

(No Model.)

2 Sheets—Sheet 1.

A. McDOWELL.  
DRESS FORM.

No. 401,192.

Patented Apr. 9, 1889.

Fig. 1.

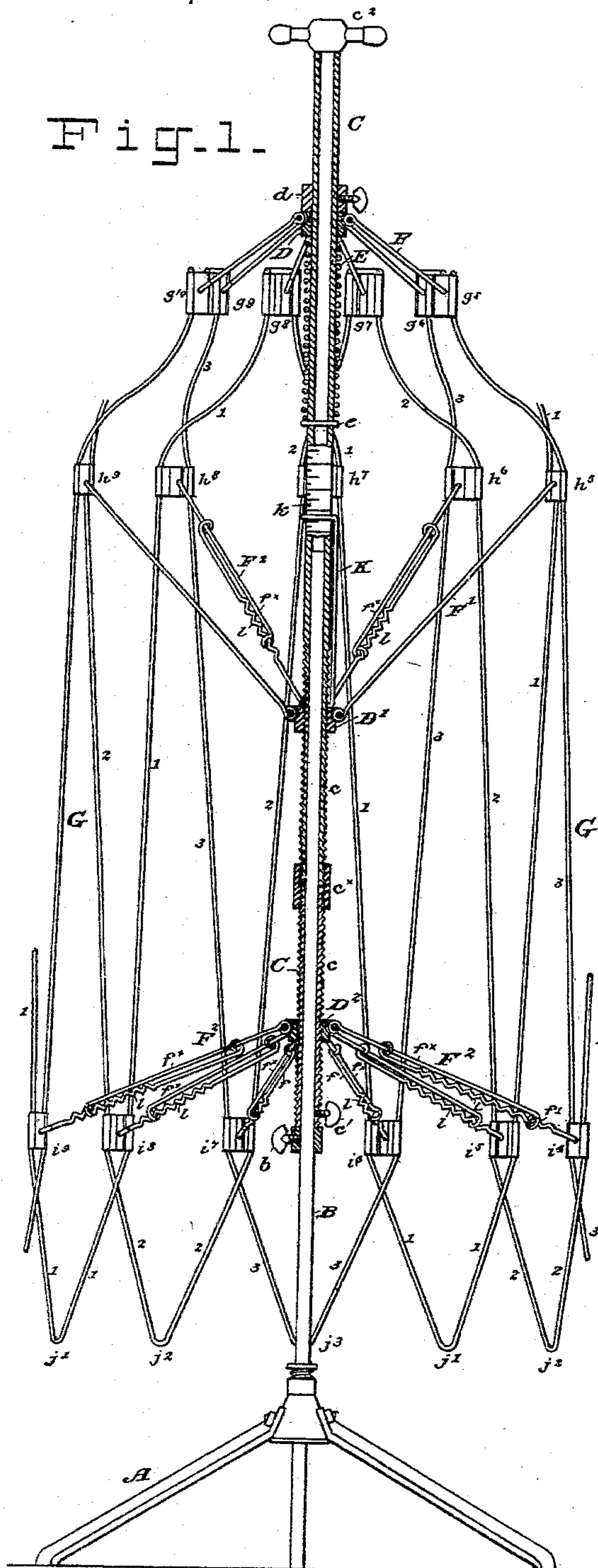
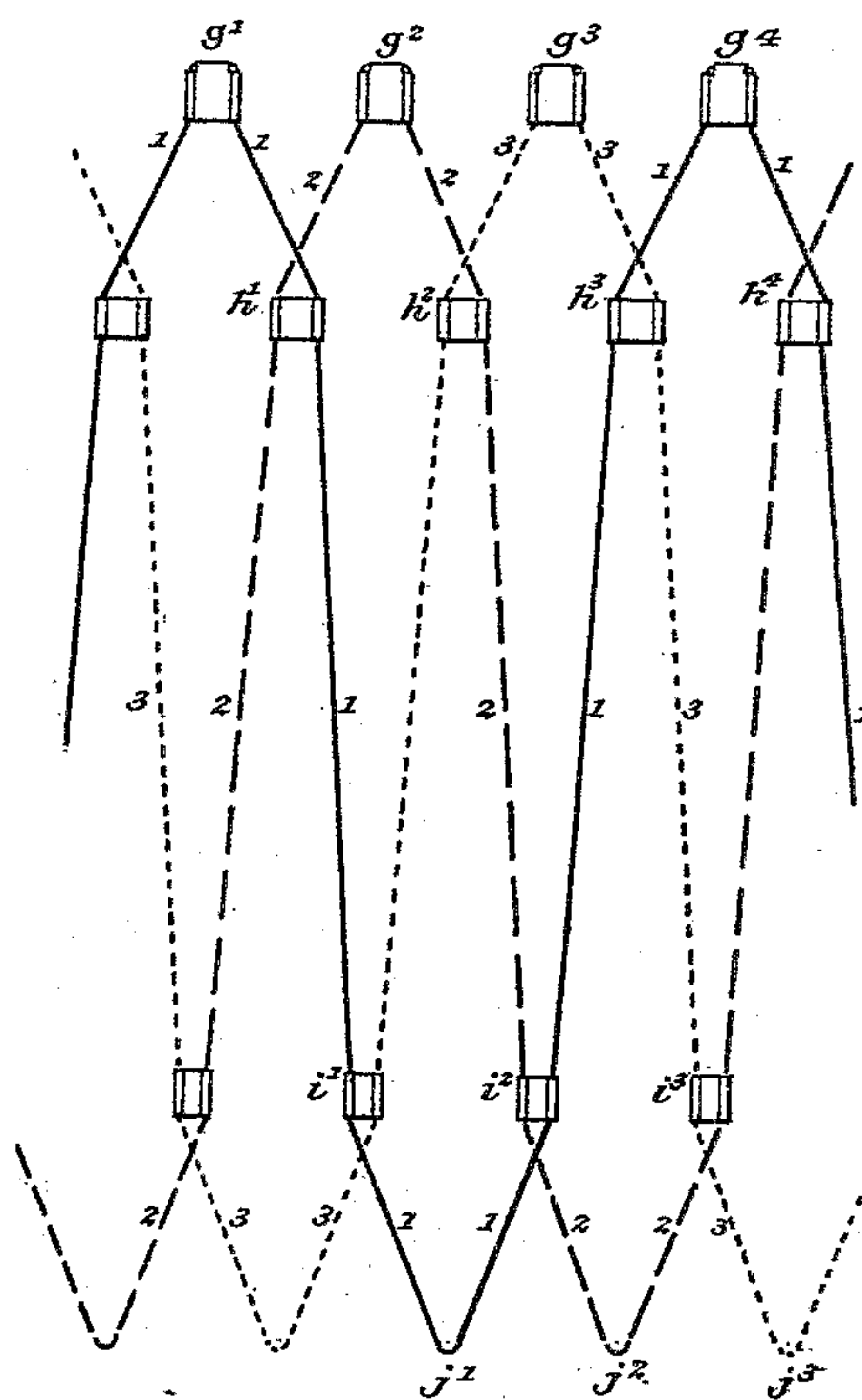


Fig. 2.



INVENTOR:

WITNESSES:

E. B. Bolton  
J. H. Daplinger.

Alex. McDowell,  
By *Henry Conner*  
Attorney.

(No Model.)

2 Sheets—Sheet 2.

A. McDOWELL.  
DRESS FORM.

No. 401,192.

Patented Apr. 9, 1889.

Fig. 3.

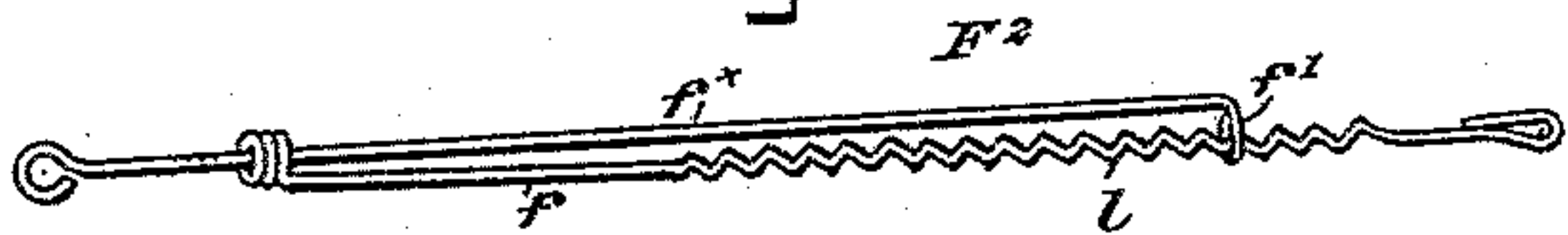


Fig. 3a.



Fig. 4.



Fig. 5.

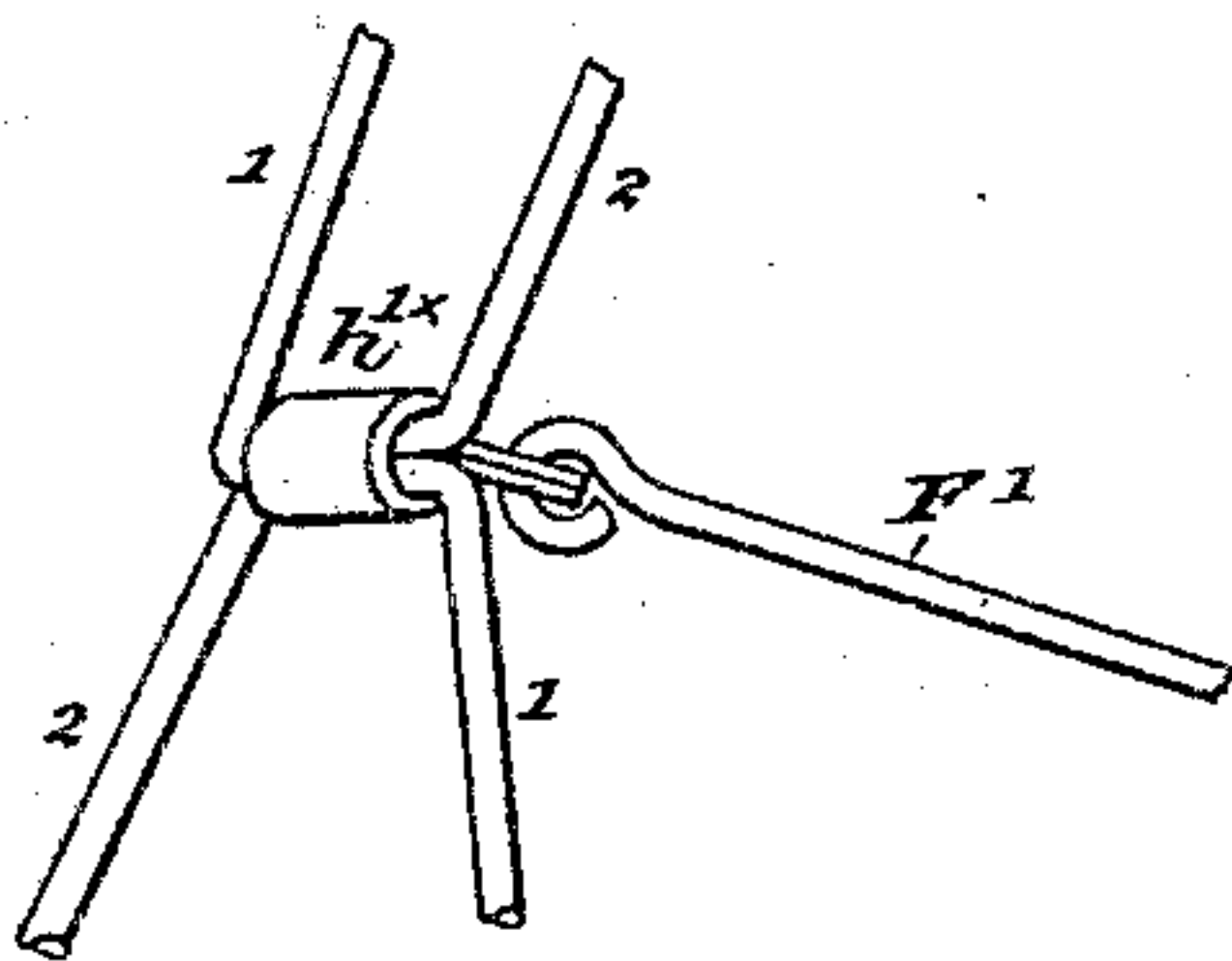


Fig. 5.

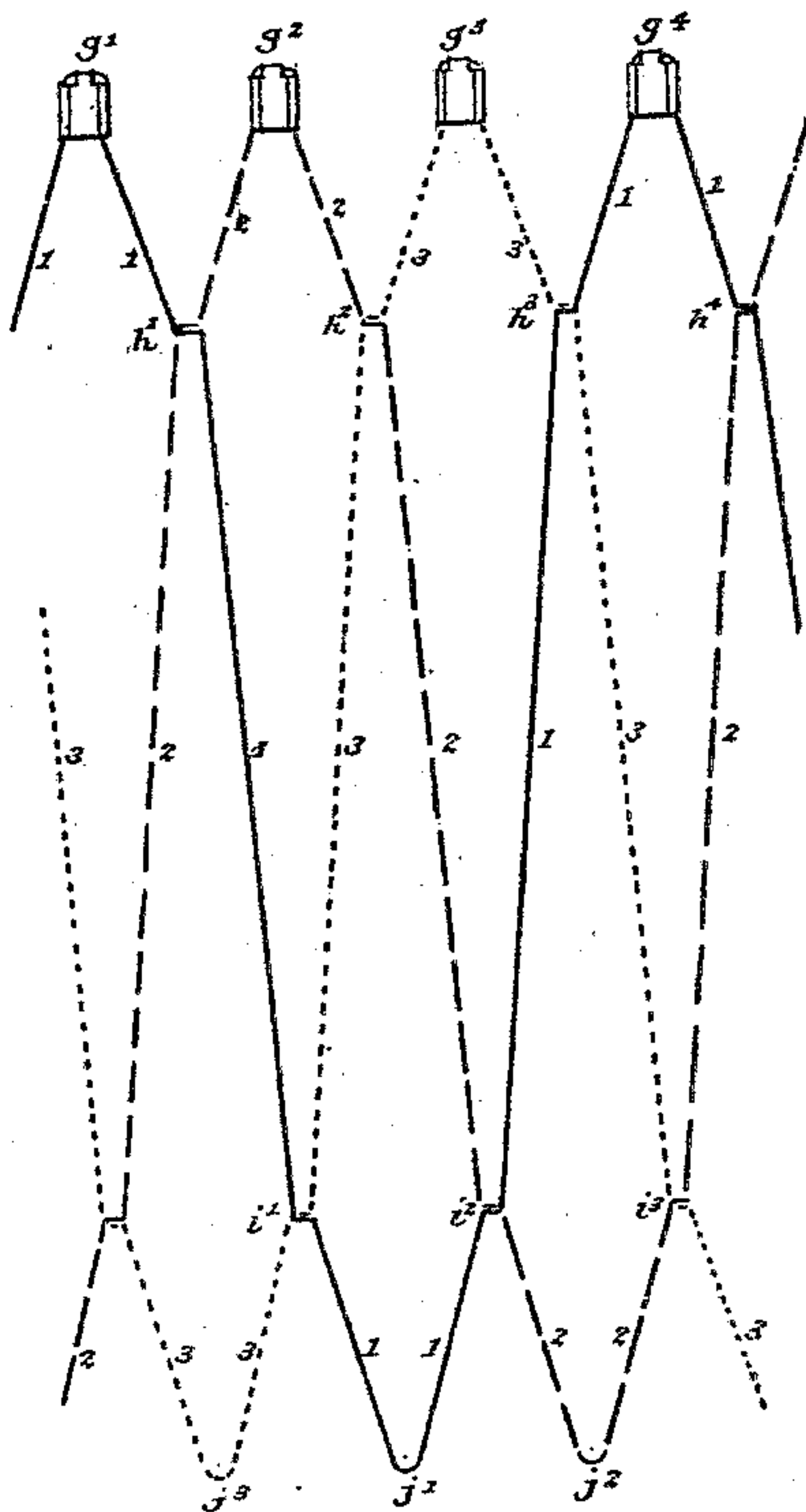
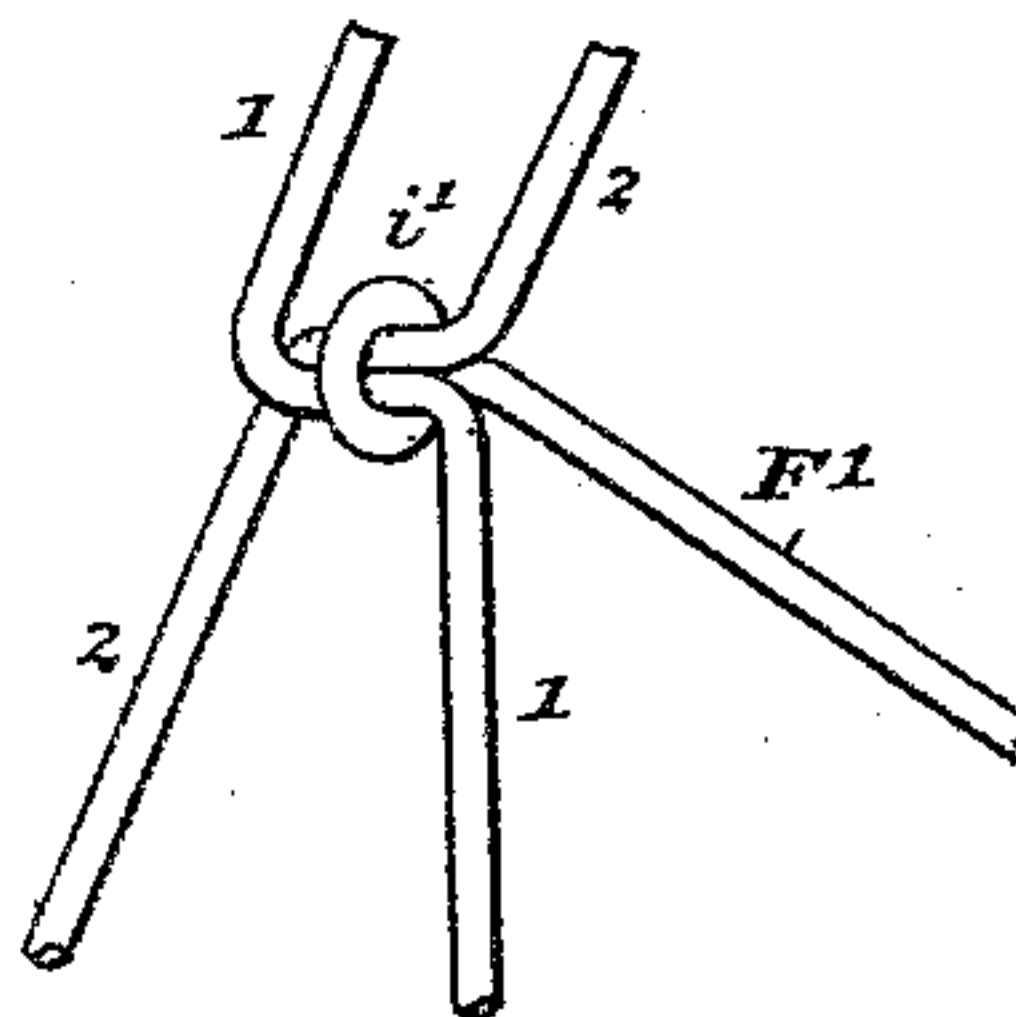


Fig. 5a.



INVENTOR:

WITNESSES:

E. B. Bolton  
J. S. Springer

A. McDowell.

By *Henry Connelley*  
Attorney.



# UNITED STATES PATENT OFFICE.

ALBERT McDOWELL, OF NEW YORK, N. Y.

## DRESS-FORM.

SPECIFICATION forming part of Letters Patent No. 401,192, dated April 9, 1889.

Application filed August 1, 1887. Serial No. 245,885. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT McDOWELL, a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain Improvements in Adjustable Dress-Forms, of which the following is a specification.

My invention relates to what are commonly known as "adjustable dress-forms" or "draping-stands;" and the object of my invention is, in part, to improve the construction, in order to obtain stiffness or rigidity of the structure, together with cheapness and lightness, and in part to improve the adjustability of the structure, so that it may be conveniently expanded and contracted while the garment is in place thereon.

My invention will be fully described hereinafter, and its novel features carefully defined in the claims.

In the drawings which serve to illustrate my invention, Figure 1 is a vertical axial section of my improved dress-form. Fig. 2 is a somewhat diagrammatic view designed to illustrate the construction and arrangement of the ribs forming the rib structure. Fig. 3 is a detached and enlarged view of one of the extensible radial braces, and Fig. 3<sup>a</sup> illustrates a slightly-modified form of said brace. Fig. 4 is a detached and enlarged fragmentary view of a part of the tubular screw-threaded standard. Fig. 5 is a diagrammatic view similar to Fig. 2, showing another form of my improved rib structure, and Fig. 5<sup>a</sup> is a view showing how the radial braces are attached to the said structure. Fig. 6 illustrates another form of the attachment of the brace to the rib structure, that will be fully described hereinafter.

Let A represent a tripod foot or base of any kind, and B an upright fixed or secured in said base. These parts may be constructed in any way desired. On the upright B is slipped a tubular standard, C, on which are cut right and left screw-threads *c c*. I usually make the standard C of two pieces or sections of tubing or piping, on which I first cut the screws and then join the pieces firmly together end to end by means of a screw-coupling, *c<sup>x</sup>*. This construction enables me to extend the screw-threads to the proper distance only from the abutting ends of the sections

without the necessity of forming screw-threads throughout the whole length of the standard. On the upright B is a set-collar, *b*, upon which the tubular standard C rests at its lower end. By slipping this collar up or down the height of the structure above the floor may be varied. Thus my construction is made telescopic in character. A set-screw, *c'*, driven through the standard C and bearing on the upright B, enables me to clamp the former to the latter, and thus, when desired, prevent its rotation thereon. At the top of standard C is a suitable handle, *c<sup>2</sup>*, whereby the form may be lifted and carried from place to place, and which also enables the user to conveniently rotate the standard within the rib structure for expanding or distending the latter.

Mounted on the standard C is the expansible rib structure which supports the garment. This I will now describe.

Beginning at the top, D is a sliding runner on standard C. This runner rests on a coil-spring, E, which embraces standard C and rests on a cross-pin, *e*, therein, or on a collar or shoulder of some kind suited to support it. To this runner D are attached the upper braces, F, which I will call the "waist-braces." Next below is a nut-runner, D', which has a female screw and screws onto the upper screw-thread *c* on the standard C. To this runner are attached the hip-braces F'. Next below is a nut-runner, D<sup>2</sup>, similar to or like runner D'. This runner has a female screw and screws onto the lower screw-thread *c* on standard C, and to it are attached the extensible skirt-braces F<sup>2</sup>. I have said that the screws *c c* are right and left screws—that is, one of them is a right-hand and the other a left-hand screw; but it is immaterial which is the right-hand and which the left-hand screw.

The outer ends of the three sets of braces F, F', and F<sup>2</sup> are attached in a suitable manner to the rib structure designated in general by the letter G. This structure is shown spread out in Fig. 2 for better illustration.

I may employ any suitable number of radial braces and ribs in forming the circle. I have shown a construction with twelve ribs and braces. I usually form the ribs and braces of wire; but this is not necessary. In Fig. 2 the construction is illustrated by rep-



representing the three overlapping rib-wires 1, 2, and 3 by different kinds of lines—viz., a full black line for rib-wire 1, a heavy broken line for rib-wire 2, and a finer dotted line for rib-wire 3. These overlap, as shown, and this overlapping is repeated all the way around. For example, rib-wire 1 starts at waist-tip  $g'$ , curves outward, downward, and obliquely to the right, crosses rib-wire 2 near the hip-clip  $h'$ , extends obliquely downward from said clip to the right, to skirt-clip  $i'$ , then crosses rib-wire 3, and continues obliquely downward to the right to lower tip,  $j'$ . At this point it bends back, forming a rounded tip, extends upward to the right, crossing rib-wire 2 to skirt-clip  $i''$ , thence upward obliquely to the right to hip-clip  $h''$ , thence upward to the right, crossing rib-wire 3, and bending inward to waist-tip  $g''$ . From this point another rib-wire 1 starts again, as shown. The other rib-wires, 2 and 3, are arranged in precisely the same manner. Thus my rib structure G is, in fact, formed of three overlapping zigzag endless structures of wire rods, strips, &c., the waist-tips  $g'$   $g''$ , &c., forming the upper apexes of the zigzags, and the tips  $j'$   $j''$ , &c., the lower apexes. These three structures are connected together where they cross, and these connecting-points are where the braces are attached thereto. This forms a very stiff and light construction, the oblique arrangement of the crossing ribs bracing the structure laterally and preventing that closing together or "bunching" of the ribs so detrimental to some forms for this purpose.

In Figs. 1 and 2 I have shown sheet-metal clips of a known form at the points  $h'$   $h''$   $i'$   $i''$ , &c., where the rib-wires are connected together, and I have shown the radial braces  $F'$  and  $F''$  connected at their outer ends to these sheet-metal clips; but I may employ a simpler construction—as, for example, that illustrated in Figs. 5 and 5<sup>a</sup>. In this construction, which in other respects is similar to that seen in Fig. 2, short lateral bends are formed in each rib-wire at the points where they are to be connected—as at  $h'$  and  $i'$ , for example—and the eye formed in the outer end of the radial brace  $F'$  or  $F''$  embraces the two wires at this point. This construction dispenses with the sheet-metal clip and effects a direct hinge-connection of the brace with the rib-wires. Fig. 5<sup>a</sup> shows the manner of attaching the brace very clearly. This latter view is on a larger scale than Fig. 5.

Fig. 6 is a view similar to Fig. 5<sup>a</sup> and illustrates the application of a sheet-metal band,  $h'^x$ , embracing the rib-wires at the lateral bends therein, and the hinging of the brace  $F'$  thereto. The attachment of the radial braces to the rib structure G may be effected in any way.

The skirt-braces  $F''$  are extensible. By reference to Fig. 3 it will be seen that each brace is composed of two parts or members,  $f$  and  $f^x$ , and that each member has an attaching

or hinging eye at its one end, and an eye at the opposite end, through which the other member plays or slides in effecting the extension. In the body of one of the members, as  $f$ , for example, are formed notch-like recesses  $l$ , made by bending the wire back and forth so as to corrugate it laterally. The engagement of the eye  $f'$  on the other member,  $f^x$ , with one of these corrugations or recesses, serves to prevent the members from sliding on each other readily, but permits them to slide when a little force is employed. Thus the user of the form may readily adjust these braces as to length, and when once adjusted the adjustment will not be disturbed by any ordinary usage. Some of the braces  $F'$  at one side of the form are also made extensible in this manner, by preference, in order to enable the user of the form to give the proper fullness to the back part of the form at the hips, so that it may fill the skirt. Either one of the members of the brace may be corrugated, or both. In Fig. 3<sup>a</sup> I have shown both so corrugated. In this figure I have also shown one of the eyes  $f'$  on the end of the member in the form of a spiral. This form of eye will engage several recesses at once. Either form of eye may be employed.

I will now describe the operation of setting and adjusting my improved form. The form may be adjusted for height by raising the tubular standard and its appurtenances and then setting collar  $b$  fast on the upright B. The standard C may now be revolved by means of handle  $c^2$  until the rib structure is expanded to nearly the proper size. The skirt is now put over the form and the waistband secured. The runner D is now pressed down upon spring E, thus causing braces  $F$ , acting as toggles, to press out the waist-tips  $g'$   $g''$ , &c., uniformly until they fit the waist of the skirt. A set collar,  $d$ , on the standard C above runner D, is now set fast to prevent the spring from pushing said runner upward. The rib structure G and the skirt thereon are now rotated in the proper direction to run nut D' upward and nut D<sup>2</sup> downward on the standard C, and thus expand the structure G within the skirt until the skirt is properly fitted at the hips, the braces  $F'$  and  $F''$  acting as toggles to distend the rib structure. The extensible braces may now be adjusted for length, if required.

In order that the structure G may be expanded nearly to the proper size at the hips before the skirt is put on, I prefer to employ a gage, which comprises suitable graduation-marks at  $k$  on standard C and a wire indicator-slide, K, arranged to slide on the standard and to rest at its base on nut D'. This slide K is simply a bit of wire with an eye bent in each end and these eyes turned over, so that the standard C may be passed through them. The upper eye serves to traverse the graduations as an indicator and the lower eye rests on the nut. In Fig. 1 a part of the standard is left in ele-



vation at the point  $k$ , in order to better show these graduations. In lieu of rotating the dress-skirt and rib structure on the standard, the latter may be rotated by the handle  $c^2$  and the former held by the hand against turning.

My form may be closed up for packing or transportation by loosening thumb-screw  $c'$  and revolving either the standard C or the structure G in the proper direction until the nut-runners  $D'$  and  $D^2$  are brought up to coupling  $c^x$ .

One characteristic of my dress-form is the co-operation of the waist-braces F and the supporting-spring E with the hip and skirt braces. If the waist-braces were removed, the form would collapse at the bottom and expand at the hips by the falling of the hinged braces  $F'$  and  $F^2$  under the weight of the rib structure. The spring E acts through the runners D and the waist-braces to support the structure.

Having thus described my invention, I claim—

1. In a dress-form, the combination, with a support therefor, of the expansible rib structure formed of three overlapping zigzag structures of wire or the like connected together at their points of crossing and connected to the distending braces of said support at said crossing-points.

2. The combination, with a standard, a runner, and a rib structure of a dress-form, of an extensible brace composed of two members having eyes or loops formed at their ends, through which the bodies of said members pass, respectively, and one or both of said members corrugated laterally, as and for the purposes set forth.

3. In a dress-form, the combination of the expansible rib structure G, the standard C, provided with right and left screws  $c$   $c$ , the nut-runners  $D'$   $D^2$  on said screws, the braces  $F'$   $F^2$ , connecting said runners, respectively, with the rib structure at the points described, the runner D, the braces F, connecting said runner with the rib structure at the waist, the set-collar over the runner D, and the spring E under runner D, substantially as set forth.

4. In a dress-form, the combination, with a standard and runners thereon, of an expansible rib structure composed of three sets of wires, 1 2 3, which cross each other, and which have laterally-bent portions that lie side by side at the points  $h'$   $h^2$   $i'$   $i^2$ , where said wires cross, and wire expanding-braces hinged to said rib structure at said crossing-points and connecting it with said runners, as set forth.

5. In a dress-form, the combination, with the rib structure, the braces  $F'$  and  $F^2$ , the runner-nuts  $D'$  and  $D^2$ , all connected and arranged substantially as set forth, of the upright B, the set-collar  $b$  thereon, and the tubular standard C, constructed of two parts, provided with right and left screws, as described, and said parts joined together end to end by a sleeve,  $c^x$ , as set forth.

In witness whereof I hereunto signed my name in the presence of two subscribing witnesses.

ALBERT McDOWELL.

Witnesses:

HENRY CONNETT,  
J. D. CAPLINGER.