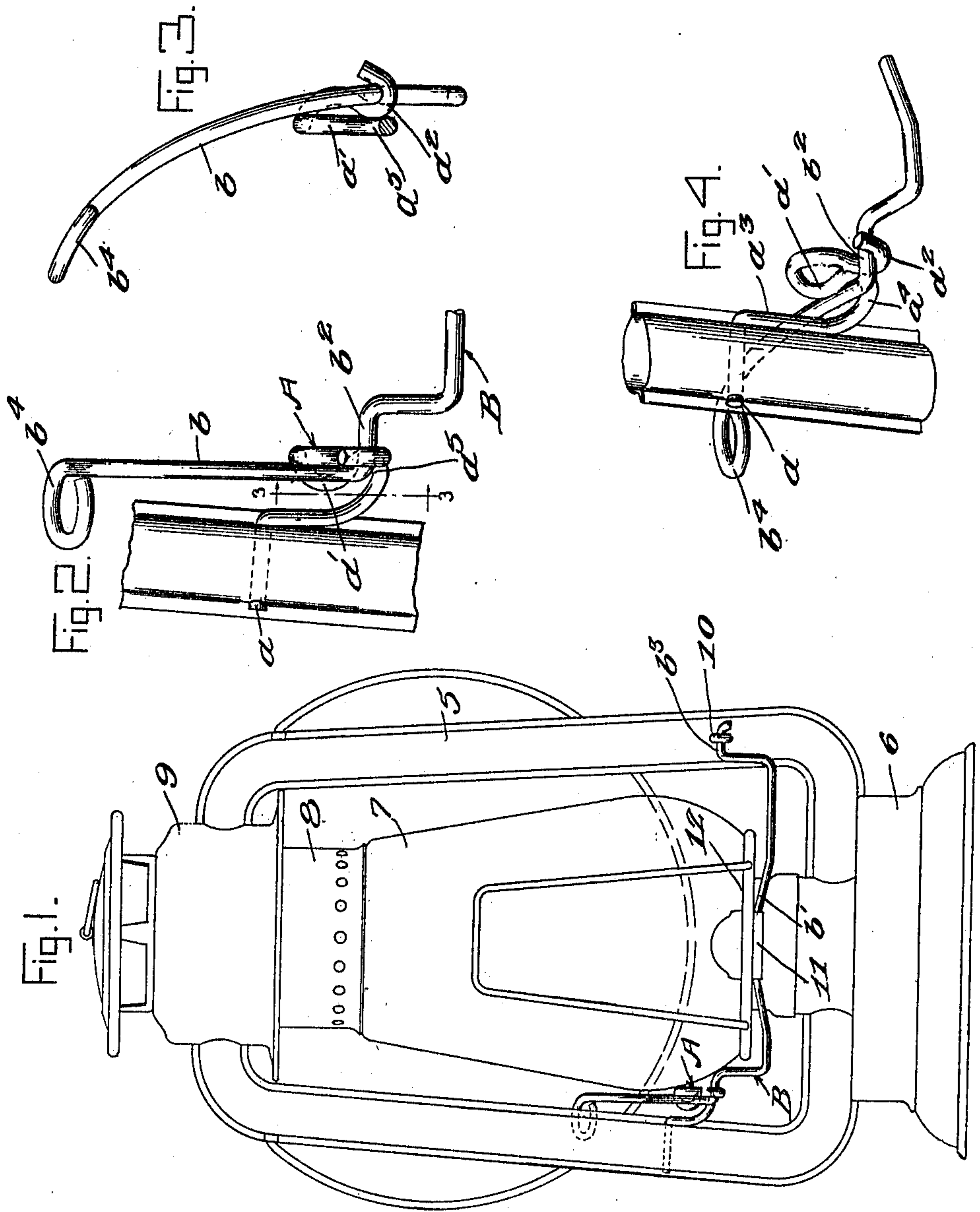


J. H. HILL.
TUBULAR LANTERN.
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978,292.

Patented Dec. 13, 1910.



Witnesses

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TUBULAR LANTERN.

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To all whom it may concern:

Be it known that I, JAMES H. HILL, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Tubular Lanterns; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The present invention has reference to improvements in lantern constructions, and more especially in or relating to the devices associated with the globe for locking the latter against displacement or removal. Its object comprehends the production of a locking device designed to the end of extreme efficiency, simplicity and economy, and so constructed that when the parts thereof are engaged with each other, the globe will be firmly locked in position within the main frame of the lantern, while a disengagement of said parts will raise the globe and when the globe cap is lifted up will permit the globe to be swung bodily outward of said frame, for cleaning purposes or for removal and replacement when damaged. To attain these results, the invention contemplates a locking device comprising merely two members, one of which constitutes a catch, or lock proper, and the other a combined clamp and support for the globe. These members are each constructed of a single piece of wire, and since they perform of themselves all of the requisite functions, no additional elements are necessary. Hence the number of working parts and the cost of production are in consequence, reduced to a minimum.

A structural embodiment of the invention is illustrated in the accompanying drawing wherein,

Figure 1 is a front elevation of a lantern equipped with the improved locking device. Fig. 2 is an enlarged fragmental view of said device, the two members thereof being in locked position. Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 2. Fig. 4 is a view similar to

Fig. 2, but showing said members in unlocked position.

The lantern illustrated in said drawings is of the conventional type, and no extended description of its component parts will therefore be given, such parts including the main frame 5, lamp 6, globe 7, and globe cap 8. The part or element last referred to is arranged for vertical movement in the cylindrical sleeve 9, with which the top member of the frame is provided, so as to permit its engagement with and removal from the upper end of the globe.

The locking device, wherein the invention resides is composed as already stated, of but two parts or members, the catch and the supporting clamp. These members are indicated, respectively, by the letters A and B, and each is formed of a single piece of wire. The catch comprises three essential parts or portions viz:—an attaching end designated by the letter *a* a catch proper *a'* and a hook *a²*. The first named portion is straight, but is approximately horizontal; in the construction illustrated, it is fitted in a transverse opening formed in the left-hand side member of frame 5 and is connected to catch *a'* by the vertical and inclined portions *a³* and *a⁴*, the former portion extending downwardly directly against said frame member to which it is preferably soldered. The catch *a'* is constituted by one arm of an up-standing loop, the other arm of which forms the stem of hook *a²*. Loop arm *a'* is bowed outwardly as shown, so as to overhang the lower end of the inclined portion *a⁴*, said bowed portion acting as a cam, the lower part of which coöperates with the aforementioned lower end of portion *a⁴* in constituting a seat *a⁵* wherein the handle portion of the supporting clamp is received and locked, as will be hereinafter described. The other arm of said loop is likewise bowed; it extends at an angle to the first-mentioned arm *a'* and its lower end is bent upwardly thereby forming the bill of the hook *a²*. The other member of the locking device, *i. e.*, clamp B is arranged transversely of frame 5, and includes essentially, a handle portion *b* at one end, a centrally located crank portion *b'* and a pair of bearing portions *b²* and *b³*, the former of which is located between handle *b* and the adjacent end of crank *b'* and the latter at the opposite end

of the clamp from said handle, at which point it is pivotally mounted in an eye 10 affixed to the right hand side member of frame 5. The bearing portion b^2 is fulcrumed in the seat formed between the stem and bill of the hook, while the crank b' is engaged in a lip 11 depending from the rim 12 of the perforated metal plate, (not shown) ordinarily provided at the base of the globe. The free end of the handle is bent laterally to provide a finger-piece b^4 .

When the parts above described are in their normal or locked position shown in Figs. 1, 2, and 3, it will be seen that handle b extends upwardly from the bearing portion b^2 and projects across and over the upper end of the catch or cam-like arm a' of the aforementioned loop, and that the lower part of said handle lies directly against the opposite arm of the loop, *i. e.*, the stem of hook a^2 . In this position the globe is lowered, and rests upon the top of the lamp burner, its upper end being fitted within the cap 8 which is preferably spring-controlled and thus exercises a downward pressure thereupon. When it is desired to raise the globe, in order to have access to the wick or burner of the lamp, this may be readily effected by moving the handle downwardly into the position shown in Fig. 4. During this movement, said handle will ride downward along the cam or catch a' , being caused to flex slightly at such time, owing to the curvature of said arm. On reaching a position opposite seat a^5 the handle will spring thereinto, and will be retained therein, by the overhanging portion of the arm. The movement above described will have the further effect of rocking the member B as a whole upon its bearing portions b^2 and b^3 , thus swinging crank b' in an upward direction and in consequence, raising the globe and with it the cap 8, said cap remaining in engagement with the globe end. The engagement of the lower end of the handle in seat a^5 will then maintain the globe in raised position, as will be apparent. When the cap is raised to an extent sufficient to completely disengage it from the end of the globe, the latter may then be swung outwardly of frame 5 by reason of the loose engagement of its plate-lip 11 with the crank portion b' of the clamp member B, whereupon said globe may readily be cleaned or removed. It will be observed therefore, that while the globe is normally held in lowered position by the tension exerted thereupon by the spring-pressed cap, it may be raised against such tension by operating the handle of the clamp member, will be locked automatically in raised position in the manner above stated, and may be swung outwardly of the lantern frame and removed from its holder when the

cap is released thereupon. It will also be observed that the clamp member is arranged for a swinging or rocking movement in either direction by the application of pressure upon its handle portion. Finally it will be noted that the bearing portion b^2 of the member in question may be lifted into and out of engagement with the hook portion a^2 of the catch member A, thus facilitating the assembling and disassembling of the parts.

Having described my invention and set forth its merits what I claim is:

1. A globe-locking attachment for lanterns comprising a catch member and a clamp member, each constructed of a single piece of wire, the first-named member consisting of an attaching end, a catch, and a hook, and the second-named member of a handle, a pair of bearing portions, and a crank, one of said bearing portions being fulcrumed on said hook.

2. The combination, with the frame and globe of a lantern, of a globe-locking attachment comprising a member attached to one side of the frame and formed with a catch and a hook and a second member pivotally-connected at one end with said hook and at the other end with the opposite side of said frame, said second member having a handle portion arranged for coöperation with said catch.

3. A globe-locking attachment for lanterns comprising a stationary wire member formed with a catch and a hook, and a rocking wire member formed with a handle arranged for coöperation with the catch, a bearing portion fulcrumed on the hook and a crank connected with the globe.

4. A globe-locking attachment for lanterns comprising a stationary wire member formed with a catch and a hook, and a wire member connected with the globe and fulcrumed on said hook, the second-named member having a handle portion arranged for coöperation with said catch.

5. A globe-locking attachment for lanterns comprising a stationary member formed with a catch and an open hook to form a fulcrum-bearing for a rocking member connected with a globe-plate and from which said member may be removed, and a rocking member connected with a globe-plate and having a portion fulcrumed in said open hook and provided with a handle arranged for coöperation with said catch.

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

JAMES H. HILL.

Witnesses:

W. J. TRIMBLE,
J. D. HENRY.