

A. A. PINDSTOFTE.
 PASTEURIZING APPARATUS.
 APPLICATION FILED OCT. 1, 1907.

946,397.

Patented Jan. 11, 1910.

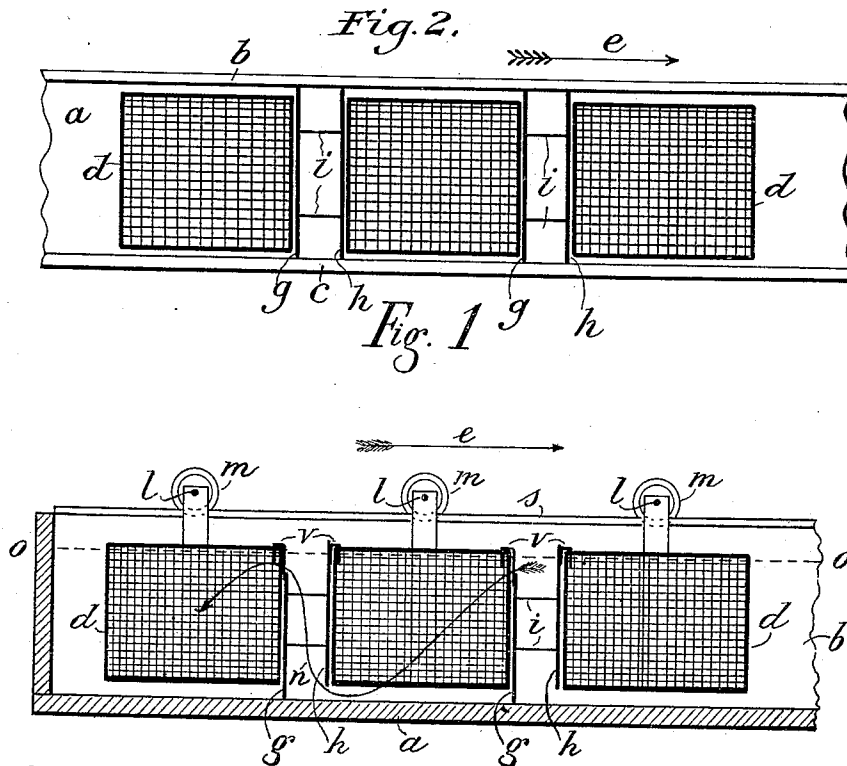
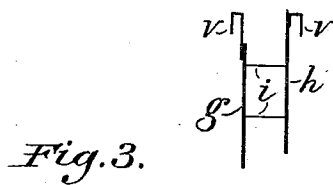


Fig. 1a



Witnesses *a*  *Ray Ernst.*

Inventor. *A. A. Pindstofte,*
by Knight Bros.
Atty.

UNITED STATES PATENT OFFICE.

ANDERS ANDERSEN PINDSTOFTE, OF FREDERIKSBERG, NEAR COPENHAGEN,
DENMARK.

PASTEURIZING APPARATUS.

946,397.

Specification of Letters Patent.

Patented Jan. 11, 1910.

Application filed October 1, 1907. Serial No. 395,390.

To all whom it may concern:

Be it known that I, ANDERS ANDERSEN PINDSTOFTE, subject of Denmark, residing at No. 62 Frederiksberg Alle, in the city of Frederiksberg, near Copenhagen, Kingdom of Denmark, have invented new and useful Improvements in Pasteurizing Apparatus, of which the following is a specification.

The present invention relates to improvements in pasteurizing apparatus of the kind in which the bottles are placed in baskets moving through a water reservoir of suitable dimensions, the bottles being gradually heated in this reservoir to pasteurizing temperature. The water is maintained at pasteurizing temperature as long as required by means of heat supplied to the water by suitable devices, the bottles afterward being cooled by means of a cooling medium supplied to the water near the place, where the bottles are removed from the apparatus. In such apparatus the pasteurizing fluid is, of course, put in motion when the baskets are pulled or pushed through it, but this motion is not sufficient to cause the warmer water at the top to mix with the colder water at the bottom, and therefore the temperature of the upper water and that of the lower water present so great differences that a pasteurizing process safe and free of breakage cannot be effected in such apparatus. These drawbacks are obviated by the present invention, which has for its object to combine the baskets with means which will produce a perfect mixing of the upper and lower layers of water during the motion of the baskets, so that the temperature is practically uniform from top to bottom at the different parts of the apparatus. The invention is illustrated in the accompanying drawing, in which—Figure 1 is a vertical longitudinal section through a part of the improved apparatus. Fig. 1^a is a vertical section through one of the channels referred to in the following specification. Fig. 2 is a plan view of parts of the apparatus; the suspension means of the baskets being omitted. Fig. 3 is a side view of two adjacent baskets and shows a modification of the invention.

Referring to Figs. 1, 1^a and 2, *a* is the bottom of the water reservoir, and *b*, *c* the side walls of said reservoir. The bottles (not shown) are placed in baskets *d*, which can be made of wire-grating, plait-work, frame-

work or the like, permitting the pasteurizing fluid to pass through the baskets. The baskets *d* are suspended on transverse shafts 1 (Fig. 1), provided with rollers *m* running upon rails *s* on the top of the side-walls of the water-reservoir so that the baskets can be moved through the water reservoir in the direction indicated by the arrows *e*. Between each two of the baskets *d* is inserted a channel having form of a flat frame, which consists of two plates *g* and *h* placed transversely to the side walls *b* and *c* of the water reservoir and connected together by means of plates parallel to the side walls *b* and *c*, or by means of cross-stays *i*, or by other suitable means. The length of the plates *g* and *h* corresponds to the distance between the side-walls *b* and *c*. The plate *g* extends from the bottom of the water reservoir to some distance below the upper edge of the basket *d*, and the plate *h* extends from the bottom of the basket *d* to some distance above the water level *o—o* (Fig. 1) in the water reservoir. The channels formed by the plates *g* and *h* are suspended upon the baskets by means of hooks *v* (Figs. 1 and 1^a) or the like or they may be suspended by any other suitable means which will permit said plates to follow the movements of the baskets.

The operation of the apparatus is as follows: The baskets containing the bottles are inserted in the water reservoir and moved through it in the direction of the arrows *e*. The motion of the baskets and of the channels formed by the plates *g* and *h* placed between each two baskets causes the pasteurizing fluid to move in the opposite direction so that the fluid-current always passes up between the baskets and down between the bottles placed in the baskets, as indicated by the arrow *n* (Fig. 1), thereby mixing the water in such a manner that the temperature is practically uniform from top to bottom at all parts of the apparatus.

Fig. 3 shows a modification, in which the channels *g*, *h* are placed in the interior of the baskets *d*, so that the distance between the baskets can be reduced to a minimum. It will be obvious that such an arrangement will give the same result as the arrangement first described. This modified form of the apparatus is the subject of a divisional application filed by me June 22nd, 1909, Ser. No. 503,682.

I claim:

1. In a pasteurizing apparatus, the combination with a water-reservoir, of a number of open bottle-baskets supported therein with
5 their bottoms some distance above the bottom of the reservoir, means permitting the moving of said bottle-baskets through said reservoir, and a number of channels moving
10 bottle-supporting parts, each of said channels consisting of two spaced parallel plates placed transversely to the side walls of the water-reservoir and having a length corresponding to the distance between said side
15 walls, one of said plates *g* extending from the bottom of the water-reservoir to some distance below the upper edge of the bottle-baskets, while the other of said plates *h* extends from the bottom of the bottle-baskets
20 to some distance above the water level in the water-reservoir; substantially as and for the purpose set forth.

2. In a pasteurizing apparatus, the combination with a water-reservoir, of a number
25 of open bottle-baskets supported therein with their bottoms some distance above the bottom

of the reservoir, means permitting the moving of said bottle-baskets through said reservoir, and a number of channels suspended
30 between each two of such baskets and moving with the baskets and separating the bottle-supporting parts, each of said channels consisting of two spaced parallel plates connected together and placed transversely of
35 the side walls of the water-reservoir and having a length corresponding to the distance between said side walls, one of said plates *g* extending from the bottom of the water-reservoir to some distance below the upper edge
40 of the bottle-baskets, while the other of said plates *h* extends from the bottom of the bottle-baskets to some distance above the water level in the water-reservoir; substantially as and for the purpose set forth.

In testimony whereof I have signed my
45 name to this specification in the presence of two subscribing witnesses.

ANDERS ANDERSEN PINDSTOFTE.

Witnesses:

MARCUS MÖLLER,
S. KÓTKJAR.