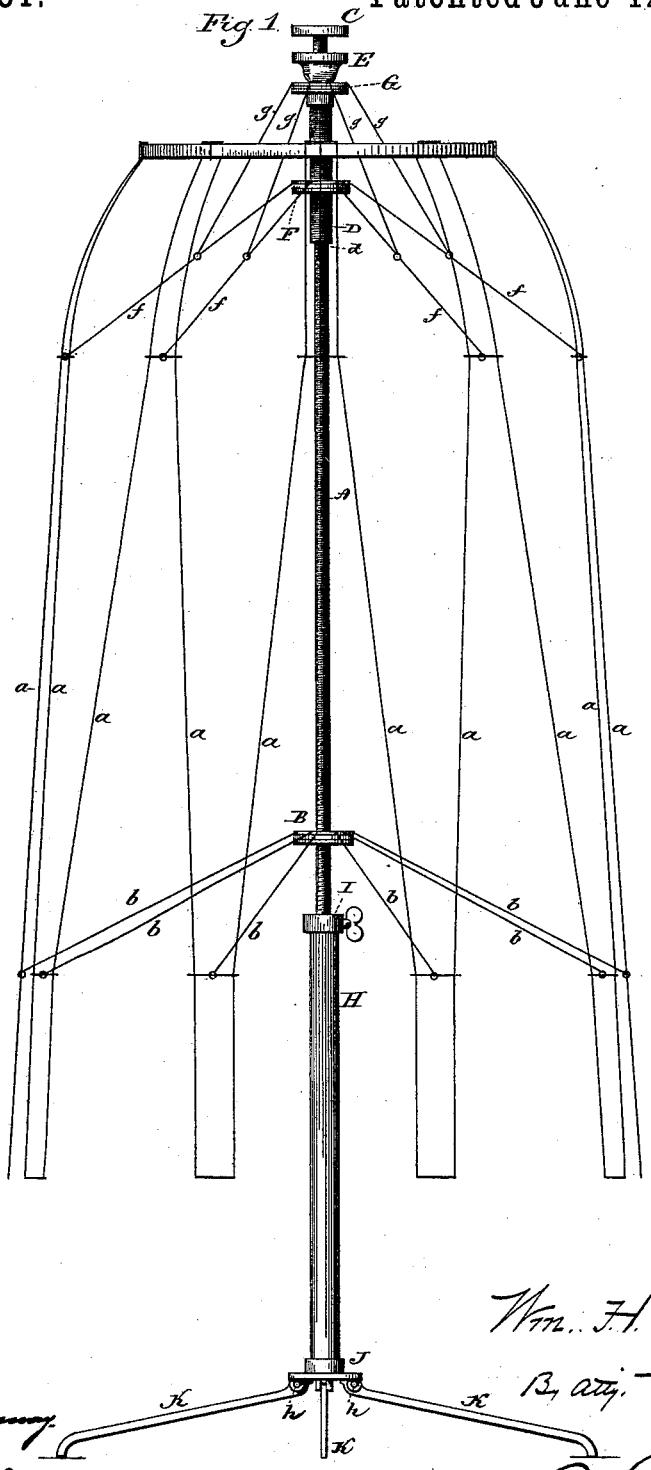
(No Model.) 2 Sheets—Sheet 1.

W. H. KNAPP.

DRESS FORM.

No. 384,531. Patented June 12, 1888.

Fig. 1.



Witnesses.
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Fred C. Earle.

Wm. H. Knapp.
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(No Model.) 2 Sheets—Sheet 2.

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No. 384,531. Patented June 12, 1888.

Fig. 2

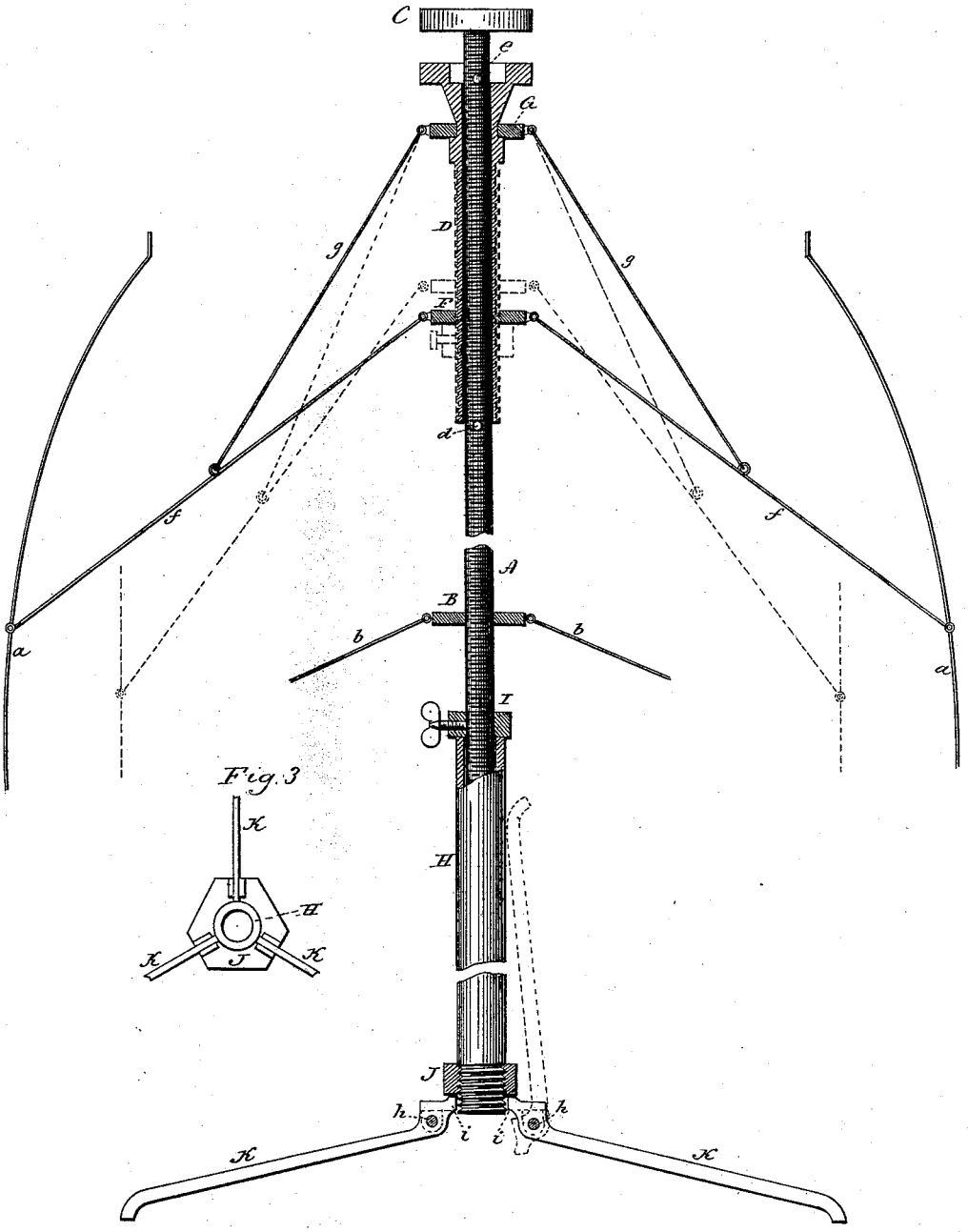

Fig. 3

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UNITED STATES PATENT OFFICE.

WILLIAM H. KNAPP, OF BROOKLYN, NEW YORK.

DRESS-FORM.

SPECIFICATION forming part of Letters Patent No. 384,531, dated June 12, 1888.

Application filed January 30, 1888. Serial No. 262,409. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. KNAPP, of Brooklyn, in the county of Kings and State of New York, have invented a new Improvement in Garment-Stands; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of a garment-stand complete in the expanded condition; Fig. 2, the same enlarged, parts broken away for convenience of illustration, broken lines on the left indicating the contraction of the stand, and broken lines at the right indicating modification in the connection between the upper series of braces and the links; Fig. 3, an under side view of the base, looking upward, also showing the lower end of the tubular standard, representing the inner end of the legs as bearing against that standard, the same as in Fig. 2.

This invention relates to an improvement in that class of garment-stands which consist of a series of vertical ribs arranged around a central spindle and in which the ribs are made expansible to adapt them to garments of various sizes.

In some cases the stand is full length. In others it is only a skirt, and in others a waist only. I illustrate the invention, however, as applied to the skirt form only, that being sufficient for full understanding and to enable others skilled in the art to which the invention pertains to apply it to various classes of garment-stands. It is an improvement upon the stand for which Letters Patent No. 373,989 were granted to me November 29, 1887. In that patent the expansion of the stand is produced by two series of diagonal braces inclined in opposite directions, the outer ends of both series hinged together to the respective ribs, and the inner end of the upper series hinged to a stationary collar, the inner end of the lower series hinged to a vertically-adjustable collar on the central spindle, so that by raising or lowering the said collar the angle of the braces with relation to each other is changed and a corresponding contraction or expansion of the stand produced.

The object of my present invention is to dispense with one of the said two series of braces and produce the expansion or contraction by a direct lifting or lowering action upon the one series of braces, and also to provide a base upon which the form may stand, which base may be contracted into narrow space, so that the whole stand with its base may be brought into an extremely small compass; and it consists in the construction, as hereinafter described, and particularly recited in the claims.

A represents the central spindle, which is supported from a suitable base in a vertical position, and around which a series of vertical ribs, *a*, more or less in number, are arranged, the construction and arrangement of the ribs in this illustration being the same as that in my Patent No. 373,989, and which it is not necessary to particularly describe in this application.

B represents a collar, which is adjustable on the vertical spindle A. This spindle is permitted a rotation and is screw-threaded, as shown, so as to work through the collar B as a nut, the spindle terminating at its upper end in a head, C, by which it may be rotated to produce an up-and-down movement upon the collar B. To the said collar B the inner ends of a series of braces, *b*, are hinged. These braces extend out to the ribs, respectively, and are hinged to the ribs by their outer ends, the same as in my patent before referred to.

Upon the spindle at the upper end a sleeve, D, is arranged, which is free for rotation upon the spindle A, but held against vertical movement independent of the spindle—say by a pin, *d*, through the spindle A below the sleeve, and a like pin, *e*, through the spindle A above the sleeve. (See Fig. 2.) This sleeve terminates at its upper end in a suitable head, E, below the spindle-head C, and so that the hand may be applied to either the head C or E to turn, respectively, the spindle A or the sleeve D. The outer surface of the sleeve D is screw-threaded, as represented, and upon this screw-threaded sleeve a collar, F, is arranged, correspondingly screw-threaded, and so as to work as a nut on said sleeve, the said nut rising or falling according to the direction in which the sleeve D is turned. To this adjustable collar F a series of braces, *f*, are hinged by their in-

ner end. The braces are inclined downward, like the braces *b* below. Their outer ends are hinged to the respective ribs, as are the ribs *b*. Above the adjustable collar F is a collar, G, on the sleeve D, stationary as to vertical movement, but so as to permit the sleeve to rotate within it. To this collar a series of links, *g*, are hinged by one end, and corresponding in number to the braces *f*. These links extend downward, and are hung to the braces *f* about midway of their length, as clearly seen in Fig. 2.

From this construction it follows that if the collar F be forced downward by the turning of the sleeve D the braces *f* will be held by the links *g*, and so that the outer ends of the braces will rise accordingly, and thus change the inclination of the braces, so that the stand will be expanded, as seen in Fig. 2. If, on the contrary, the sleeve D be turned in the opposite direction to raise the collar F, as indicated in broken lines, Fig. 2, the braces *f* will still be held by the links *g* while the collar ends of the braces rise, the rib ends will fall, and the stand will be contracted, as indicated in broken lines at the left in Fig. 2. The lower part of the stand is expanded or contracted by turning the spindle A to raise or lower the collar B, and change the inclination of the braces accordingly. Under this construction, and owing to the suspension of the braces by the links, the movement of the outer end of the braces in expanding and contracting is very much more rapid than where two series of oppositely-inclined braces are employed, as in my previous patent. It will be evident that this same arrangement of stationary links and single series of diagonal braces may be employed in any portion of the stand, where reliance has heretofore been had upon the two series of oppositely-inclined braces, whether it be in the waist portion or in the skirt portion.

While I prefer to adjust the collar F by means of the screw-threaded sleeve, as I have described it may be adjusted by a set-screw, as indicated by broken lines. In this case it may slide freely on the sleeve or spindle upon which it is arranged, it being understood that in cases where the double adjustment is not required the collars F G may be arranged directly upon the spindle, without the interposition of the tubular sleeve—a modification not necessary to illustrate, as the tubular sleeve D may, under such modification, be considered as an integral part of the central spindle.

To provide a convenient base which may be folded into a very contracted shape, I make the central standard, H, tubular, and in which the central spindle works in the usual manner, (see Fig. 2,) the spindle being vertically adjustable therein by means of a set-collar, I, in the usual manner for this class of garment-stands.

J represents the base, which is in the form of a flanged collar, internally screw-threaded, to receive the correspondingly screw-threaded lower end of the standard H, so that the said standard is vertically adjustable through the opening in the base.

K represents the legs, three in number, each hinged to the under side of the base, as at *h*, at points outside the opening through the base, as seen in Fig. 2, and so as to swing in a vertical plane. The inner ends of the legs are constructed with an extension, *i*, from the pivots. These inner ends work in corresponding radial slots in the base, and when in the spread condition (indicated in Fig. 2) these extensions are adapted to bear against the outer surface of the standard in the base, which prevents the legs from turning on their pivots, and so that they are firmly held in the supporting position, as clearly represented in Fig. 2; but when the standard is raised or withdrawn from the opening in the base then the inner ends of the legs are free and they may be folded against the standard, as represented in broken lines.

It will be understood that the radial recesses are formed in the base to permit the projections *i* from the pivot ends of the braces to work therein, as indicated in Fig. 2. This base, while specially adapted for garment-stands, is equally applicable for other purposes, and I do not wish to be understood as limiting this part of my invention to garment-stands.

I am aware that skirt-forms have been made consisting of a series of ribs, with two series of oppositely-inclined braces radiating from two corresponding collars on a central shaft, one series of said braces hung to the respective ribs, and the other series of said braces hung to the first series of braces between the shaft and the ribs; but in such cases the two series of braces have been inclined in opposite directions—that is, converge from the shaft to their points of connection. I therefore make no claim to such a device, the gist of my invention being the series of braces extending from an adjustable collar on the shaft diagonally downward and connected to the respective ribs, with a stationary collar above, having links hung thereto and extending to the said braces, hung to the said braces between the shaft and ribs, the braces and links both inclining in the same direction.

I do not wish to be understood as broadly claiming a standard having legs hinged to a base, so as to be turned on their respective hinges from the expanded position into a contracted position against the central shaft, as such I am aware, broadly considered, is not new.

I claim—

1. In a garment-stand consisting of a central spindle, and a series of ribs surrounding it radially expansible, the combination therewith of a vertically-adjustable collar, F, a stationary collar, G, both supported on said spindle, a series of diagonal braces corresponding to the respective ribs, and a corresponding series of links, the outer end of said braces hinged to the respective ribs, the inner end of said braces and links hung, the one series to

the stationary collar G and the other series to the adjustable collar F, the outer ends of the said links hinged to the said braces midway of their length, both the links and braces inclined in the same direction, substantially as described.

2. In a garment-stand, the combination of a central vertical spindle, a series of ribs surrounding said spindle and radially expansible, a collar, B, vertically adjustable on said spindle, a series of braces, *b*, hinged by their inner ends to the said collar B and inclining downward therefrom, their outer ends hinged to the said ribs, a second adjustable collar, F, on said spindle, and a stationary collar, G, above said collar F, a second series of braces inclined in the same direction as the lower series of braces, and a corresponding series of links, the outer ends of the said second series of braces hinged to the respective ribs, the inner ends of the said links and braces, the one hung to the stationary collar and the other to the adjustable collar, the outer ends of the links hung to the said second series of braces midway of their length, substantially as described.

3. In a garment-stand, the combination of the central spindle, A, a series of ribs arranged around said spindle and radially adjustable, an adjustable collar, B, on said spindle, a series of braces, *b*, hung by their inner ends to the said collar B and extending diagonally downward, their outer ends hung to the respective ribs, the tubular sleeve D on said spindle above said collar B, free for independent rotation on said spindle, but held against vertical movement, said sleeve screw-threaded upon its outer surface, a correspondingly screw-threaded collar, F, on said sleeve, a stationary collar, G, above said collar F, a second series of braces, and a corresponding series of links inclined in the same direction as the series of braces below, the said second series of braces hinged by their outer ends to the said ribs, the inner ends of said series of ribs and series of links hinged, the one to the adjustable collar F and the other to the stationary collar G, and the outer ends of the links hung to the respective braces midway of their length, substantially as described.

4. A support for garment-stands and like purposes, consisting of a base, J, having a central opening through it, a standard, H, vertically adjustable in said opening through the base, the said base constructed with radial recesses, the said recesses extending into the central opening, and legs K, hinged in said recesses upon an axis at right angles to the axis of said standard, the said hinging axes being outside the said opening, and the said legs each constructed with an extension from their respective hinged ends, the said extensions being adapted to bear against the central standard within the opening in the base when the legs are extended, substantially as described, and whereby when the standard is withdrawn the legs are free to be folded against the standard.

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