Dec. 6, 1932. D. U. SMITH 1,889,880

APPARATUS FOR DRYING GELATIN AND THE LIKE

Filed April 13, 1931

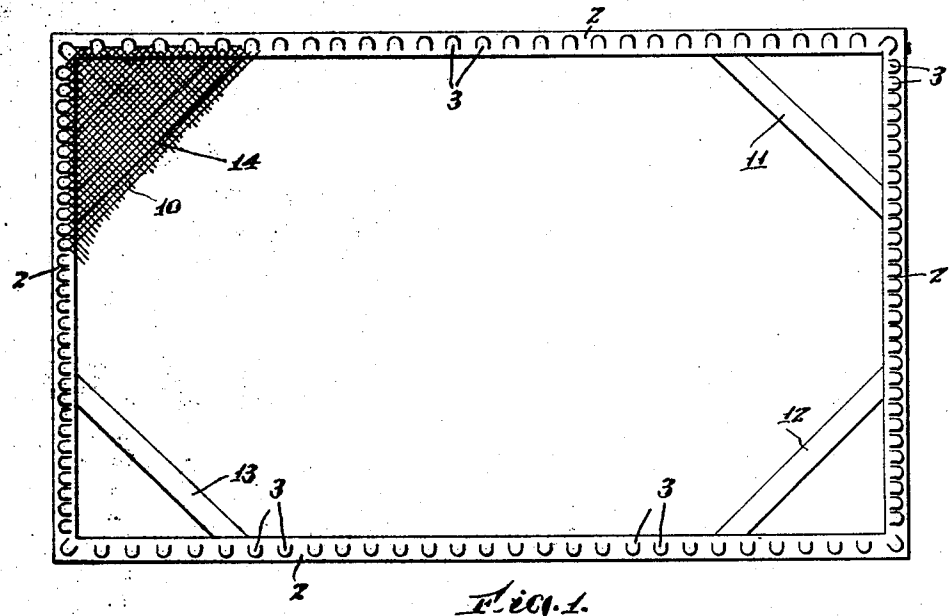


Fig. 1.

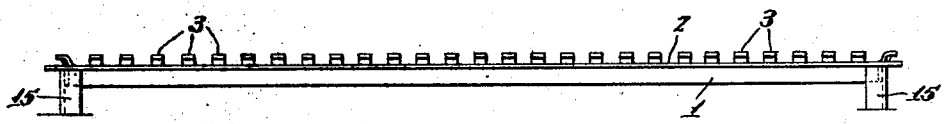


Fig. 2.

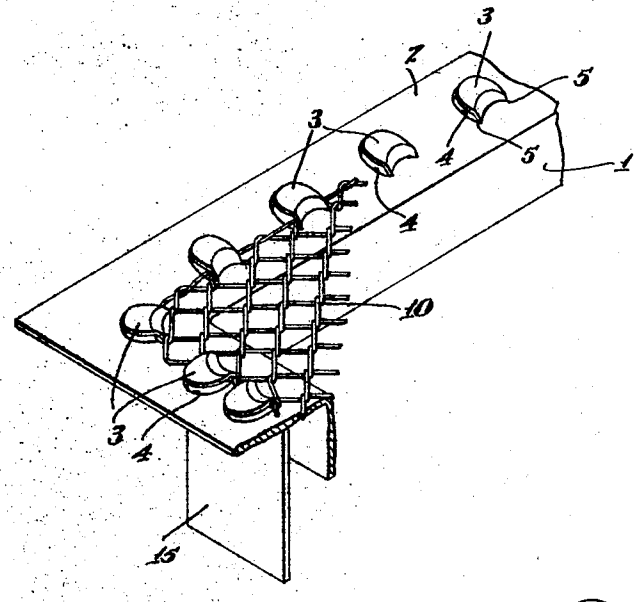


Fig. 3.

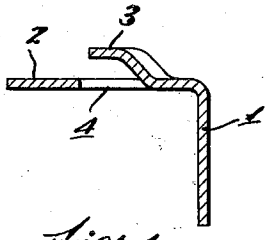


Fig. 4.

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UNITED STATES PATENT OFFICE

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APPARATUS FOR DRYING GELATIN AND THE LIKE

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My present invention is a novel and improved apparatus for use in the manufacture, and particularly the drying, of gelatin and similar substances.

In the handling of such articles as gelatin, particularly when employed as a food product, it is most essential that same be treated and handled in a hygienic manner, and by apparatus capable of being readily, efficiently, and easily cleansed. My present invention provides an all-metal drying frame construction, having means for quickly attaching or detaching the "net" or woven wire, and providing also a strong rigid construction which will last for a relatively long time and withstand the usages to which such articles are necessarily subjected.

A serious difficulty with prior gelatin drying frames has been that the main frame portion is usually made of wood and the same is necessarily subjected to alternate wet and dry action, and, furthermore, such frames in handling are subjected to considerable strain. As these frames are ordinarily from 4′ to 5′ long, and 3′ to 4′ wide, with the net stretched tightly thereover, and as the same is subjected to a "beating" or hammer-like blows to dislodge the gelatin from the net when inverted after drying, the constant breakage, damage, looseness in the frame, and hence constant repairing and expense are serious items.

In my present all-metal frame structure I eliminate the difficulties above briefly outlined and utilize an improved novel, strong, and especially desirable all-metal frame, particularly available for use in handling food products, such as gelatin or the like.

A further improvement in the present invention consists in the simplicity of the net and frame attaching devices, eliminating all danger of dirt or dust, or other unhygienic matter accumulating in corners on the frame, or where the net or frame are attached—which has heretofore been a serious difficulty in prior devices, particularly the usual wooden frames and wire net constructions.

Further details, novel combinations, and advantages will be hereinafter more fully pointed out and claimed.

Referring to the drawing, illustrating a preferred embodiment of the invention,

Fig. 1 is a plan view of the frame structure;

Fig. 2 is a side elevational view of one of the said frames;

Fig. 3 is an enlarged perspective of the net holding and attaching devices, and

Fig. 4 is a fragmentary cross-sectional view through one of the net-holding hooks.

As shown in the drawing, I prefer to make the frame structure of light, strong angle iron, or metal, of any suitable composition, giving strength and lightness, and preferably of angle iron construction, as shown. This angle iron frame comprises the vertical flange or portion 1, and the horizontal or flanged extending portion 2, and in the horizontal portion 2 I form, cut, or stamp out a series of hook-like members 3, leaving corresponding recesses 4 therein. Any desired number or plurality of such hooks may be thus formed around the flange 2 in both sides and ends of the frame. Preferably also, these are so stamped or made as to give a slight round configuration at the base of the hook 3, as shown at 5, 5, to dislodge the engagement of the adjacent strand of the wire net, designated at 10, and as clearly illustrated in Fig. 3, and curved to provide a wedging action on the wire. I may, if desired, form any suitable number of such hooks 3, preferably providing same to engage each alternate strand of the wire net along the sides and on each strand along the end portions, but this arrangement is, of course, optional and any sufficient number of hooks to hold the net relatively rigid can be employed. Furthermore, any suitable size or type of net may be utilized and with the wires angularly or rectangularly arranged or interlocked.

My improved frame being formed of angle iron, is extremely strong and rigid but additional braces across each corner may be fitted, if desired, as shown in Fig. 1 at 11, 12, 13, and 14, these braces being brazed, riveted, or suitably secured to the frame. Preferably, also, short legs are fitted to support the frame slightly above the floor, table, or carrier on which it may rest.

In use, it is customary to fit the net over the sides and each end, and thereupon by applying a still stretching strain and by the use of a small tool, to stretch the remaining side of the net over onto the hooks 3. This net is firmly secured and will permit the inverting of the frame when it is desired to remove the gelatin or the like after drying, and also allow a hammering or beating action on the reverse side of the net to dislodge the gelatin therefrom without dislodging the net from the hooks 3 and the frame. The net can be readily cleansed, or replaced and renewed, and the entire frame and net may be sterilized by steam, if desired, immersed in boiling water, or subjected to other cleaning operations.

It will be seen that I have devised a novel, strong, all-metal, structural drying frame with provision for quick attachment, or ready detachment of the net and frame, the entire structure being simple, strong, and hygienic in construction and in use, making it especially adaptable for handling food products.

I claim:

A hygienic apparatus of the kind described for drying food products, gelatin, or the like, comprising an all-metal rectangular frame, a plurality of hooks stamped from the top portion of said frame, having an inclined wedge-shaped surface and a round wire-engaging portion and a removable wire net constructed and arranged to be detachably secured to said frame by predetermined meshes of said wire net engaging and jamming under the wedge hook and bearing on the wire-engaging surface.

In testimony whereof, I have signed my name to this specification.

DAVID U. SMITH.