Nov. 10, 1931. P. H. WATKINS 1,831,333

APPARATUS FOR MANUFACTURING GLOVES

Filed March 16, 1928 2 Sheets-Sheet 1

Fig. 1.

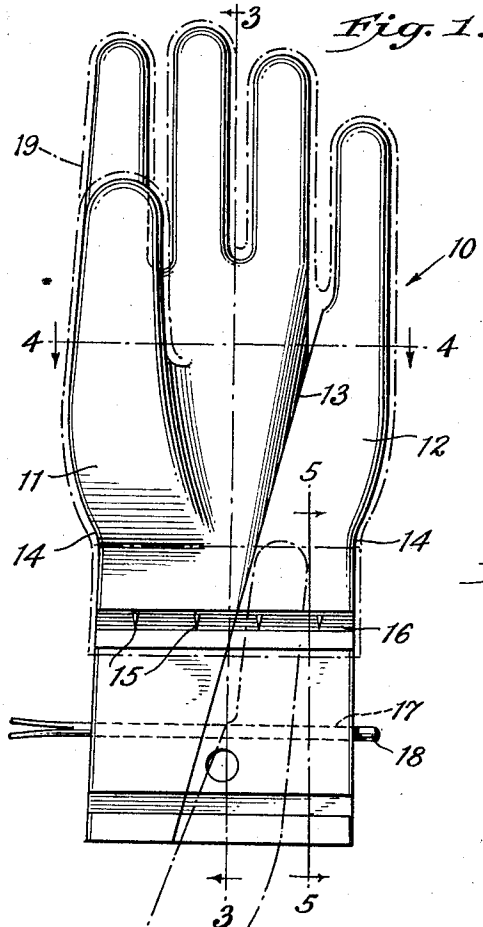


Fig. 2.

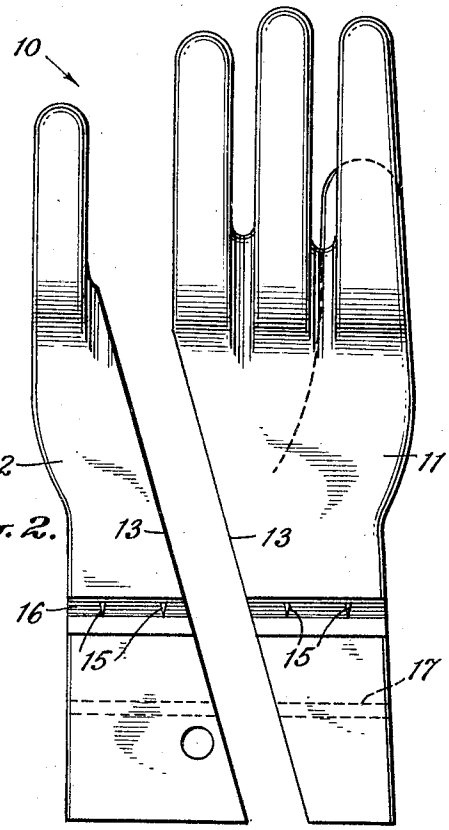


Fig. 3.

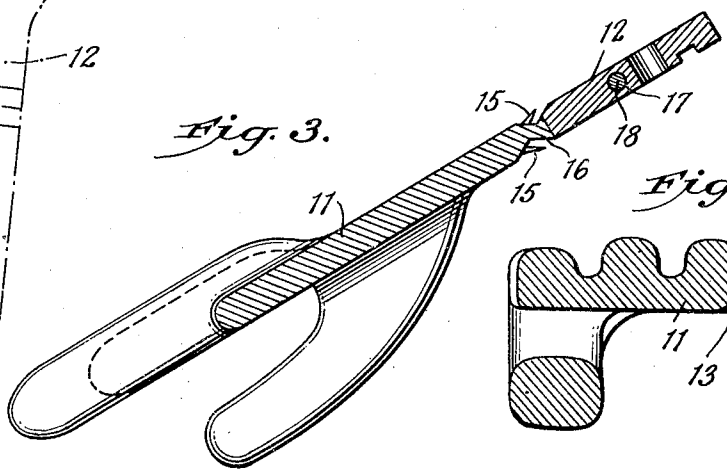


Fig. 4.

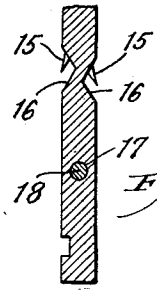


Fig. 5.

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APPARATUS FOR MANUFACTURING GLOVES

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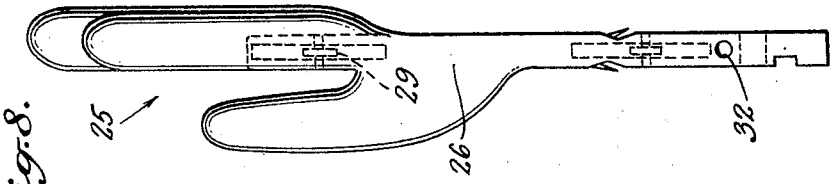


Fig. 8.

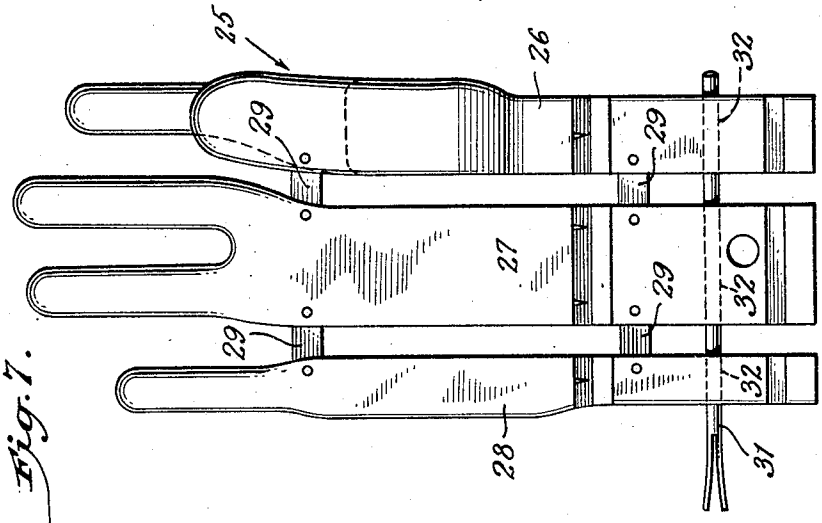


Fig. 7.

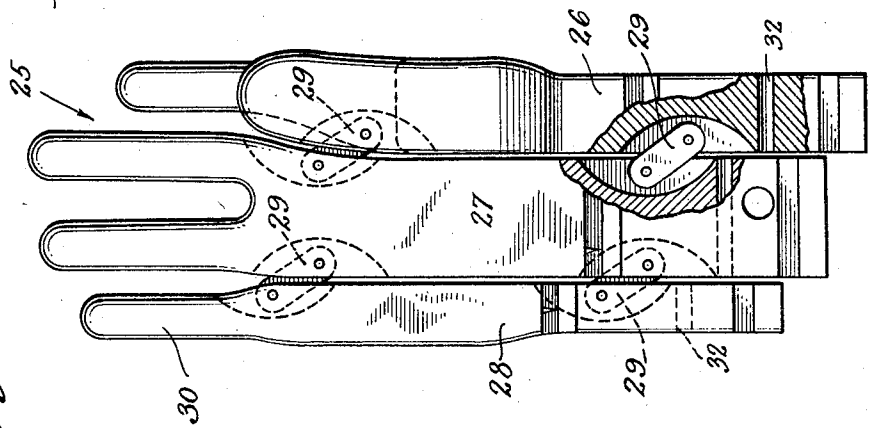


Fig. 6.

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Patented Nov. 10, 1931 1,831,333

UNITED STATES PATENT OFFICE

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APPARATUS FOR MANUFACTURING GLOVES

Application filed March 16, 1928. Serial No. 262,177.

This invention relates to the manufacture of gloves, but more particularly to such as are made with a fabric backing having a face or outside surface of rubber composition, and has for its primary object to provide an improved form which may be quickly and easily inserted in the fabric backing to retain the same in shape during the coating operation, and thereafter removed therefrom in the same manner.

Further objects of the invention are to prevent creeping of the backing and distortion of the wrist, to provide an improved type of sectional form, to provide means for properly positioning the sections relative to each other after they have been inserted in the fabric backing, and in general to provide an improved method of manufacturing gloves of the type set forth.

In the manufacture of rubber gloves having a fabric backing according to the present invention, a form of metal or other suitable material in substantially the shape of a hand, is inserted in the backing to hold the backing fully extended and then the form with backing thereon is dipped into rubber cement or latex one or more times until a sufficiently thick coating is provided over the outer face of the fabric, the thickness of the coating depending upon the purpose for which the gloves are intended.

Forms of various materials have heretofore been used in the manufacture of all-rubber gloves but these are of solid or one piece construction, as the elastic character of the material enables the gloves to be readily stretched to permit withdrawal of the form after the gloves are vulcanized. In making rubber gloves with fabric backing, the inextensible character of the fabric makes the use of such forms impracticable due mainly to the difficulty of inserting and withdrawing the form.

The present invention contemplates a sectional form in which the elements may be inserted in the backing or withdrawn therefrom either successively or in a relative arrangement in contracted position, and thereafter expanded by the relative movement of the sections. The form is contracted by a similar movement after the completion of the coating operation to enable the same to be easily withdrawn from the backing.

The many other objects and advantages of the present invention will be better understood by reference to the following specification when considered in connection with the accompanying drawings, in which:

Fig. 1 is a front elevation of a form embodying the principles of the invention;

Fig. 2 is a rear elevation of the form shown in Fig. 1;

Figs. 3, 4 and 5 are respectively sections on the lines 3—3, 4—4 and 5—5 of Fig. 1.

Fig. 6 is a front elevation of a modification of the form shown in Fig. 1, the parts being in their contracted position.

Fig. 7 is the same as Fig. 6, but with the parts in extended position, and

Fig. 8 is a side elevation of the embodiment of Fig. 6.

Referring to the drawings, and particularly to Figs. 1–5 inclusive, the form 10 is made in two sections, 11 and 12, which are of metal or other suitable material. This form is divided as indicated at 13 to facilitate the insertion of the form in the fabric backing and its removal therefrom after a coating of rubber composition has been applied to the backing by dipping or otherwise. The form is preferably contracted at the wrist as at 14 and this prevents creeping of the backing during the dipping operation. To further insure the proper maintaining of the fabric backing fully extended upon the mold, pins or prongs as 15 may be provided on the wrist portion of the form so that these will engage the fabric at this point. These prongs are preferably located in grooves as 16 and such grooves on opposite sides of the form are preferably staggered to permit a deeper groove without seriously affecting the strength of the form. These prongs engage the fabric after it has been stretched over the form and aid in removing wrinkles from the glove. A perforation as 17 extends transversely through the form and a pin as 18 is inserted through this perforation when the sections have been brought into alignment to maintain these sections in this position during the coating

of the fabric backing with the rubber composition.

The form 10 is inserted in the fabric backing 19 in the following manner: The section 11 is first slid into position within the fabric backing as indicated in Fig. 1. The section 12 is next placed relative to the section 11 in the position indicated by dot and dash lines in Fig. 1, and then pressed longitudinally into the fabric backing until it assumes the position indicated in solid lines in that figure. The oblique angle of the parting line between the sections causes the section 12 to move laterally as it is pressed into the backing and thus produces an expansion of the form.

Referring particularly to Figs. 6–8, this embodiment of the invention differs from the previous one in that the sections are connected by links whereby relative longitudinal movement of the sections causes expansion and contraction of the form. The form 25 comprises three sections 26, 27 and 28 and the connecting links are designated 29. In Fig. 6 the form is shown in its contracted position and in this position it is inserted into the fabric backing. When the finger 30 has advanced as far as possible into the corresponding finger of the fabric backing, the sections 27 and 26 are pushed longitudinally of the section 28, or in other words into the backing, and during this movement the links 29 provide the lateral expansion of the form indicated in Fig. 7. The pin 31 is then inserted through the corresponding perforation 32 in each of the sections which have now been brought into alignment and the form is thus locked in its expanded position. It will thus be evident that in each of the embodiments the form in contracted position is inserted in the backing and then expanded therein by relative longitudinal movement of the sections. The reverse of this movement contracts the form.

Various other means might be provided for expanding and contracting the form within the backing, but it is believed that the two embodiments shown and described will fully illustrate the principles of the invention.

Having thus described my invention, what I claim and desire to protect by Letters Patent is:

1. As an article of manufacture, a glove form in the shape of a hand and fingers divided substantially longitudinally of the hand portion into glove-engaging sections and expanded and contracted by the relative movement of said sections.

2. A glove form comprising finger and hand portions in a plurality of glove-engaging sections and links connecting said sections, the form being contracted and expanded by relative movement of the sections.

3. A glove form composed of finger and hand portions in a plurality of glove engaging sections, said sections being so shaped and being provided with coacting parts whereby the sections may be arranged to facilitate the insertion of the form in a glove and, upon movement of the sections relatively, may be arranged to support the glove in distended shape, and means to prevent relative movement of the sections after adjustment to the last mentioned arrangement.

4. A glove form divided substantially longitudinally into a plurality of glove engaging sections, means whereby relative longitudinal movement of the sections in one direction facilitates the insertion of the form into the glove, and relative longitudinal movement of the sections in the reverse direction distends the glove, and means to maintain the form in glove distending position.

5. A glove form divided longitudinally into a plurality of sections, links adjoining said sections whereby relative longitudinal movement of the sections in one direction facilitates the insertion of the form into the glove, and relative longitudinal movement of the sections in the reverse direction distends the glove, and means to maintain the form in glove distending position.

Signed at New York, county and State of New York, this 14th day of March, 1928.

PARKE H. WATKINS.