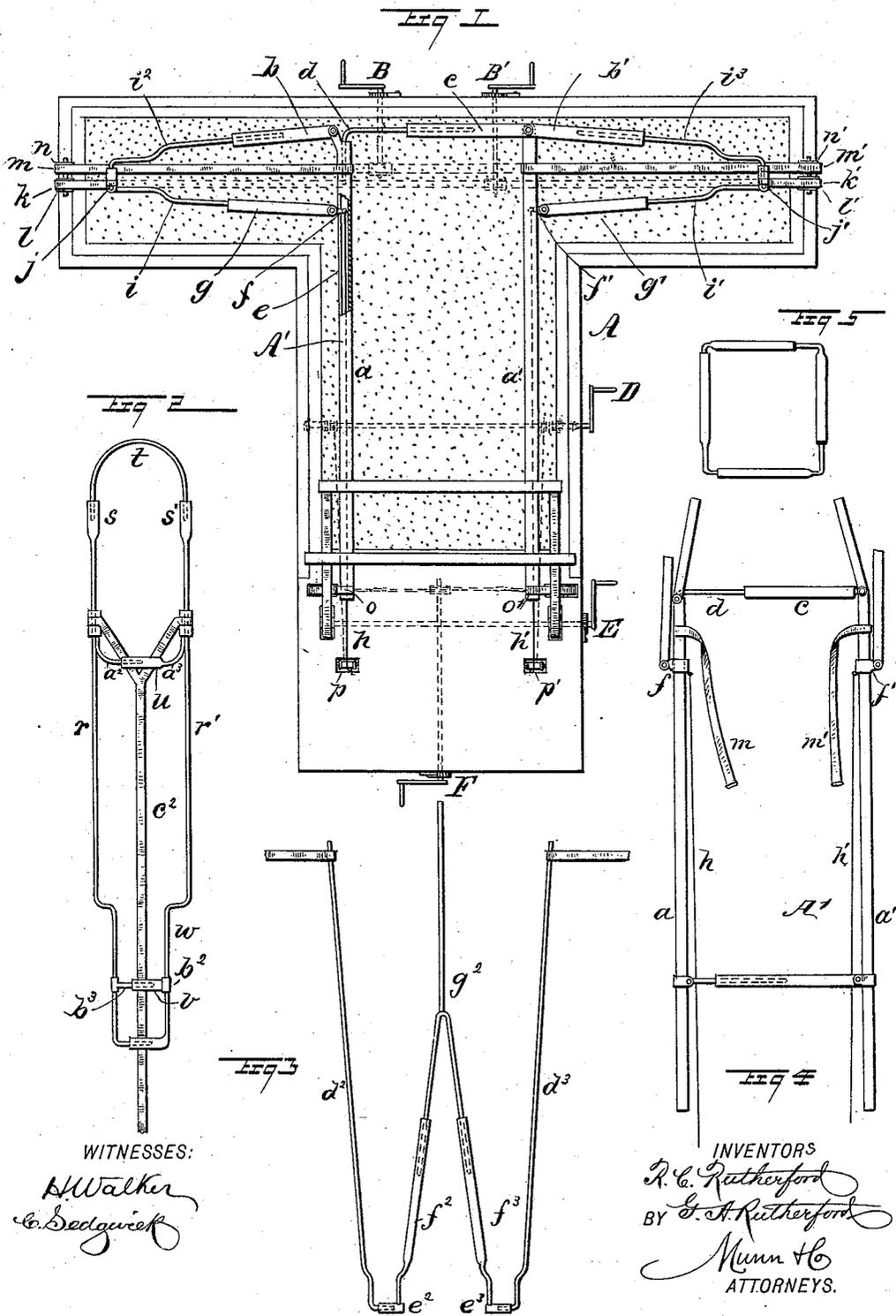


(No Model.)

R. C. & G. A. RUTHERFORD.
APPARATUS FOR STRETCHING SHRUNKEN GARMENTS.

No. 534,053.

Patented Feb. 12, 1895.



WITNESSES:

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UNITED STATES PATENT OFFICE.

REUBEN C. RUTHERFORD AND GEORGE A. RUTHERFORD, OF NEW YORK, N. Y., ASSIGNORS, BY DIRECT AND MESNE ASSIGNMENTS, TO SAID GEORGE A. RUTHERFORD AND PATRICK O'THAYNE, OF SAME PLACE.

APPARATUS FOR STRETCHING SHRUNKEN GARMENTS.

SPECIFICATION forming part of Letters Patent No. 534,053, dated February 12, 1895.

Application filed January 15, 1894. Serial No. 496,947. (No model.)

To all whom it may concern:

Be it known that we, REUBEN C. RUTHERFORD and GEORGE A. RUTHERFORD, both of New York city, in the county and State of New York, have invented new and useful Improvements in Apparatus for Stretching Shrunk Garments, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a plan view of the apparatus. Fig. 2 is a side elevation of a frame for hose. Fig. 3 is a side elevation of a frame for drawers. Fig. 4 is a side elevation of a portion of an expansible frame made on a modified plan; and Fig. 5 is a detail view of a rectangular expansible frame.

Similar letters of reference indicate corresponding parts in all the views.

The object of our invention is to restore to their original dimensions, woolen fabrics or garments which have been shrunk in washing, wearing, or by other causes.

The invention consists in the construction and arrangement of parts as hereinafter fully described and pointed out in the claims.

This invention has special relation and is supplemental to the invention covered by Letters Patent of the United States, No. 398,847, granted to Reuben C. Rutherford, March 5, 1889.

In reducing our invention to practical form, we employ a steam table provided with numerous perforations in the top thereof, and furnished with windlasses, and an extensible frame adapted to the garment to be treated, and arranged to be connected with the windlasses so that it may be extended in all directions.

The table A, for general use, is preferably made in T-shape, as shown, but it may be adapted to the particular form of garment to be treated. The table is made hollow for the reception of steam, and series of perforations are made in its upper surface, for supplying steam to the garment lying thereon. Below the table are journaled windlasses B, B', for extending the sleeves and upper portion of a garment laterally, and below the middle portion of the table is journaled a windlass F,

for stretching the lower portion of a garment laterally. Near the center of the table is journaled a windlass D, and near the end of the table is journaled a windlass E, both extending across the table at right angles. The said windlass E consists of a shaft carrying two small drums around which are wound tapes connected with the cross bar which is secured to the end of the garment or fabric to be stretched. The said windlass is provided with a ratchet wheel which is engaged by a pawl pivoted to the edge of the table.

We will describe the apparatus and the method of stretching a garment, an undershirt for example, with our improved apparatus. The expansible skeleton frame A', which receives the undershirt, is formed of side tubes $a a'$, the tubes $b b'$ hinged to the ends of the tubes $a a'$, the tube c attached to the upper end of the tube a' , and the right angled rod d inserted in the upper end of the tube a and also in the tube c . In the outer sides of the tubes $a a'$ are made slots e , in which are placed slides $f f'$ pivotally connected with tubes $g g'$. To the slides $f f'$ are attached cords $h h'$. In the tubes $g g'$ are inserted offset rods $i i'$, to the free ends of which are pivoted short tubes $j j'$. In the tubes $b b'$ are inserted offset rods $i^2 i^3$, the free ends of which are bent at right angles and inserted in the tubes $j j'$.

The garment is placed upon the expansible frame A', by folding up the tubes $b b'$, $g g'$, after removing the rods $i i'$, $i^2 i^3$, as indicated in Fig. 4. The said rods $i i'$, $i^2 i^3$, are inserted in the sleeves and in the tubes. The frame carrying the garment is placed on the table A, and tapes $k k'$ are attached to the tubes $j j'$ and pass over the pulleys $l l'$ at the rear of the table, thence under the table to the windlass B'. Tapes $m m'$ attached to the tubes $a a'$, extend through the sleeves and run over pulleys $n n'$ at the rear of the table and are wound on the windlass B. The lower ends of the tubes $a a'$ are connected by tapes $o o'$ with the windlass F. The cords $h h'$ connected with the slides $f f'$ run over pulleys $p p'$, and are wound on the windlass D.

While the garment is being steamed the several windlasses are turned, thus tighten-

ing the tapes and the cords, expanding the frame A' and stretching the garment in any direction as much as may be required, the windlass B serving to stretch the body of the garment laterally, and the windlass B' stretching the sleeves. The windlass F stretches the lower portion of the garment laterally; the windlass E stretches the garment lengthwise and the windlass D is used to stretch the sleeve laterally, by drawing down the tubes *g g'*.

It will be seen that the means for expanding the frame serve also as a means for holding the frame on the table.

In the modified form of extensible frame shown in Fig. 4, the slides *f f'* instead of being placed inside of the tubes *a a'* are placed upon the outside, and the cords *h h'* are placed upon the outside. This difference of construction, however, does not affect the operation of the apparatus.

In the expansible frame shown in Fig. 2, for application to hose the side rods *r r'* are provided with tubular upper ends *s s'*. The lower end of the rod *r'* is made tubular, and the lower end of the rod *r* is bent at right angles and inserted in it. In the tubular ends *s s'* of the rods *r r'* is inserted a curved rod *t*, which is designed for receiving the toe of a stocking. A curved extensible cross bar *u*, formed of the parts *a² a³* receives the heel of the stocking. The ends of the said extensible bar are provided with eyes which slide on the rods *r*. The parts *a² a³* are curved, and the part *a³* has a tubular end into which is inserted the free end of the part *a²*. An extensible cross bar *v* is placed on the narrower portion *w* of the extensible frame which receives the top of the stocking. The said bar is formed of the tubular part *b²* is attached to the rod *r'* and the part *b³* attached to the rod *r* and which enters the part *b²*. A tape *c²* is connected with the ends of the bar *u*. The extensible stocking frame is placed upon the table and extended by means of the windlasses as in the case of the frame A'.

In Fig. 3, is shown an extensible frame for receiving drawers. The frame is composed of the side rods *d² d³*, which are offset at their lower ends and bent at right angles, tubes *e² e³* attached to the tubes *f² f³*, the right angled ends of the tubes *d² d³* being inserted in the tubes *e² e³*, and a forked rod *g²*, the arms of the fork of which are inserted in the tubes *f² f³*. This frame is placed upon the table and expanded laterally and longitudinally as in the cases already described.

In like manner the apparatus may be adapted to various other garments or to plain fabrics, the frames being made of telescoping parts to admit of expansion in all directions. The several windlasses are provided with ratchets and pawls for maintaining them in the position in which they may be placed, thereby holding the garment in an expanded condition while it is pressed.

In Fig. 5, is shown an expansible rectangular frame, formed of four angled pieces, each piece having a tubular end for receiving the solid end of the adjacent piece, as shown.

In lieu of employing a steam table we may cover the table with felt, and apply the steam to the upper surface by means of damp cloths and hot irons.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. An apparatus for stretching shrunken garments, comprising a hollow table having a perforated top, an expansible skeleton frame having the form of the garment to be treated, and adapted for insertion in the garment, an expanding mechanism carried by the table and connected with the expansible frame, substantially as described.

2. In an apparatus for stretching shrunken garments, the combination with a table, of an expansible frame on the table, windlasses carried by the table, and cords or tapes connected to the windlasses and frame, substantially as and for the purpose set forth.

3. In an apparatus for stretching shrunken garments, an expansible frame, comprising side bars, tubes hinged to the upper ends of the side bars, a second set of tubes having a sliding and hinged connection with said side bars, and two pairs of rods, each pair having their inner ends fitting in the said tubes and their outer ends slidably connected together, substantially as described.

4. In an apparatus for stretching shrunken garments, an expansible frame, comprising tubular side rods provided with slots, tubes hinged to the upper ends of the side bars, slides in the tubular side bars and projecting out through the slots thereof, a second set of tubes hinged to the said slides, and two pairs of rods, each pair having their inner ends fitting in the said tubes, and their outer ends slidably connected together, substantially as described.

5. In an apparatus for stretching shrunken garments, an expansible frame, consisting of tubular and slotted side bars, one of said side bars having a right angled extension at the top, a right angled rod fitting in the said right angled extension of the side bar and in the other side bar, a tube hinged to the upper end of each side bar, slides in the side bars and projecting through the slots thereof, a second tube hinged to each slide, and two pairs of rods having their inner ends fitting in the said tubes, the outer end of one rod of each pair being provided with an angular tubular extension to receive the angular end of the other rod, substantially as herein shown and described.

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Witnesses:

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