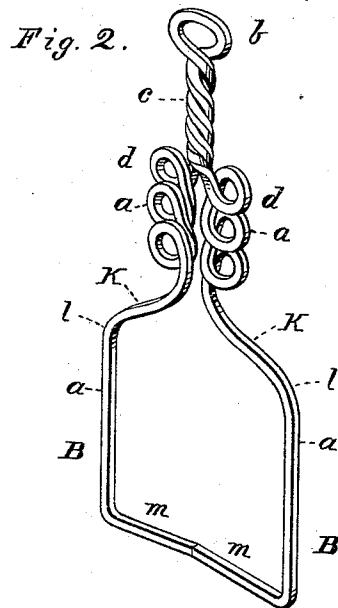
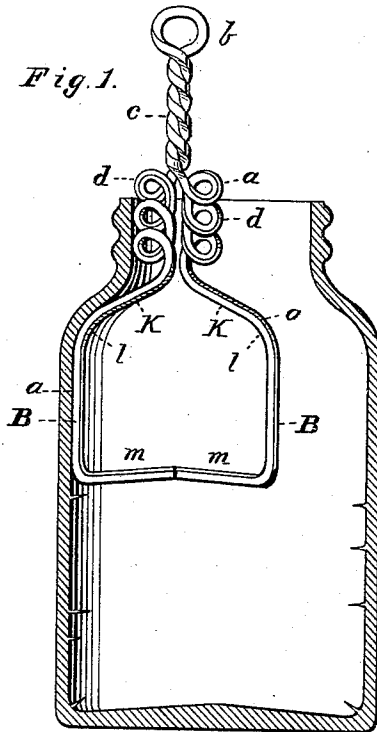


(No Model.)

S. W. ERWIN.
CLEANER FOR FRUIT JARS, &c.

No. 415,625.

Patented Nov. 19, 1889.



WITNESSES

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UNITED STATES PATENT OFFICE.

SANFORD W. ERWIN, OF MOUNT MERIDIAN, INDIANA.

CLEANER FOR FRUIT-JARS, &c.

SPECIFICATION forming part of Letters Patent No. 415,625, dated November 19, 1889.

Application filed May 23, 1889. Serial No. 311,896. (No model.)

To all whom it may concern:

Be it known that I, SANFORD W. ERWIN, a citizen of the United States, and a resident of Mount Meridian, in the county of Putnam and State of Indiana, have invented certain new and useful Improvements in Cleaners for Fruit-Jars, &c.; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention, and shows a vertical section of a jar, with a front view of the cleaner. Fig. 2 is a perspective view of the cleaner.

The invention relates to devices for detaching or removing splinters or slivers which adhere to glass jars and other hollow glass articles as they come from the factory; and it consists in the construction and novel combination of the parts constituting the instrument, as hereinafter set forth, and pointed out in the appended claim.

In the embodiment of my invention I provide a length of spring metal, which is made rectangular in cross-section, so that it will have angular edges *a a*. At its middle portion the bar is bent in loop form to provide a handle, as at *b*. The branches of the bar, twisted to form the shank portion *c*, are from the lower end of the twisted portion each formed into a series of loop-spirals *d d*, lapsing a little one above another, as shown. These loops *d d* are therefore in two vertical rows, having the inner edges near each other. The spirals *d d* are turned outward, and in consequence of the spiral bending the angular edges at the outside of the loops are presented in a salient manner, so as to form scraping-edges adapted to readily detach the

glass particles or splinters from the neck portion of a jar when the instrument is turned back and forth therein.

In order to provide for cleaning the inside wall of the vessel, each branch from the lowest spiral loop is bent outward to form a shoulder portion *K*, which is bent downward by a rounded curve, as at *l*, and thence extends downward to its terminal portion, which is bent inward and slightly upward, as at *m*, forming the bottom-cleaning portion. The planes of the branches *B B* of the instrument are slightly oblique, so that each branch has one of its outer angular edges a little more distant from the axial center than the other, thereby forming a salient angular edge to scrape the inner wall of the jar when the instrument is turned therein to detach the splinters.

The instrument can be introduced into the vessel when the branches are closed or sprung sufficiently past each other for the purpose, and when introduced they will spring outward to working position. The elasticity of the branches also allows the instrument to be easily withdrawn.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

The instrument for detaching splinters from the interior of glass vessels, provided with the upper end loop, the intermediate series of twisted loops, and the laterally-extended lower portions or branches, the latter portions, together with said intermediate twisted loops, having their angular or corner edges presented to and adapted to act upon said splinters, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

SANFORD W. ERWIN.

Witnesses:

B. F. SPURGEON,
W. A. BOURNE.