

(No Model.)

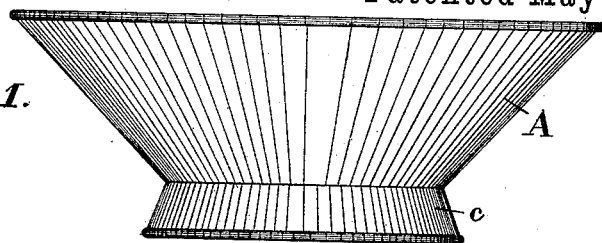
G. W. KNAPP.

MILK STRAINER.

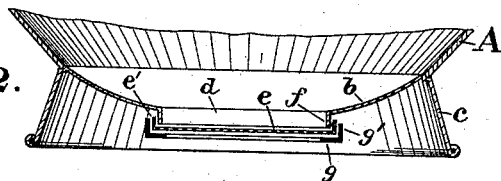
No. 383,307.

Patented May 22, 1888.

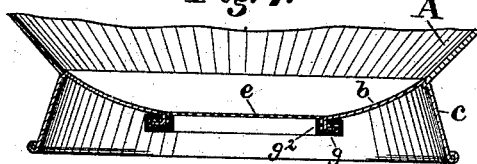
*Fig. 1.*



*Fig. 2.*



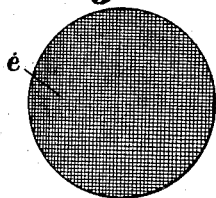
*Fig. 7.*



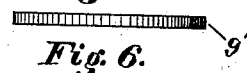
*Fig. 3.*



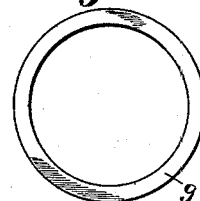
*Fig. 4.*



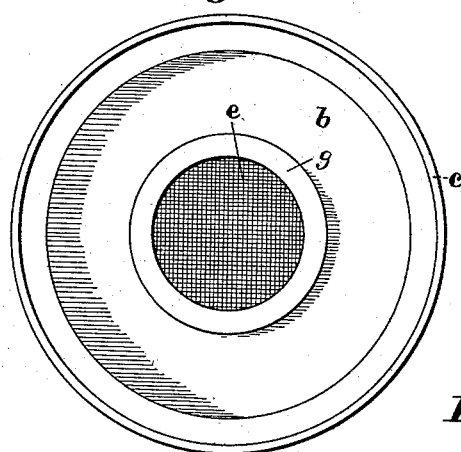
*Fig. 5.*



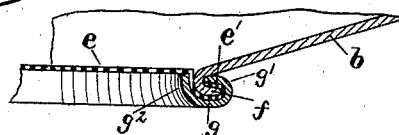
*Fig. 6.*



*Fig. 8.*



*Fig. 9.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

GEORGE W. KNAPP, OF BALTIMORE, MARYLAND.

## MILK-STRAINER.

SPECIFICATION forming part of Letters Patent No. 383,307, dated May 22, 1888.

Application filed October 22, 1887. Serial No. 253,054. (No model.)

### *To all whom it may concern:*

Be it known that I, GEORGE W. KNAPP, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Milk-Strainers, of which the following is a specification.

My invention relates to strainers; and it consists in an improvement in attaching wire-gauze or woven wire to the sheet metal of which the vessel part of the strainer is composed.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of an ordinary milk-strainer. Fig. 2 is a sectional view of the bottom parts of the strainer, showing their shape and relative position previous to being attached together. Figs. 3 and 4 are views of the wire-gauze shaped preparatory to attachment. Figs. 5 and 6 are views of the confining-ring. Fig. 7 is a sectional view of the bottom of the strainer. Fig. 8 is an inverted plan view or lower side view of the strainer-bottom. Fig. 9 is a sectional view, on a larger scale, of the joint where the wire-gauze is attached to sheet metal.

The vessel part A of the strainer is made of sheet metal, and may have any desired shape. It has a bottom, *b*, and a base foot, *c*, which supports it. The sheet-metal bottom *b* is cut out at the center and forms a round hole or opening, *d*, which is closed by the wire-gauze *e*.

Heretofore strainers made just as above stated have had the brass wire-gauze attached to and secured over the opening *d* in the center of the sheet-metal bottom *b* by solder. The solder is objectionable, chiefly because in applying it an acid flux is necessarily used with brass wire-gauze. The acid flux often spreads or spatters, and thereby discolors and corrodes the brass wire-gauze.

My invention enables wire-gauze of any kind to be attached to the strainer-bottoms made as above described without the use of solder, and thereby obviates the objections named, and also makes a better and cheaper article.

In carrying out my invention a flange, *f*, is formed around the center hole or opening, *d*, in the bottom, (see Fig. 2,) the wire-gauze *e* is cut to a circular shape to fit the center opening, *d*, and has around its rim a flange,

*e'*, which takes position about the flange *f* on the bottom. To attach the parts, a joint is formed by interlocking the flange *f* on the bottom with the flange *e'* on the wire-gauze. A confining-ring, *g*, is closed around the said joint *f e'*, as shown in Figs. 7, 8, and 9. The addition thereto of the confining-ring *g* adds to the strength and security of the parts. In preparing this ring a flange, *g'*, is formed around its outer edge, (see Figs. 2 and 5,) and the ring is placed against the wire-gauze, as shown in Fig. 2. In forming the interlocking joint with the confining-ring suitable well-known tools are employed, and the wire-gauze flange *e'* and the ring-flange *g'* are both turned inward, or toward the center opening, *d*, while the flange *f* on the sheet-metal bottom is turned outward, or away from the central opening. (See Fig. 9.) The wire-gauze is "dished" or pressed upward, in order that upon the upper surface it will be flush with the upper surface of the sheet-metal bottom *b*, and the inner edge, *g''*, of the confining-ring is also pressed upward, and thereby the said ring is closed tightly around the joint.

In the drawings the outward-turned flange *f* on the sheet-metal bottom *b* is shown on the lower side of the said bottom. In other words, said flange *f* is here formed by turning the metal downward. It is not essential, however, that said flange *f* should have this position, for it may be on the upper side of the bottom—that is, in its formation the metal may be turned upward.

Having described my invention, I claim—  
A milk-strainer consisting of the vessel A, with bottom *b*, having opening *d*, and flange *f*, surrounding said opening, the wire-cloth *e*, having flange *e'*, the fastening-ring *g*, with flange *g'*, the said flange *g'* being inwardly bent, so as to have its end interlocked between the bottom *b* and flange *f*, and the flange *e'* being held between said interlocked portions of said flanges *g'* and *f*, and the inner edge, *g''*, of the ring *g*, with the wire gauze, being pressed upward, whereby said gauze is flush with said bottom of the strainer, substantially as shown and described.

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

GEORGE W. KNAPP.

Witnesses:

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