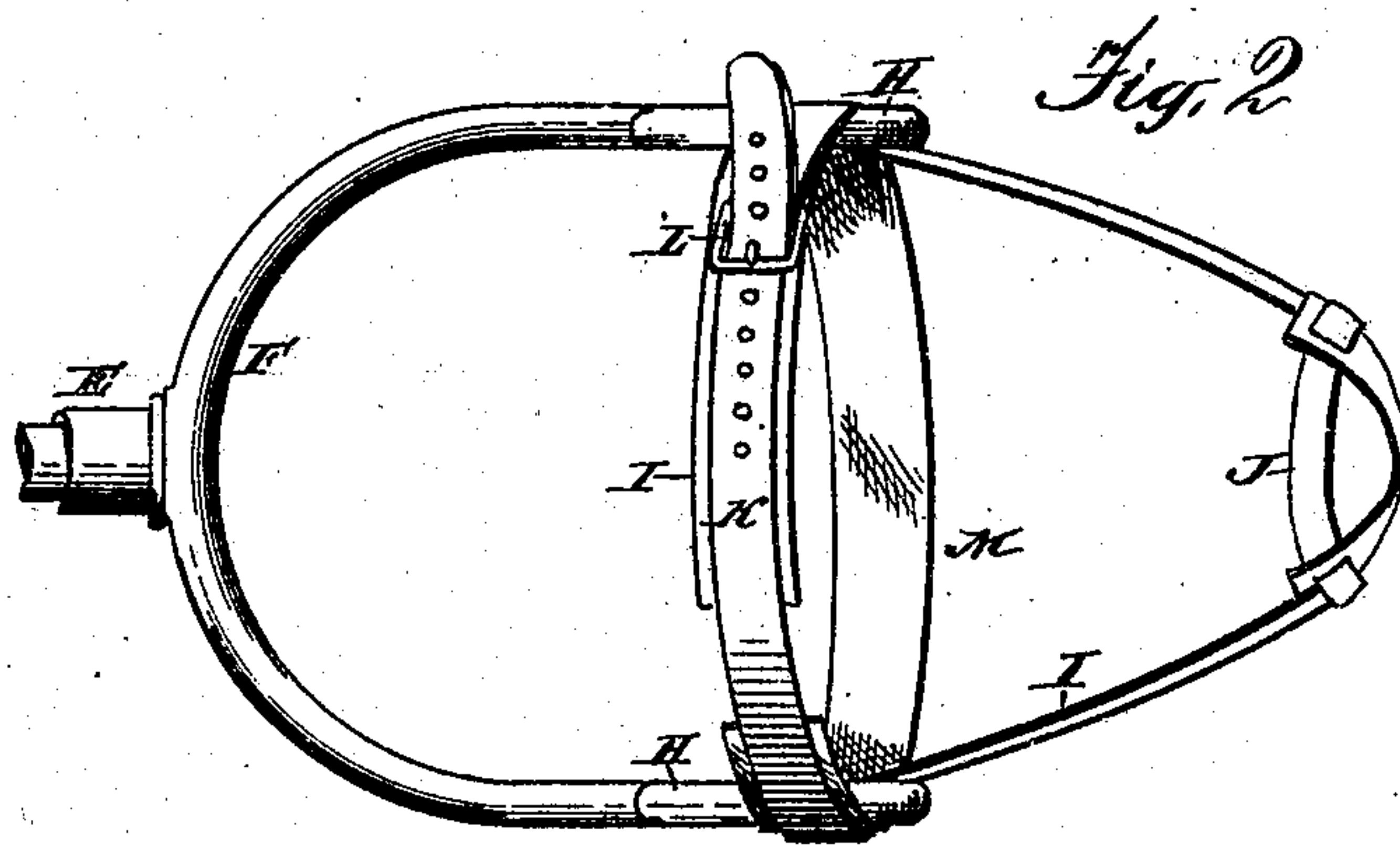
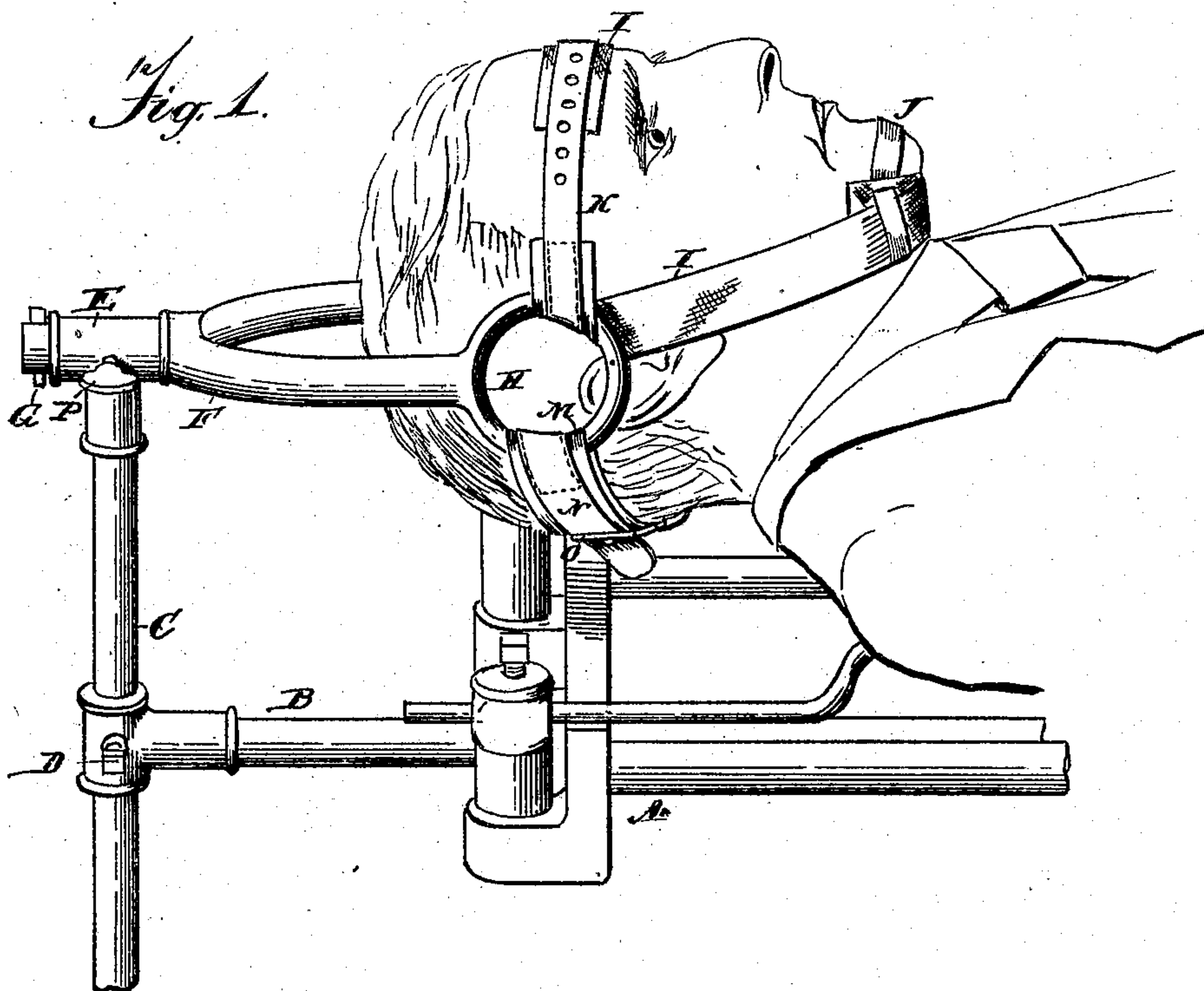


S. M. LANGWORTHY.  
SURGICAL HEAD HOLDER.  
APPLICATION FILED FEB. 25, 1908.

923,862.

Patented June 8, 1909.



Witnesses:  
L. A. St. John  
J. L. Clarke

Inventor  
Solon M. Langworthy  
By J. W. St. John  
Atty.



# UNITED STATES PATENT OFFICE.

SOLON M. LANGWORTHY, OF CEDAR RAPIDS, IOWA.

## SURGICAL HEAD-HOLDER.

No. 923,862.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed February 25, 1908. Serial No. 417,657.

*To all whom it may concern:*

Be it known that I, SOLON M. LANGWORTHY, citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Surgical Head-Holders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to surgical appliances in which tension is applied to the trunk, or to the trunk and legs; and has for its object to provide an improved attachment for holding the patient's head in any desired position, and in a safe and comfortable manner.

The nature of the invention is fully disclosed in the description and claims following, reference being had to the accompanying drawings in which—

Figure 1 is a side view in perspective of a head-holder embodying my improvements, as in use. Fig. 2 is a top view of the same detached.

In the drawing, A designates a part of the head or upper end of a surgical table, the details of which are not important to an understanding of this invention.

B is an extension rod adapted to be moved endwise by suitable mechanism, not shown. To the head of this is attached a standard C, adjustable up and down in the head by means of a set-screw D. The upper end of the standard is provided with a tee E, and in this is swiveled a stirrup F suitably held in the tee, as by a pin G. The forks of the stirrup terminate in rings H, and in these are mounted the head-holding straps. The stirrup should, of course, be wide enough so as not to bear or bind on any head to which it may be applied. In the upper portion of the rings is mounted a strap or band I, which, as will be seen, passes over the forehead, and after making a quarter turn in the rings, passes under the point of the chin. At the chin it is provided with a short cross-strap J, which passes over the chin in front, as shown, and serves to hold the underpassing strap near the point of the chin, to prevent the possibility of choking. A piece of comparatively wide webbing is used for the main band, and to this is attached, for the purpose of adjustment, an extending piece of leather strap K to connect with a buckle L suitably attached

to the other portion of the band. Opposite the forehead band is a back-band M looped through the rings of the stirrup, and similarly provided with adjusting strap N and buckle O. This band, when in operative position, lies across the back base of the skull, and it is evident that when stress is applied to the stirrup the head will be very snugly and securely held at three strong resisting areas, the forehead, the back base of the skull, and the point of the chin. The grip is such that slippage is impossible, and at the same time is so distributed as not to give discomfort to the patient. As already noted, the stirrup is swiveled, so as to turn according to any desired position of the patient's head, and is secured in such position by a thumb-screw P.

While the head-holder has been shown in connection with a surgical table, it will be evident that it might also be used for suspending the patient bodily, as it is sometimes desirable to do.

In order that it may take the proper position, notwithstanding the lengthening or shortening of the chin-band, the loop that passes over the front of the chin should be connected slidably with the chin-band.

Having thus described my invention, I claim:

1. A head-holder, comprising a stirrup, a forehead and chin-band looped through the legs of the stirrup, and an opposing back-head band also looped through said legs.

2. In a head-holder, the combination of a rigid stirrup, an adjustable front head and chin-band looped through the legs of the stirrup, and an adjustable back-head band similarly looped through said legs.

3. In a head-holder, the combination of a stirrup having its legs provided with terminal rings, a forehead and chin-band looped through said rings, and a back-head band similarly looped.

4. In a head-holder, the combination of a stirrup to straddle the head, and having terminal rings, a forehead and chin-band looped through said rings, and a short cross-band mounted on the chin-band, and adapted to pass over the front of the chin, and a back-band also looped in said rings, and adapted to engage the back of the head.

5. In a head-holder, the combination of bands adapted to engage the forehead, chin and back-head, a stirrup having terminal rings through which said bands are looped

a standard in which said stirrup is swiveled, and means for fastening the stirrup when turned to any desired position.

6. In a head-holder, the combination of  
5 an extension-rod, a head-holder, embracing an adjustable standard mounted in the head of the extension-rod, a stirrup swiveled in said standard, and bands looped through the legs of the stirrup, one adapted to engage the

forehead and chin, and the other the back of the head. 10

In testimony whereof I affix my signature in presence of two witnesses.

SOLON M. LANGWORTHY.

Witnesses:

J. M. ST. JOHN,

J. L. CLARKE.