G. COLLIS.

METHOD OF PRODUCING ARTICLE HOLDING DEVICES.

APPLICATION FILED APR. 29, 1914.

1,130,378. Patented Mar. 2, 1915.

Fig. 1.

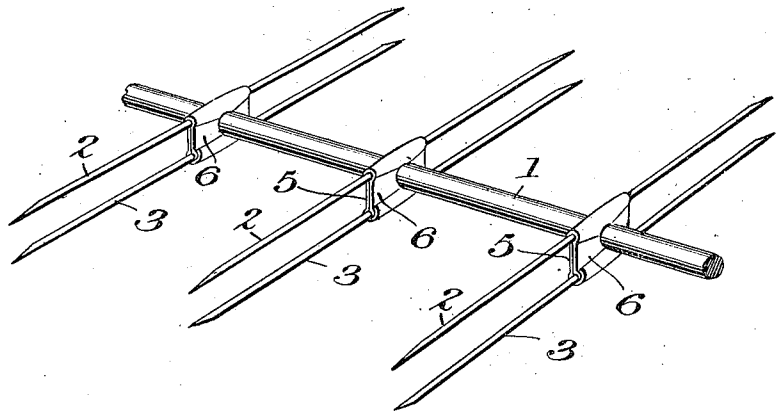


Fig. 2.

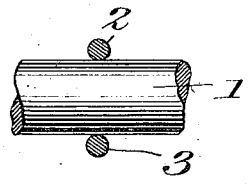


Fig. 3.

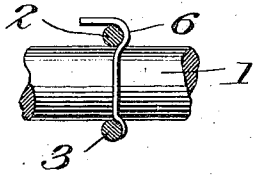


Fig. 4.

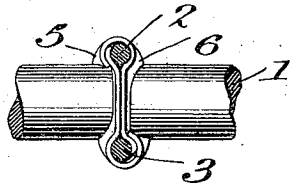
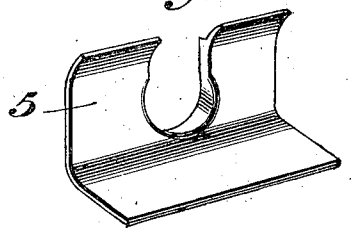


Fig. 5.



Witnesses

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METHOD OF PRODUCING ARTICLE-HOLDING DEVICES.

1,130,378. Specification of Letters Patent. Patented Mar. 2, 1915.

Original application filed June 9, 1913, Serial No. 772,644. Divided and this application filed April 29, 1914. Serial No. 835,321.

To all whom it may concern:

Be it known that I, GEORGE COLLIS, a citizen of the United States, residing at Clinton, in the county of Clinton and State of Iowa, have invented certain new and useful Improvements in Methods of Producing Article-Holding Devices, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to methods of producing metallic article holding devices.

The present application is a true division of one heretofore filed by me, to-wit, on June 9th, 1913, Serial No. 772,644.

The method constituting the subject-matter of the present case includes the welding to a metal bar of relatively large diametral dimension of a series of article-holding elements or wires of relatively smaller diametral dimension; and, then, attaching (as by welding) to the bar and wires suitable reinforcing-plates adapted securely to hold the wires to the bar and, also, to maintain them in proper spaced relation. These reinforcing-plates, acting in the nature of clamps, are sufficiently elongated to extend beyond the portions of the wires which have been heated and, thus, the wires have restored to them what, in effect, is their original stiffness and strength.

With this object in view, the invention resides in the aforementioned method, the details of which will appear hereinafter.

In the accompanying drawings, a form of the article and the components of which it is constructed are, by way of example, illustrated as embodied in a so-called "rack" forming an element in apparatus for coating or icing articles of food and the like.

In these drawings: Figure 1 is a view in perspective of the rack; Fig. 2 is a fragmentary view, in section, and on an enlarged scale, illustrating a section of the bar with a pair of wires attached thereto; Fig. 3 is a similar view showing one of the strengthening or reinforcing-plates attached to the structure; Fig. 4 is a similar view showing another of the pair of strengthening plates employed; and Fig. 5 is a view on an enlarged scale of one of the strengthening plates.

In practising my improved method, I prefer to utilize, as a supporting element, a bar or rod 1, elongated and, if desirable, cylindrical. At predetermined points on said rod, wires, 2, 3, or the like, are disposed—in pairs, for instance—whereupon they are suitably heated, electrically by preference, until they are properly welded to the bar. These wires may, as shown, occupy a position at right angles to the bar, and on opposite sides thereof, whereby they are spaced approximately the distance of the thickness of the bar. Then, to effect a more rigid securement of these wires to the bar, reinforcing plates 5 and 6 are welded to the bar and to the wires.

In welding the different wires to the bar—which may be done separately or all together—it is not essential, nor in fact desirable, to subject the metals of the wire and bar to a very high degree of temperature because reliance is not had solely upon the welding of the wires to the bar to attach them thereto. Were a high temperature employed, it would, by reason of the fact that the wires are of smaller diametral dimension than is the bar, tend to melt or unduly soften the small wires at the point of contact and thereby make them weak. Hence, I resort to strengthening media, preferably in the form of the aforementioned pair of plates which encompass the bar and, also, each wire of the pair. The plates are welded to the bar and also to the wires.

After the welding of the wires has been completed, as aforementioned, the whole structure is dipped in molten tin or the like which not only produces a smooth and clean surface but also effects the further function of soldering all of the joints together. As the particular use of this form of structure is such as to require that it shall be retinned after it has been completed, it is obvious that, unless the wires have been properly secured to the bar by electric welding, it would not be possible to dip them into the molten tinning metal without producing disintegration of the parts.

It is to be understood that the method herein disclosed may be utilized for producing articles other than those hereinabove referred to.

What I claim is:

1. The method of producing article-holding devices, and the like, which consists in welding to a metallic bar of relatively large diametral dimension a pair of article-holding wires of relatively smaller diametral dimension; then attaching to said bar and

wires metallic strengthening plates; and finally soldering said plates to the bar, to the wires, and to each other.

2. The method of producing apparatus for coating or icing articles of food and the like, which consists in welding to a metallic bar of relatively large diametral dimension a series of pairs of article-holding wires of relatively smaller diametral dimension; then attaching to the bar and wires at one side of the latter a metallic strengthening plate; then attaching to the bar and wires at the opposite side of the latter another metallic strengthening plate; and then soldering the plates together and to the wires and bar by dipping the structure in its entirety into molten tin and whereby soldering of all joints and surfacing of the elements of which the structure is composed are effected.

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

GEORGE COLLIS.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."