June 13, 1939. R. E. WINKLER 2,162,045

CLOTHESPIN

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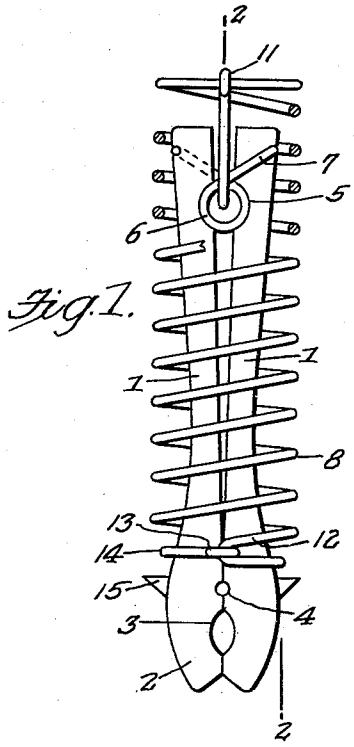

Fig. 1.

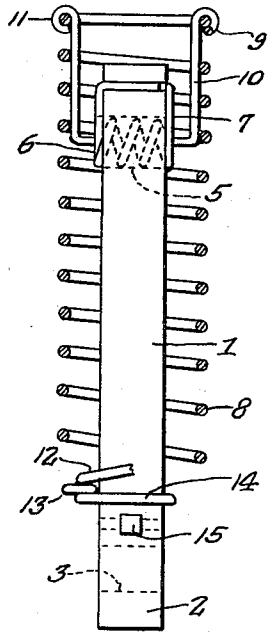

Fig. 2.

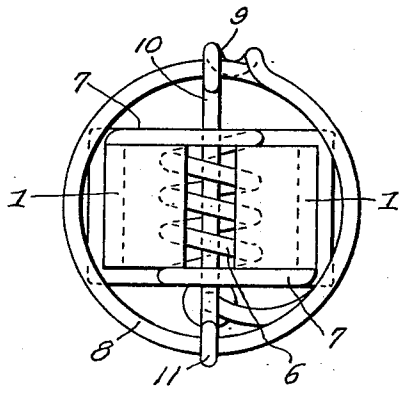

Fig. 3.

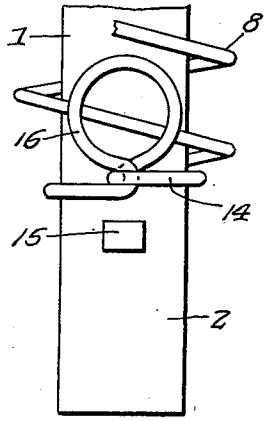

Fig. 4.

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Fig. 7.

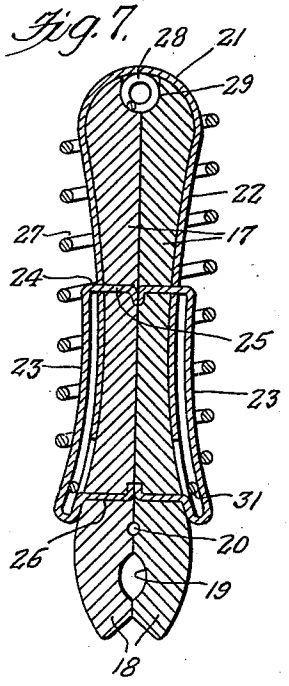
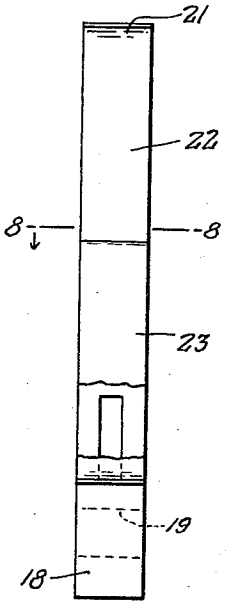


Fig. 6.



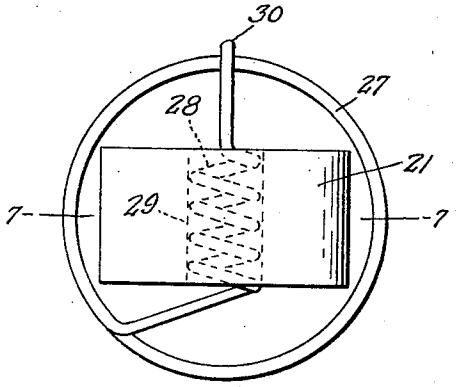


Fig. 5.

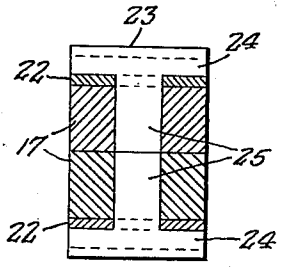


Fig. 8.

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CLOTHESPIN

Ralph E. Winkler, Helena, Mont.

Application October 5, 1938, Serial No. 233,451

5 Claims. (Cl. 24—137)

The present invention relates to new and useful improvements in clothespins and has for its primary object to provide, in an article of this character comprising a pair of coacting jaws, a novel construction and arrangement whereby said jaws will be firmly pressed together in a manner to securely clamp the clothes on the line.

Another very important object of the invention is to provide a clothespin of the aforementioned character comprising a construction and arrangement which is such that the device may be applied and removed with one hand.

Other objects of the invention are to provide a clothespin of the character described which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in side elevation of an embodiment of the invention, an upper portion of the main spring being broken away.

Figure 2 is a view in elevation taken at right angles to Fig. 1, the spring being in vertical section substantially on the line 2—2 of Fig. 1.

Figure 3 is a top plan view.

Figure 4 is an elevational view of the lower portion of the device, showing a slight modification.

Figure 5 is a top plan view of another form of the invention.

Figure 6 is an elevational view of the embodiment shown in Fig. 5, a portion of one of the guides being broken away.

Figure 7 is a vertical sectional view, taken substantially on the line 7—7 of Fig. 5.

Figure 8 is a view in horizontal section, taken substantially on the line 8—8 of Fig. 6.

Referring now to the drawings in detail, and to Figs. 1 to 3, inclusive, thereof in particular, it will be seen that the reference numeral 1 designates a pair of swinging complemental jaws of suitable material, preferably wood, said jaws being of substantially the shape shown to advantage in Fig. 1 of the drawings and including enlarged free end portions 2. The faces of the jaws 1 have formed therein pairs of opposed large and small recesses 3 and 4, respectively, for the reception of large and small clotheslines.

The upper end portions of the jaws 1 have formed therein opposed recesses 5 which accommodate a coil spring 6 on which said jaws fulcrum. At its ends, the coil spring 6 terminates in arms 7 which are engaged in grooves provided therefor in the outer sides of the jaws 1 above the coil spring in a manner to open said jaws as well as to retain same on said coil spring.

Encircling the jaws 1 is a clamping spring 8 of the coil type. The uppermost coil of the spring 8 terminates in a loop 9 (see Fig. 3) which is crimped or clamped on the subjacent coil of said spring. From the loop 9 an integral, substantially U-shaped member 10 extends downwardly in the coil spring 8, the bight portion of said member 10 passing through the coil spring 6. This is shown to advantage in Fig. 2 of the drawings. The other end of the U-shaped member 10 is secured to the upper coil of the spring 8 by a loop 11. It will thus be seen that the upper end of the jaw clamping spring 8 is connected to the upper end portions of said jaws through the coil spring 6. It will also be noted that the spring 6 extends upwardly beyond the upper ends of the jaws 1.

At its lower end, the coil spring 8 is reversed, as at 12 and secured at its end through the medium of a loop 13 in a manner to provide a rigid slip ring or the like 14 which is slidably engaged with the enlargements 2 of the jaws 1 for closing said jaws when said spring 8 expands. Stops 15 project from the enlargements 2 for positively preventing the slip ring 14 from passing over said enlargements at all times such, for example, as after wear has occurred or the wood from which the jaws have been made has shrunk.

It is thought that the operation of the device will be readily apparent from a consideration of the foregoing. To open the jaws 1, the slip ring 14 is held between the thumb and second finger of one hand and the index finger of that hand is engaged with the upper end of the coil spring 8. Then, by compressing the coil spring 8 in an obvious manner the slip ring 14 is moved upwardly on the jaws 1 thus permitting the spring 6 to open said jaws. The jaws 1 are then engaged over the clothes on the line after which the coil spring 8 is permitted to expand. As the coil spring 8 expands the slip ring 14 is forced downwardly on the enlargements 2 on the free end portions of the jaws 1 in a manner to clamp said jaws on the line.

In the slight modification shown in Fig. 4 of the drawings, diametrically opposite side portions of the slip ring 14 are twisted and formed to

provide upwardly extending loops 16 for receiving the thumb and second finger of the hand in which the pin is being held thereby facilitating holding the slip ring when the coil spring 8 is compressed.

Referring now to Figs. 5 to 8, inclusive, of the drawings, it will be seen that the reference numeral 17 designates a pair of elongated jaws of suitable material, preferably wood, having inwardly curved outer faces and formed to provide enlarged free end portions 18. The opposed faces of the jaws 17 have formed therein pairs of opposed, complemental large and small recesses 19 and 20, respectively, for receiving comparatively large and small clotheslines.

The jaws 17 are held together through the medium of a substantially U-shaped clip 21 of suitable resilient sheet metal the legs 22 of which are curved inwardly to conform to the outer faces of said jaws 17 with which said legs are engaged. At their lower ends, the legs 22 of the clip 21 are bent upon themselves in a manner to provide elongated guides 23. The guides 23 terminate, at their upper ends, in inturned flanges 24 (see Fig. 8) which abut the legs 22 of the clip 21. Anchoring tongues 25 project inwardly from the flanges 24. The tongues 25 pass through the legs 22 of the clip 21 and the jaws 17 and are clinched at their inner ends. This is shown to advantage in Fig. 7 of the drawings. Also, tongues 26 which are struck from the lower end portions of the legs 22 of the clip 21 pass through the jaws 17 and are clinched, thus firmly securing said clip 21 in position on said jaws.

Encircling the jaws 17 and the clip 21 is a coil spring 27. Extending transversely from the uppermost coil of the spring 27 is an integral coil 28 on which the jaws 17 fulcrum at their upper ends. The upper end portions of the jaws 17 are recessed, as at 29, to accommodate the coil 28. The coil 28 terminates, at one end, in a loop 30 which is secured on the upper end of the spring 27. At its lower end, the coil spring 27 is formed to provide a slip ring 31 which is operable in the guides 23 for opening and closing the jaws 17. It will be observed that the guides 23 in which the slip ring 31 travels conform substantially to the curvature of the jaws 17. If desired, the slip ring 31 may be provided with thumb and finger receiving loops, such as those designated by the reference numeral 16 in Fig. 4 of the drawings.

The jaws 17 are normally held closed by the slip ring 31 of the coil spring 27. To open the jaws 17, the slip ring 31 is held between the thumb and second finger of one hand and the index finger of that hand is engaged with the upper or bight portion of the clip 21. The coil spring 27 is then compressed in a manner to cause the slip ring 31 to travel upwardly in the guides 23 thus opening or spreading the jaws 17. The pin is then engaged with the clothes on the line and the coil spring 27 is released. When released, the coil spring 27 expands and the slip ring 31 is forced downwardly in the guides 23 for clamping the jaws on the line.

It is believed that the many advantages of a clothespin constructed in accordance with the present invention will be readily understood and although preferred embodiments of the device are as illustrated and described, it is to be understood that further modifications and changes in the details of construction may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

1. A clothespin comprising a pair of swinging jaws, a coil spring encircling said jaws and anchored thereto at one end, a slip ring on the other end of the coil spring slidably engaged with the jaws for closing said jaws, and thumb and finger receiving members on said slip ring at diametrically opposite points.

2. A clothespin comprising a coil, a pair of elongated, complemental swinging jaws fulcrumed, at one end, on the coil, means on the ends of the coil for securing the jaws thereon, a coil spring encircling the jaws, an integral U-shaped member in one end portion of the coil spring extending through the coil, and a slip ring on the other end of said spring slidably engaged with the jaws for closing said jaws.

3. A clothespin comprising a pair of elongated, complemental swinging jaws, a substantially U-shaped, resilient clip mounted on said jaws, elongated, arcuate guides on the legs of said clip, a coil spring encircling the jaws and the clip, a slip ring on one end of said coil spring operable in the guides for opening and closing the jaws, and a transverse coil on the other end of said spring, said coil passing between one end portion of the jaws and constituting a fulcrum therefor.

4. A clothespin comprising a pair of swinging jaws, a coil spring encircling said jaws and having one end anchored thereto, a slip ring integral with the other end of said coil spring and slidably engaged with the jaws for closing said jaws, and a loop connecting one end of the slip ring to the juncture between the coil spring and said slip ring.

5. A clothespin comprising a fulcrum, a pair of jaws mounted for swinging movement on said fulcrum, a coil spring encircling said jaws and having one end connected to the fulcrum, and means on the other end of said coil spring for closing the jaws, said fulcrum comprising a coil extending transversely between the jaws.

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