D. S. HAYWARD.

Glove-Stretcher.

No. 165,096. Patented June 29, 1875.

Fig. 1.

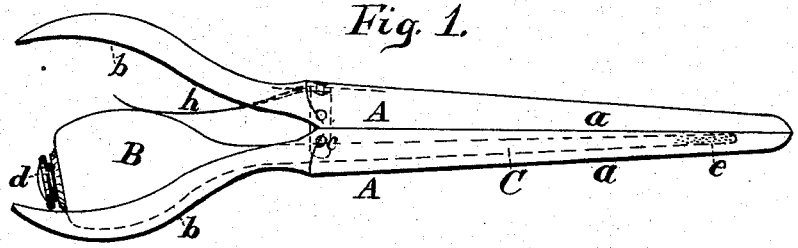

Fig. 2.

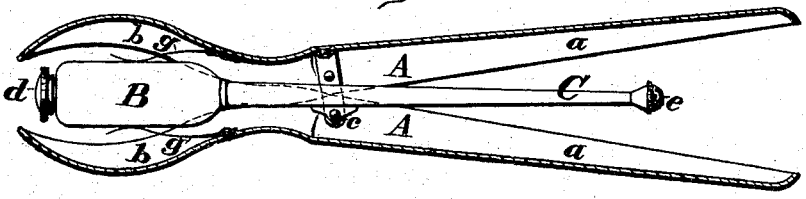

Fig. 3.

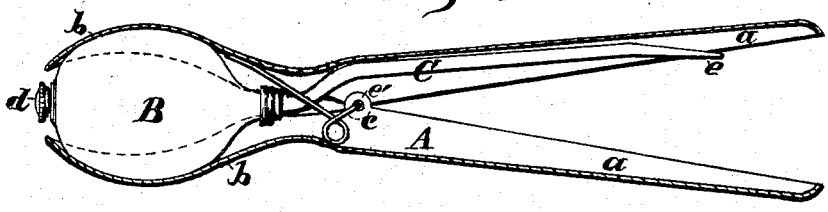

Fig. 4.

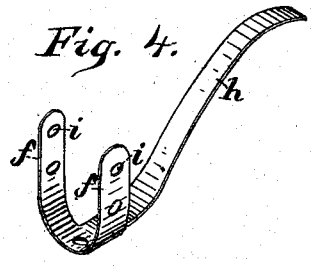

Fig. 5.

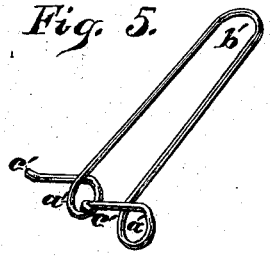

Fig. 6.

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UNITED STATES PATENT OFFICE.

DAVID S. HAYWARD, OF NEW YORK, N. Y.

IMPROVEMENT IN GLOVE-STRETCHERS.

Specification forming part of Letters Patent No. **165,096**, dated June 29, 1875; application filed June 11, 1875.

To all whom it may concern:

Be it known that I, DAVID S. HAYWARD, of the city, county, and State of New York, have invented certain Improvements in Glove-Stretchers, of which the following is a specification:

The object of this invention is partly to produce a stretcher that will be light, strong, durable, and effective, and partly to combine with the stretcher proper a receptacle for the powder used to facilitate drawing on the glove, so arranged that the powder may be applied while the stretcher is yet in the glove and the glove expanded.

Heretofore glove-stretchers have been made solid, of hard wood, bone, &c., and to be strong enough it was necessary that the parts should be made thick and heavy. To give the proper curved shape to the handles also necessitated cutting obliquely across the grain, which rendered them weak. No provision was made for using powder in connection with the stretcher, that operation having to be performed after the stretcher had been removed, and by a separate apparatus.

My invention consists, partly, in a tubular or hollow stretcher, made in two parts and hinged together, and partly in the combination of the stretcher with a receptacle for containing glove-powder, arranged to be operated simultaneously therewith, or before the stretcher is removed, and both tending to accomplish the same result. Another feature of novelty consists in the peculiar construction of the hinge and spring.

In the drawings, Figure 1 is a view of my improved stretcher, with jaws closed. Fig. 2 is a sectional elevation of the same, with the jaws open, showing the tubular construction, and the manner of arranging the powder-receptacle. Fig. 3 is a view showing the powder-receptacle, as constructed in the form of a bulb of elastic rubber. Fig. 4 is a perspective view of the hinging-piece and spring, all made from one piece. Fig. 5 is a modification of the same, constructed of spring-wire. Fig. 6 shows a modification of the hinge.

Let A A represent the two halves of the stretcher, which may be precisely alike, *a a* being the jaws, and *b b* the handles by which they are operated. The two halves are hinged together at *c*. One essential feature in the structure of the parts A A consists in their being hollow or tubular, the jaws, when closed, presenting a smooth, rounded outer contour, or a polygonal contour, if that form be preferred. This hollow form gives great strength in proportion to the weight and the material employed, which is a great desideratum in this class of goods.

I prefer to construct the two halves of sheet-steel precisely alike, stamped or pressed into the required tubular or hollow form; but they may be made of sheet-iron, cast metal, hard rubber, or any other material suitable for the purpose. If made of metal they may be plated on the outside with gold, silver, or nickel, and be painted or enameled inside to improve their appearance.

The hollow on the inside of the jaws may be covered with a flat plate, neatly soldered or otherwise attached thereto, so that the jaws would appear solid; but I do not consider this necessary. The essential feature is the construction of the two parts or halves of thin material, stiff enough for the purpose, so as to present a convex contour on the outside and a concave contour on the inside.

I combine with the stretcher a powder-receptacle, B, both arranged in such a manner in reference to each other that the powder may be applied to the interior of the glove while the jaws of the stretcher are inside the same, and extended or open.

The precise form or precise arrangement of the receptacle B is not essential; but I have shown in Fig. 1 a metallic or hard-rubber box, B, provided with a capped opening at *d* for the insertion of the powder, and a tube, C, extending centrally forward from said box, and provided with a finely-perforated nozzle, *e*, for the escape of the powder.

The box B is placed between the handles *b b*, and should be attached to one of them in some convenient and substantial manner—either removable or permanent. Where the tube C extends forward centrally, as in Fig. 2, I prefer to hinge it to the jaws at the point *c*, and to preserve its central position between the handles I arrange a small spring, *g g*, on

each side of it in substantially the manner shown, said springs serving, also, to keep the jaws closed.

In Fig. 1 the powder-receptacle B is shown attached to one of the handles *b*, and the tube C is represented in dotted lines as lying along the hollow in one of the jaws.

In operating this device the stretcher is inserted and the jaws extended, as desired. While thus extended the powder is ejected through the perforated nozzle *e* by a quick, jerking motion of the jaws downward, somewhat similar to that used in ejecting the contents of spice-boxes.

If the hollow in the jaws be plated or covered over, these cavities may be arranged to receive the powder, and the plate or cover be perforated at or near the front end for its expulsion; or the jaw might be perforated for the same purpose.

In the modification shown in Fig. 3 the powder-receptacle B is a bulb of elastic rubber, and the powder is ejected by compression of the bulb. I prefer to accomplish this by squeezing the bulb between the handles when they are pressed together; and to avoid the expulsion of the powder every time the handles are slightly compressed, as in stretching the glove-fingers, I make the bulb so narrow, as shown, that the handles do not act upon it until the jaws are opened quite wide. I am thus enabled first to stretch the fingers, and then withdraw the stretcher back into the body of the glove, where room is had to close the handles on the bulb and eject the powder. As the powder is very fine—almost impalpable—the perforations for its escape should be very small.

In Fig. 1, but more clearly in Fig. 4, is shown my peculiar combined hinge-piece and spring. A plate of spring-steel is cut somewhat in the form of a T, the branches *f f* forming the hinging part, and *h* the spring. The branches are curved upward to correspond with the concave interior of one of the jaws, to which it is fitted and firmly riveted, leaving the ends projecting above to receive the other jaw. These ends are pierced with holes *i i*, to receive the rivet *c*, by which the jaws are hinged together. The spring portion *h* is curved upward, and bears against the inner face of the opposite handle, or against the box B, thus tending to keep the jaws closed.

In Fig. 5 I have shown this spring in a modified form, which possesses some advantages, although the first named is the best for some purposes.

A piece of spring-wire, bent out at the ends *c′ c′* to form the rivets, has two coils, *a′ a′*, bent in it, which rest upon the inner surface of the handle, the doubled portion or bight *b′* extending upward and backward, impinging against the other handle to form a spring. When this form of spring and hinge is used I prefer to omit any separate hinging-plate, and form a lip, *e′*, on one part, A, as in Fig. 6. This lip is set in, in the manufacture, so as to rest inside of the other part or half, and form a lap, through which the rivet *c′* passes.

When the tube C is to be maintained in a central position, as in Fig. 2, the spring that closes the jaws may be a thin leaf of steel, bent to a U shape, the curved part being perforated for the tube C to pass through, and the ends arranged to press against the inner concave faces of the handles, so as to keep them apart. To retain it in place, the bow of the spring may be attached to the tube, or the ends may be attached to the handles, and the bow left free.

Having thus described my invention, what I claim as new is—

1. A glove-stretcher composed of tubular or hollow sections, substantially as and for the purposes specified.

2. The combination of a glove-stretcher with a powder-receptacle, B, either elastic or non-elastic, attached to said stretcher, and arranged to operate in connection therewith, in such a manner that the powder may be ejected in the interior of the glove while the jaws of the stretcher are expanded therein.

3. The spring device shown in Fig. 4, consisting of the spring *h* and hinging-piece *f f*, made in one piece, and perforated at *i i* to receive the hinging-rivet *c*, substantially as shown.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

DAVID S. HAYWARD.

Witnesses:
HENRY CONNETT,
JOHN W. S. HUGILL.