

M. J. HOOPER.

OIL LAMP BURNER.

APPLICATION FILED NOV. 15, 1906. RENEWED OCT. 16, 1908.

905,183.

Patented Dec. 1, 1908.

Fig. 1.

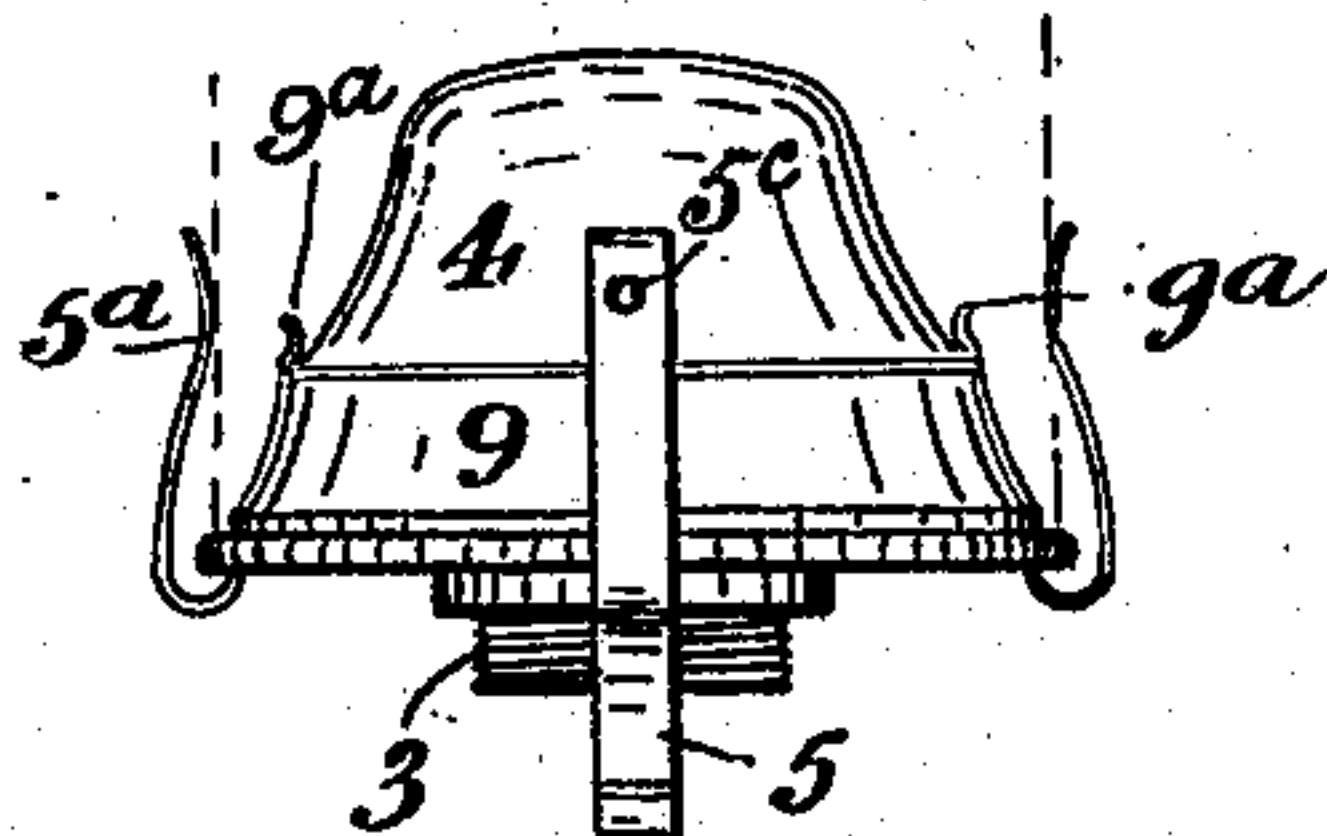
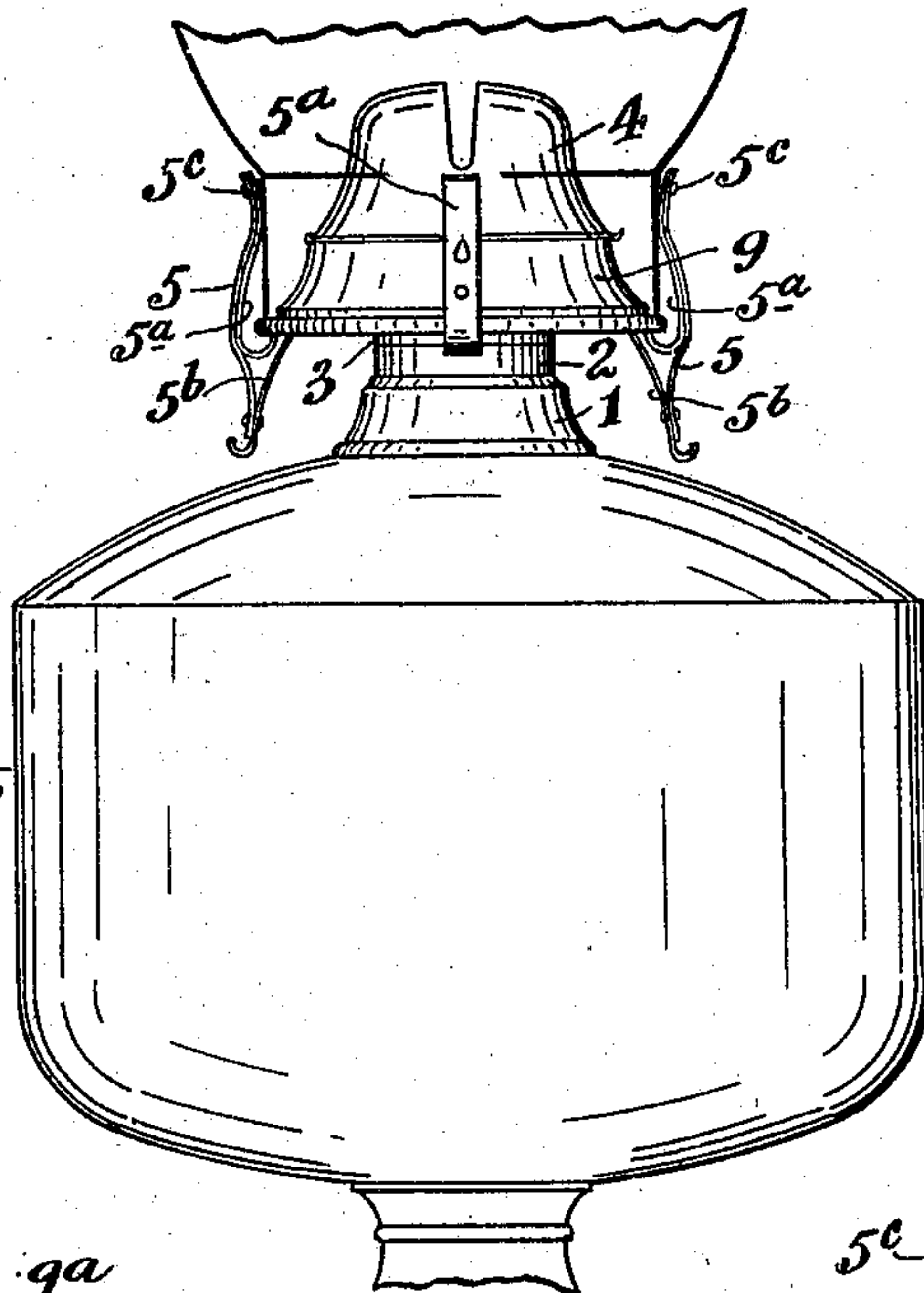


Fig. 5.

Fig. 2.

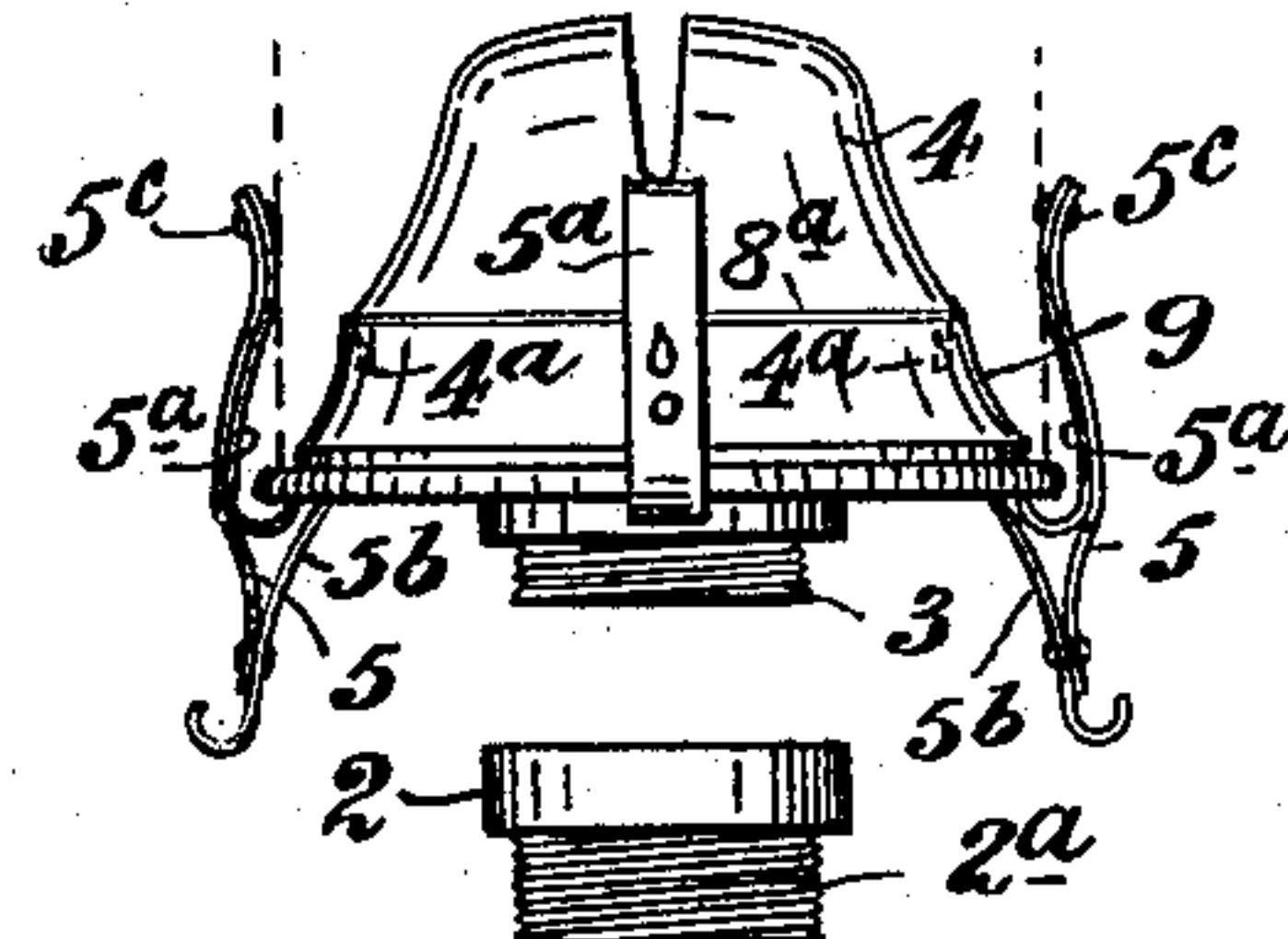
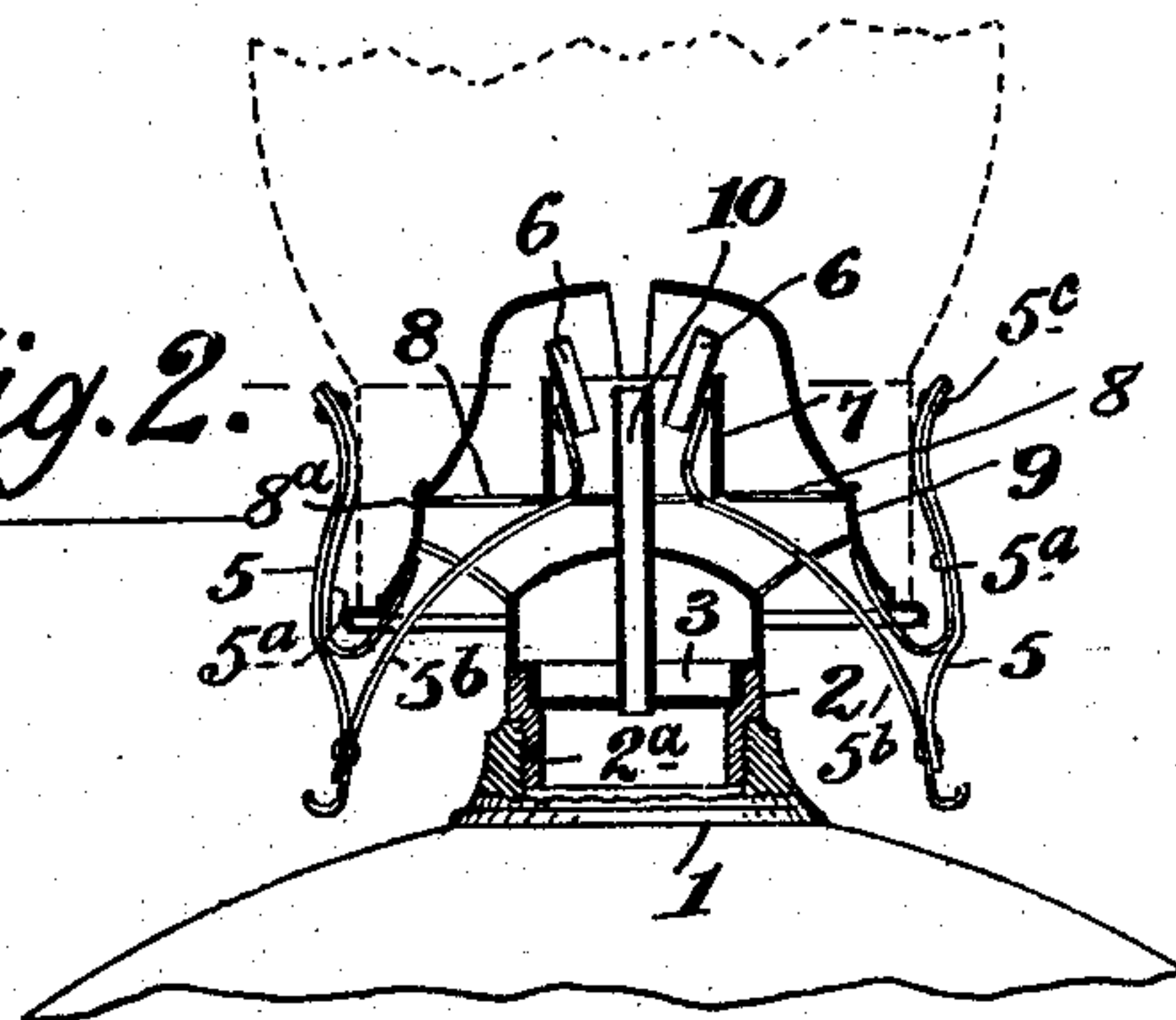
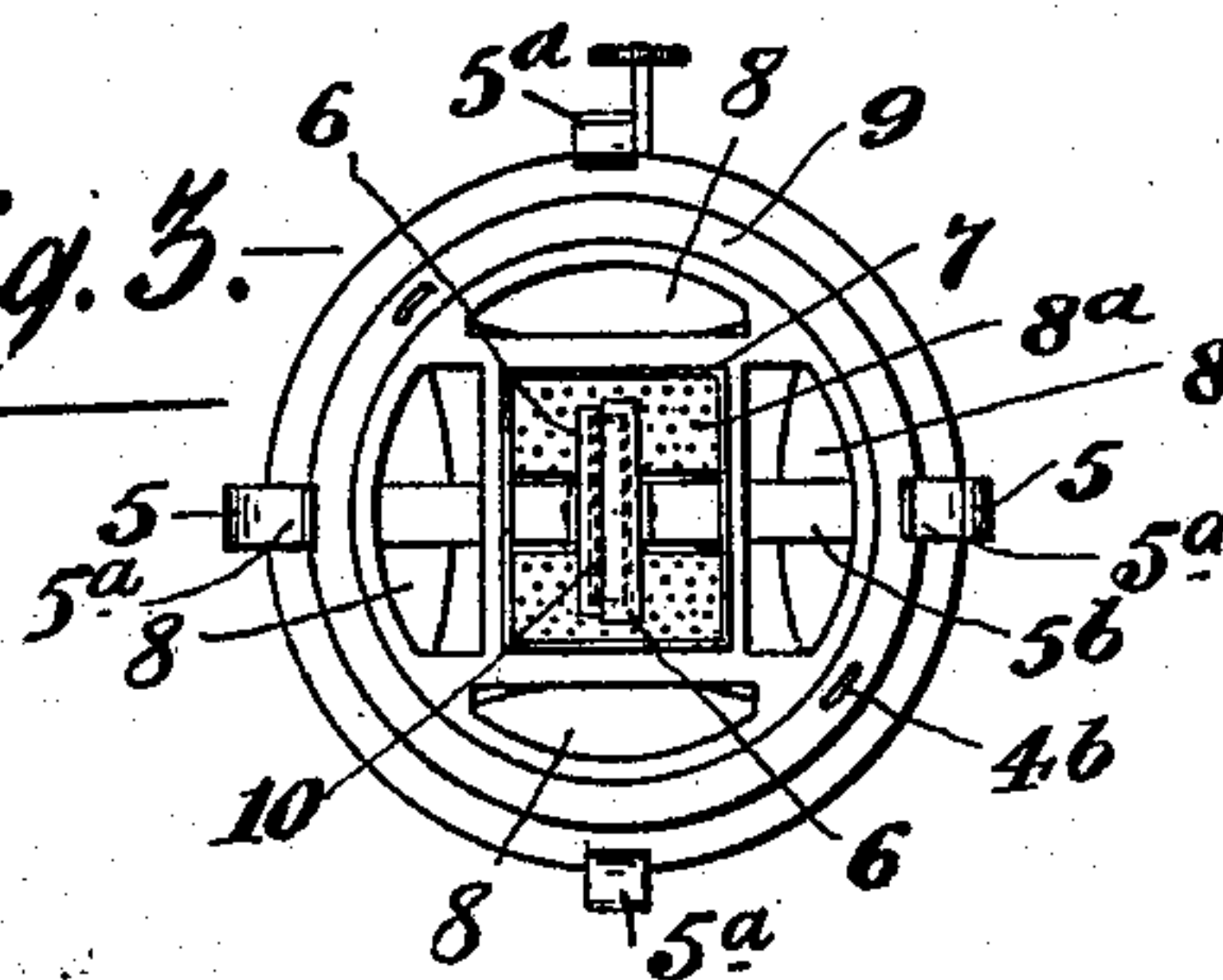


Fig. 4.

Fig. 3.



Witnesses:

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By his Attorney,

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UNITED STATES PATENT OFFICE.

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OIL-LAMP BURNER.

No. 905,183.

Specification of Letters Patent.

Patented Dec. 1, 1908.

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To all whom it may concern:

Be it known that I, MICHAEL JOHN HOOPER, a subject of the King of Great Britain, residing in North Carlton, near Melbourne, in the State of Victoria, Commonwealth of Australia, have invented certain new and useful Improvements in and Connected with Oil-Lamp Burners, of which the following is a specification.

The object of this invention is to provide in a simple and efficient manner improvements in and connected with the burners of oil lamps for the purpose of increasing the luminosity of the flame while providing an effective extinguisher which will operate automatically and with certainty in the event of the lamp being overturned, thus obviating all danger of explosions or fires in case of accidents to lamps.

According to this invention, which has been designed specially with a view to enable my improvements to be used with lamps at present in use, the burner is furnished with a pivoted extinguisher comprising preferably two members or plates adapted to be actuated by the removal of the lamp chimney and by the placing of the same in position on the gallery over the burner. Each of these members is attached to an arm or lever passing downwardly through apertures in the base of the burner cone and are constructed in such a manner that they may be conveniently connected to and actuated by the chimney-holders or clamps of the burner gallery. The extinguisher plates, which are projected outwardly by the placing of the chimney in position spring inwardly immediately the chimney is removed and inclose the wick-tube thereby extinguishing the flame. A casing is provided which surrounds the upper portion of the wick-tube for the purpose of regulating the air supply to the flame, part of the air ascending the spaces between the casing and the wick-tube, and part between the casing and the inner sides of the burner cone.

The invention is illustrated in the accompanying drawings to which reference will now be made for the purpose of fuller and clearer explanation.

In these drawings Figure 1 is a front view of part of an oil lamp embodying my improvements. Fig. 2 is a vertical section. Fig. 3 shows in plan view with the dome or cone removed my improved burner. Fig. 4

is a detail view illustrating the connection between the burner and the lamp bowl: and Fig. 5 illustrates a modification of the means employed for securing the burner cone or dome in position and whereby it may be conveniently removed when desired.

In these views 1 is the ordinary burner socket affixed to the bowl of the lamp which may be of any size, pattern or construction according to the design of the lamp. This socket 1 is internally screw-threaded and adapted to receive the ordinary burner, but in order that my improved burner may be fitted conveniently to a lamp in use at present I use an internally screw-threaded collar or socket 2 into which the burner is adapted to be screwed, said collar 2 being constructed with a screw-threaded shank 2^a which may be of any dimensions to fit all lamps largely in use.

3 indicates the nipple of the burner adapted to screw into the collar 2 or directly into the lamp socket 1 as may be desired.

4 is the burner cone or dome provided with depending lips 4^a designed to fit into apertures 4^b formed in the outside of the burner 9 and be thereby secured in position.

5 are arms or levers suitably secured as at 5^c to the clamps or chimney-holders 5^a which are affixed to the burner in the ordinary manner. These arms 5, which are preferably curved to conform to the curvature of the clamps 5^a and rest close thereto are affixed to (or made in one piece bent to form therewith) arms 5^b which pass upwardly through apertures 8^a formed in the perforated base 8^a of the burner cone 4 and secured to the extinguisher plates or members 6. A casing 7 is provided surrounding the upper portion of the wick-tube 10 for the purpose of regulating the air supply to the flame, part of the air ascending the spaces between the casing 7 and the wick-tube 10 and part between the casing and the burner cone or dome 4. This casing 7 in addition to regulating the air supply prevents the extinguisher plates 6 from being at any time projected too far outwardly whereby they are retained always in an operative position.

The operation of my invention is thus explained:—The extinguisher members or plates 6 normally inclose the wick-tube 10 protecting the wick from dirt, but when it is desired to light the lamp the lower ends

of the levers 5 are pressed inwardly, the wick may then be lighted and when the chimney is placed over the gallery and supported by the clamps 5^a the extinguisher plates are projected outwardly and retained in that position as illustrated in Fig. 2 until the removal of the chimney takes place. In case of accident and the lamp be overturned the chimney is certain to be either smashed or displaced from the supporting clamps, when the extinguisher plates or members 6 immediately spring inwardly enclosing the wick-tube 10 thereby extinguishing the flame and preventing explosions or fires. From this it will be readily understood that whenever it is desired to extinguish the lamp this may be conveniently and safely accomplished by merely elevating the chimney of the lamp and releasing it from its holders or clamps.

In addition to the automatic extinguisher arrangement my burner possesses other features of improvement by which the best results in the distribution of air to the flame is secured and a whiter and a less smoky flame may be thereby obtained while the burner is rendered practically inodorous. In the burner the apertures 8 formed in the perforated base part 8^a of the cone 4 which allow the extinguisher arms 5^b to pass there-through and to have free movement increase the upward central draft to a large extent. Part of the air enters the spaces between the wick-tube 10 and the casing 7 and is directed towards the edges of the wick whether the flame is high or low, thereby preserving an uninterrupted air supply to a perfect combustion which is essential to prevent the burner from throwing off carbon or noxious vapors. The current of air ascending the spaces between the casing 7 and the sides of the cone or dome 4 is directed by the contracted portion of the dome 4 to the ends of the wick whereby a higher and non-smoky flame is obtainable. It will be observed that the usual apertures or air openings which are provided in the outside of the ordinary burner body 9 are dispensed with in my improvements.

The burner cone or dome 4 may be conveniently removed should it be desired to trim the wick or clean the burner, for by raising the cone 4 the lips 4^a lift out of the apertures 4^b in the burner casing 9 which normally retain them in position.

Fig. 5 illustrates a modification of the means of securing the burner cone in position. The cone 4 is pressed into engagement with the spring fastenings 9^a on forcing of

which outwardly with the fingers the cone may at any time be readily removed.

The invention is applicable for lamps having flat wicks either single or duplex burners, and in practice the extinguisher arms may be provided with terminal knobs or other ornamentations to give the burner a neat appearance, but as will be well understood these and similar modifications in the design and construction of the details may be made while still preserving the essential features of the invention.

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

1. In a lamp burner, the combination with a frame portion, chimney holding clamps carried thereby, lever arms secured to the said clamps and extending downwardly below the same, arms carried by said lever arms, and extinguisher plates carried by said arms.

2. In a lamp burner, the combination with elastically yieldable chimney holding clamps, lever arms secured to said clamps and extending downwardly below the same, arms carried by said lever arms and extending inwardly, extinguisher plates carried by said arms, and means for limiting the outward movement of said extinguisher plates.

3. In a lamp burner, the combination with a framing portion, elastically yieldable chimney holding clamps carried thereby, lever arms secured to the upper portions of said clamps and extending downwardly below the same, a wick tube carried by said casing, arms carried by the lever arms and extending toward said wick tube, extinguisher plates carried by said arms, and an open ended casing surrounding said wick tube and said plates for affording an air passage and limiting the outward movement of the said plates.

4. In a lamp burner, the combination with a frame having a wick tube, of a plurality of elastically yieldable chimney holding clamps carried by the frame, lever arms carried by some of these clamps and extending toward the wick tube, extinguisher plates carried by said arms, a burner cone located adjacent to said wick tube, and spring fastenings carried by other of said clamps for holding said cone in position.

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

MICHAEL JOHN HOOPER.

Witnesses:

ANTHONY J. CALLINAN,
HENRY E. GREENWOOD.