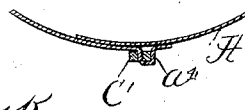


Fig. 9



Witnesses

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UNITED STATES PATENT OFFICE.

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

KEY-OPENING CAN.

SPECIFICATION forming part of Letters Patent No. 581,937, dated May 4, 1897.

Application filed March 28, 1896. Serial No. 585,189. (No model.)

To all whom it may concern:

Be it known that I, FRANK KINSEY, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in 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 cans of that class in which a detachable strip, which forms part of the can, is located in the side wall of the same, a short distance below the top thereof, and in which a slotted key is employed for engagement with a free tongue, which projects from the end of the detachable strip for the purpose of removing the same from the can. In such cans as heretofore constructed the keys have ordinarily been secured to the can by means of a paper label pasted to the can over the key; but it has been proposed to secure the key to the can by the engagement of the slot thereof with the tongue of the detachable strip. I propose as an improved construction in devices of this character to make the key with a long slot extending lengthwise of the shank of the key to a point near the head of the same and to provide the detachable strip with an extension or tongue the extremity of which is notched, cut away, or depressed at its upper edge to form a key-holding prong, the upper edge of which is located at such distance below the can-top as to permit the key to be engaged with the prong when its head is located at the side of the can and below the top thereof. I further propose to extend the tongue for its full width beyond the margin of the can-wall to such distance that the tongue may be wrapped about and firmly engaged with the key before the tearing of the strip begins, this construction insuring that the key shall have a firm hold on the tongue throughout its full width before the tearing commences, notwithstanding the fact that the tongue is notched or cut away to form a key-holding prong, as described, and that the key before being put into use is engaged with the narrowed extremity or prong portion only of the

tongue. The construction described possesses the general advantage of enabling the key to be held in place on the can by the tongue in a position which does not interfere with the cans being packed closely or placed one on top of the other, while at the same time the key may be brought into position for use by merely drawing or sliding it upward on the key-holding prong, which is engaged with the slot of the key.

The invention may be more readily understood by reference to the accompanying drawings, in which—

Figure 1 is a side view of the top part of a can with a key attached thereto, showing one embodiment of my invention. Fig. 2 is a sectional view through the tongue, taken on line 2 2 of Fig. 1. Fig. 3 shows the edge of the blank for the side wall of the can with the tongue formed thereon. Fig. 4 is a similar view showing a slightly-different form of tongue. Fig. 5 is a view showing a can and key attached thereto, in which the tongue is provided with an upwardly-projecting part to engage the head of the key. Fig. 6 is a cross-section of the same, taken on line 6 6 of Fig. 5. Fig. 7 shows the tongue illustrated in Figs. 5 and 6 as formed upon the blank. Fig. 8 is a similar view showing a somewhat different form of the tongue. Fig. 9 is a sectional view like Fig. 2, showing another way of bending the blank.

Referring first to Figs. 1 to 4 of the drawings, A indicates the side wall of the can-body, which consists of a piece of sheet metal provided with a seam *a* and having a detachable strip *a'*, which is defined by parallel weakening-lines *a² a²* and is provided with a tongue *A*, which forms a prolongation of the strip beyond the seam *a*, said tongue being free or unattached to the can-body, so that a slotted key may be engaged therewith for the purpose of wrapping the strip thereon and thus tearing it from the can-body in a manner heretofore quite well understood. The can-body is shown as provided with a cap or cover B secured to its upper edge. The detachable strip *a'* is located at some distance below the can-top, as is common in cans having a detachable strip in the side wall.

C indicates the key for opening the can,

the same consisting of a straight shank C' and a head C^2 , which is relatively short or narrow in a vertical direction. The shank C' is provided with a longitudinal slot c , through which the tongue may be inserted and in which the tongue is adapted to slide, the intention being that the key should be secured to the can for shipment by engagement with the tongue at the upper part of the slot in such manner as to hold the key flat against the side of the can, and that the key should be drawn or slid upwardly on the tongue to bring its head beyond the top of the can, so that it may be rotated to remove the detachable strip. The distance between the top of the detachable strip and the top of the can is not sufficient to give space for the head of the key above the strip, and if the strip were lowered to afford room for the head of the key so much would be removed in opening it as to make a can thus constructed objectionable to users. I therefore propose to make the tongue of full width from its base to a line $a^3 a^3$, Fig. 3, at a considerable distance from the base and to cut away the extremity of the tongue at its upper edge, so as to form at the lower part thereof a key-holding prolongation or prong a^4 . The upper edge of the prong a^4 is located at such distance from the top of the can as to leave room for the head of the key below the can-top when the prong is inserted in the upper part of the slot c , as clearly seen in Fig. 1.

In preparing the cans for shipment when made as shown in Figs. 1, 2, 3, and 4 the prong a^4 will be inserted through the upper part of the slot in the key and the key will then be given a half-turn or somewhat more than a half-turn, so as to bring the free end of the prong backwardly against the body of the tongue, as clearly seen in the sectional view, Fig. 2. The prong when thus bent will hold the key tightly and securely against the can-body, and when it is desired to open the can the key may be drawn upwardly, as shown in dotted lines in Fig. 1, and then turned so as to first wrap the main part of the tongue about the key and to therefore tear the detachable strip from the can-body. The body of said tongue, as before stated, will be made of such length that it may be wrapped partially or entirely around the key before the tearing of the strip begins; so that the key will have a firm hold upon the strip before the tearing strain comes thereon. This construction insures an equal or even tearing of the strip at both edges thereof.

The construction shown in Fig. 4 differs from that shown in Fig. 3 only in the fact that the extremity of the prong in Fig. 4 is made wider than its inner part.

In Figs. 5, 6, and 7 I have shown another construction in the tongue embracing the same features hereinbefore described, but including also an additional feature—to wit, an upwardly-extending arm or projection a^5 at the free end of the tongue which reaches up-

wardly to and bears against the head of the key, so as to hold the same more firmly against the can-body. In attaching the key to the can-body by this form of device the key will not be turned to bend the end of the prong back against the body of the tongue, as before described, but instead the tongue will be inserted through the slot of the key, passing outwardly through said slot, and its free end, with the arm a^5 thereof, will be then bent backwardly into a plane parallel with the side of the can, so as to bring the upper end of the arm flat against the head of the key.

The tongue shown in Figs. 5, 6, and 7 embraces an additional feature which is not shown in the other figures—to wit, a downward projection a^6 at the lower edge of the tongue having an outwardly and upwardly inclined or oblique guide-surface a^7 , as shown more clearly in Fig. 7. This guide-surface performs an important function in the operation of the key, for the reason that when the key is drawn upwardly or lifted the contact of the lower end of the key-slot with such inclined edge or surface acts to force or carry the key laterally toward the body of the tongue, and thus brings the lower part of the slot into engagement with that part of the tongue which forms a direct continuation or prolongation of the detachable strip. The position of the key when lifted and after being shifted sideways by the action of said guiding-surface is shown in dotted lines in Fig. 5. In said Figs. 5, 6, and 7, moreover, the cutting away of the upper edge of the tongue has the effect of forming a notch a^8 , in which the upper part of the key-shank rests when the key is secured to the can-body, thus enabling the key-head to be placed below the can-top in the same manner hereinbefore described in connection with the more simple form of tongue shown in Figs. 1, 2, and 3.

Fig. 8 illustrates a construction having an angular projection a^6 at the lower edge of the tongue and an inclined guide-surface a^7 at its edge similar to and performing the same function as the oblique guide-surface a^7 . (Shown in Fig. 7.) This form of the tongue is without the holding-arm a^5 , but it is provided with an upwardly-extending oblique prong a^9 , which is adapted for insertion through the slot of the key and is adapted to be bent about the key-shank to hold the same in place in the same manner as the straight prong a^4 . (Shown in Figs. 1 to 3.) In securing the key in place on the can by the use of the tongue a^9 , however, said tongue will not be bent outwardly around or over the key, as shown in Fig. 3, as this would make difficult the sliding of the key along the inclined guide-surface a^7 , and it is therefore preferred to fasten the key by bending the tongue at right angles to the can-body to receive the key-shank and to then bend the free end of the tongue toward the can-body in the same manner as illustrated in Fig. 5. This manner of bending the tongue is shown in a sectional

view of Fig. 9, which illustrates the manner in which the tongue may be bent to hold the key and which may be used in the construction shown in Figs. 1, 2, and 3, as well as that shown in Fig. 8.

The tongue may be given the form herein described by bending the metal instead of cutting it away, and a construction of both kinds is included in my invention.

I claim as my invention—

1. A can having a detachable strip formed by weakened lines in its side wall below its top and provided with a free tongue which forms a prolongation of the detachable strip and the body of which is made of a width equal to that of the detachable strip and extends in alinement with the same, the outer end of the tongue being notched or cut away at its upper edge to form a key-holding prong, which is so located as to afford space below the top of the can for the head of a key, the body of the tongue being extended beyond the margin of the metal of which it forms a part such distance as to afford full engagement of the strip with the key before the tearing begins, substantially as described.

2. A can having a detachable strip formed by weakened lines in its side wall below its top and provided with a free tongue which forms a prolongation of the detachable strip and the body of which is made of a width equal to that of the detachable strip and extends in alinement with the same, the outer end of the tongue being notched or cut away at its upper edge to form a key-holding prong, which is so located as to afford space below the top of the can for the head of a key, and a key having an elongated slot for engage-

ment with the said tongue, the distance between the lower side of said notch and the can-top being greater than the distance between the top of the slot in the key and the upper end of the head thereof, substantially as described.

3. A can having a detachable strip in its side wall below its top and provided with a free tongue which forms a prolongation of the detachable strip, and the body of which is made of a width equal to that of the detachable strip and is arranged in line with the same, the outer end of said tongue being notched or cut away at its upper edge to form a key-holding prong, and said prong having an upwardly-extending arm adapted to engage the head of a key, substantially as described.

4. A can having a detachable strip in its side wall below its top and provided with a free tongue which forms a continuation of the detachable strip and the body of which is made of a width equal to that of the strip and is arranged in alinement with the same, the outer end of said tongue being notched or cut away at its upper edge to form a key-holding prong and having an angular key-guiding projection at its lower edge, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 20th day of March, A. D. 1896.

FRANK KINSEY.

Witnesses:

C. CLARENCE POOLE,
WILLIAM L. HALL.