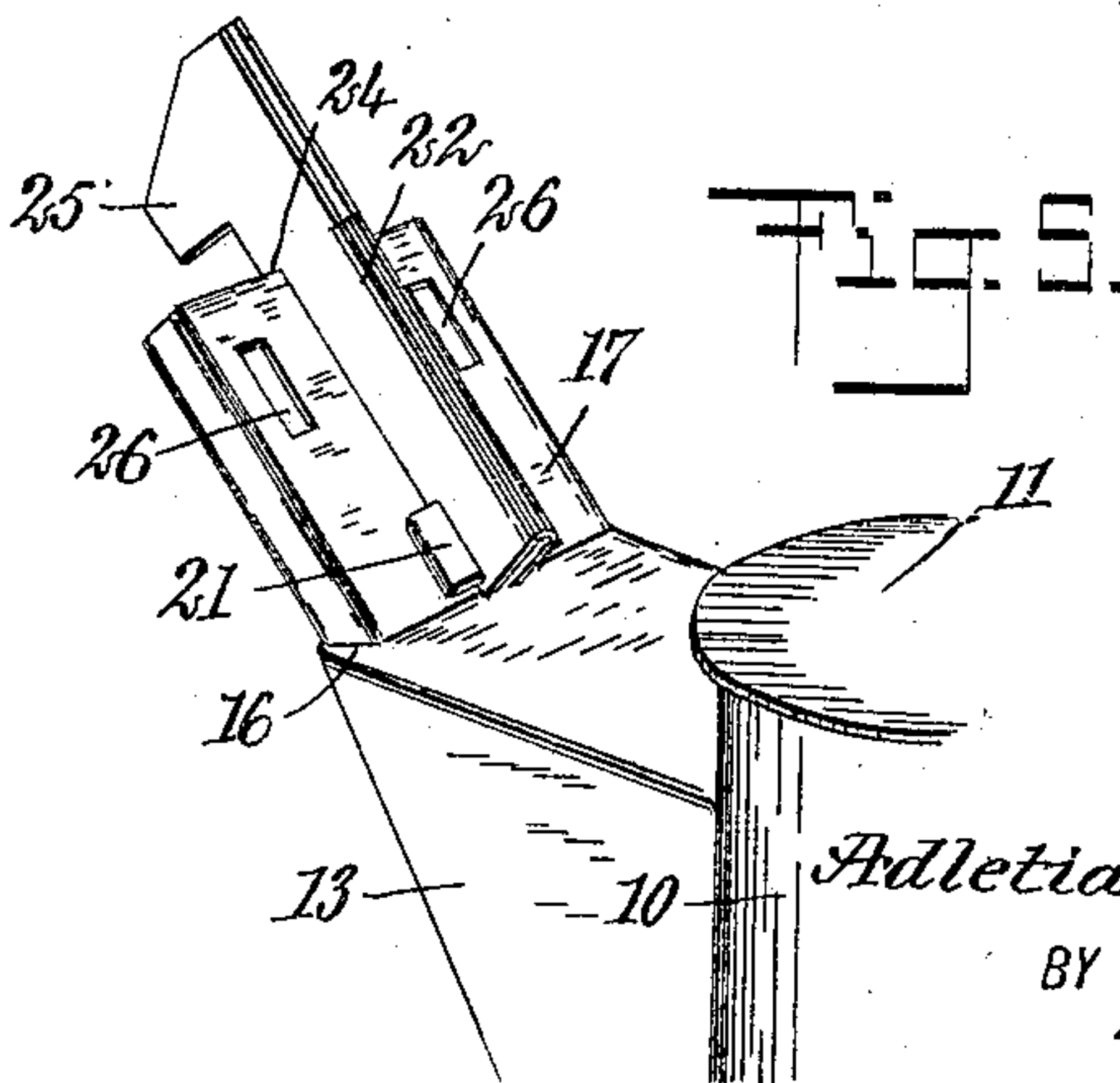
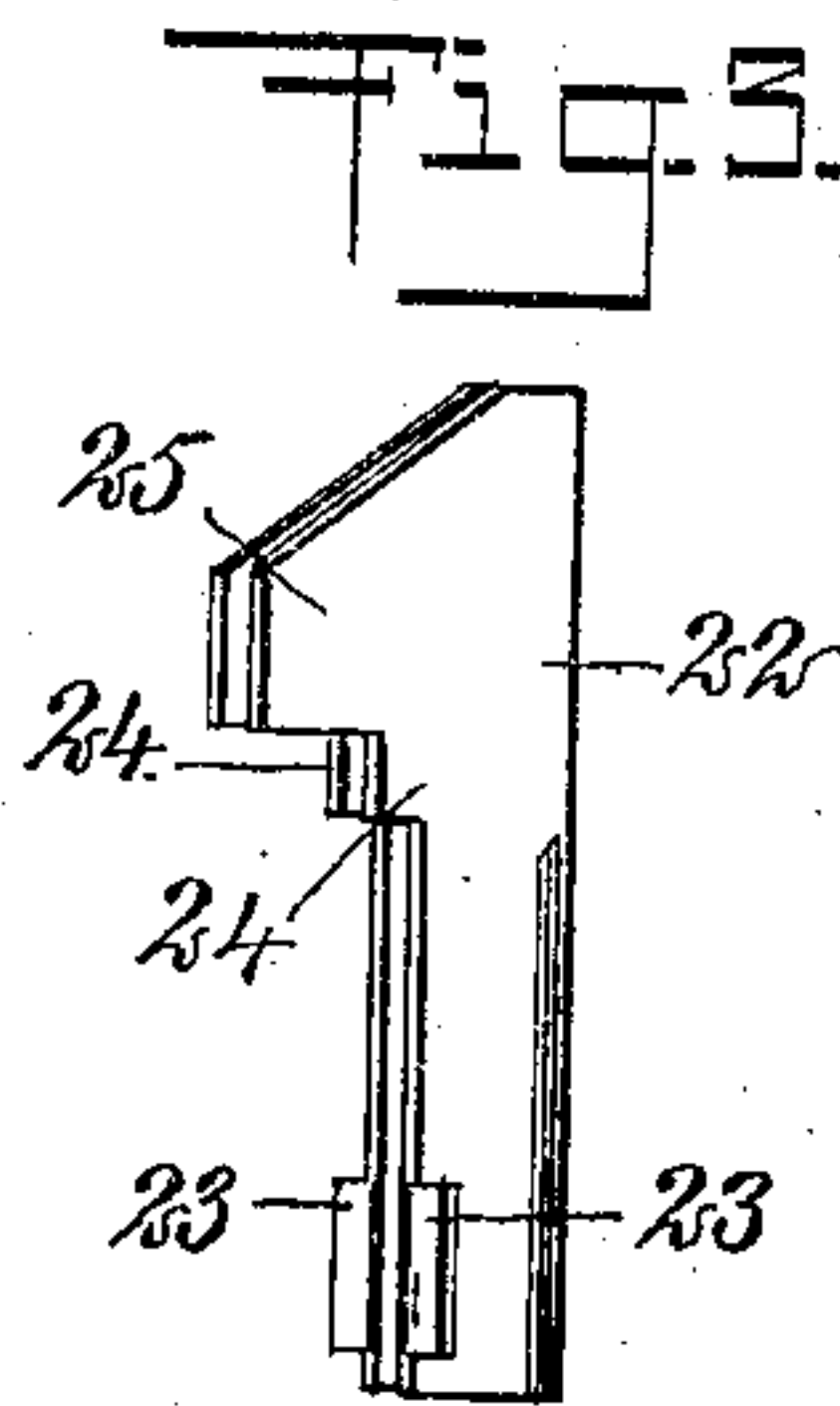
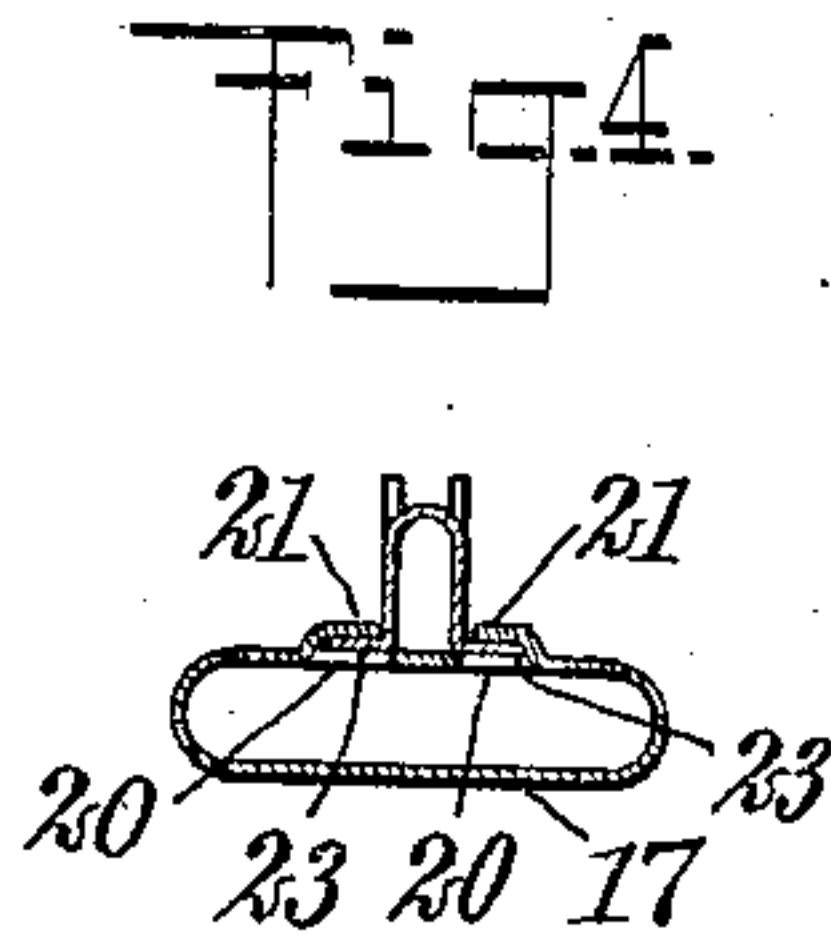
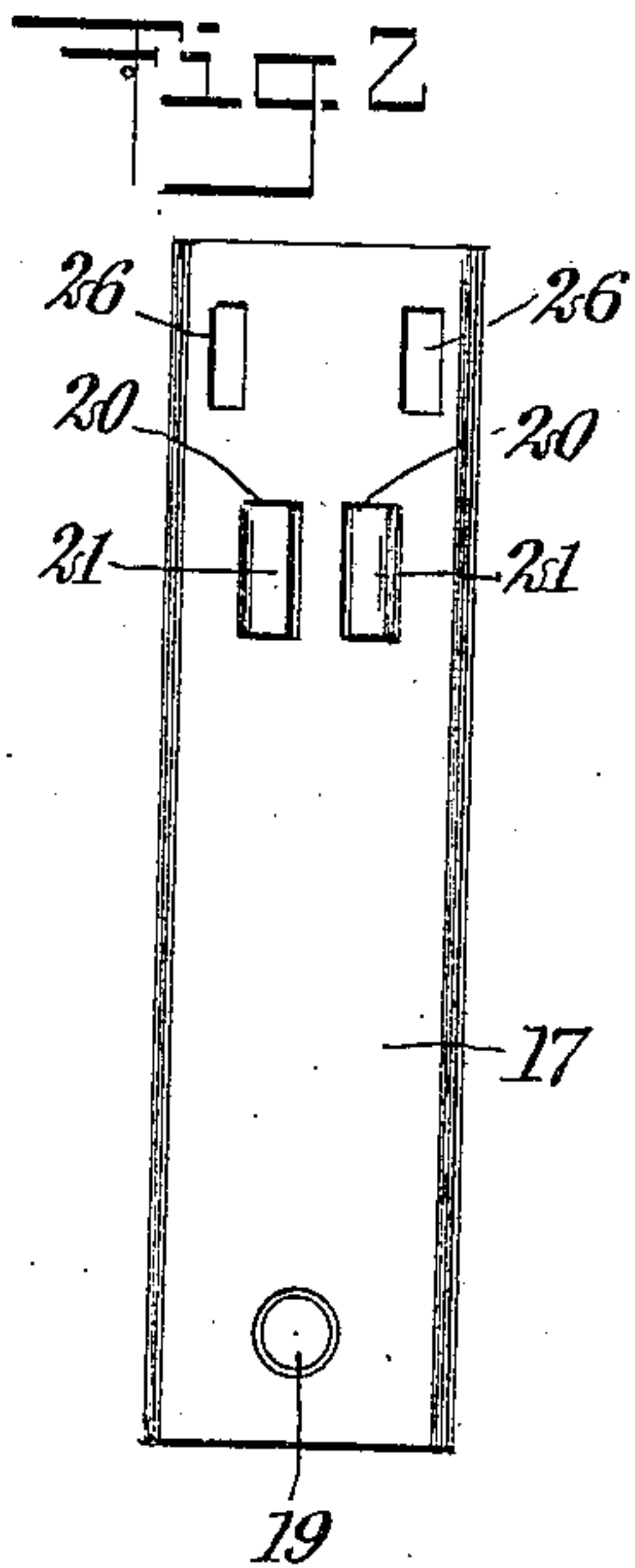
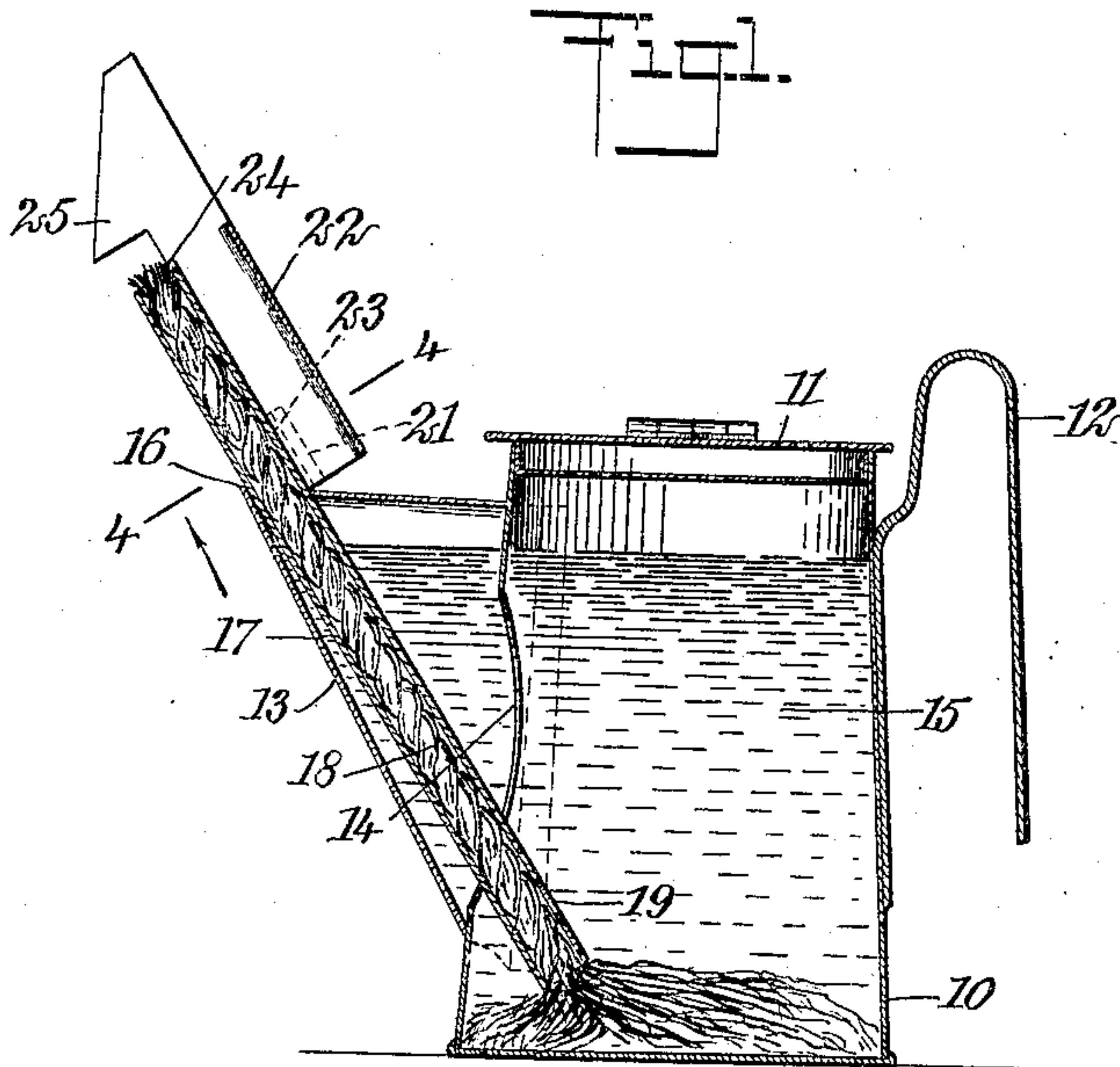


A. M. VAN LIEW.  
MINER'S LAMP.  
APPLICATION FILED DEC. 2, 1908.

934,243.

Patented Sept. 14, 1909.



WITNESSES

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# UNITED STATES PATENT OFFICE.

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JOHN VAN LIEW, OF HOUGHTON, MICHIGAN.

## MINER'S LAMP.

934,243.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed December 2, 1908. Serial No. 465,645.

*To all whom it may concern:*

Be it known that I, ADLETIA MAE VAN LIEW, a citizen of the United States, and a resident of Houghton, in the county of Houghton and State of Michigan, have invented a new and Improved Miner's Lamp, of which the following is a full, clear, and exact description.

This invention relates to miners' lamps for burning oil, wax and the like, and more particularly to a lamp of this class comprising a body, a wick tube projecting through the spout of the body, and a member removably mounted upon the wick tube and arranged longitudinally thereof to assist in conducting heat from the flame to the illuminant within the body, and having a part extending over the projecting end of the wick tube. The member is hollow, so that it conducts air to the flame to assist the combustion.

The object of the invention is to provide a simple, inexpensive and light-weight miner's lamp, which is compact in form, which is adapted to burn wax or the like as an illuminant, in which the combustion of the wax or other substance is complete, and which thus obviates the production of smoke and other noxious gases.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a longitudinal section of an embodiment of my invention; Fig. 2 is a plan view of the wick tube; Fig. 3 is a perspective view of the member removably mounted upon the wick tube; Fig. 4 is a transverse section on the line 4—4 of Fig. 1; and Fig. 5 is a perspective view showing a part of the lamp body, a part of the spout, the projecting wick tube, and the member mounted thereon.

Before proceeding to a more detailed explanation of my invention, it should be clearly understood that while the same is particularly useful as a means for employing wax and the like for producing a light, any other illuminant such as oil or petroleum can be equally well employed. If wax is

used, it is necessary to provide means for transmitting heat from the flame to the main body of the wax, in order to liquefy or soften the same, to enable the wick to draw the wax to the point of combustion by capillary action. In my lamp, a member is mounted upon the wick tube and extends longitudinally of the same; it is fashioned from metal or other heat-conducting material for the above purpose. The member is hollow, and has wings or other parts extending over the projecting end of the wick tube and serves as an air conduit for supplying the flame with sufficient air to insure complete combustion, thereby obviating the production of smoke, carbon and noxious gases. This feature is of great importance, especially if the lamp is to be used in poorly ventilated mines where such gases are often a source of danger to the workers in the same.

Referring more particularly to the drawings, I prefer to provide the lamp with a cylindrical or slightly tapered body 10, fashioned from sheet metal and having a hinged lid or cover 1 of any suitable form. The body has a hook or hanger 12 by means of which the lamp can be removably attached to the cap or some part of the clothing of the user. Preferably, at the side remote from the hanger, the body has a tapered spout 13, communicating interiorly with the lamp body through a suitable opening 14, in the wall of the lamp. The shape of the body permits shaved wax or the like to be easily introduced into the same. I have shown in the type of lamp illustrated herewith, for example, a liquid illuminant 15 such as oil or the like. The spout 13 has an opening 16, through which projects an inclined wick tube 17, which extends into the body and has its lower end near the bottom of the same. Preferably, the wick tube is flat, to receive a correspondingly shaped wick 18, which I have found to be particularly advantageous in connection with a lamp for burning wax. The wick has the lower end shredded to provide a complete contact with the illuminant. Furthermore, near the lower end, the wick tube has an opening 19 through which the illuminant can enter the wick tube. At the projecting end, near the spout, the wick tube has cut away portions 20 forming outwardly disposed spaced flanges 21. A member 22, preferably of U-section, has at the



opposite sides near one end, outwardly extending lugs 23, adapted to be slidably positioned under the flanges 21, to hold the member removably in place. The latter has  
 5 shoulders 24, adapted to engage at the end of the wick tube to limit the movement of the member when it is being inserted in position between the flanges 21. Owing to the U-form of the member, it constitutes an  
 10 air tube or conduit so that air can pass from a point remote from the flame to the flame. Furthermore, the member has wings 25 extending over the end of the wick tube and slightly spaced therefrom, so that these  
 15 wings are located in the flame when the lamp is lighted. The member thus becomes heated and serves to transmit heat along the wick tube toward the illuminant within the body.

It will be understood that the member 22  
 20 may be of any suitable form, and that the wings 25 may be replaced by other parts adapted to project into the flame, or for a like purpose. Near its outer end, the wick tube has openings 26, for the purpose of ad-  
 25 mitting the air to the wick to assist in the combustion and to allow the wick to be adjusted. The member 22 serves a like purpose as has been explained above, and thus the flame is provided with sufficient air to insure  
 30 substantially complete combustion, thereby minimizing the production of smoke, soot or the like.

Having thus described my invention I claim as new, and desire to secure by Letters  
 35 Patent:

1. A miner's lamp, comprising a body, a wick tube projecting from said body and having a flange, and a heat conducting member mounted upon said tube and having a  
 40 part extending over the end thereof into the flame, said member constituting an air conduit, and having a lug removably engaging said flange.

2. A miner's lamp, comprising a body, a  
 45 wick tube projecting from said body, and an air conducting member mounted upon said tube and arranged to feed air into the flame

at the projecting end of the tube, said member having a laterally disposed wing projecting transversely across the end of said  
 50 tube.

3. A miner's lamp, comprising a body, a wick tube projecting from said body, and a removable air conduit mounted upon said  
 55 tube and arranged to feed air into the flame at the projecting end of said tube, said conduit serving to conduct heat longitudinally of said tube from said flame toward said  
 60 body, and having a part disposed transversely across the end of said tube.

4. A miner's lamp, comprising a body, a spout, a wick tube projecting from said  
 65 spout, and a member removably mounted upon said tube and having a passage there-through, said member further having a wing extending transversely over the end of said  
 70 tube.

5. A miner's lamp, comprising a body, a spout, a wick tube extending from said body  
 75 through said spout and projecting from the latter, said tube having offset flanges, and a hollow member having lugs adapted removably to engage under said flanges and having a shoulder adapted to engage at the end  
 80 of said tube, said member having a wing extending over the end of said tube into the flame.

6. In a miner's lamp adapted to burn wax, a flat wick tube adapted to receive a flat  
 85 wick, said tube having openings near the ends thereof, and a member removably mounted upon said tube and having a wing projecting over the end thereof, said member being hollow to serve as an air conduit, and being fashioned from a heat-conducting  
 90 material.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ADLETIA MAE VAN LIEW.

Witnesses:

LOUIS N. LEGRIS,  
 JOHN VAN LIEW.