(No Model.)

F. REISET & G. A. WAEBER.

CONSTRUCTION OF SHEET METAL CANS.

No. 496,209. Patented Apr. 25, 1893.

FIG. 1

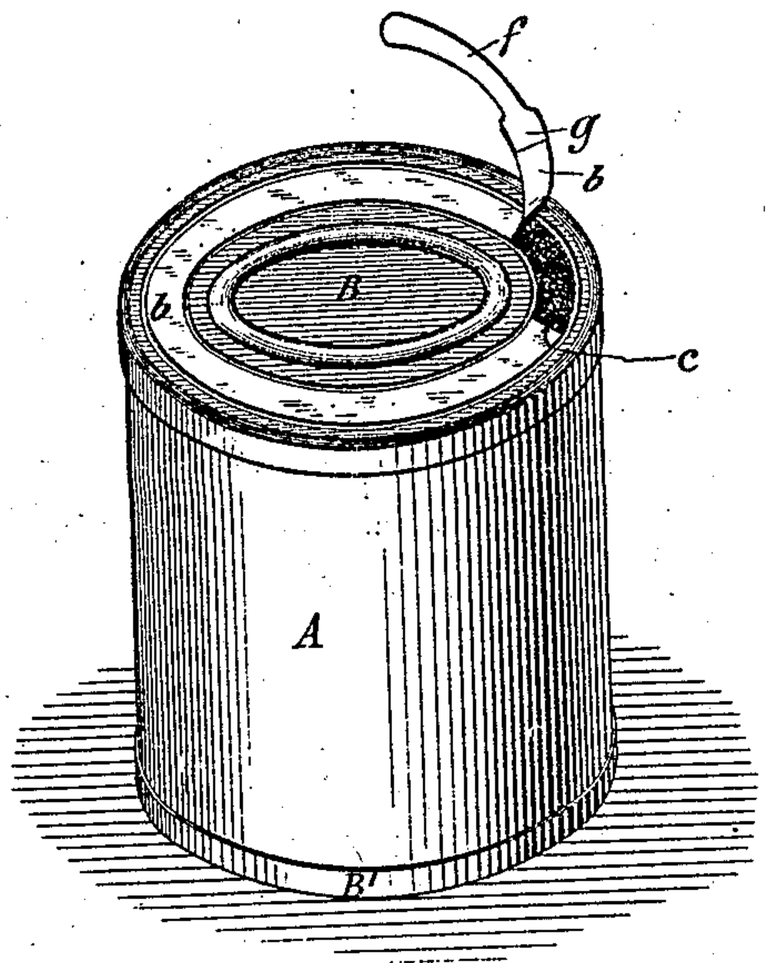
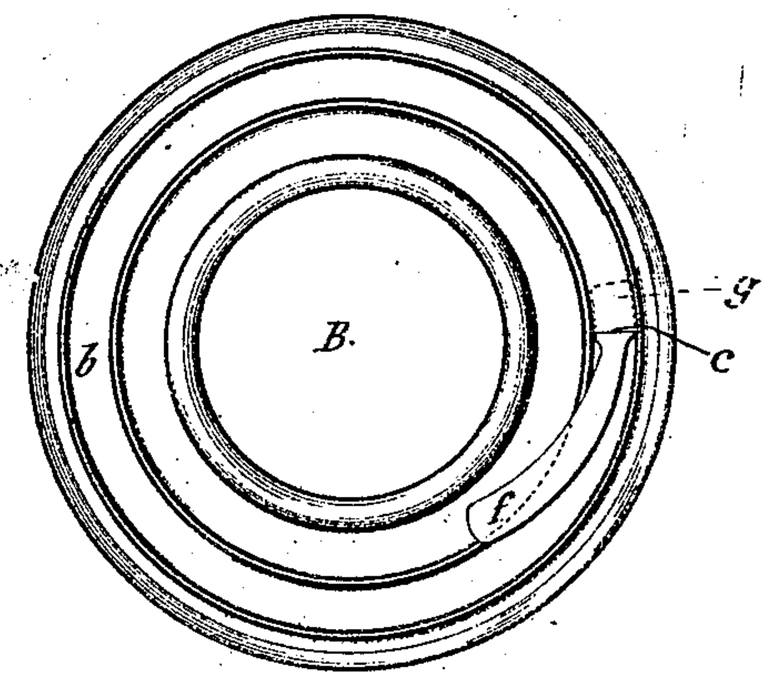


FIG. 2



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UNITED STATES PATENT OFFICE.

FREDERIC REISET AND GUSTAVUS A. WAEBER, OF NEW YORK, N. Y.

CONSTRUCTION OF SHEET-METAL CANS.

SPECIFICATION forming part of Letters Patent No. 496,209, dated April 25, 1893.

Application filed April 9, 1892. Serial No. 428,507. (No model.)

To all whom it may concern:

Be it known that we, FREDERIC REISET, a native of the Republic of France, doing business in the city of New York, in the State of New York, and GUSTAVUS A. WAEBER, a citizen of the United States, residing in the said city and State, have invented a new Method of Constructing Sheet-Metal Cans and also Vessels which Require to be Hermetically Sealed, and we hereby declare that the following is a full, clear, and exact description thereof, reference being had to the drawings which accompany and form part of this specification.

A leading object of our improvement is to diminish the cost of production of metallic cans and vessels of the classes which are opened by tearing out a strip-section therefrom. Receptacles of this character are coming into such general use and are being applied to so many new purposes, that it is a matter of importance to enable manufacturers to put them upon the market at as small a first cost as possible. One of the sources of expense hitherto incident to the production of such vessels has been the necessity of furnishing with each vessel sold one of the instruments—generally termed "keys"—which are used to tear out the opening strips, and it is a part of the design of our present invention to dispense with the use of keys and enable the can or other receptacle to be easily opened by the employment simply of a "tongue" of a special construction and operating in a manner different from any device heretofore introduced for this purpose.

To enable others to make and use our improvement, we will proceed to describe it.

In the drawings, Figure 1 is a top view of a sheet metal can of cylindrical form, showing our invention applied to one of its ends or heads; and Fig. 2 represents a similar end or head after the operation of tearing out the strip-section to open the can has been commenced.

A, Fig. 1, denotes the body of a cylindrical sheet metal can of the usual construction, and B B′ are the ends or heads thereof. In one of these heads, as at B, we place a suitable strip-system, employing by preference that described in Letters Patent No. 401,913, granted April 23, 1889, to the above named Gustavus A. Waeber, which consists of a strip-section located between beads combined with two incisions, though any other efficient system will answer the purpose.

In the strip-section *b b* we make a transverse cut entirely or partly through the material of it at any desired point in its path, as for example at *c*. We next provide a device, which may be termed a lever-tongue, made in the form of a short bar or lever of copper, iron or other stiff unyielding substance, as seen at *f*, and fasten one end of it, *g*, firmly to the strip-section *b b* at or close to the point where the incision *c* is placed. In case this incision is made entirely through the strip-section, we usually prefer to thin the end *g* of the lever *f* and insert it through the incision and then solder or otherwise permanently secure the thinned end in position. If, however, the incision is made only partly through the section, the end, preferably thinned as before, may be soldered or fastened strongly in any way to the upper side of the strip-section close to the incision. It will be seen that the part *f* when thus secured in place constitutes in a certain sense a prolongation of the section and therefore becomes a substitute for the customary thin flexible tongue employed in receptacles of the character here represented. But it also performs a function of which the ordinary tongue is incapable, inasmuch as its rigidity and its combination with the strip-section at the incision point *c* enables it, upon being firmly grasped at its free extremity by the hand or with pliers or in any other effective manner, to operate as a lever working upon the fulcrum furnished by that portion of the strip-section to which its fastened end is attached. Consequently, as soon as force is exerted upon its free extremity it quickly pries off that part of the strip-section and causes it to break through at *c* and thus starts the stripping operation fully as effectually as can be done by the ordinary key applied to a thin and yielding tongue of the usual construction. It thus comprises a tongue and a key in one instrument and performs efficiently the function of each. Moreover it removes the danger of tearing the tongue off before the strip-section has been

started, as frequently happens when the flexible tongue is used if the soldering which keeps the latter in place has not been properly done. It will thus be seen that we dispense entirely with a separate key or any equivalent therefor, and yet provide an instrument which satisfactorily answers all the purposes of such a key without the additional manufacturing cost which the employment of separate keys makes necessary.

It is not essential that the transverse incision *c* should be used in all cases. In its place, a sufficiently sharp bead may be provided extending across the strip-section in the same manner as the incision. Or, the metal of the strip-section around or near to the point where the key is secured to it may be weakened or made brittle in any suitable way so that it can be readily torn through by the initial action of the key. It is also not always necessary that when an incision is employed at *c*, it should be made only partly through the strip-section. In cans or vessels designed for holding paints, white lead, baking powder, tobacco, and many other articles which do not require to be kept absolutely air-tight, it will answer all purposes if the incision is cut entirely through the metal.

In the process of manufacture it is sometimes easier to make the incision extend entirely through the metal, even in vessels which are intended to be air-tight, for the reason that the cutters do not then require so nice an adjustment as when they are to cut only partly through the sheet material. But it is to be understood that if this course be adopted, the cut-through incision must afterward be touched lightly with solder on one or other of the sides of the strip-section so as to close it and prevent the entrance of air on that side. It is also proper to state that when the contents of the vessel require to be preserved from the air, it will generally be found best to solder lightly all around the point of attachment of the lever *f* to the strip-section.

The mode of construction here represented is applicable to the tops of glass jars for containing milk, canned fruit and other articles, and also to many other purposes for which ordinary systems of strip-opening could not be satisfactorily employed.

Having thus described our improvement, what we claim, and desire to secure by Letters Patent, is—

A can, jar, or other vessel, of sheet metal or other material, provided with a strip-section which at some point in its path is suitably weakened more or less transversely of its length, in combination with a rigid lever tongue firmly attached to the strip-section at or close to the weakened point of the latter and so constructed and operating as to constitute a lever to start and complete the tearing out of the strip-section and thereby dispense with a key, substantially as set forth.

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