Feb. 3, 1959 W. D. RICHARDSON 2,871,538

CLOTHESPIN

Filed May 4, 1956

FIG. 1

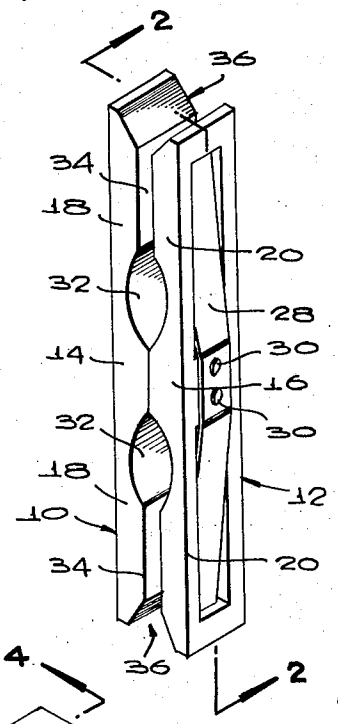


FIG. 2

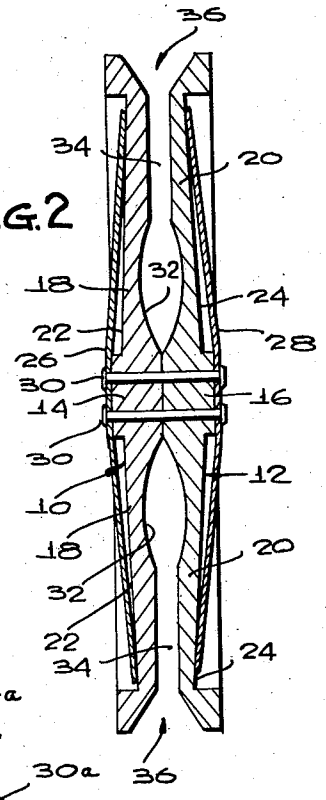


FIG. 3

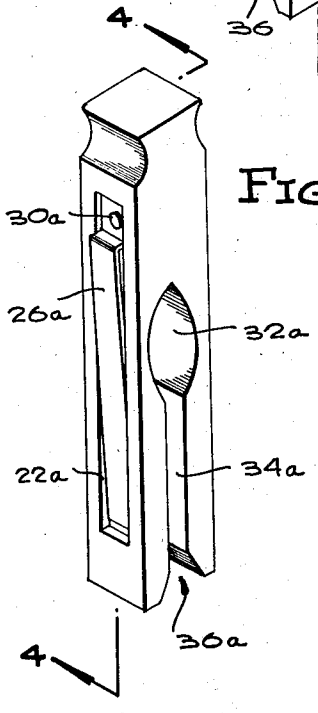
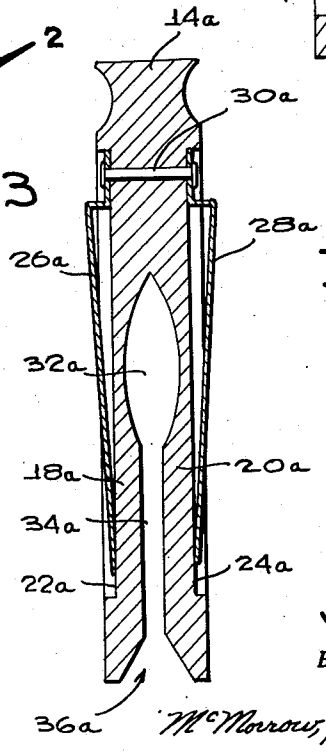


FIG. 4



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CLOTHESPIN

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1 Claim. (Cl. 24—137)

This invention relates to clothespins, and more particularly has reference to a clothespin so designed as to include spring means adapted, without manual adjustment thereof, to impart to the clothespin more strength than is true of clothespins previously devised, while at the same time providing a better grip upon the clothes.

Summarized briefly, the invention in one form comprises a double-ended clothespin having leaf springs at opposite sides thereof the end portions of which are engaged in outwardly facing recesses. The leaf springs are anchored intermediate their ends, by means of pins which also serve as connecting means for identical but opposite pin members, with the resultant construction providing a double-ended clothespin having longitudinal slots defined by and between the pin members at opposite ends of the device. The spaces between the pin members are so designed as to permit heavy, thick hems to be accommodated as well as thinner articles, and in each instance the spring arrangement is such as to provide a clamping action below the hems while at the same time preventing splitting of the pin. In another form of the invention, the clothespin is of the single-ended type, but in its basic essentials, is structurally and functionally like the double-ended clothespin.

Among important objects of the invention are the following:

To provide a clothespin that can be manufactured at low cost, considering the benefits to be obtained from the use thereof;

To so design the clothespin as to impart a high degree of strength thereto, thus increasing the useful life of the clothespin;

To so form and locate the springs relative to the clamping arms or pivot members of the device as to provide a particularly strong clamping action upon the clothes while at the same time permitting the arms to freely yield for the purpose of inserting or removing the clothes or other fabric articles engaged by the clothespin; and

To accomplish the above stated objects without the necessity of manually adjustable elements or other means that would tend to prolong the time required for engagement or disengagement of the fabric article.

Other objects will appear from the following description the claims appended thereto, and from the annexed drawing, in which like reference characters designate like parts throughout the several views, and wherein:

Figure 1 is a perspective view of a clothespin formed according to the present invention;

Figure 2 is a longitudinal sectional view therethrough on line 2—2 on an enlarged scale;

Figure 3 is a perspective view of a modified form showing a single-ended clothespin; and

Figure 4 is an enlarged longitudinal section on line 4—4 of Figure 3.

In Figures 1 and 2 there is illustrated a double-ended clothespin including elongated, oppositely but identically formed clamping members **10, 12** including midlength

portions **14, 16** respectively having flat, contacting inner faces. Portion **14** is integral with elongated clamping arms **18, 18** extending in opposite directions from the portion **14**, while portion **16** is correspondingly made integral with elongated clamping arms **20, 20**. In the outer surfaces of the arms **18** there are formed longitudinally extending, shallow recesses **22, 22**, similar recesses **24** being formed in the respective arms **20**.

As will be seen from Figure 2, the several longitudinal recesses are increased progressively in depth from their inner outer ends, so that the bottom walls of the recesses lie in planes inclined slightly out of alignment with the main or general planes of their associated clamping members.

A pair of identically but oppositely formed leaf springs **26, 28** is provided upon the clothespin, and medially between their ends, said springs are anchored by transversely extending pins **30** through the midlength portions **14, 16**. The pins are spaced closely apart longitudinally of the clothespin, and extend through aligned openings of the respective clamping members, thus to not only anchor the springs to their associated clamping members, but also to anchor the clamping members to each other medially between the ends of the clothespin.

From the location at which the members are anchored to each other, the respective clamping arms are spaced apart, to provide a slot-like recess opening inwardly from each of the opposite ends of the clothespin, adapted to receive a garment or other article to be gripped between the clamping arms. At the inner ends of the article-receiving spaced, shallow, concaved recesses are formed in the inner surfaces of the respective clamping arms, defining elliptically shaped enlarged portions **32** of the slot-like recesses **34** into which the articles are inserted. The enlarged portions adapt the clothespin for clamping engagement with the thickened portions of the gripped articles, as for example, the hems of various garments, and said thickened portions are effectively gripped without placing undue pressure upon the clothespin in a manner such as would tend to split the same.

In the outer ends of the slot-like recesses **34**, the clamping arms are beveled so as to define tapering throats **36** of said recesses, facilitating insertion of a clothesline and of the articles to be clamped.

As will be noted from Figure 2, the end portions of the springs are inclined obliquely to the bottom walls of the recesses, with the springs being disposed out of the recesses adjacent the points at which they are fixedly connected to the respective members **10, 12**.

This arrangement results in the free ends of the springs being disposed a minimum distance away from the walls of the slot-like, article-receiving recesses **34**. Further, said springs are so tensioned as to cause the free ends thereof to exert a continuous, resiliently yielding pressure on the free end portions of the clamping arms, tending to bias said arms toward each other, whereby to provide a highly efficient clamping action upon the fabric articles.

In Figures 3 and 4 there is shown a modification which structurally and functionally is similar to the first form. However, the modification provides a single-ended clothespin, with the clamping members being integrally connected at one end of the pin as at **14*a***. The clamping members in this form of the invention have been designated at **18*a***, **20*a*** respectively, and formed in the outer surfaces thereof are longitudinal recesses **22*a***, **24*a*** respectively, receiving leaf springs **26*a***, **28*a*** respectively.

The leaf springs have one end anchored to the clamping memebrs, at the location of the integral connection of the clamping members to each other, by means of a single pin **30*a***.

Defined between the clamping members is a slot-like recess 34*a*, the inner end of which has an enlarged portion 32*a* of elliptical shape, for the same purpose as the enlarged portions 32 of the first form of the invention. The outer end of the slot-like openings 34*a* merges into a tapered throat 36*a*, facilitating insertion of the clothesline and the articles to be gripped by the clothespin.

In this form of the invention, as in the first form, the springs, adjacent the points to which they are anchored to the clamping members, are offset outwardly, to be disposed exteriorly of the associated recesses 22*a*, 24*a*. Further, as in the first form, the springs are oppositely inclined obliquely to the planes of their associated clamping members, with the free ends of the springs exerting a continuous pressure against the free end portions of the clamping members tending to bias said clamping members in a transverse direction toward each other for effectively gripping the fabric articles.

A common characteristic may be noted in both forms of the invention. The clothespin is not of the "snap-on" type, and a space is provided therein particularly adapted to accommodate heavy hems. Said space further aids in preventing splitting of the clothespin while the flat or leaf springs are so arranged as to maintain pressure near each of the throats of the clothespin. This increases the grip of the clothespin upon the article and prevents spreading of the article-receiving space while also increasing the strength of the clothespin. No necessity for manual adjustment of any of the parts is required, with these characteristics of the device inherent in the same, due to the particular formation, relative arrangement, and points of connection of the several components.

It is believed apparent that the invention is not necessarily confined to the specific use or uses thereof described above, since it may be utilized for any purpose to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles, it being considered that the invention comprehends any minor change in construction that may be permitted within the scope of the appended claims.

What is claimed is:

A clothespin comprising at least one pair of elongated clamping members disposed in face-to-face contact at least at one location along the length thereof; at least one pin headed at its opposite ends and extending transversely of the members at said location to rigidly connect the members to each other in said face-contacting relation, the heads at opposite ends of the pin being disposed in close proximity to the outer surfaces of said members at said location, said members extending in laterally spaced, normally parallel relation from a location adjacent their fixed connection, defining therebetween an elongated, article-receiving slot open at one end, said members having outer surfaces formed with shallow longitudinal recesses extending from the location of said connection to locations adjacent said one end of the slot, said recesses, at the second named locations, having end walls extending transversely of the respective members; and a pair of leaf springs one end of which is disposed in face-contacting relation to said outer surfaces of the members, at the location of said pin, said leaf springs being tightly clamped between said outer surfaces and the respective heads of the pin, so as to be fixedly anchored to the respective members at said one end of the leaf springs by the pin, said springs extending within the recesses and slidably contacting the members at the other ends of the springs, the springs being tensioned at said other ends thereof to resiliently, yieldably oppose spreading of the members from their normal parallel relation, said other ends of the springs, in the normal relation of the members, being spaced longitudinally of the recesses from said end walls and moving toward the end walls into engagement therewith on spreading of the members, so as to limit the members against being spread beyond a predetermined extent.

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