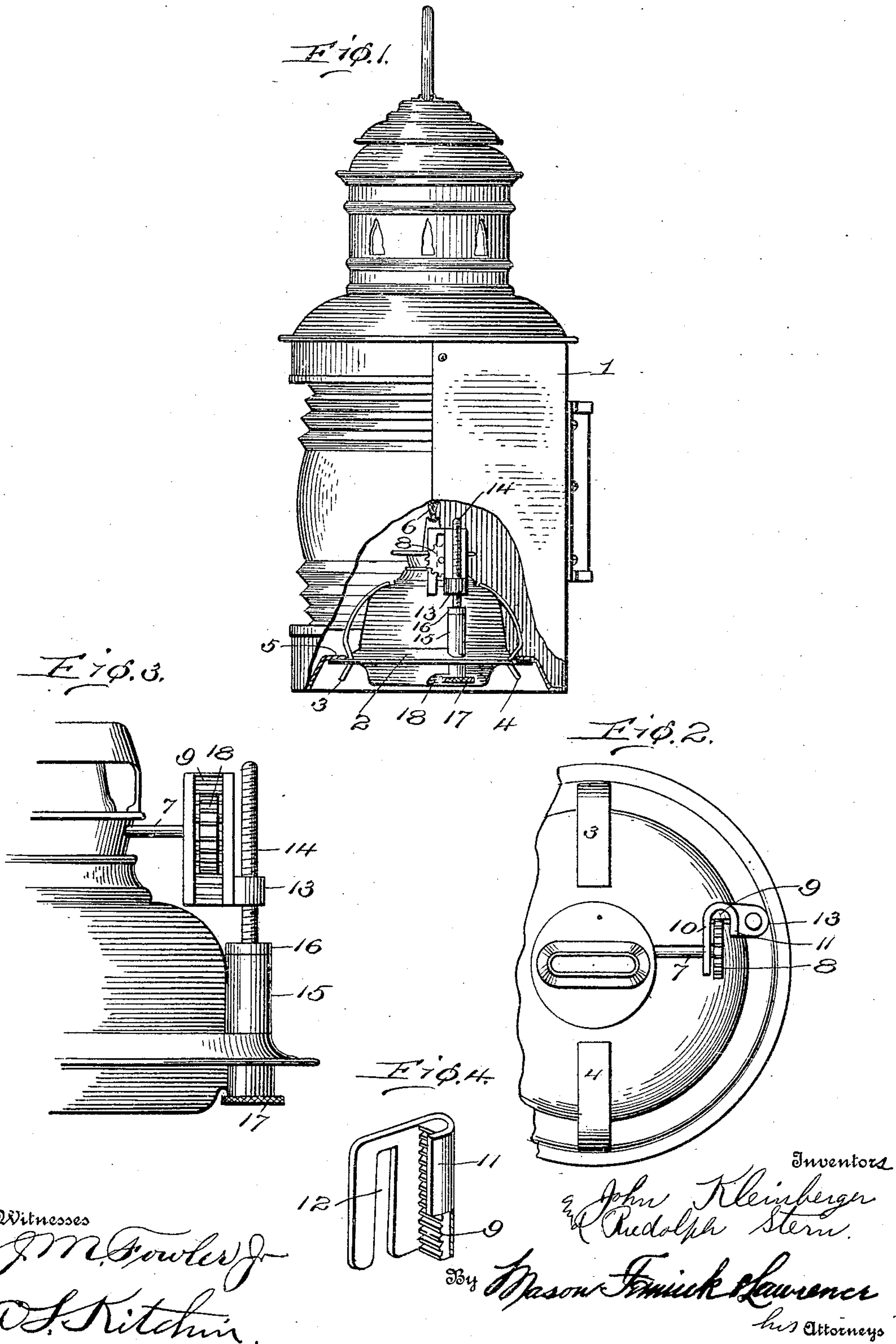


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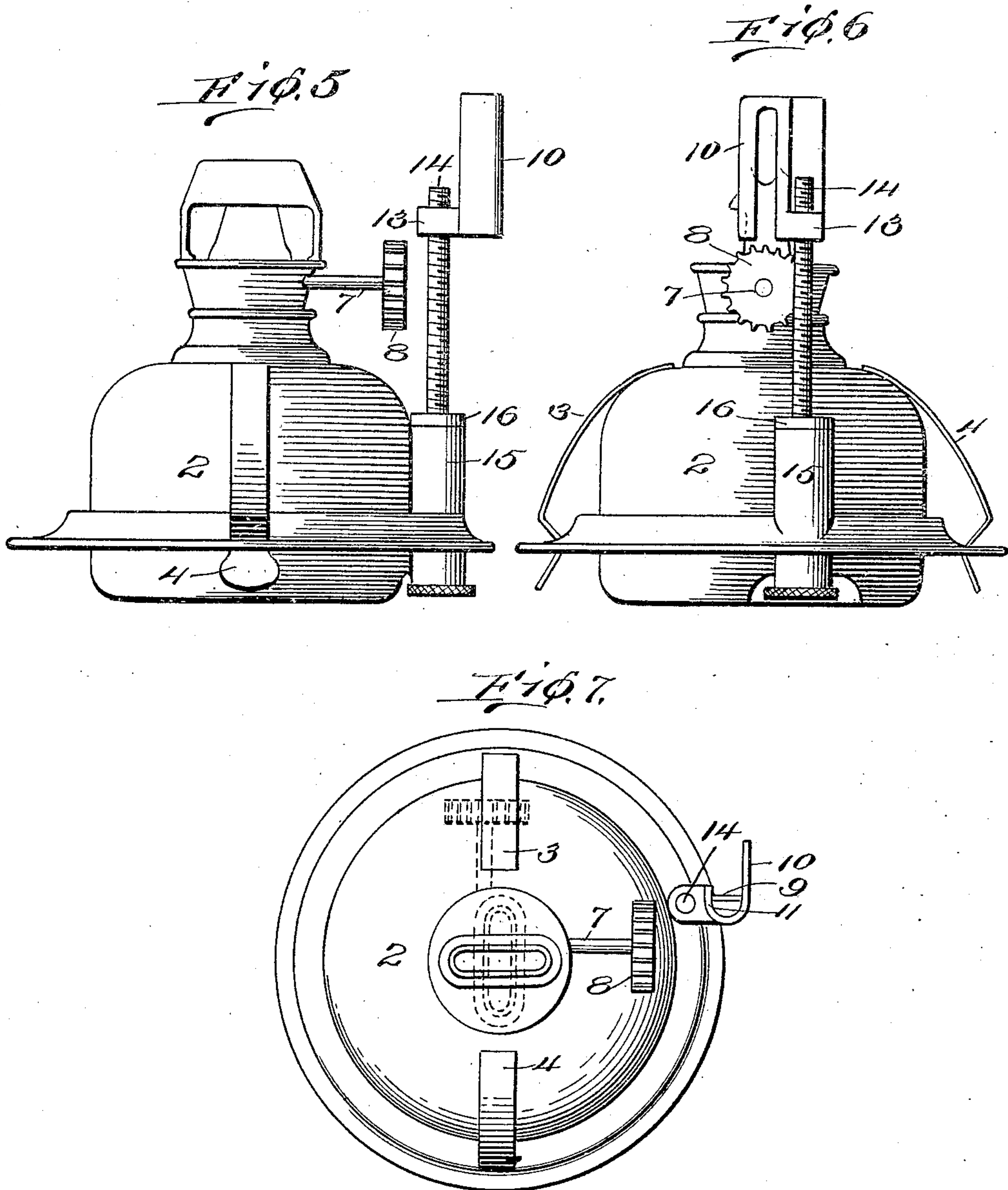
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Witnesses

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UNITED STATES PATENT OFFICE.

JOHN KLEINBERGER, OF BROOKLYN, AND RUDOLPH STERN, OF NEW YORK, N. Y., ASSIGNORS TO AMERICAN MARINE LAMP MFG. CO., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

WICK-ADJUSTING MECHANISM FOR LAMPS AND LANTERNS.

944,967.

Specification of Letters Patent. Patented Dec. 28, 1909.

Application filed January 18, 1909. Serial No. 472,868.

To all whom it may concern:

Be it known that we, JOHN KLEINBERGER and RUDOLPH STERN, respectively a citizen of the United States and a subject of the Emperor of Austria-Hungary, and respectively residing at Brooklyn, in the county of Kings and State of New York, and New York city, in the county and State of New York, have invented certain new and useful Improvements in Wick-Adjusting Mechanism for Lamps and Lanterns; and we 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 improvements in lamps, lanterns, and the like, and particularly to means for adjusting the wick thereof, and has for an object the arrangement of adjusting means that may be operated from the exterior of the lamp.

Another object in view is the provision of a lantern or lamp with a removable well, and means for adjusting the wick by the rotation of the thumb member located on the outside or bottom of the well.

A still further object of the invention is the arrangement of a reciprocating rack and guide for moving a wheel connected with the wick adjusting mechanism so that upon the reciprocation of the rack the gear will be rotated for varying the position of the wick, and a screw for adjusting the rack that extends to the exterior of the lamp for manipulation whereby upon the rotation of the screw the wick will be raised and lowered according to the direction of movement of the screw.

With these and other objects in view the invention comprises certain novel constructions, combinations and arrangement of parts as will be hereinafter more fully described and claimed.

In the accompanying drawings: Figure 1 is a side elevation of a lantern, certain parts being broken away in order to better disclose the invention. Fig. 2 is a fragmentary plan view of the well of the lantern showing the wick adjusting mechanism connected therewith. Fig. 3 is an enlarged fragmentary side elevation of the well with the wick adjusting mechanism connected therewith. Fig. 4 is an enlarged detail perspective view

of the rack and guiding means. Fig. 5 is a side elevation of the well or font removed with the reciprocating slide turned for permitting the removal of the burner from the font. Fig. 6 is a side elevation of the font or well looking directly at the wick controlling gear, with the reciprocating member raised but not turned. Fig. 7 is a top plan view of the structure shown in Fig. 5, the reciprocating member being turned and also the burner being shown turned in dotted lines.

In the construction of a lantern according to the present invention it is aimed among other things to provide an efficient lantern in which a proper adjustment of the wick may be made without removing the well or without opening the lantern. In accomplishing this purpose a gear wheel is rigidly secured to the rotating shaft upon which is mounted a wick feeding or controlling mechanism. The gear wheel is arranged to mesh with a reciprocating rack that has secured thereto a guide for holding the rack in mesh with the gear wheel so that upon the reciprocation of the rack the gear wheel will be rotated, and consequently the wick will be forced upward or downward according to the rotation thereof. The guide for the rack is rigidly secured to the rack and is formed with a threaded projection through which extends a threaded adjusting member or screw which is connected with the well and extends below the bottom thereof or to a position outside of the lantern when the well is in place, and is permitted a free rotation but not any longitudinal movement. By this arrangement whenever the screw is rotated the same will force the lug on the guide upward or downward as the case may be, and consequently reciprocate the guide and the rack, whereby a rotary movement will be conveyed to the gear for regulating the position of the wick.

In order that the invention may be more fully understood an embodiment of the same is shown in the accompanying drawings, in which 1 indicates the body of a lamp that may be of any desired kind. Removably mounted in the body 1 is a well 2. The well 2 is inserted and removed from the bottom and is held in place by spring catches 3 and 4 clamping or snapping over a flange 5 formed on body 1. The well is provided

with a wick 6 that is controlled by any desired feeding mechanism (not shown) which in turn is controlled by a shaft 7. The wick feeding mechanism may be of any desired kind, and as the same forms no part of the present invention will not be further described. Rigidly secured to the shaft 7 is a gear wheel 8 which is arranged to mesh with a rack 9 that is rigidly secured into a guiding member 10. The guiding member 10 is formed with a turned over portion 11 that, together with the main body of the guiding member, forms a groove for holding the gear opposite the gear wheel 8. A slot 12 is formed in the guiding member which permits the guide 10 to reciprocate or slide over the shaft 7, and to consequently hold the rack 9 in engagement with the gear wheel 8. By this construction and arrangement the slot 12 acting on shaft 7 holds the rack against the wheel 8 and turned over portion 11 forms the guide for holding the gear wheel and the rack in the same plane. Projecting outward from the turned over portion 11 is a lug 13 that is provided with an aperture passing therethrough that is threaded for receiving a threaded bolt or screw 14. The threaded bolt 14 extends substantially parallel with the wick and at right angles to the shaft 7 and is adapted upon rotation to reciprocate guide 10, and rack 9 carried thereby. The bolt or screw 14 passes through a housing 15, and is prevented any longitudinal movement by having secured thereto a stop 16 at the upper end of the housing 15, and a thumb member 17 at the lower end of the housing 15. The threaded thumb member 17 is positioned on the exterior of the entire lantern or below the well so as to be readily operated without removing the well from the body 1 of the lantern. In order that the thumb member 17 may not project downward a sufficient distance to strike any article upon which the lantern is placed the bottom of the well 2 is offset at 18 for accommodating the thumb member.

After the wick has been lighted the catches 3 and 4 are grasped and forced inward until the well is permitted to enter the body 1 of the lantern and take the position shown in Fig. 1, or if desired the well may be bodily forced into the position shown in Fig. 1, the catches 3 and 4 by their resilient nature permitting such action. The wick 6 then may be regulated to any desired height and turned up and down without removing the well from the body 1 which is of great advantage in use with marine lanterns and other lanterns or lamps used out in the open where the lamp is subject to the action of the wind. Upon the rotation of thumb member 17 screw 14 is moved and by being threaded into projection 13 will reciprocate or move upward or downward the projec-

tion or extension 13. As extension 13 is rigidly secured to guide 10 and as guide 10 is rigidly secured to rack 9 the rack will be moved up or down together with extension 13 as screw 14 is rotated in either direction. Upon the reciprocation of rack 9 gear wheel 8 will be rotated and also shaft 7, and consequently the feeding mechanism of wick 6 will be operated for regulating the position of wick 6.

It will be noted that the invention may be applied to any form of burner by merely taking off the ordinary thumb piece on the burner and substituting therefor a gear wheel 8 and then applying the remaining parts of the adjusting mechanism.

In using the adjusting mechanism no disadvantage is experienced in removing and then applying the burner to the well or font. In order to remove the burner all that is necessary is to turn the thumb piece or member 17 until the reciprocating member 10 has been moved upward to substantially the position shown in Fig. 6. The same is then turned to the position shown in Figs. 5 and 7. This will permit a free rotation of the burner until the same is entirely disconnected. The turning of the reciprocating rack carrying member 10 to the position shown in Figs. 5 and 7 is very desirable as the same is entirely out of the way of the gear wheel 8 as the same moves upward when unscrewing the burner. After the well has been filled the burner may be replaced and then the sliding member 10 brought to its correct position as seen in Fig. 1. This idea of ready removability of the burner is an important feature of the invention as by the particular construction and arrangement of the various parts the ready removability is accomplished without complicated mechanism and delicate parts.

What we claim is:

1. In a lantern, a well, a burner removably secured to said well having a shaft extending therefrom, a gear connected to said shaft, a reciprocating rack meshing with said gear and adapted to move the same, a guide rigidly secured to said rack and formed with a slot for accommodating the shaft supporting said gear, means for moving said rack and guide, said means permitting said guide to be swung away from the shaft passing through the slot therein for permitting said burner to be removed from said well.

2. In a lantern, a well formed with wick adjusting mechanism, a gear wheel connected with said wick adjusting mechanism, a reciprocating rack engaging said gear wheel for rotating the same, a threaded extension connected with said rack and a rotatable threaded screw engaging said extension and projecting to the exterior of said lantern whereby said wick adjusting mechanism may be operated from the exterior of the lantern.

3. In a lantern, a well, formed with wick
adjusting mechanism, a gear connected with
said wick adjusting mechanism, a reciprocating rack meshing with said gear for moving the same, a guide for holding the rack in engagement with said gear, a threaded extension projecting from said guide, and a rotatable threaded screw engaging said threaded extension whereby upon the rotation of said threaded screw movement will be conveyed to said wick adjusting mechanism.

4. In a lantern, a well provided with wick adjusting mechanism, a gear connected with the wick adjusting mechanism, a reciprocating rack meshing with said gear for moving the same, a guide for holding the rack in mesh with said gear, said rack being formed with a bent over portion for holding the rack and gear in the same plane, a threaded extension projecting from said guide and rotating threaded means engaging said threaded extension for reciprocating the same, whereby said rack is reciprocated and said gear is rotated for moving said wick adjusting mechanism.

5. In a lantern, a well formed with wick adjusting mechanism having a shaft, a rotatable gear wheel rigidly secured to said shaft for rotating the same, a reciprocating rack meshing with said gear wheel for moving the gear wheel, a guide rigidly secured to said reciprocating rack, said guide being

formed with a slot for accommodating said shaft, the action of the slotted portion against said shaft causing the guide to hold the reciprocating rack in mesh with the gear wheel, and means extending to the exterior of the lantern for reciprocating the guide, whereby movement is conveyed to the rack, and from thence to the wick adjusting mechanism.

6. In a lantern, a well provided with a wick adjusting mechanism having a controlling shaft extending therefrom, a rotating gear wheel rigidly secured to said shaft, a reciprocating rack meshing with said gear wheel for rotating the same, a guide rigidly secured to said rack, said guide being formed with a slotted portion for accommodating said controlling shaft, whereby said guide will hold said rack in mesh with said gear wheel, said guide being also formed with a turned over portion for holding the rack and gear wheel in the same plane, a threaded extension projecting from said guide, a rotatable threaded screw engaging said threaded extension, and means for preventing longitudinal movement of said threaded screw.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN KLEINBERGER.
RUDOLPH STERN.

Witnesses:

HUGO MOCK,
ARTHUR WENDT.