April 14, 1942. I. HARTER 2,279,460

CLOTHESPIN

Filed Sept. 5, 1940

Fig. 1

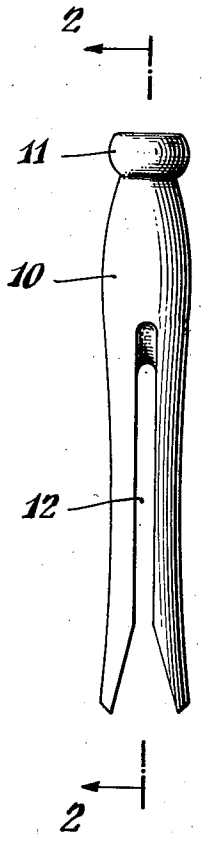
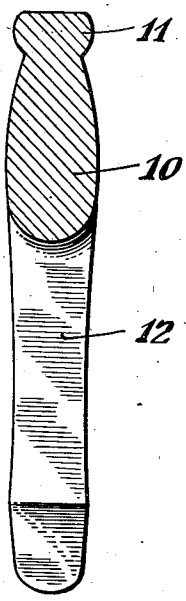



Fig. 2




INVENTOR
Isaac Harter
BY
Arthur A. Rentz
his ATTORNEY

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# UNITED STATES PATENT OFFICE

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## CLOTHESPIN

Isaac Harter, Akron, Ohio

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4 Claims. (Cl. 24—138)

This invention relates to clothespins, and aims to provide an improved clothespin made of a single piece of wood or other suitable material which, even when made of the same size and shape as the conventional wooden clothespin and of the same kind of wood, shall have greater resistance to splitting from the crotch under a force tending to spread the legs of the pin apart such as occurs in the ordinary use of the pin, and which has, therefore, a longer average useful life, and which shall be only little more costly to make.

The conventional single-piece wooden clothespins of approximately cylindrical form and slotted longitudinally from one end for approximately two-thirds of their length have a saw-cut crotch which has right angle corners both in the plane of the slot and transversely thereto. Such pins, having the grain of the wood running lengthwise of the pin, are very liable to split in use under the spreading strain on the legs resulting from forcing the legs over fabric looped over the clothes line. It has been proposed to reduce this liability to splitting by curving the crotch in one direction. This, however, makes the pins only slightly less liable to split when used.

In accordance with the present invention, the crotch of the pin is made convexly curved, and most desirably semi-circular, in the plane of the slot, and concavely curved, and most desirably semi-circular, at right angles to said plane. Careful tests have shown that such double-curve-crotch pins have a much higher resistance to splitting under a spreading force applied to the legs than the conventional square-crotch pins of the same shape, size and material.

The accompanying drawing shows a clothespin of the conventional shape having a crotch shaped according to the invention. In said drawing:

Fig. 1 shows the pin in side elevation looking in the direction of the plane of the slot between the legs; and

Fig. 2 is a section taken on line 2—2 of Fig. 1.

Referring to the drawing, the clothespin illustrated is made of a single piece of wood or other suitable material of the conventional generally cylindrical shape, having a body portion 10 with the usual head 11 at one end thereof, and slotted longitudinally from the other end for approximately two-thirds of its length. The drawing shows the pin of the usual length of about 4¼ inches with the greatest diameter at the body portion of a little over ⅝ of an inch, the slot 12 being $\frac{5}{32}$ of an inch wide and flared outward in the usual manner at and near the open end of the pin. The crotch of the slot is convexly semi-circular in the plane of the slot, as appears in Fig. 2, and concavely semi-circular at right angles to said plane, or across the slot, as shown by Fig. 1. All weakening sharp angles at the crotch are thus avoided, and stresses resulting from a spreading force applied to the legs of the pin, instead of being concentrated at certain points as in a square-cut crotch, are distributed by the double curve form of the crotch, thereby greatly lessening the liability to splitting.

The new clothespins with their double-curve crotch are, when made of wood, readily produced by cutting the slot by means of a saw having a convex semi-circular cutting edge and by rotating the pins in the plane of the saw through 180° on a radius equal to one-half the diameter of the pin at the end of the slot-cutting operation.

While full semi-circular curvature of the crotch in both directions has been found most desirable for attaining the object of the invention, that is, reduction of liability of the pins to splitting, while at the same time being readily produced as above stated, much advantage may be secured with convex and concave curvatures which are not fully semi-circular or which are not an arc of a circle, and it may be that somewhat greater resistance to splitting might be obtained by using some curve other than an arc of a circle for one or both of the curvatures of the crotch. Obviously, the shape of the clothespin as a whole and the size of the pin may be varied substantially.

What is claimed is:

1. A clothespin formed of a piece of material slotted lengthwise from one end and having a crotch extending diametrically across the piece which is convexly semi-circular in the plane of the slot and concavely semi-circular at right angles to said plane.

2. A clothespin formed of a piece of material slotted lengthwise from one end and having a crotch extending diametrically across the piece which is convexly curved in the plane of the slot and concavely curved at right angles to said plane.

3. A clothespin formed of a piece of wood slotted lengthwise from one end and having a crotch extending diametrically across the piece which is convexly semi-circular in the plane of the slot and concavely semi-circular at right angles to said plane.

4. A clothespin formed of a piece of wood slotted lengthwise from one end and having a crotch extending diametrically across the piece which is convexly curved in the plane of the slot and concavely curved at right angles to said plane.

ISAAC HARTER.