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CLOTHESPIN

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Fig. 1

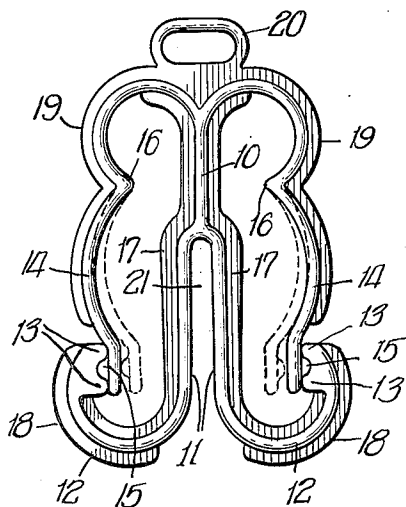


Fig. 2

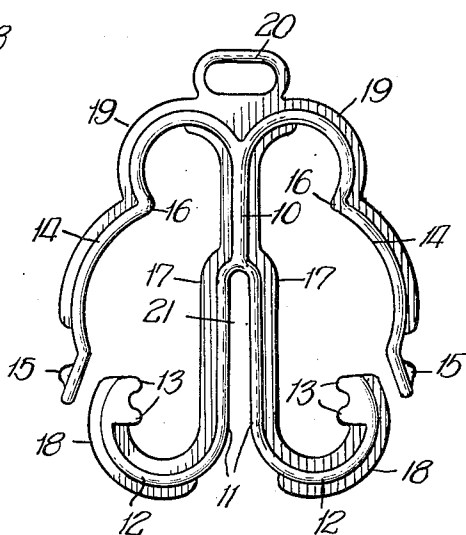
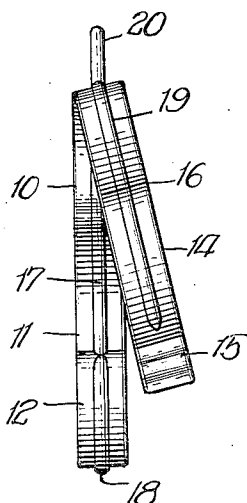


Fig. 3



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CLOTHESPIN

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4 Claims. (Cl. 24—137)

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The present invention relates to clothes pins or similar fasteners and has for its main object the provision of a clothes pin molded or struck out in a single piece and embodying a stationary jaw and a coacting movable jaw, between which jaws laundry or other objects may be inserted and engaged.

Another object of the present invention is the provision of a clothes pin formed out of single, oblong, rigid and closed piece of material slit at one point thereof to define a pair of jaws between which laundry or other articles may be inserted and held in a clamped position.

A still further object of the present invention is the provision of a clothes pin or like fastener which may be formed into oval, circular or like closed shape and provided with a stationary jaw and a coacting movable jaw, between which laundry or other articles may be inserted and held in a clamped position.

A still further object of the present invention is the provision of a clothes pin made out of a single, continuous and resilient piece of material having a stationary jaw at one end, and a movable jaw at the opposite end thereof, the latter normally contacting the former along its inner face, between which jaws laundry or other articles may be inserted and held in a clamped position, said movable jaw being capable of being manually depressed away from said stationary jaw preparatory to the insertion of the articles between the two jaws.

Another object of the present invention is the provision of a suitable method of forming a clothes pin of the character hereinabove indicated by molding the same out of plastic or like material.

A still further object of the present invention is the provision of a method of molding a clothes pin of the character hereinabove indicated, which method may broadly include molding a clothes pin into such a shape as to cause the movable jaw to remain outwardly of the stationary jaw and before the mold has completely set, to bring said movable jaw to the opposite side of the stationary jaw, to thereby increase the resiliency of said movable jaw.

With the above general objects in view and others that will appear as the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawing, and pointed out in the appended claims.

In the drawing forming a part of this application and in which like designating characters

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refer to corresponding parts throughout the several views:

Fig. 1 is a side elevation of the clothes pin embodying the present invention;

Fig. 2 is a side elevation of the clothes pin in its form immediately after the same has left a mold, when the pin is made of plastic or similar material; and

Fig. 3 is an end elevation of the pin, illustrating a step in the method of moving the movable jaw past the stationary jaw in order that the former may bear against the latter from the opposite or inner face thereof.

Referring to the present drawing in detail there is shown a pin which includes a stem 10 having a lower bifurcated end to provide a pair of spaced bars 11. The free end of each of said bars 11 terminates in an arcuate stationary jaw 12 which is directed outwardly from and upwardly toward the median line coincidental with said stem 10. As is seen in Figs. 1 and 2, the outer free, lower end of each jaw 14 has at its outer wards its respective bar 11, and there, on its inner face is provided with a pair of spaced, substantially parallel extensions 13, which are in a transverse relation with the plane of the pin.

Projecting from the upper end of stem 10 is a pair of curved movable jaws 14 extending laterally and downwardly in opposite directions from the median line coincidental with stem 10. The free, lower end of each jaw 14 has at its outer face an integrally formed ridge 15, which, in the operative position of the two jaws, enters into the depression defined by extensions 13, as clearly seen in Fig. 1.

When laundry or any other object is inserted between stationary jaw 12 and movable jaw 14, the extensions 13 and the ridge 15 provide means for preventing the object held by the jaws from slipping therefrom.

The movable jaw 14 is manually depressed and moved toward bar 11, as indicated by the dotted line position shown in Fig. 1, in a spaced relation with respect to the stationary jaw 12 to facilitate the insertion of the objects to be held between the two jaws. Discontinuation of the manual pressure upon jaw 14 will cause the same to spring back into its normal operative position in contact with stationary jaw 12, as shown by the full lines in Fig. 1.

At a point opposite stem 10, each jaw 14 may be provided with an inwardly directed elbow 16, which tends to limit the flexing of the jaw, that is will permit flexing thereof from elbow 16 downwardly, as is indicated by the dotted lines

in Fig. 1, thereby preventing cracking of the jaw above elbow 16.

Stem 10, bar 11, jaw 12 and the base of jaw 14, all on their inner faces are provided with reduced, strengthening rib 17. The outer face of jaw 12 is provided with a similar rib 18. Thus, ribs 17 and 18 impart a sufficient degree of rigidity to prevent any flexing movement of the jaw 12. The outer face of each movable jaw 14 has a similar, reduced, strengthening rib 19 which, however, terminates adjacent the free end of the shiftable jaw 14 to provide clearance for insertion of the objects between jaws 12 and 14.

Said last named rib 19 fills the crotch defined by stem 10 and the branching bases of the movable jaws 14, and a portion thereof adjacent said crotch is formed into an eye 20 to form means for suspending the clothes pin from a hook, nail or the like.

The spaced bars 11 define a slot 21 into which clothes line or the like may be inserted and frictionally engaged therebetween, and constitutes an additional alternate means for suspending or supporting the present clothes pin.

It will be observed that the inherent, flexing nature of the material out of which the pin has been formed, such as plastic, will tend to cause the movable jaw 14 to flex normally away from stem 10 and bar 11 toward the free end of stationary jaw 12. It has been found however that when plastic material is used for making the pin, such material in time loses its flexibility and resiliency, perhaps due to frequent manual depressing of jaw 14 and its constant movement toward to or away from said stationary jaw 12, with the result that in time said movable jaw 14 will assume a permanent position spaced away from stationary jaw 12, thereby rendering the pin inefficient due to the inability of the two jaws to clamp firmly the object placed therebetween.

To obviate the above undesirable result, the present method has been devised and includes molding the clothes pin in the shape illustrated in Fig. 2 and not in the shape in which the parts thereof assume their ultimate position, illustrated in Fig. 1. The method contemplates molding the clothes pin so that the movable jaws 14 are disposed outwardly of stationary jaws 12 and to some extent in a spaced relation with the latter, as is seen in Fig. 2. Just how much space there should be between jaws 12 and 14 depends upon the type of plastic employed, the degree of ultimate flexibility desired to be imparted to the movable jaws 14, and the degree of the contactual clamping action of the latter upon stationary jaws 12.

When the clothes pin has been formed into the shape shown in Fig. 2, and before the plastic material employed has completely set, the next step in the method is to shift each of said movable jaws 14 in a lateral direction from the plane of the pin, position shown in Fig. 3, to bring the lower ends of jaws 14 out of the path of the upper ends of stationary jaws 12. Next, said jaws 14 are pressed in the direction toward stem 10 and bars 11, until the lower ends of said jaws 14 are past the upper ends of jaws 12. Thereupon said jaws 14 are moved laterally into the opposite direction until they are within the plane of the pin. This will automatically bring the lower ends of jaws 14 in contact with the inner faces of stationary jaws 12, with the ridges 15 interposed between the extensions 13, as seen in Fig. 1. The pin is then permitted to completely

set, and thereafter, the jaws 14 will permanently retain flexibility and resiliency, obviating the objection hereinabove mentioned.

From the hereinabove description it will be readily seen that each side of the clothes pin in effect constitutes a single continuous strip of curvilinear substantially C-shaped formation, having separated overlapping ends, which coact to define a stationary jaw and a movable jaw. Optionally the pin may be made just in that shape or double, as is shown in the drawing.

While there is described herein preferred embodiments of the present invention, it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the invention as claimed.

What I claim as new is:

1. A clothes pin comprising an elongated stem having a bifurcated end, each arm of said end having an arcuately shaped terminal section residing in a common plane and extending away from each other, and an elongated resilient member extending laterally from each side of said stem adjacent the other end thereof and disposed in said plane, said members extending from said stem in a direction toward said arcuately shaped sections, and the free ends of said members being movable toward and away from their respectively adjacent arcuately shaped terminal sections to cooperate therewith to form two jaws of a clamp.

2. A clothes pin comprising an elongated stem having a bifurcated end, each arm of said end having an arcuately shaped terminal section residing in a common plane and extending away from each other, an elongated resilient member extending laterally from each side of such stem adjacent the other end thereof, said members being disposed in said plane, said members extending from said stem in a direction toward said arcuately shaped sections, the free ends of said members being movable toward and away from their respectively adjacent arcuately shaped terminal sections to cooperate therewith to form two jaws of a clamp, a laterally extending elongated strengthening rib integrally formed on opposite sides of said stem, on one side of each arm, and a portion of each of said arcuately shaped terminal sections on one side thereof, and a laterally extending elongated strengthening rib integrally formed with each of said resilient members, said last-named ribs projecting away from said first-named ribs, and all of said ribs being disposed in said plane.

3. A clothes pin comprising an elongated stem having a bifurcated end, each arm of said end having an arcuately shaped terminal section residing in a common plane and extending away from each other, an elongated resilient member extending laterally from each side of said stem adjacent the other end thereof and disposed in said plane, said members extending from said stem in a direction toward said arcuately shaped sections, the free ends of said members being movable toward and away from their respectively adjacent arcuately shaped terminal sections to cooperate therewith to form two jaws of a clamp, and said other end of said stem having an enlarged portion projecting away from said arms, said enlarged portion having an aperture extending transversely thereof to receive a clothes line therethrough.

4. A clothes pin comprising an elongated stem having a bifurcated end, each arm of said bifurcated end being spaced apart to form an elon-

gated slot therebetween adapted to receive a clothes line therein, each arm of said end having an arcuately shaped terminal section residing in a common plane and extending away from each other, an elongated resilient member extending laterally from each side of said stem adjacent the other end thereof and disposed in said plane, said members extending from said stem in a direction toward said arcuately shaped sections, and the free ends of said members being movable toward and away from their respectively adjacent arcuately shaped terminal sections to cooperate therewith to form two jaws of a clamp.

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