May 31, 1949. B. BURNS 2,471,606

CLOTHESPIN

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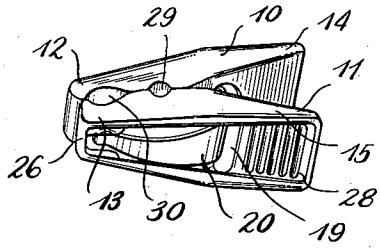


Fig. 1

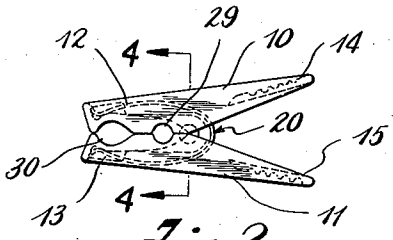


Fig. 2

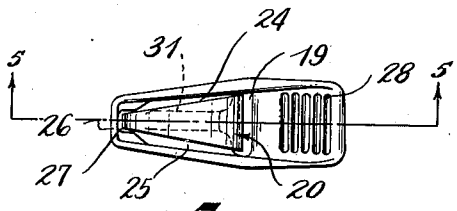


Fig. 3

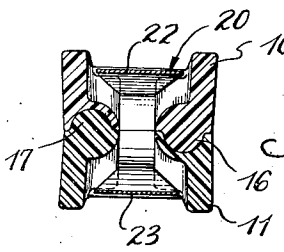


Fig. 4

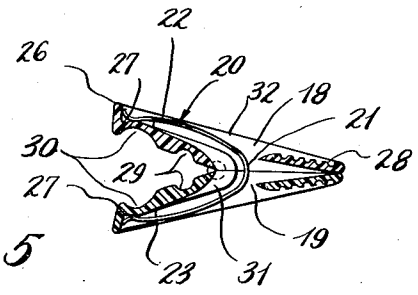


Fig. 5

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CLOTHESPIN

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3 Claims. (Cl. 24—137)

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This invention relates to improvements in clothespins and like clamping devices.

An object of the invention is to provide an improved clothespin formed of two opposed parts providing opposed jaws and opposed handle portions and to provide a novel and simple spring that can be easily assembled with the parts to urge the jaw portions into mutual engagement.

Another object of the invention is to provide an improved clothespin or the like wherein the two opposed parts may be formed of a moldable material such as a synthetic resin plastic. The use of this material is desirable in that it presents a smooth surface and does not readily weather and in so doing become rough or discolored. Such materials generally possess certain qualities with respect to stresses that they are capable of withstanding and ordinarily cannot be subjected to heavy bending stresses.

It is, therefore, another object of the invention to provide an improved clothespin consisting of two opposed parts providing opposed jaws and handles and to provide a spring arrangement which will urge the jaws into mutual engagement without subjecting the material of the parts to destructive stresses.

Another object of the invention is to provide an improved clothespin wherein the opposed parts are duplicates of each other thus avoiding the necessity of making the parts of the clothespin in pairs and to provide a construction wherein the spring may be assembled with the parts very readily to thus reduce assembly costs.

With the foregoing and other objects in view, which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawings for an illustrative embodiment of the invention, wherein:

Figure 1 is a perspective view of the improved clothespin embodying the present invention;

Fig. 2 is a view in side elevation of the same;

Fig. 3 is a top plan view of the same;

Fig. 4 is a view on an enlarged scale taken substantially upon the line 4—4 upon Fig. 2; and

Fig. 5 is a longitudinal vertical section through the clothespin and illustrating it in its fully opened position. This section may be regarded as taken substantially upon the line 5—5 upon Fig. 3.

Referring to the accompanying drawings wherein similar reference characters designate similar parts throughout, the improved clothespin comprises two opposed parts generally indicated at 10 and 11. These parts provide opposed

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jaw portions 12 and 13 and handle portions 14 and 15. The handle and jaw portions are angularly related to each other so that when the jaws are closed the handles are opened or spaced from each other as shown on Fig. 2. Conversely as the handles are pressed together the jaws are opened as illustrated in Fig. 5. Near the juncture between the handle and jaw of each part there is a small protuberance arranged adjacent the side thereof. Thus the part 10 has a protuberance 16 and similarly the part 11 has a protuberance 17. These protuberances are receivable in complementary recesses in the opposed parts and establish pivotal connections between the parts at the junctures of the jaws and handles. Thus the part 10 may rock with respect to the part 11 and lateral displacement of one part relatively to the other is prevented by the boss and socket connection between the parts. As each part has a protuberance adjacent one side and a recess adjacent the other the two parts may be identical and need not be made in the form of complementary parts of a pair.

Adjacent the pivotal connection thus provided aligned apertures 18 and 19 are formed in the handle portions and a C-shaped spring 20 has its crotch 21 disposed in these apertures and its arms 22 and 23 extending forwardly therefrom and positioned against the backs of the jaws 12 and 13. This spring is biased to normally urge the jaws into mutual engagement. The arms of the spring preferably taper forwardly as shown in Fig. 3 so that the action of the spring is somewhat distributed between the crotch and along the length of the arms. The sides of the two members 10 and 11 have continuous longitudinally extending flanges 24 and 25 which cooperate with the transverse flanges 26 at the forward ends of each of the members to define recesses on the backs of the jaws in which the outwardly bent forward ends of the arms 22 and 23 are confined and these ends of the spring preferably seat on the backs of the jaws immediately behind the flanges 26 in shallow recesses 27. The outer surface of the handle portions may be serrated or embossed as indicated at 28 between the flanges to provide an anti-slipping surface, when the clothespin is grasped and its handle portions pressed together.

The particular formation of the opposed surfaces of the jaws is immaterial but in the construction illustrated, these jaws are provided with semi-cylindrical recesses 29 of a suitable size to cooperate to enclose a clothesline therebetween.

Forwardly of these recesses there may be additional recesses **30**.

On the backs of the jaws there are formed grooves **31** (see Figs. 3 and 5) which in width are substantially equal to the width of the forward ends of the arms **22** and **23**. These grooves meet or merge as at **32** at the rear ends of the jaws. The purpose of these grooves is to facilitate the application of the spring to the two opposed parts. Thus when the two opposed parts are assembled together the juncture of the grooves at **32** presents a relatively narrow edge and a spring may have its arms applied to opposite sides of this edge and on being pressed forwardly the arms of the spring are wedged apart or are separated to bias the spring. During the forward movement of the spring the narrow forward ends of the arms are caused to follow the grooves until they seat in the recesses **27**.

From the above-described construction it will be appreciated that the two opposed parts may be exact duplicates of each other, thus reducing the number of loads required to cast these parts. Thus as the parts are exact duplicates of each other no time or labor is required in properly assembling dissimilar parts or a pair. When the parts are assembled together the spring may be easily and quickly applied by merely pressing the spring forwardly through the aligned apertures and causing its ends to be spread in the course of following the grooves **31** to the recesses **27**. It is to be observed that as the jaw portions **12** and **13** are subjected to virtually direct compression under the action of the spring that the parts **10** and **11** are not subjected to stresses detrimental to plastics during normal use. Many plastics are subject to "cold flow" but if "cold flow" is present in the plastic employed it does not detrimentally effect the construction or operation of the clothespin.

Various changes may be made in the details of construction without departing from the spirit and scope of the invention as defined by the appended claims.

I claim:

1. In a clothespin: a pair of members, comprising jaw portions, means providing for relative pivotal movement of said members about a transverse axis adjacent the rear ends of said jaw portions, each member also comprising a handle portion, said handle portions extending rearwardly from said axis and diverging outwardly from each other to provide a space therebetween when said jaw portions are pivoted into contact with each other, an opening through each member, said openings providing unobstructed and generally parallel straight passageways extending forwardly from the space between said handle portions and along outer surfaces of the associated jaw portions, and a C-shaped spring having its bight portion between said handle portions and its legs extending forwardly generally along said passageways and into engagement with the said outer surfaces of said jaw portions.

2. A clothespin as defined in claim 1 wherein the transverse edges of said openings nearest said jaw portions are defined by rearwardly facing relatively sharp edges closely adjacent each other when said jaw portions are closed to define a rearwardly facing wedge.

3. A clothespin as defined in claim 1 wherein the free end portions of the legs of said springs are bent to diverge outwardly away from each other.

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