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D. K. WILLIAMS

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GARMENT HANGER

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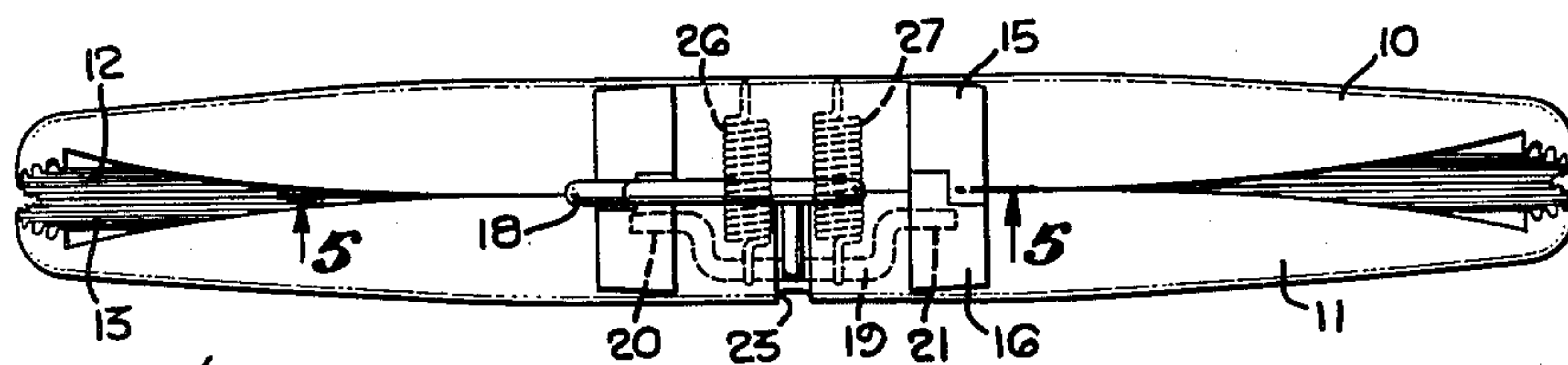


FIG. 1.

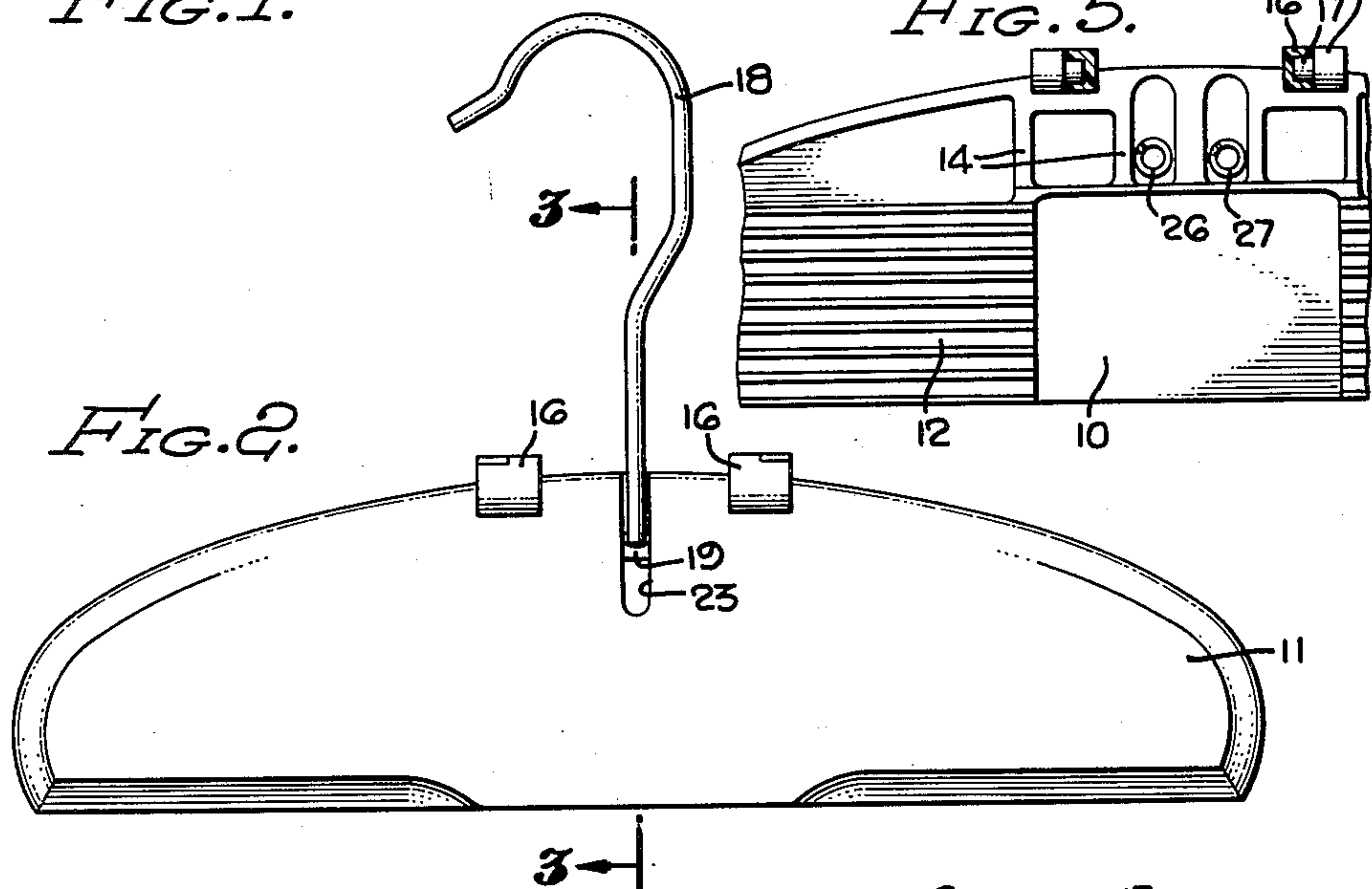


FIG. 2.

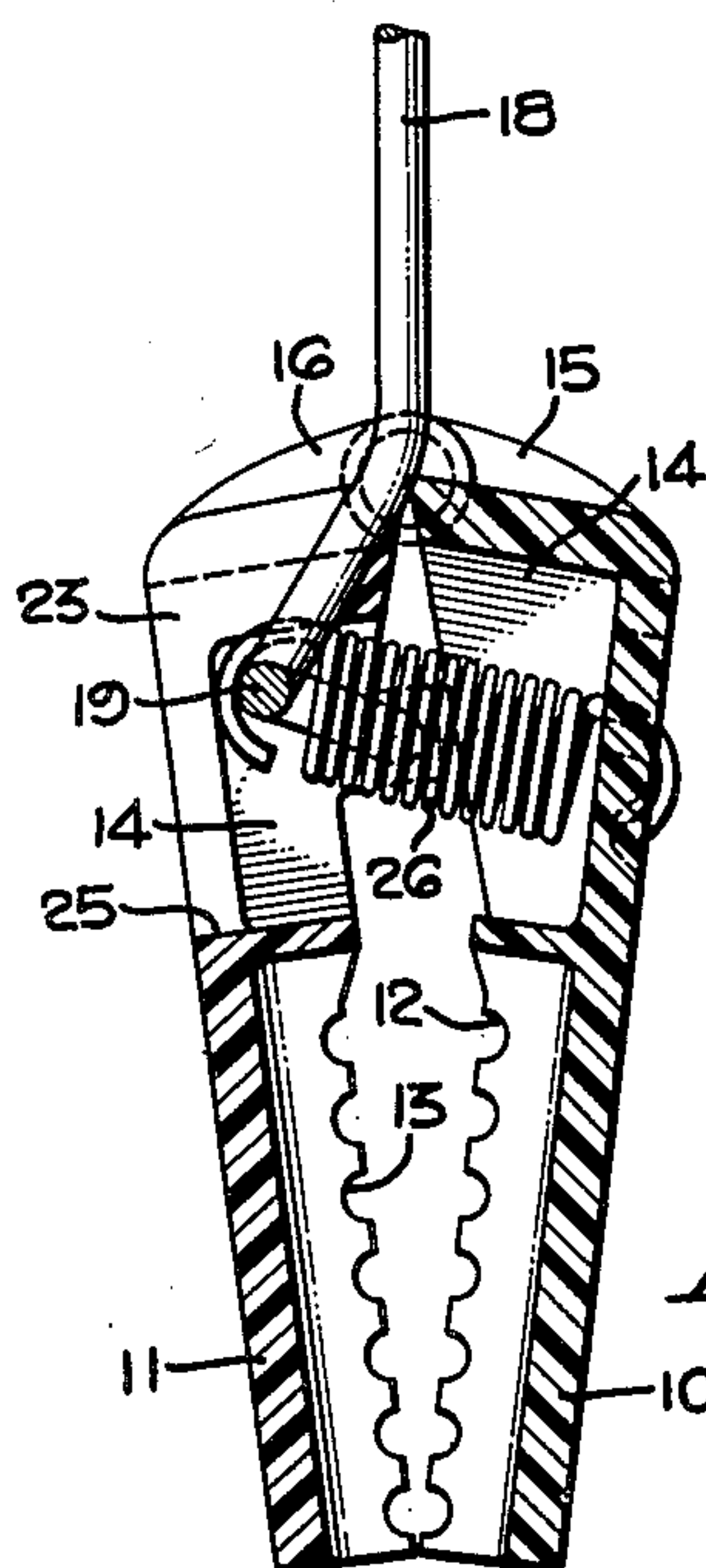


FIG. 3.

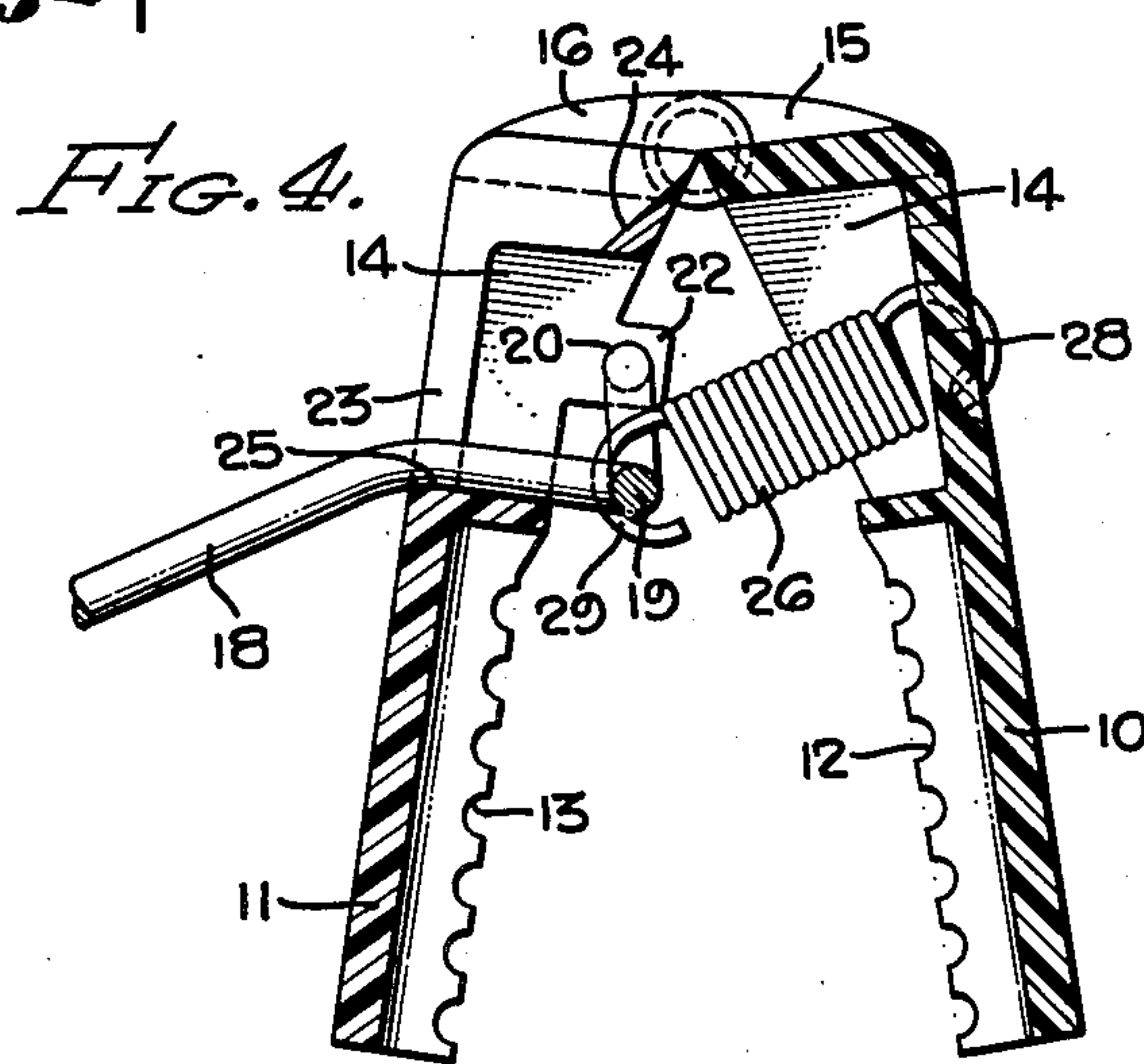


FIG. 4.

INVENTOR,  
DEWAYNE KENNETH WILLIAMS

BY

Hazard & Miller  
ATTORNEYS



## UNITED STATES PATENT OFFICE

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## GARMENT HANGER

Dewayne Kenneth Williams, Anaheim, Calif., as-  
signor to Williams Manufacturing Co., Inc.,  
Anaheim, Calif., a corporation of California

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2 Claims. (Cl. 223—96)

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This invention relates to improvements in pants or garment hangers.

A primary object of the invention is to provide a garment hanger consisting of two opposed jaws hingedly connected together and which have a novel spring and suspending hook arrangement so designed that when the suspending hook is swung into a suspending position a tension will be imposed upon the spring means yieldably urging the jaws into clamping engagement on a garment positioned therebetween. By reason of the yieldable effect of the spring means, although the jaws are urged to clamp upon the garment they may be forcibly spread in accommodating garments of varying thicknesses or when used to suspend a plurality of garments. On the other hand, when the suspending hook is swung into a releasing position, the tension imposed on the jaws urging them together is completely relieved allowing the jaws to be readily opened for removal or insertion of a garment.

More specifically, an object of the invention is to provide a garment hanger having the above-mentioned characteristics wherein the suspending hook is utilized as a lever having considerable mechanical advantage in developing a tension in the spring means and wherein, by reason of the suspending hook being caused to swing over center with relation to the line of tension of the spring means, the suspending hook will be automatically locked in its suspending position until forcibly displaced therefrom.

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 drawing for an illustrative embodiment of the invention, wherein:

Figure 1 is a top plan view of the garment hanger embodying the present invention;

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

Fig. 3 is a vertical section taken substantially upon the line 3—3 upon Fig. 2, and showing the position assumed by the parts when the suspending hook is in suspending position;

Fig. 4 is a view similar to Fig. 3, but illustrating the position assumed by the parts when the suspending hook is in releasing position; and

Fig. 5 is a partial view taken substantially upon the line 5—5 upon Fig. 1, in the direction indicated.

Referring to the accompanying drawing wherein similar reference characters designate similar parts throughout, the improved garment hanger

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consists of two opposed jaw members 10 and 11 preferably, but not necessarily, formed of a molded synthetic resin plastic. These members present opposed surfaces that are ribbed or serrated as indicated at 12 and 13 designed to grip upon a garment placed between the jaw members. At various other areas the jaw members may be cored out for lightness and to save material although various strengthening ribs such as those indicated at 14 may be left for strengthening purposes.

The jaw members 10 and 11 are hingedly connected together at their tops. Any suitable hinge construction may be used for this purpose although I preferably provide hinges which are also formed of a molded synthetic resin plastic, each hinge consisting of two opposed hinge members 15 and 16 the hinge member 16 being recessed to accommodate a pin 17 on the hinge member 15. These hinge members after being assembled together in hinging relationship, are cemented in place in recesses designed to partially receive them on the tops of the jaw members 10 and 11.

A suspending hook 18 is provided which is welded or otherwise rigidly secured centrally of a crank 19. This crank has trunnions 20 and 21 on its ends which are pivotally mounted in spaced arms, one of which is shown at 22, that are formed integral with the jaw member 11. Thus, the crank 19 can be forcibly rotated by means of the suspending hook 18 about the axis of the aligned trunnions 20 and 21 with the suspending hook swinging through a slot 23 formed in the jaw member 11. The top and bottom of this slot indicated at 24 and 25, respectively, limit the swinging movement of the suspending hook to the two extreme positions shown in Figs. 3 and 4, respectively. A pair of helical tension springs 26 and 27 are provided, each of which in its normal condition has its convolutions closed or in side by side relationship. In this position no tension is imposed or exerted by the springs urging the jaws into clamping relationship. Consequently, the jaws can be swung apart to permit of the insertion or removal of a garment. However, when the suspending hook 18 is swung into the position shown in Fig. 3, the movement of the throw of the crank 19 causes the springs to be stretched. These springs are consequently effective to urge the jaws 10 and 11 into clamping relationship upon a garment positioned between the jaws but as the springs are yieldable it is possible to forcibly separate the jaws if the garment is of considerable thickness or several garments are placed therebetween in side by



side relationship. Consequently, the jaws automatically adjust themselves to the thickness of the garment that is placed therebetween when the jaws are urged to clamp thereon.

It will be noted in Fig. 3 that the line of tension of each spring 26 and 27 is slightly above the line connecting the axis of the trunnions 20 and 21 with the crank throw so that in effect when the suspending hook 18 is swung into suspending position the springs 26 and 27 have a slightly over center relationship with respect to the crank 19. Consequently, the tension of the springs in the position shown in Fig. 3 is effective to continually urge the suspending hook 18 against the upper stop 24 until such time as the suspending hook is forcibly swung downwardly and the crank is passed through center position. Of course, after the crank 19 passes over center with relation to the line of tension exerted by the springs, the springs are then effective to urge the hook 18 into its lowermost position and on approaching its lowermost position, the convolutions of the springs come in direct contact with each other so that tension of the springs is completely released allowing the jaws to open.

From the above-described construction it will be appreciated that the improved garment hanger is highly advantageous in that it may be easily and economically manufactured and assembled with a minimum number of parts. The operating parts are entirely disposed within the jaws or therebetween so as to be largely concealed with the exception of the suspending hook 18. This suspending hook, together with the crank, in effect, function as an annular lever fulcrumed on the trunnions 20 and 21 having considerable mechanical advantage in imposing tension on the springs 26 and 27 to yieldably urge the jaws into clamping relationship when the suspending hook is swung into suspending position. On the other hand, when the suspending hook is swung into releasing position, the tension on the springs is completely released so that the jaws can be readily separated for the insertion or removal of a garment.

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. A garment hanger comprising a pair of opposed jaws, means hingedly connecting the jaws together for clamping movement upon a garment to be suspended therefrom, a crank pivotally mounted upon one jaw, a suspending hook rigidly secured to the throw of the crank and swingable through a slot in the mentioned jaw between two extreme positions, and tension springs connecting the throw of the crank to the other jaw adapted to be placed under tension so as to yieldably urge the jaws into clamping position when the suspending hook is swung into suspending position and to release the jaws for separation when the suspending hook is swung to its other extreme position.

2. A garment hanger comprising a pair of opposed jaws, means hingedly connecting the jaws together for clamping movement upon a garment to be suspended therefrom, a crank pivotally mounted upon one jaw, a suspending hook rigidly secured to the throw of the crank and swingable through a slot in the mentioned jaw between two extreme positions, and tension springs connecting the throw of the crank to the other jaw adapted to be placed under tension so as to yieldably urge the jaws into clamping position when the suspending hook is swung into suspending position and to release the jaws for separation when the suspending hook is swung to its other extreme position, the point of connection between the tension springs and said other jaw being so arranged that the line of tension of the springs will pass over center with relation to the crank when the suspending hook is swung into suspending position.

DEWAYNE KENNETH WILLIAMS.

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