

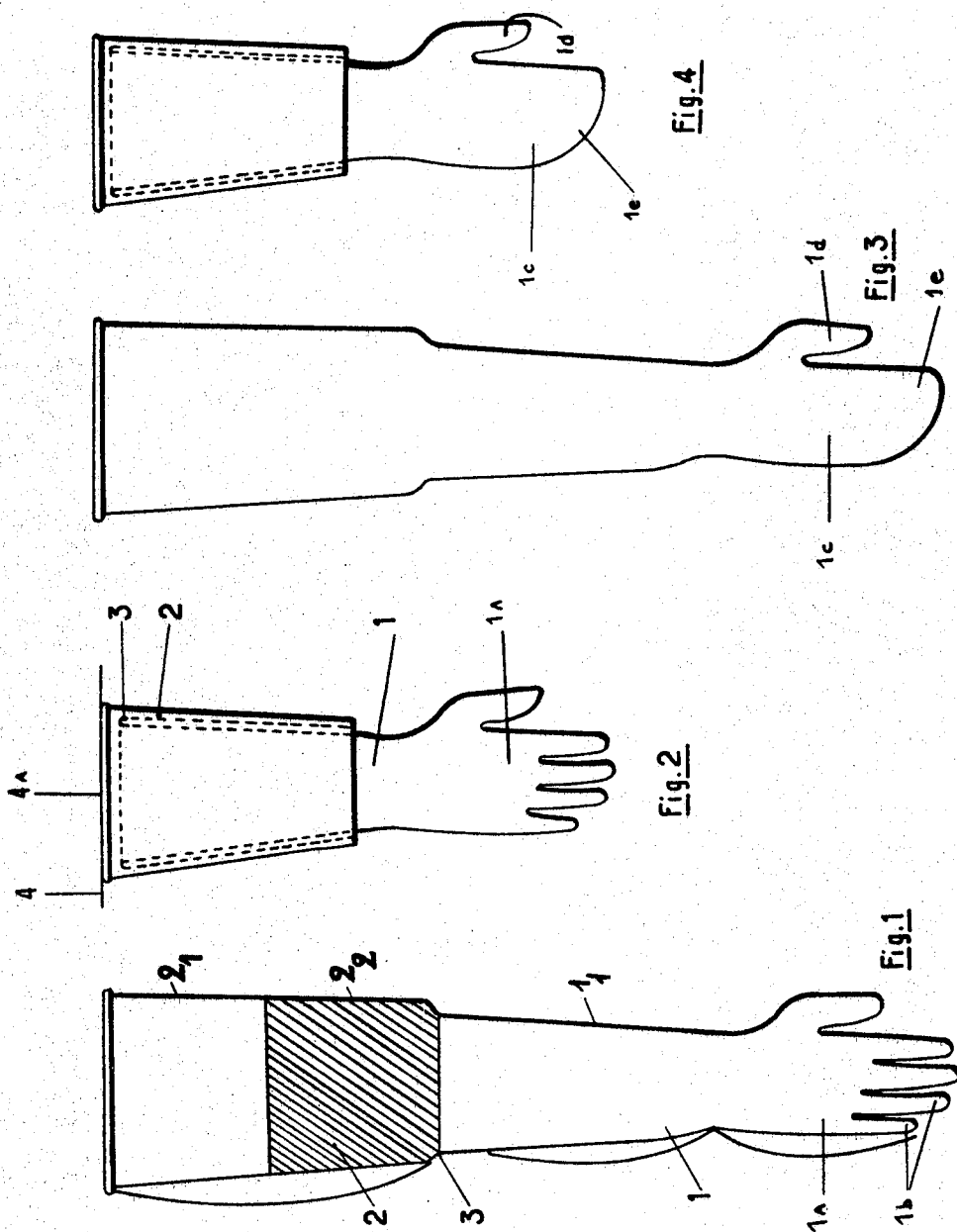
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GLOVE

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3,391,406
GLOVE

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The present invention relates to a glove or gauntlet construction.

The present invention is designed primarily for glove or gauntlets used in material handling laboratory applications, and other similar applications. The present invention provides a glove or gauntlet construction having a hand portion, forearm portion, adjustable portion, and a rearward extension—each continuous with the other. The hand and forearm portions are designed to slightly grip the user's forearm while the rearward extension, having a larger diameter than that of the forearm portion, is adapted during usage to telescopically slide over the forearm portion, thereby permitting partial withdrawal of the user's arm without movement of either the hand or forearm portions relative to the user's hand or forearm. This invention is particularly designed to overcome problems which are inherent in prior constructions conventionally used in laboratory work. These constructions which are often secured at their rearward periphery to portholes in a chamber do not permit partial withdrawal of the user's arms from the glove without consequent movement and adjustment of the hand or forearm portion of the glove. Consequently, such gloves have often been inconvenient, particularly when they are being used in delicate work or work requiring constant motion and partial withdrawal of the user's hands and arms.

It is therefore an object of the present invention to provide a glove or gauntlet particularly designed for laboratory work, use in conjunction with chamber portholes, and for handling material which permit and facilitate the partial withdrawal of the wearer's forearm from the glove without consequent movement of the hand portion or forearm portion. A further object of this invention is to provide a glove of the type described having a forearm portion which extends substantially from the wrist to the bend of the elbow with a rearward extension of a larger diameter extending substantially from the elbow to the level of the shoulder.

These and other objects of the present invention will be more clearly understood when considered in conjunction with the accompanying drawing in which:

FIG. 1 is a front elevational view of a glove embodying the invention;

FIG. 2 is a front plan view of the glove shown in FIG. 1 in a telescoped position with underlying portion shown in dotted line;

FIG. 3 is a front view of a modification of the invention illustrated in FIGS. 1 and 2; and

FIG. 4 is a front view of the gauntlet shown in FIG. 3 in telescoped position with portions shown in dotted outline.

Referring first to the preferred embodiment shown in FIGS. 1 and 2, there is illustrated a glove having a hand portion 1A. This hand portion is formed as a normal glove with five fingers indicated at 1B. The hand portion 1A is integral with the forearm portion 1. The hand portion 1A is designed to extend over and cover the hand of a wearer to the wrist. The forearm portion 1 is intended to cover the wearer's forearm from the wrist to a portion substantially at the bend of the elbow. The hand portion 1A and forearm portion 1 should be sized so that they will slightly grip the wearer's hand and forearm and re-

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main secured on the hand and forearm without sliding during use. An adjustable portion or rearward extension 2 extends from and is integrally connected to the forearm portion 1 by a shoulder section 3. The shoulder section 3 is an annular, narrow, outwardly flared continuation of the forearm portion 1. This annular shoulder section 3 is positioned to circumscribe a wearer's arm, preferably at or near the bend of the elbow. The rearward extension 2 extends from this annular shoulder 3 rearwardly and is designed to cover the wearer's arm substantially from the elbow to the level of the shoulder.

If desired, the annular shoulder 3 as well as the rearward extension 2 may be formed of the same material as the hand portion 1A and forearm portion 1. However, in a modification, a part of the forearm portion 1 and a part of the rearward extension 2 may be formed of rigid or semirigid material which are adapted to slide one over the other. The intermediate portion which comprises a part of the rearward extension, the annular shoulder section 3, and a part of the forearm portion may be formed of a tube of flexible, stretchable, elastic material. The forearm portion of this modification is secured against sliding by the gripping action of this flexible material 2 from a point forward of the annular section 3 towards the hand 1A.

FIGURE 2 illustrates the invention when an individual forearm is partially withdrawn. In this arrangement, the larger diameter formed by the rearward portion 2, telescopes about the forearm portion 1. At the same time, the forearm portion 1 remains in slight gripping engagement with the wearer's forearm due to the elastic nature of this portion 1. Thus a wearer may partially withdraw an arm from this glove or gauntlet during handling and moving without sliding the forearm portion 1 from the user's forearm.

If desired, the periphery 4A of the glove at its rear end may be suitably secured to a porthole or other similar construction ordinarily found in laboratory chambers or like constructions.

FIGURES 3 and 4 illustrates a modification of this invention in which like numbers refer to like parts illustrated in FIGURES 1 and 2. In this arrangement, the hand portion is formed as a mitten 1C having a thumb section 1D and finger section 1E.

The glove or gauntlets made in accordance with the present invention may be formed of any suitable synthetic or natural material such, for example, as rubber—both synthetic or natural, and other various chemical materials which may, for example, be resistant to heat and gases or corrosive chemicals. The rigid portions referred to above may be formed of a rigid or semirigid plastic material such as a thermoplastic or heat-setting material.

The foregoing description is intended to exemplify the embodiments of the invention but the scope of the invention is intended to be limited only by the claims appended hereto.

What is claimed is:

1. A glove adapted for frequent partial withdrawal of the user's arm comprising:

hand and forearm portions adapted to fit respectively in gripping relation over the user's hand and forearm,

a rearward extension having a diameter greater than the diameter of said forearm portion,

shoulder means integrally connecting said rearward extension with said forearm portion for telescopically sliding said rearward extension over said forearm portion, said rearward extension having a diameter sufficient to permit free movement of the user's upper arm into and out of said rearward extension with-

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out relative movement of said forearm portion with respect to the user's forearm and said rearward extension having a length sufficient to permit withdrawal of substantially all of said forearm portion into said rearward extension,

said shoulder means integrally connecting said rearward extension with said forearm portion comprising an annular shoulder section flared outwardly along one annular edge from said forearm portion, and connected at its other annular edge to said rearward extension,

said forearm portion being sized to extend from a user's wrist to the bend of the elbow, and

said rearward extension sized to extend from a user's elbow to the level of the shoulder.

2. A glove as set forth in claim 1 wherein a portion of said rearward extension and said forearm portion are formed of rigid material and the portion of said glove intermediate said rigid material is formed of flexible material.

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3. A glove as set forth in claim 2 wherein said intermediate portion includes an annular shoulder section having a diameter less than the diameter of said rearward extension.

5 4. A glove as set forth in claim 3 wherein said glove is formed of gas impermeable material.

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