Dec. 1, 1964 A. SARJANIAN ETAL 3,159,504

GLOVE FORM

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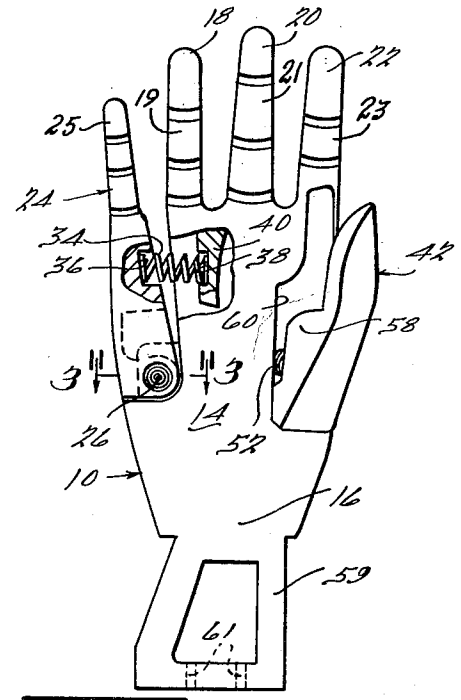


FIG. 1.

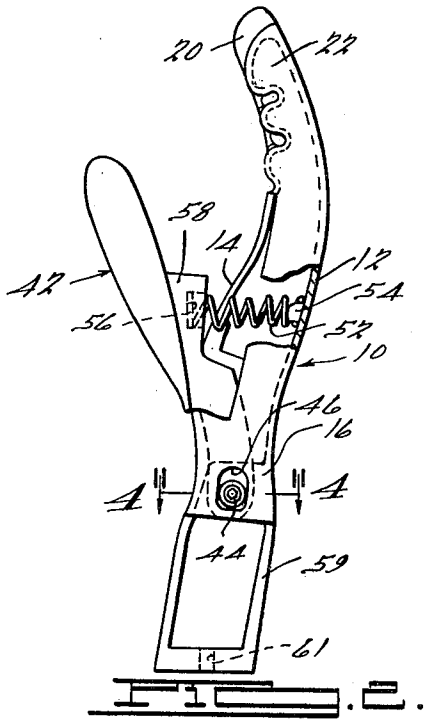


FIG. 2.

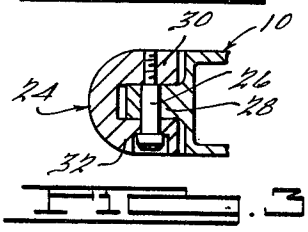


FIG. 3.

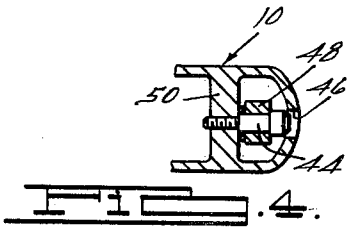


FIG. 4.

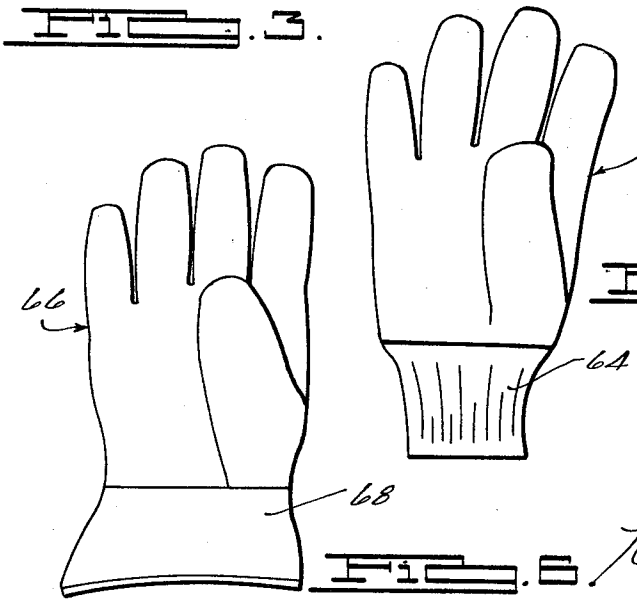


FIG. 5.

FIG. 6.

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GLOVE FORM

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This invention relates to an improved glove form adapted to support a fabric glove to be coated with a layer of plastic, rubber or the like.

It is conventional practice in the manufacture of plastic covered gloves to fit a base fabric glove on a mold or form shaped as a hand. The mold or form is then dipped in a bath of liquid plastic material or the like to completely coat the fabric glove with the plastic material.

The molds or forms used in such a process generally have a plurality of fingers and a thumb which are spread apart in order that all portions of the base fabric glove will be thoroughly coated with the plastic material. Certain types of base fabric gloves, however, are difficult to fit on a mold having its fingers and thumb spread apart. For example, gauntlet type gloves having a wrist portion of non-elastic material will not fit over the spread fingers and thumb portion of a mold unless the spread of the fingers and thumb is reduced or unless the mold is substantially smaller than the glove to be fitted thereon. A glove supported by a mold altered in this fashion will fold on itself and, therefore, may not be uniformly coated with plastic material.

Consequently, many manufacturers use a two-piece mold sized to snugly fit a base fabric glove comprising a first piece having a hand member with fingers spread in a relaxed shape, and a second separate piece shaped as a thumb which is adapted to fit the thumb portion of the base fabric glove. Once the thumb piece is separately inserted into the base fabric glove, even the non-elastic wrist portion of a gauntlet type glove will fit over the spread fingers on the hand member. The fact that the base fabric glove fits snugly on the two-piece mold assures that the glove will be thoroughly coated with the plastic material. A great deal of time, however, is spent in fitting base fabric gloves on such two-piece molds. Consequently, a greater number of employees are required to keep a conveyorized system fully operative. This, of course, increases the unit cost of gloves manufactured by such means.

The objects of the present invention, therefore, are to provide an improved glove form having fingers and a thumb which are spread apart and adapted to snugly fit in a base fabric glove having either elastic or non-elastic wrist portions; to provide an improved glove form which is adapted to quickly fit in such base fabric gloves; and to provide an improved glove form having such characteristics by pivotally connecting a finger and a thumb on an arcuate elongated member shaped approximately as the back, palm and wrist of a hand and by yieldingly holding said finger and thumb outwardly of the arcuate elongated member.

The manner of accomplishing the foregoing objects and other objects, features, and advantages of the present invention will become apparent from the subsequent description, taken in conjunction with the accompanying drawing in which:

FIGURE 1 is a view in fornt elevation, partially broken away, of a glove form constructed in accordance with certain of the principles of the present invention;

FIGURE 2 is a view in side elevation, partially broken away, of the glove form illustrated in FIGURE 1;

FIGURE 3 is a view in horizontal section taken along the line 3—3 of FIGURE 1;

FIGURE 4 is a view in horizontal section taken along the line 4—4 of FIGURE 2;

FIGURE 5 is a view in front elevation of a fabric glove having an elastic wrist portion; and

FIGURE 6 is a view in front elevation of a glove having a gauntlet or non-elastic wrist portion.

The improved glove form of the present invention is generally adapted to support different types of base fabric gloves to be coated with a liquid molding material in conventional dip-molding processes of the type having a conveyorized system which carries the form and the glove supported thereon to a preheat oven, a dipping station having a bath of suitable liquid molding material such as plastic, rubber, and the like, a fusing oven, a cooling station and a stripping station. Such dip-molding processes may include a greater or lesser number of stations depending upon the material to be molded on the base fabric glove as is well known in the art.

One embodiment of a glove form constructed in accordance with certain of the principles of the present invention is illustrated in FIGS. 1–4 as including a hollow arcuate elongated member 10 comprising a back portion 12, a palm portion 14, and a wrist portion 16 shaped approximately as the back, palm and wrist of a hand.

The improved glove form further includes three fixed fingers 18, 20, 22 having front portions 19, 21 and 23, respectively, adjacent the palm portion 14, and each of which connect to one end of the elongated member 10. Each of the fingers 18, 20, 22 are preferably bent in a relaxed shape to impart flexibility to the plastic glove supported thereon. The fingers 18, 20, 22 also are spread apart from each other in order that the outer surface of glove fingers supported thereon will be completely coated with the liquid molding material. A small finger 24, having a front portion 25, is also bent in a relaxed shape and is pivotally mounted on one side of the arcuate elongated member 10 by means of a pin 26 which connects spaced arms 30, 32 on one end of the small finger 24 to an outwardly directed tongue 28 on the arcuate elongated member 10. One end of the pin 26 threadingly engages the arm 30 for holding the finger 24 to the arcuate elongated member 10.

The small finger 24 is yieldingly held outwardly of the arcuate elongated member 10 by means of a coil spring 34 having one of its ends supported in a recess 36 in the small finger 24 and having its opposite end supported in a recess 38 in an inwardly directed arm 40 located within the hollow arcuate elongated member 10. Consequently, the small finger of a base fabric glove supported on the improved glove form is spaced from the remainder of the glove form so that it will also be completely coated with liquid molding material.

A thumb 42 is pivotally mounted on the opposite side of the elongated member 10 by means of a pin 44 which is adapted to pass through an aperture 46 in the outer surface of the member 10, an elongated end portion 48 of the thumb 42 and thread into a wall portion 50 on the arcuate elongated member 10. The thumb is held outwardly from the arcuate elongated member 10 by means of a second coil spring 52 having one end connected on an inwardly directed tab 54 on the inner surface of the back portion 12 and having its opposite end seated in a recess 56 in a shoulder 58 on the thumb 42. Thus, a thumb portion of a base fabric glove supported on the improved glove form will be located away from the remainder of the glove form and will also be completely coated by the liquid molding material. The palm portion 14 of the elongated member 10 is cut out at 60 in order that the thumb 42 can be pressed toward the finger 22 for reasons to be discussed.

A base 59 on the improved glove form has a plurality of laterally spaced holes 61 through which means are

inserted to fix the improved glove form on a conveyorized system of the type discussed above.

It has been found that base fabric gloves having either elastic or non-elastic wrist portions will fit over the improved glove form much faster than over conventional two-piece type molds as discussed above. Basically the reduced time is attributable to the fact that the improved glove form is essentially formed as a single piece, thereby eliminating the insertion of two separate pieces in the base fabric glove. Therefore, a base fabric glove can be slid on the improved glove form in a single motion during which time the movable small finger **24** and the thumb **42** are moved toward the elongated member **10** to allow the wrist portion of the base fabric glove to fit thereover.

For example, when a base fabric glove **62** having an elastic knit wrist portion **64** (FIG. 5) is fit on the glove form illustrated in FIGS. 1–4, the small movable finger **24** is initially depressed inwardly toward the arcuate elongated member **10**. Once the knit wrist **64** is slid over the tips of the movable finger **24** and the three fixed fingers **18, 20, 22**, it will hold the small movable finger **24** in its depressed position. Then the thumb **42** is slightly depressed toward the palm **14** and the wrist **64** is stretched and slipped thereover to hold the thumb **42** in a depressed position. The fingers and thumb of the base fabric glove are then aligned with their counterpart fingers and thumb on the glove form and inserted therein and the base fabric glove is slid over the entire form which snugly fits therein. Once the wrist **64** is located on the wrist **16** of the glove form, the small finger **24** and thumb **42** will be moved into positions outwardly of the elongated member **10** by the springs **34, 52**. Then the base fabric glove **62** and the glove form are ready to be passed through the liquid molding material.

Similarly, a gauntlet or turned-up wrist type of glove **66** (FIG. 6) having a non-elastic wrist portion **68**, can be quickly fit on the improved glove form by first moving the small movable finger **24** toward the arcuate elongated member **10**. Then the non-elastic wrist portion **68** of the glove **66** is slipped over the tips of the movable small finger portion **24** and the three fixed fingers **18, 20, 22**. The small finger portion **24** is held against the elongated member **10** by the wrist portion **68** to enable a person fitting the glove on a form to press the thumb **42** toward the finger **22**. In this case the thumb **42** must be moved against the back **12** of the arcuate elongated member **10** so that the non-elastic wrist portion **68** will slip over the tip of the thumb **42** to hold it in the depressed position. The fingers and the thumb of the base fabric glove are then aligned with their counterparts on the glove form and the glove is slipped downwardly on the form until the non-elastic wrist portion is positioned over the wrist **16** of the glove form. At this point, the base fabric glove snugly fits on the glove form and the small finger **24** and the thumb **42** are again held outwardly in a spread position by the springs **34, 52**.

Glove forms having such movable thumb and finger portions are quickly manipulated by a person fitting gloves thereon so that gloves of different types can be quickly fitted thereon prior to passing through a bath of liquid molding material. Therefore, the number of persons required to keep a given conveyorized system operative is materially reduced.

It will be understood that the specific construction of the improved glove form which is herein disclosed and described is presented for purposes of explanation and illustration, and is not intended to indicate limits of the invention, the scope of which is defined by the following claims.

What is claimed is:

1. A glove form for supporting a glove to be dip-molded in a plastic-like material comprising an elongated member simulating the back, palm and wrist of a hand, finger elements extending from said elongated member

and at least one of which finger elements are rigid therewith, said finger elements having a front portion adjacent said palm, said palm having an outer surface generally defining an elongated plane extending toward said finger elements and means defining a pivot axis disposed interiorly of said plane generally parallel to the transverse dimension thereof, a thumb element pivotally mounted on said means adjacent the wrist of said elongated member for permitting movement of said thumb element on said pivot axis from a first position adjacent said one of said finger elements and in front thereof to a second position spaced from said one of said finger elements and resilient means for returning said thumb element to its second position after a glove is fitted on the glove form for holding the portion of the glove supported on said thumb element in a suitable position for dip-molding.

2. A glove form for supporting a glove to be dip-molded in a plastic-like material, comprising an elongated member simulating the back, palm and wrist of a hand, finger elements and a thumb element extending from said elongated member, said finger elements having a front portion adjacent said palm, one of said finger elements being normally disposed laterally outwardly of the other said finger elements, said thumb element being normally disposed outwardly of and in front of said finger elements, said palm having a surface thereon generally defining an elongated plane extending towards said finger elements and means defining a pivot axis disposed interiorly of said plane and extending parallel to the transverse dimension thereof, means connecting said thumb element to said pivot axis for permitting movement of said thumb to a position adjacent said finger elements to reduce the width of the glove form as a glove is fitted thereon, and resilient means for returning said thumb element to its normally disposed position after a glove is fitted on the glove form for holding the portions of the glove supported on said movable finger and thumb elements in a suitable position for dip-molding.

3. A glove form for supporting a glove to be dip-molded in a plastic-like material, comprising an elongated member simulating the back, palm and wrist of a hand, four spaced apart finger elements extending from said elongated member, and at least three of which finger elements are rigid therewith, said finger elements having a front portion adjacent said palm, said palm having a surface thereon generally defining an elongated plane extending towards said finger elements and means defining a pivot axis disposed interiorly of said plane and extending parallel to the transverse dimension thereof, a thumb element pivotally mounted on said means adjacent the wrist thereof for permitting movement of said thumb element on said pivot axis from a first position adjacent a first one of said finger elements and in front thereof to a second position spaced from said first finger element, means pivotally mounting a second one of said finger elements remote from said first finger element on said elongated member for movement from a first position closely adjacent a third one of said finger elements to a second position spaced from said third finger element, and means including spring means connected between said elongated member and said thumb and second finger elements, respectively, for returning said thumb and second finger elements to their said second positions after a glove is fitted on the glove form for holding the portions of the glove supported on said movable elements in a suitable position for dip-molding.

4. A glove form for supporting a glove to be dip-molded in a plastic-like material comprising an elongated member simulating the back, palm and wrist of a hand, four spaced apart finger elements extending from an elongated member and at least three of which finger elements are rigid therewith, said finger elements having a front portion adjacent said palm, said palm having an outer surface generally defining an elongated plane extending toward said finger elements and means defining

a pivot axis disposed interiorly of said plane generally parallel of the transverse dimension thereof, a thumb element pivotally mounted on said means adjacent the rest of said elongated member for permitting movement of said thumb element on said pivot axis from a first position adjacent a first one of said finger elements and in front thereof to a second position spaced from said first finger element, means defining an opening in said palm adjacent said front portion of said first finger element, a portion of said thumb element when in said first position being received in said opening and resilient means for returning said thumb element to its second position after a glove is fitted on the glove form for holding the

portion of the glove supported on said thumb element in a suitable position for dip-molding.

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