Dec. 22, 1970 G. C. JACKSON 3,548,413

FIREPLACE GLOVE

Filed May 28, 1969 3 Sheets-Sheet 1

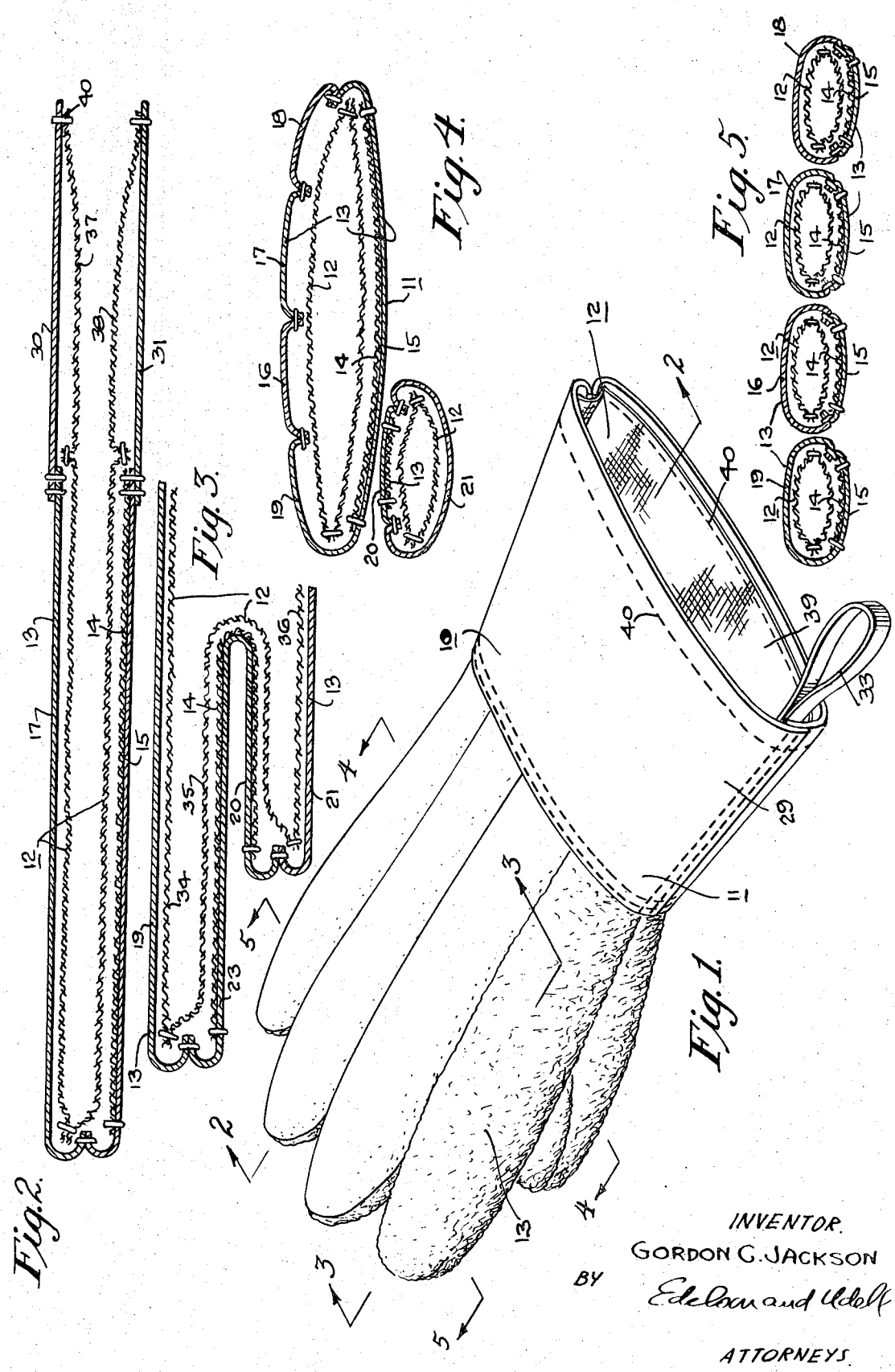


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

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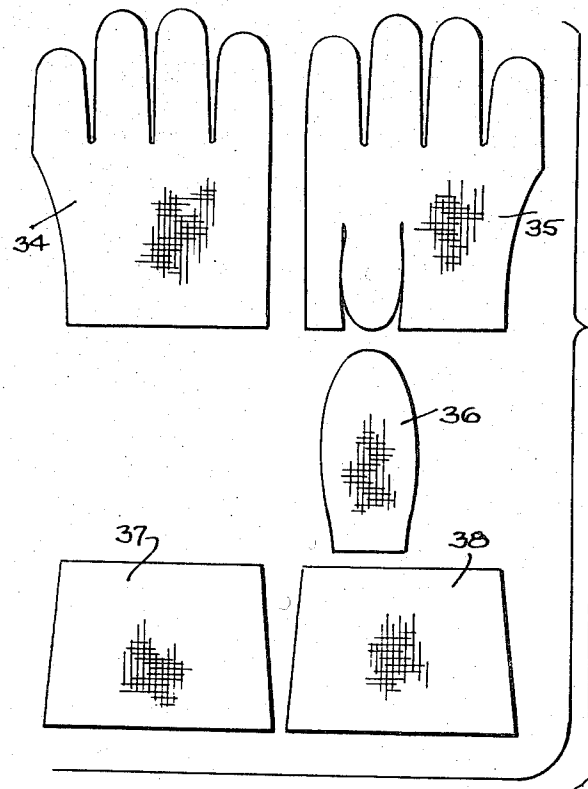
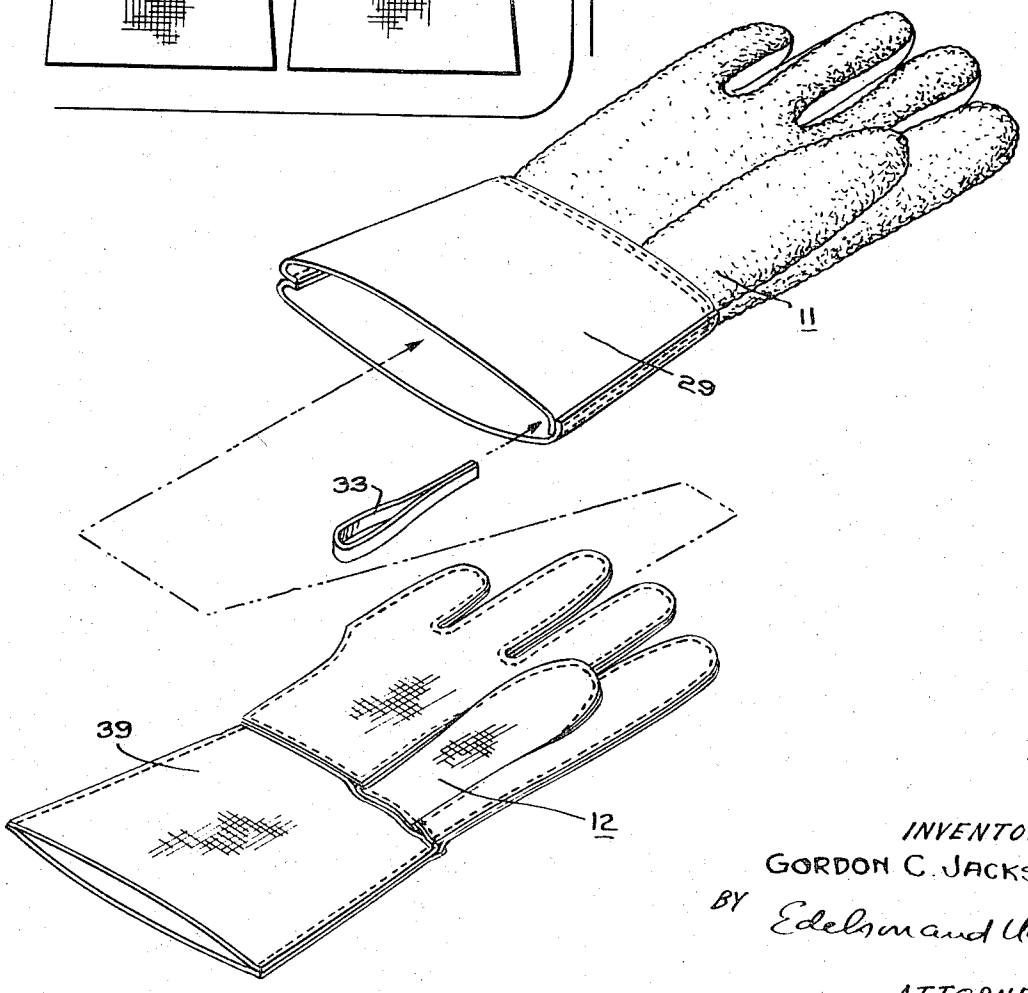


Fig. 8.

Fig. 6.



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Fig. 7

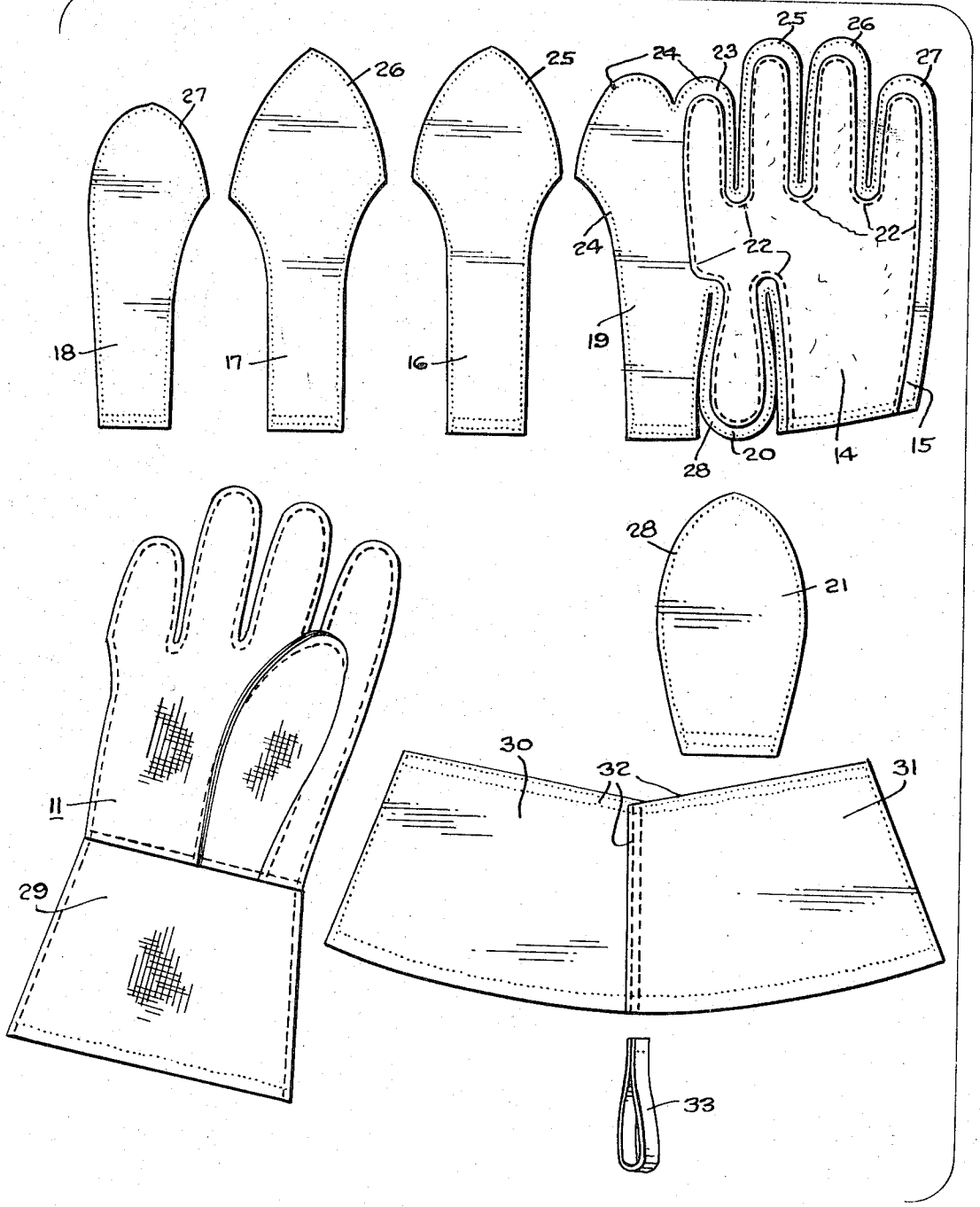


Fig. 7A

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FIREPLACE GLOVE

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Int. Cl. A41d 13/10, 19/00
U.S. Cl. 2—161 3 Claims

ABSTRACT OF THE DISCLOSURE

A fireplace glove made of two telescopically interfitted glove-shaped parts, the outer glove part being made of expanded leather and the inner glove part of wool fabric. The two interfitted parts of the glove are respectively provided with wrist-embracing cuff portions having their open ends perimetrally sewn together by lines of stitching which serve as the sole means of securement of the inner glove part to the outer glove part in consequence of which the palm and finger portions of the interfitted glove parts are free to move relatively to one another to preclude build-up of heat at any one point in the glove. The expanded leather of the outer glove part and the wool fabric of the inner glove part are both surface-napped to create air cells or pockets in which air is entrained as the medium for retarding conduction of heat through the superimposed leather and wool layers of the glove. The palm portion of the leather glove part is internally lined with a porous fabric to physically separate the palm portions of the interfitted glove parts, which lining being thus interposed between layers of fire resistant materials may or may not be flammable per se.

This invention relates to fireplace gloves and more particularly to improvements in the construction thereof to effectively protect the hands of the wearer against injury in the handling of extremely hot objects such as burning logs and coals in fireplaces and briquettes in charcoal broilers or grilles.

Among the principal objects of the present invention is the provision of a glove having an outer shell of leather in which is more or less loosely interfitted an inner glove-shaped shell fabricated of a napped coarsely woven wool material, the interfitted inner and outer shells being provided in the areas thereof which overlie the palm and inside surfaces of the thumb and fingers of the wearer's hand with an insulating cushion of a porous fabric.

All of the materials of which the glove is formed have a high degree of porosity to provide therein a myriad of air cells or pockets in which air is entrained as the heat insulating medium for preventing transference of extreme heat from the heated object being handled to the hand upon which the glove is worn. Thus, an important aspect of the invention is to provide such telescopic assembly of an outer glove formed of expanded leather and an inner glove separately formed of a coarsely woven 100 percent wool fabric, with an intervening cushioning layer of a porous fabric disposed therebetween, to effectively utilize as the heat insulating medium the air which is entrapped within and between each superimposed fabric layer of the glove.

An important objective of the invention is to so attach the inner woolen fabric glove within the outer leather shell thereof as to permit the inner glove such freedom of movement within its encasing shell of leather as to prevent the build up at any one point in the glove of heat transferred from a heated object being handled.

A further object of the invention is to provide a glove of the character above described wherein the several materials of which the outer and inner gloves are formed are disposed in such specific relation to one another as to most effectively provide maximum protection against injury of the wearer's hand in handling heated objects, as well as to reduce to a minimum cuts and punctures of the glove such as might be occasioned by sharp and abrasive objects.

Still another important object of the present invention is to provide a multiple-layered glove which is so pliant and flexible when fitted on the hand as to be convenient in use and yet provide an extremely tough outer surface for maximally resisting cuts, punctures and abrasions without at the same time reducing its fire resistant and heat insulating properties.

A still further object of the invention is to provide a fireplace glove having an outer surface of expanded leather which in itself retards conduction of heat therethrough and which is not subject to such hardening and shrinking as to prematurely shorten the useful life of the glove.

It is also an important object of the invention to provide a glove fabricated of materials all of which are adapted to be dry-cleaned without reducing its effectiveness for safely protecting the hand against burns and other injury during the handling of heated articles.

Other objects and advantages of the present invention will appear more fully hereinafter, it being understood that the invention consists substantially in the combination, construction, location and relative arrangement of parts as hereinafter described as shown in the accompanying drawings and as finally pointed out in the appended claims.

In the drawings:

FIG. 1 is a perspective view of the glove constructed in accordance and embodying the principles of the present invention;

FIG. 2 is a longitudinal sectional view of the glove as taken along the line **2—2** of FIG. 1;

FIG. 3 is a longitudinal sectional view of the thumb and forefinger section of the glove as taken along the line **3—3** of FIG. 1;

FIG. 4 is a transverse sectional view of the palm and thumb section of the glove as taken along the line **4—4** of FIG. 1;

FIG. 5 is a transverse sectional view through the finger portions of the glove as taken along the line **5—5** of FIG. 1;

FIG. 6 is an exploded view showing in perspective individually formed outer and inner parts of the glove prior to their telescopic assembly to form the completed glove of FIG. 1;

FIG. 7 is an exploded view showing in plan the several individual component elements of the outer part of the glove;

FIG. 7A is a view of the glove part as formed of the components of FIG. 7; and

FIG. 8 is an exploded view showing in plan the several individual component elements of the inner portion of the glove.

Referring now more particularly to the drawings, it will be noted that the completed glove **10** as shown in FIG. 1 comprises essentially a pair of telescopically interfitted outer and inner glove-like parts **11** and **12** respectively shown in FIG. 6. The outer part **11** of the glove is provided with an external sheathing **13** of expanded leather having its inner face in the regions of the palm and finger portions of the glove lined with a porous fabric **14** to provide an insulating cushion between the interfitted inner and outer parts **11** and **12** of the glove.

The expanded leather constituting the outer sheathing of the glove part **11** is commercially available in the form of split leather at least 1/16 inch thick in which the fibres have been so separated and raised by chemical or mechanical means as to provide a myriad of air pockets which serve to insulate the raised fibres of the leather

from one another. Such expanded leather not only retards conduction of heat therethrough, but also resists hardening and shrinking of the leather to thereby increase the pliability and useful life thereof.

Although the mode of prodcing the expanded leather forms no part of the present invention, it may be mentioned that such expanded leather may be prepared in several ways, one of which involves scoring and teasing up the surface of the leather, as in napping flannel, then tanning the teased leather with chromium sulphate, oiling it with sperm oil and finally spinning it in a rotating baffled drum until the leather reaches a desired degree of softness. In certain instances, the leather may be initially soaked in a solution of 50% boric acid and 50% borax for a period of 100 to 120 hours prior to the teasing step, while in still other instances the teasing or napping step may be performed after the leather has been tanned, oiled and drummed.

FIG. 7 illustrates the pattern of cutting the expanded leather **13** in flat or sheet form for producing a glove for the right hand, it being observed that the cutting is such as to provide a main part **15** which is adapted to overlie the palm of the right hand and the inner surfaces of the four fingers thereof, and independently cut out parts **16, 17** and **18** to respectively cover the back or outer surfaces of the middle, ring and little fingers of the hand. The main part **15** additionally includes a laterally extending reversely foldable wing portion **19** to cover the back or outer surface of the index finger of the hand and also a freely extending portion **20** to overlie the inner surface of the thumb. Still another separately cut out part **21** of the expanded leather is provided to cover the back or outer surface of the thumb.

The porous fabric **14**, which may be woven or knitted of any suitable fibrous yarn, such as wool, cotton and the like, is cut to the shape and form best shown in FIG. 7, and is stitched, as by the line of stitching **22**, to the inner face of the main part **15** of the expanded leather to provide the latter with a fixed inner lining of porous cushioning material for the palm, finger and thumb portions thereof.

With the lining stitched in place as shown in FIG. 7, the wing portion **19** of the main leather piece **15** is folded back over the unlined surface of the index finger portion **23** to present its perimetral edges in registry with the corresponding edges of said finger portion **23** of the piece **15**, following which the registering edges of the corresponding index finger parts are stitched together along the line **24** to form the index finger of the glove part **11**.

Thereafter, the several separately formed finger pieces **16, 17** and **18** of the expanded leather are respectively positioned in back-to-back overlying relation to the unlined surfaces of their corresponding finger portions of the main leather piece **15**, following which the corresponding parts for each of the glove fingers are stitched together along their edges, as by the lines of stitching **25, 26** and **27** for the middle, ring and little fingers respectively. Finally, with the thumb portion **20** of the main leather part **15** folded back over the palm portion thereof so as to present in face to face relation the surfaces thereof lined with the porous insulating fabric **14**, the separately cut out thumb piece **21** is positioned over the unlined surface of the thumb portion **20** and stitched thereto along the stitch line **28** to form the thumb of the leather glove part **11**.

The above described procedure for stitching together the several component elements of the leather glove part **11** is preferred since it facilitates easy machine sewing of the relatively heavy leather fabric. It will be apparent, however, that this procedure results in an inside out formation of the glove part, that is, with its cushioning lining **14** and the sewed edges thereof externally exposed. Thus, after the leather glove part **11** has been formed as described, it is turned inside out so that its stitched edges and the lining **14** thereof are disposed internally of the glove.

It will be understood, of course, that any other suitable procedure may be followed for producing the leather glove part **11** and also that in lieu of forming the same with the thumb and several finger parts as shown, it may be formed as a mitten having a single part for commonly receiving the several fingers of the hand in addition to that for receiving the thumb.

Upon completion of the hand-embracing portion of the leather glove part **11**, it is provided with a wrist-embracing cuff **29** formed of the cuff pieces **30–31** cut out of any suitable leather stock which may or may not be expanded leather. These cuff parts **30–31**, which are stitched along the stitch lines **32** to complete the leather glove part **11**, may be sewn in position eitner before or after the hand-embracing part of the leather glove is turned right side out. Also, if desired, the cuff **29** may be provided with a loop hanger strap **33**.

The inner glove part **12** is formed of a coarsely woven napped wool fabric which is cut according to a predetermined pattern into the several parts **34, 35, 36, 37** and **38** which are then sewn together along the stitch lines **39** to produce the completed inner glove part as shown in FIG. 6. For this construction of the inner glove **12**, the parts **34** and **35** are simply superimposed upon one another with their corresponding palm and finger edges in registry and with the separate thumb part **36** superimposed upon the turned back thumb portion **36*a*** of the part **35** to present their correspondinv edges in registry, whereupon the registering edges are all stitched together as will be readily understood. As in the case of the outer expanded leather glove part **11**, the inner glove is also provided with a wrist-embracing cuff **39** formed of the cuff parts **37** and **38**, which latter are of wool fabric. It will of course be understoood that the woolen inner glove part may be of mitten form in those instances where it is to be telescopically fitted into an outer expanded leather glove part produced in the form of a mitten.

While both the palm and back faces of the inner glove part are formed of coarsely woven 100 percent wool fabric having a napped surface to increase its surface porosity and thereby its air entraining capability, the wool fabric forming the back face of this inner glove part is preferably provided with a knitted backing having a coarsely interwoven napped facing of 100 percent wool. This wool-faced knitted fabric is also preferably employed for the thumb part **36**. By constructing the inner glove part **11** so that the knitted backing of the wool-faced fabric is exposed on the back face of the glove and on the back face of the thumb portion thereof, telescopic insertion of the woolen glove part **12** into the leather outer glove part **11** to form the complete glove shown in FIGS. 1 to 5 is facilitated.

Upon insertion of the wool inner glove part **12** into the outer expanded leather glove part **11**, the two parts so telescoped into one another are secured together solely by the line of stitching **40** extending peripherally about the outer open cuff ends of the two glove parts. Thus, the inner glove is secured in relatively free-floating arrangement within the outer glove so that its finger, thumb and palm parts have such freedom of movement within the outer leather glove as to preclude the possibility of heat being built up at any one point of contact of the glove with a heated object.

It will be understood, of course, that the glove may be fashioned as hereinabove described for either or both left and right hands, and that the essential aspect of the glove construction is to produce the same of such materials as have been described in such relative arrangement as to create between the contiguous layers of the inner and outer glove parts cellular air spaces which effectively provide insulation against extreme heat. Since the glove of the present invention depends basically upon the air entrapped in the interstices of the napped materials as the heat insulating medium, it will be apparent that the inherent flexibility of these materials is in no way reduced by the entrapped air and thus the glove is highly pliant

and flexible when fitted upon the hand despite the fact that it comprises, as described, a pair of separately formed telescopically interfitted inner and outer glove parts.

It will be understood that the porous fabric **14** which internally lines the palm and inside finger and thumb faces of the expanded leather glove part **11** serves primarily as a mechanical separation between the inner and outer glove parts and that since it is sandwiched between two materials which are each themselves highly fire resistant, it may or may not be flammable per se. However, due to its porous character this lining **14** also serves effectively to entrap air for preventing the transfer of heat from the outer leather glove part **11** to the inner woolen glove part **12.**

It will be understood further that the present invention is susceptible of various changes and modifications which may be made from time to time without departing from the real spirit or principles thereof, and it is accordingly intended to claim the invention broadly, as well as specifically as indicated in the appended claims.

What is claimed as new and useful is:

1. A fireplace glove comprising in combination, an outer glove part of leather, and an inner glove part of woolen fabric, each of said glove parts constituting a complete enclosure for the hand of the wearer with the inner glove part telescopically fitted within the outer glove part, the said outer and inner glove parts being respectively provided with wrist-embracing cuff portions having open ends in registry with one another and secured together peripherally about said registering open ends thereof whereby the hand-embracing portion of the inner glove part is free to move relatively to the corresponding portion of the outer glove part, said outer leather glove part being provided in the areas thereof which overlie the palm and

corresponding faces of the thumb and fingers of the hand with a fixed-in-position lining of porous fabric which serves as an insulating cushion between the layers of the telescopically interfitted outer and inner glove parts.

2. In a fireplace glove as defined in claim **1** wherein the hand-embracing portion of the outer glove part is formed of expanded leather having a napped surface and the corresponding interfitted portion of the inner glove part is formed of a 100 percent wool fabric having a napped surface in at least the area thereof which overlies the palm and corresponding faces of the thumb and fingers of the hand.

3. In a fireplace glove as defined in claim **1** wherein the expanded leather of the outer glove part and the wool fabric of the inner glove part are of such intersticed fibrous character as to provide the same with closely related minute pockets or cells having entrained therein air as the principal medium for preventing transfer of heat through the glove to the hand of its wearer.

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