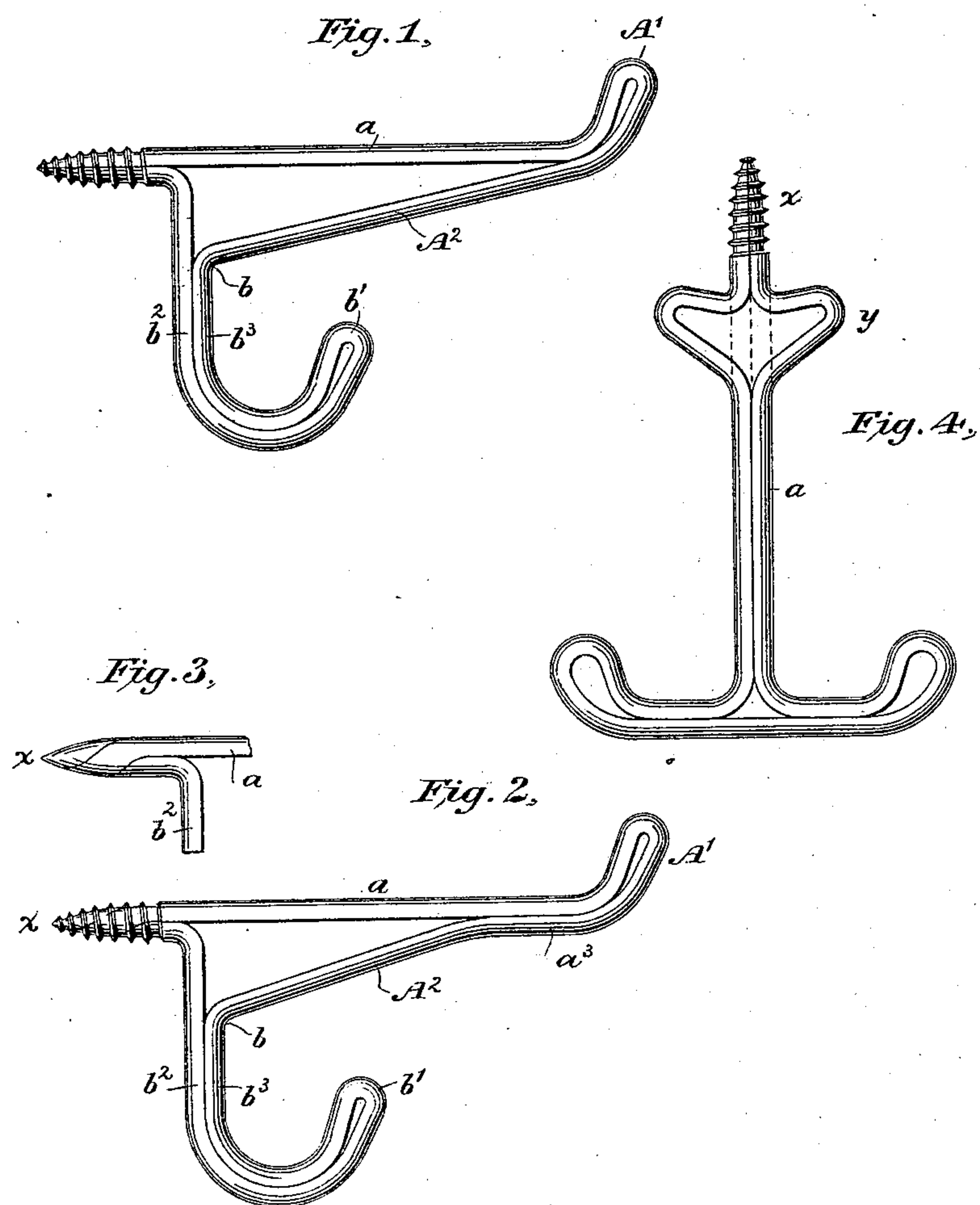


(No Model.)

R. GORTON.
HOOK.

No. 472,948.

Patented Apr. 12, 1892.



Witnesses
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UNITED STATES PATENT OFFICE

ROBERT GORTON, OF PLAINFIELD, NEW JERSEY.

HOOK.

SPECIFICATION forming part of Letters Patent No. 472,948, dated April 12, 1892.

Application filed April 23, 1891. Serial No. 390,138. (No model.)

To all whom it may concern:

Be it known that I, ROBERT GORTON, a citizen of the United States, residing at Plainfield, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Wire Hooks or Hangers, of which the following is a specification.

My invention relates to that class of hooks or hangers which are made from a single piece of wire and which have a single pointed screw-threaded securing-shank. Hooks of this class are usually formed of a single piece of round wire having one end pointed and screw-threaded and the other end formed into an eye or loop surrounding that portion of the hook immediately in front of the screw-threaded shank. It is usual, also, to form hangers of this class with two hooks, the connecting-piece between the upper and the lower hook constituting a brace.

According to my invention I dispense with the eye or loop above referred to and am thus enabled to arrange all parts of the hook in the same plane, thus greatly facilitating packing. This I accomplish by arranging the two ends of the wire side by side to form the shank portion of the hook, permanently securing these ends together, and pointing and screw-threading them in the usual way. By this construction there are no free ends of the wire in any portion of the hook after it is once set up. Where the hanger is made of round wire and is provided with two hooks—an upper and a lower one—and the lower rear end of the bracing portion is supported against the upright back piece or wire which connects the lower hook to the shank, there is a liability of the brace-wire's slipping from the rear upright wire, as the contacting surfaces are quite small.

In my improved hook I use half-round wire and secure the ends thereof together and point and screw-thread them in the way above described to form a securing-shank. I thus not only dispense with the eye usually employed, but, as will be readily apparent, there is considerable saving in material, and yet I maintain the desired strength and rigidity, and do so without unnecessary bends, coils, or eyes. The downwardly-inclined brace usually employed in hooks of this class is employed in my hook, and I connect the lower rear end of

this brace with the vertical rear portion of the hook by bringing together the flat inner portions of the half-round wire, so that in use there is not that liability for the brace to slip from the rear wire that there is in hooks of this class as usually made.

In the accompanying drawings, Figure 1 is a side elevation of one of my improved hooks with the two ends of the wire forming the screw-pointed shank welded together. Fig. 2 is a similar view showing the two ends of the wire forming the screw-point twisted together. Fig. 3 is a detail view showing the two ends of the wire twisted together and turned down to a point, the screw-thread not yet having been cut thereon; and Fig. 4 is a view showing a ceiling-hook made according to my invention.

The wire is bent as follows, half-round wire being shown in all the figures:

Referring to Fig. 1, the horizontal wire *a* of the upper hook, the rear end of which forms one-half of the screw-threaded shank *x*, extends forward the required distance, is then bent upwardly to form the point *A'* of the upper hook, is then turned down, and is carried rearwardly to form the brace *A²*. At the point *b* the wire is bent downwardly, then curved out and up to form the point *b'* of the lower hook, is then turned down, and carried back in contact with the other portion of the wire between *b* and *b'*. It then extends upwardly to the horizontal portion *a*, where it is abruptly turned at right angles and extends rearwardly parallel with and in contact with the rear end of the portion *a* of the wire. Half-round wire being used, the flat sides of the ends lie against each other and practically form a round wire. This wire may be welded or swaged together electrically or otherwise permanently secured, and upon the point thus formed the screw-thread is cut. It will be observed that the two vertical portions of the wire *b²* *b³* abut against each other, and as their abutting surfaces are flat a firm seat or support is provided to receive the rearward thrust of the brace *A²*, and no matter what the weight hung upon the upper hook may be there will be no tendency of the portion of the wire *b³* to slip off of the vertical portion *b²*. The hook has, therefore, great strength. The bends necessary to form it are of the ut-

most simplicity, and consequently the cost of manufacture is reduced. Furthermore, hooks so made pack more closely, because they are perfectly flat, all portions of the wire being in the same plane, there being no eyes around the shank, as is ordinarily the case in hooks of this class.

In Fig. 2 I have shown a hook of substantially the same construction. It differs from the hook already described only in two minor particulars: First, the two ends forming the pointed shank are twisted together and the screw-thread is then cut thereon. Fig. 3 shows the ends twisted together and turned down before the thread is cut. Second, the brace A^2 , instead of being carried downwardly and rearwardly from the end of the upper hook, extends back a short distance parallel and in contact with the horizontal portion a , as seen at a^3 , and then extends rearwardly and downwardly to form the brace. The formation of the lower hook is as already described. By employing half-round wire with a less weight of metal I may have a greater bearing-surface—that is, greater transverse width of metal—than where all-round wire is used, and at the same time the strength of the hook is increased. By the use of half-round wire, therefore, aside from the particular manner of bending, I am enabled to reduce the cost and improve the character of the hook. Further, I obtain a firm bearing for the brace against the vertical portion b^2 of the wire, as already mentioned, and by the use of wire of this character I am enabled to bring the ends together and form the screw point or shank merely by welding or twisting.

In Fig. 4 I have shown a ceiling-hook in which the ends of the wire are brought together and screw-threaded. The bending is plain from the drawings and needs no specific description. The wire may extend from the screw-shank directly down to form the

opposite hooks, as shown in dotted lines, or may be given an outward bend, as shown at y , to form a shoulder to limit the entrance of the screw-threaded shank into its support and add to the strength of the hook by bracing it.

I do not in this application claim, broadly, a hook formed of half-round wire in which the vertical portion of the brace has its flat face resting against the flat face of the vertical rear portion of the hook, these features being claimed in my application, Serial No. 425,735, filed March 21, 1892.

I claim as my invention—

1. A hook or hanger formed from a single piece of wire, with its two ends brought together, arranged side by side, and permanently secured, pointed, and screw-threaded to form a securing-shank, substantially as described.

2. A hanger formed from a single piece of half-round wire, having upper and lower hooks, each composed of two portions of the wire, and having a securing-shank formed by the two ends of the wire, which have their flat sides brought together, permanently secured, tapered, and screw-threaded, substantially as described.

3. A hanger formed of half-round wire, with its ends brought together and arranged side by side and permanently secured, pointed, and screw-threaded to form a securing-shank, and having the horizontal portion a , the downwardly and rearwardly extending brace A^2 , the lower hook, and the vertical portion b^2 , against the flat face of which the flat face b^3 of the lower portion of the brace A^2 has its bearing.

In testimony whereof I have hereunto subscribed my name.

ROBERT GORTON.

Witnesses:

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