No. 638,507. Patented Dec. 5, 1899.

F. S. GRAVES.

CLOTHES PIN.

(Application filed Mar. 13, 1899.)

(No Model.)

Fig. 1.

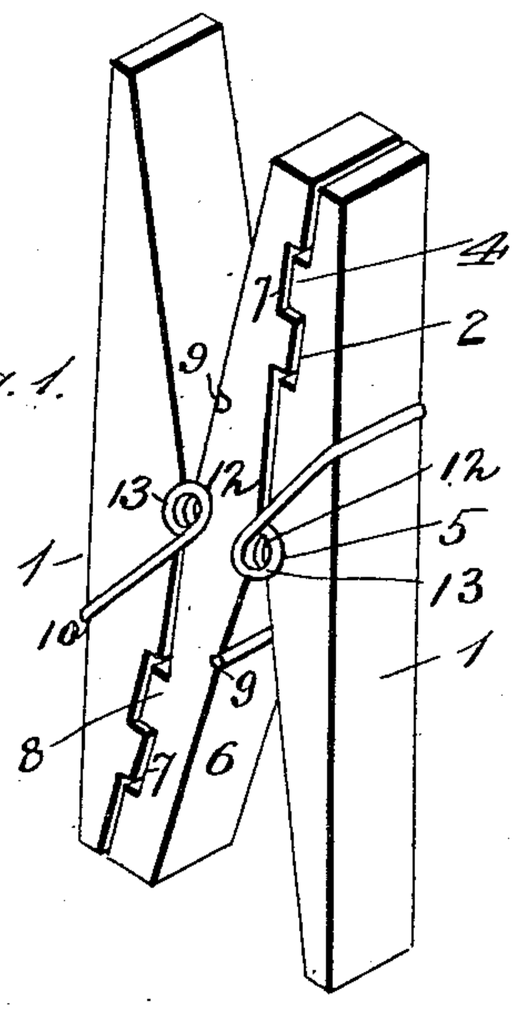


Fig. 2.

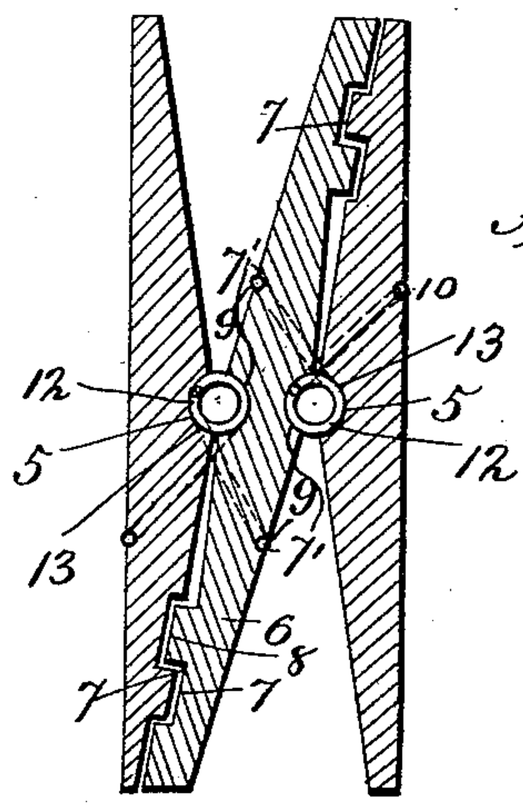


Fig. 3

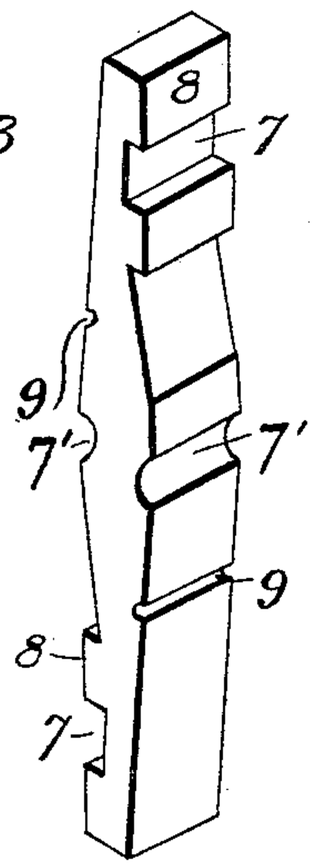


Fig. 4

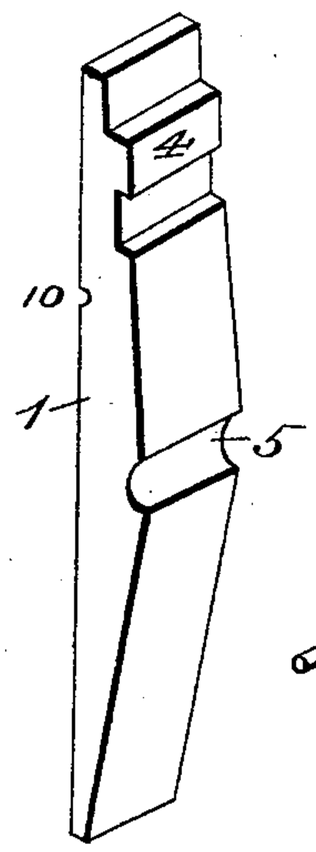
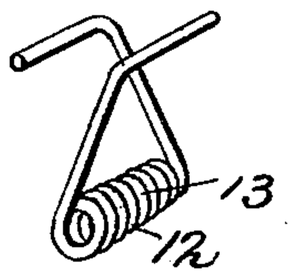


Fig. 5



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UNITED STATES PATENT OFFICE.

FREDERICK S. GRAVES, OF HANCOCK, MAINE.

CLOTHES-PIN.

SPECIFICATION forming part of Letters Patent No. 638,507, dated December 5, 1899.

Application filed March 13, 1899. Serial No. 708,910. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK S. GRAVES, a citizen of the United States, residing at North Hancock, in the county of Hancock and State of Maine, have invented new and useful Improvements in Clothes-Pins, of which the following is a specification.

My invention relates to improvements in clothes-pins of that class or description for which Letters Patent of the United States were granted to me August 16, 1898, No. 609,198. The object of the present invention is to provide an improved construction of springs which pivotally connect the three bars which form the jaws together, and also to improve the construction of said jaws, by which I secure superior advantages with respect to efficiency in use.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a clothes-pin constructed in accordance with my invention. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a detail perspective view of the central bar. Fig. 4 is a similar view of one of the outer bars. Fig. 5 is a detail perspective view of one of the springs.

In the said drawings the reference-numeral 1 designates the outer bars, each consisting of a piece of wood of suitable size beveled on the inner side from the center to each end and formed at one end with rectangular recesses 2 and corresponding teeth 4, these recesses and teeth being formed at opposite ends, respectively, of the bars. The other ends of said bars are made plain or smooth. These bars are also formed with central transverse semicircular grooves 5, which form bearings for the springs, hereinafter described.

The numeral 6 designates the central bar, beveled on each side from the center to the ends and formed with rectangular recesses 7 and teeth 8, corresponding with the recesses and teeth of the outer bars, which engage or interlock therewith. This bar 6 at opposite sides is formed with central transverse semicircular grooves 7′, which coincide with the grooves in the inner sides of the outer bars and in connection therewith form the seats or bearings for the springs. In opposite sides of the said central bar are grooves 9, one at each side of said central groove, and form seats for the ends of the springs. Similar grooves 10 are formed in the outer sides of the outer bars to receive the other ends of the springs. By this form of spring the construction is greatly simplified, so that when a large number are manufactured the saving in cost in the aggregate is very great.

The numeral 12 designates the springs, two being employed, each consisting of a piece of spring-wire bent at the center, forming a number of coils 13, which are seated in the said central grooves of the bars. The ends of these springs are then inclined upwardly and downwardly in opposite directions and the ends bent inwardly at right angles and engaging with the grooves in the central and outer bars at opposite sides to the central grooves.

In using the device the pin is connected with the clothes-line by separating one of the side bars from the central bar and inserting the line between these bars. The article of clothing which is to be suspended from the line is then secured between the other outer bar and the central bar.

By the above it will be seen that I dispense with the long straight bar shown in my said patent, and also with one of the bends of the same, thus not only cheapening the construction of the pin, but rendering the device more efficient in use, as the bars are not only held together more firmly or securely, but the grip of the spring is increased.

Having thus fully described my invention, what I claim is—

In a clothes-pin, the combination with the two outer bars beveled on their inner sides from the center to each end and formed with rectangular interlocking projections and recesses in the inner faces at opposite ends and formed in the outer faces or sides with transverse grooves and in the inner sides with semicircular transverse grooves, of the central bar beveled from the center to the ends on opposite sides formed with central semicircular grooves and with transverse grooves at opposite sides of said central grooves, and the springs each consisting of a single piece of

spring-wire bent into a number of central coils seated in said central grooves, and formed with oppositely-inclined upwardly and downwardly extending arms, the extremities of which are bent inwardly at right angles and engaged with the grooves at the sides of said central grooves, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FREDERICK S. GRAVES.

Witnesses:

JAMES S. REYNOLDS,

OMAR W. TAPLEY.