

(No Model.)

G. HENCKEL.

COMBINED LARYNGOSCOPE AND TONGUE DEPRESSOR.

No. 447,823.

Patented Mar. 10, 1891.

Fig. 1.

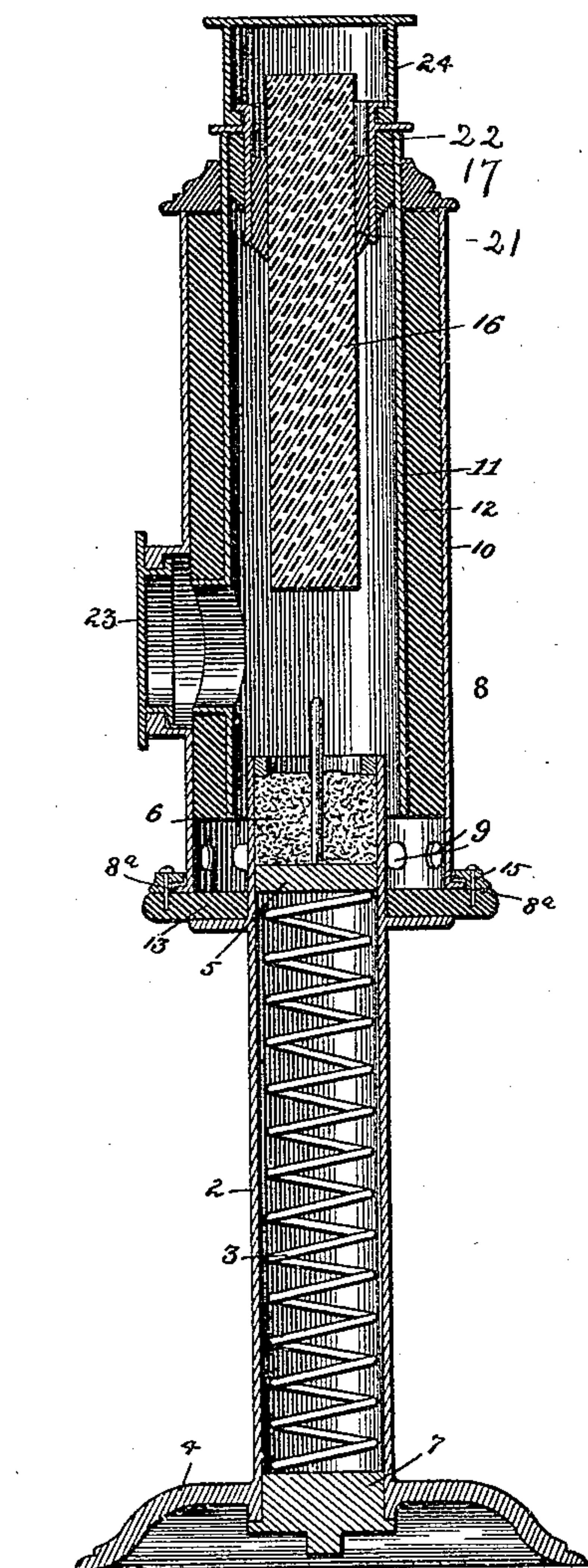


Fig. 2.

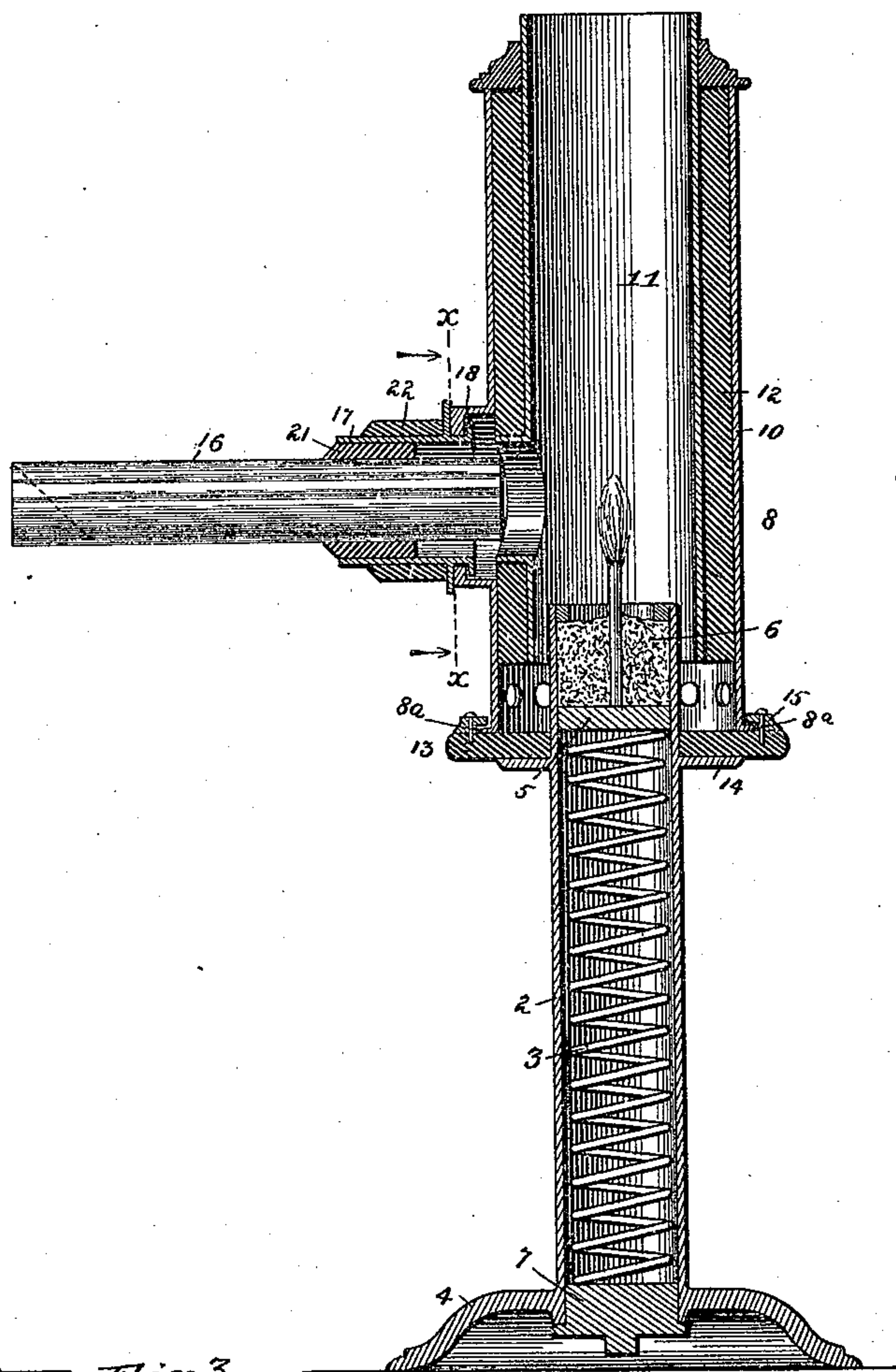
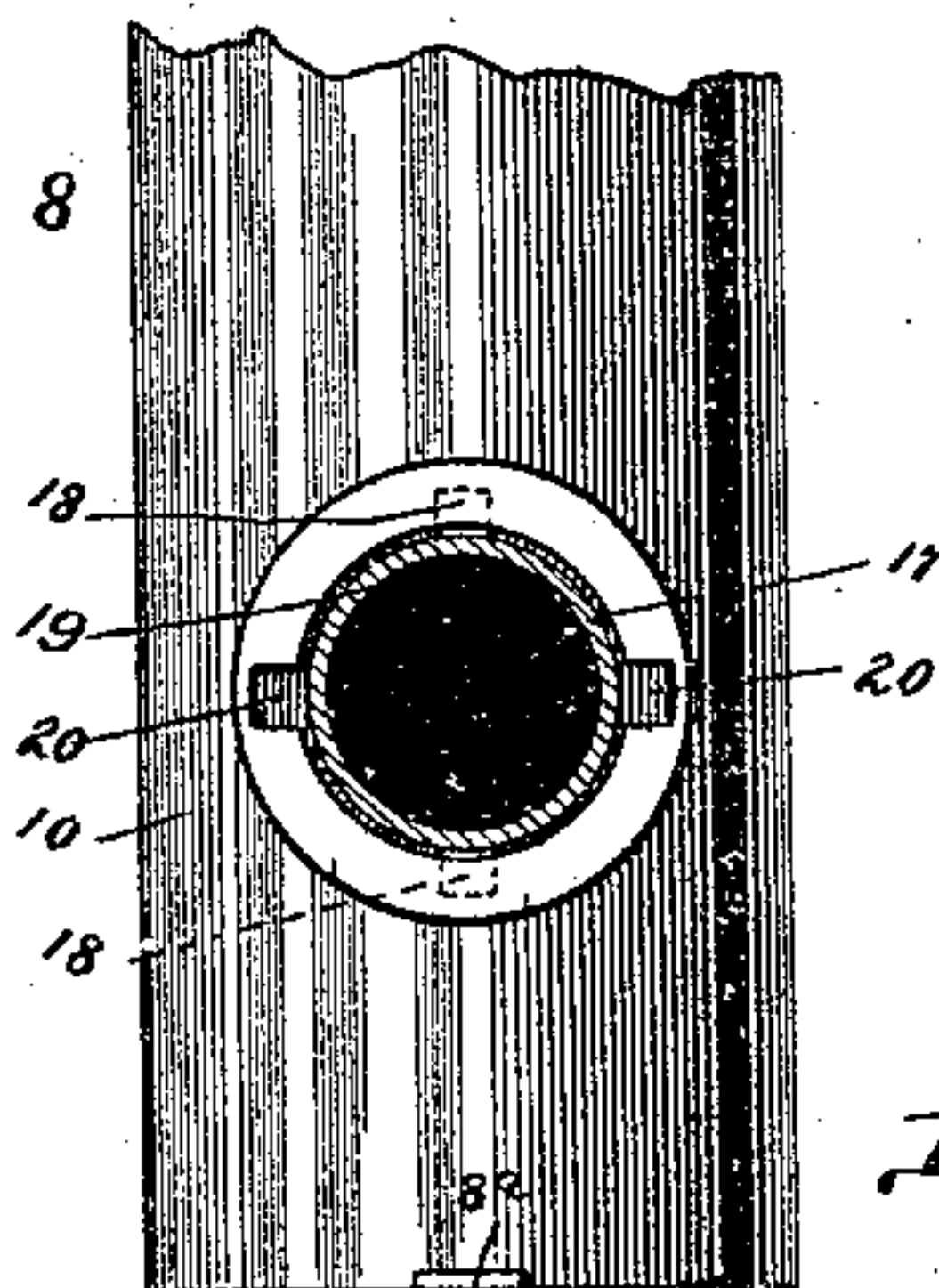


Fig. 3.



Witnesses.

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# UNITED STATES PATENT OFFICE.

GEORGE HENCKEL, OF CHICAGO, ILLINOIS.

## COMBINED LARYNGOSCOPE AND TONGUE-DEPRESSOR.

SPECIFICATION forming part of Letters Patent No. 447,823, dated March 10, 1891.

Application filed October 11, 1890. Serial No. 367,848. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE HENCKEL, of Chicago, in the county of Cook and State of Illinois, have invented an Improved Combined  
5 Laryngoscope and Tongue-Depressor, of which the following is a specification.

The object of my invention is to provide a simple and convenient device for illuminating the throat, and for other similar purposes,  
10 which shall be so constructed as to pack readily into a shape easily carried about in the pocket or instrument-case and can be set up ready for use in a few moments.

In the accompanying drawings, Figures 1  
15 and 2 are vertical sections of the lamp, Fig. 1 showing the arrangement of parts when packed for carrying. Fig. 2 shows the parts as arranged for use. Fig. 3 is a side elevation of a portion of the chimney or tube surround-  
20 ing the flame, showing the joint to which the illuminating-rod is attached, said joint being sectioned on line *xx*, Fig. 2, the direction of the point of view being indicated by the arrows.

2, Figs. 1 and 2, is a tube containing a spiral  
25 spring 3 and supported upon a base 4. The upper end of the tube 2 is contracted, and at the top of the spiral spring 3 is a disk or flange 5, on which a candle 6 is supported. The bottom of the tube 2 is provided with a remov-  
30 able plug 7, so as to permit the insertion of the candle, plunger, and spring. The apparatus just described keeps the flame of the candle always at the same height and no novelty is claimed for it *per se*. At the upper end  
35 of tube 2 is attached a larger tube 8, the lower portion of which is pierced with holes 9, for the admission of air to the candle-flame. The tube 8 is composed of an outer sleeve 10, an inner sleeve 11, and a packing 12 between  
40 the outer and inner sleeves composed of asbestos or other non-conducting and refractory material. The connection between the tubes 8 and 2 is an annular disk 13 of papier-maché or similar suitable non-conducting sub-  
45 stance. Said disk 13 rests upon and is fastened to a collar 14, formed on the tube 2, and is detachably secured to the bottom of sleeve 10 by a flanged ring 15, screwed or riveted to the disk 13. The bottom of sleeve 10 has lugs  
50 8<sup>a</sup> 8<sup>a</sup> engaging underneath the ring 15. The latter is notched in one or more places to allow the chimney to be detached, the joint be-

ing a duplication of that shown in Fig. 3, which is hereinafter described in detail.

A glass rod 16 forms the medium for trans-  
55 mitting the light from the candle-flame to the desired spot. The surface of said glass rod acts by reflection to keep the rays of light from the candle within the rod and thus prevents the dissipation of the rays and affords  
60 a concentrated light, as a lens would do. The rod serves the additional function of opening or keeping clear the passage to be examined, dispensing with the use of a second instrument for this purpose. The outer end of the  
65 rod 16 may be beveled, as indicated by dotted lines in Fig. 2, so that the rod acts like a prism and the rays are projected obliquely from the rod instead of directly forward as when the rod is square-ended. The rod 16 is mounted  
70 in a short flanged tube or collar 17, provided with lugs 18, as indicated by dotted lines in Fig. 3, said lugs serving to attach the tube 17 to the opening in the sleeve 10, surrounding  
75 which is a flange 19. Said flange 19 is cut away at points 20 20 to allow the insertion of the lugs 18, said lugs being then revolved so as to engage under the flange 19. Direct contact of the rod 16 with the tube 17 is prevented  
80 by the interposition of a papier-maché ring 21, (*vide* Fig. 2,) which prevents the tube from being heated and cracked by conduction through the metal of the lamp. The tube or collar 17 is also provided with an exterior ring  
85 22, of papier-maché or similar material, the diameter of said ring being such as to fit the interior of sleeve 11, so that when the rod and its attached fittings are removed from the side opening it may be inserted and secured  
90 within the top of sleeve 11, as shown in Fig. 1. A cap 23 is provided for closing the side opening in the tube 8, and a cap 24, having a notched flange adapted to fit the end of tube  
95 17, is also provided to protect the rod 16, as shown in Fig. 1.

By the use of a glass rod, mounted as described, the axis of the rod being directed toward the flame and non-conducting materials being interposed between the candle and the rod, light is transmitted in a concentrated  
100 beam without the transmission of an appreciable amount of heat, and in examining the throat the rod acts as a tongue-depressor, enabling a clear view to be obtained, and in



other instances maintains an open and unobstructed passage without requiring other instruments to be used.

What I regard as new, and desire to secure  
5 by Letters Patent, is—

1. In a physician's lamp, the combination of an opaque tube surrounding the flame and having an opening in its side opposite the flame, and a solid glass rod detachably secured  
10 in said opening and having its axial line directed to said flame, substantially as described.

2. The combination, in a physician's lamp, of a tube surrounding the flame and having  
15 an opening in its side opposite the flame, a glass rod detachably secured therein by a short tube or collar secured to one end thereof, said collar being adapted to fit within the top of the tube which surrounds the flame, where-  
20 by the glass rod may be secured within the last-named tube when not in use, substantially as described.

3. The combination of a tube containing a candle and devices for maintaining the height thereof constant, a larger tube mounted at the  
25 top of the first-named tube and composed of inner and outer sleeves having a layer of non-conducting material interposed between them, the last-named tube also having an opening opposite the candle-flame, in which opening  
30 is detachably mounted a glass rod by means of a short tube or collar secured at one end thereof and engaging by means of lugs at its end with a flange upon the outer sleeve, said collar being fitted to the inner sleeve, where-  
35 by the glass rod may be inserted and secured within said sleeve when not in use, and caps, as 23 24, fitted to said collar and said opening, substantially as described.

GEORGE HENCKEL.

Witnesses:

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