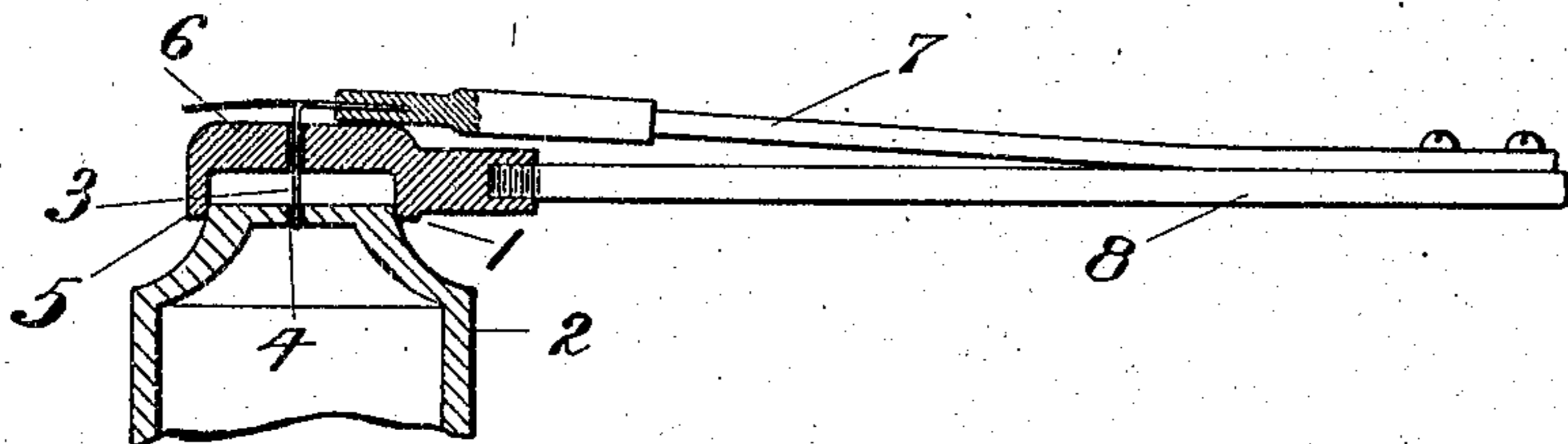
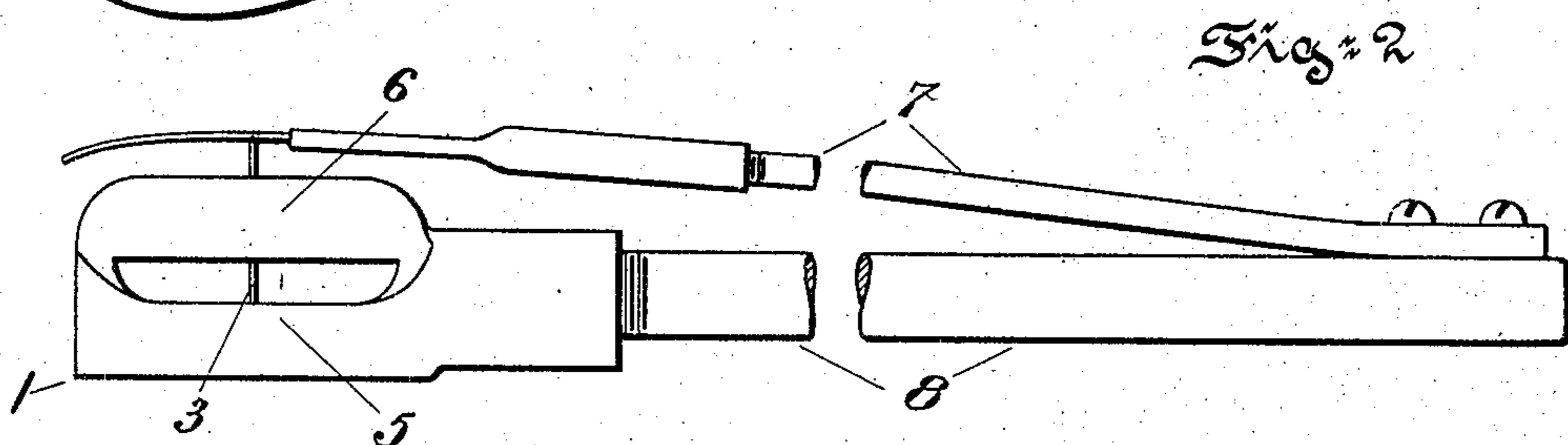
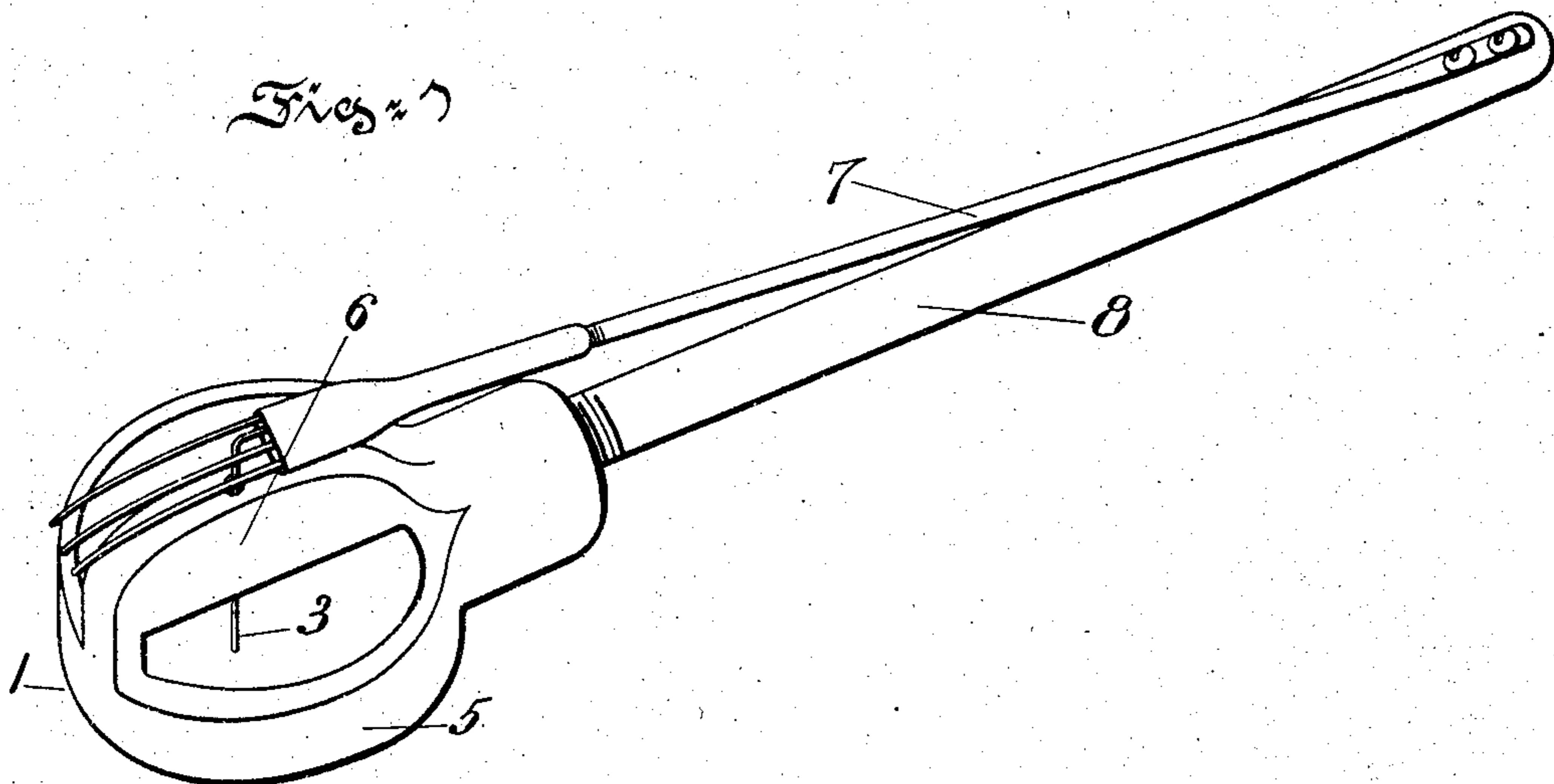


No. 781,101.

PATENTED JAN. 31, 1905.

A. E. SHAW.
NEEDLING DEVICE FOR BURNERS.
APPLICATION FILED MAR. 29, 1904.



Witnesses

[Signature]
H. M. Gilligan

Inventor

Arthur E. Shaw.

By

Augustus S. Skouglton,
Attorney

UNITED STATES PATENT OFFICE.

ARTHUR E. SHAW, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
PENNSYLVANIA GLOBE GAS LIGHT COMPANY, OF PHILADELPHIA,
PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

NEEDLING DEVICE FOR BURNERS.

SPECIFICATION forming part of Letters Patent No. 781,101, dated January 31, 1905.

Application filed March 29, 1904. Serial No. 200,654.

To all whom it may concern:

Be it known that I, ARTHUR E. SHAW, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Needling Device for Burners, of which the following is a specification.

Objects of the present invention are to provide a device for needling burners even when the latter are not readily accessible or when they are obscured by darkness, to provide for conveniently renewing the needle of the device, and to make the device not only efficient in operation but also conveniently portable—as, for example, in the pocket.

To these and other ends hereinafter set forth the invention, stated in general terms, comprises the improvements to be presently described and finally claimed.

The nature, characteristic features, and scope of the invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is a perspective view illustrating, upon a very much enlarged scale, a needling device embodying features of the invention. Fig. 2 is a side view of the same; and Fig. 3 is a sectional view, upon a somewhat smaller but still enlarged scale, showing the needling device in application to a burner.

In the drawings, 1 is a needle-guide, and it is adapted for detachable application to a burner—such, for example, as is indicated at 2 in Fig. 3. This needle-guide is provided with a movable needle 3, adapted to enter the burner-orifice 4. This needle-guide 1 is provided with an opening through which the needle 3 works, and it is constructed to center this opening in respect to the opening in the burner-tip 2. For this purpose the guide comprises a flange 5, shown as a ring and adapted to receive the burner-tip and with a bridge or part 6, having in it the opening through which the needle 3 works. The nee-

dle is carried by a spring-arm 7, attached to the handle 8. The arm 7 is shown as equipped with several needles, so that when one is broken or otherwise rendered unfit for use another can be turned down into position for working through the hole in the bridge 6.

It will be obvious to those skilled in the art to which this invention relates that modifications may be made in details without departing from the spirit thereof. Hence I do not limit myself to the precise mode of construction; but,

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A needling device for burners comprising a ring adapted for detachable application to a burner and provided with a laterally-extending handle, and a spring-arm secured to the handle, and provided with a needle arranged centrally of the ring and adapted to enter the burner-orifice, substantially as described.

2. A needling device for burners comprising a flange adapted for detachable application to the burner and provided with a handle and bridge, and a spring-arm connected with the handle and provided with a needle arranged to work through an opening in the bridge, substantially as described.

3. A needling device for burners comprising a needle-guide adapted for detachable application to the burner and provided with a movable arm equipped with several needles projecting in the plane of the arm and of which any one may be positioned perpendicular to the arm to cooperate with the guide, substantially as described.

In testimony whereof I have hereunto signed my name.

ARTHUR E. SHAW.

In presence of—

E. V. SHIVLER,
K. M. GILLIGAN.