

(No Model.)

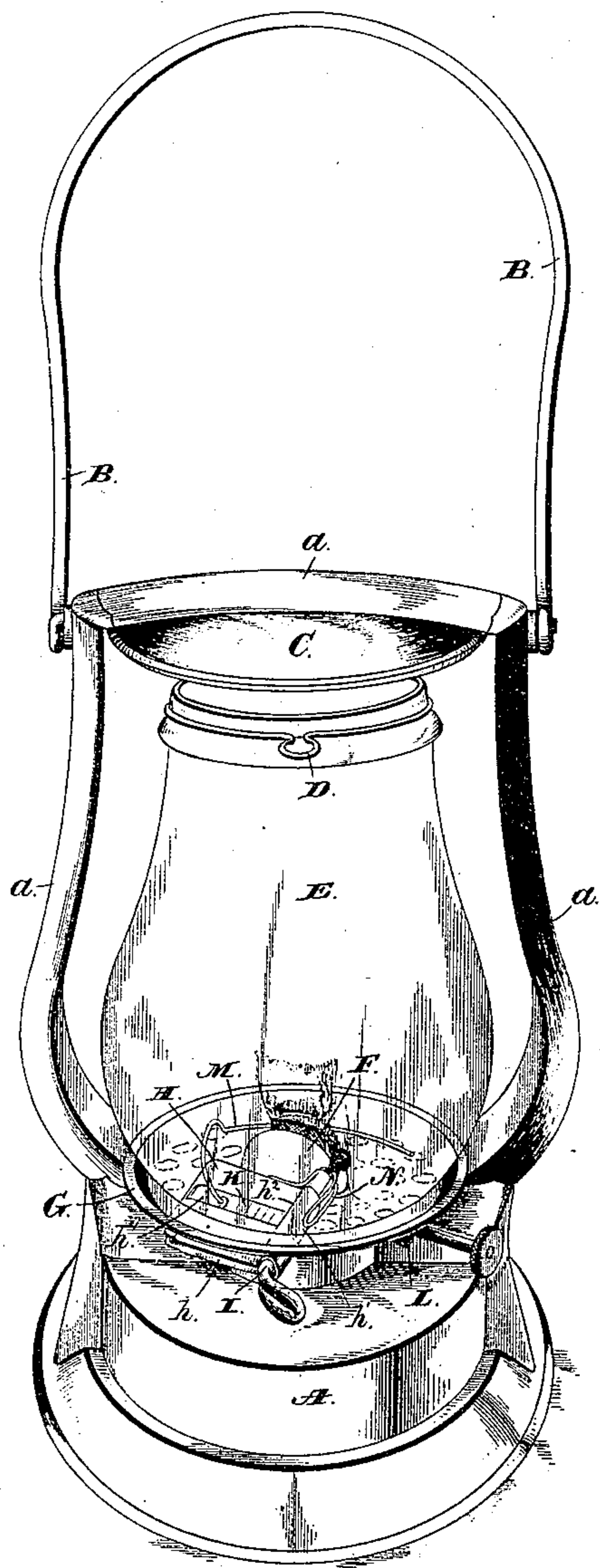
3 Sheets—Sheet 1.

W. D. DOREMUS.
LIGHTING MECHANISM FOR LAMPS.

No. 450,483.

Patented Apr. 14, 1891.

Fig. 1.



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(No Model.)

3 Sheets—Sheet 2.

W. D. DOREMUS.
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Fig. 2.

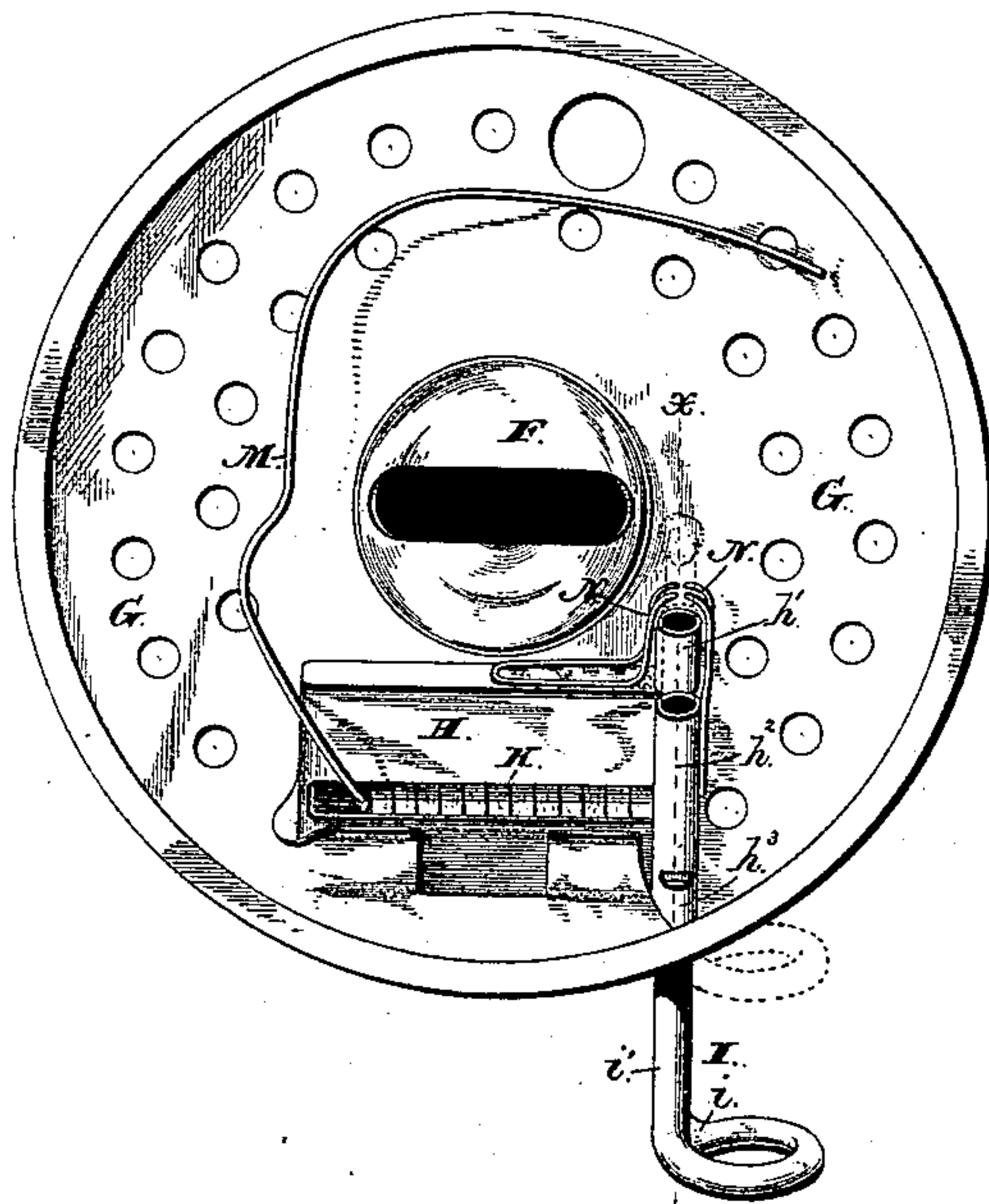
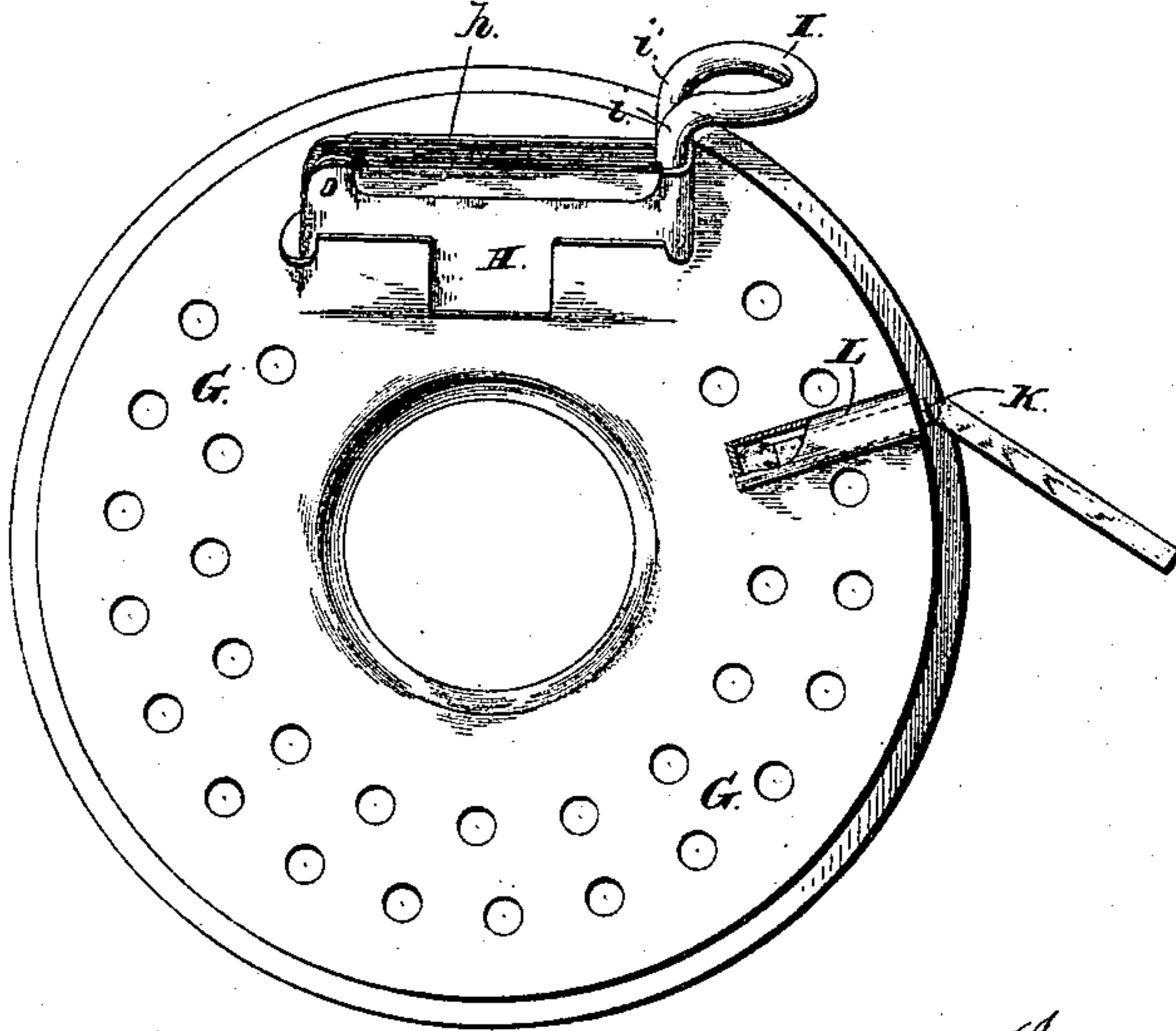


Fig. 3.



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Fig. 4.

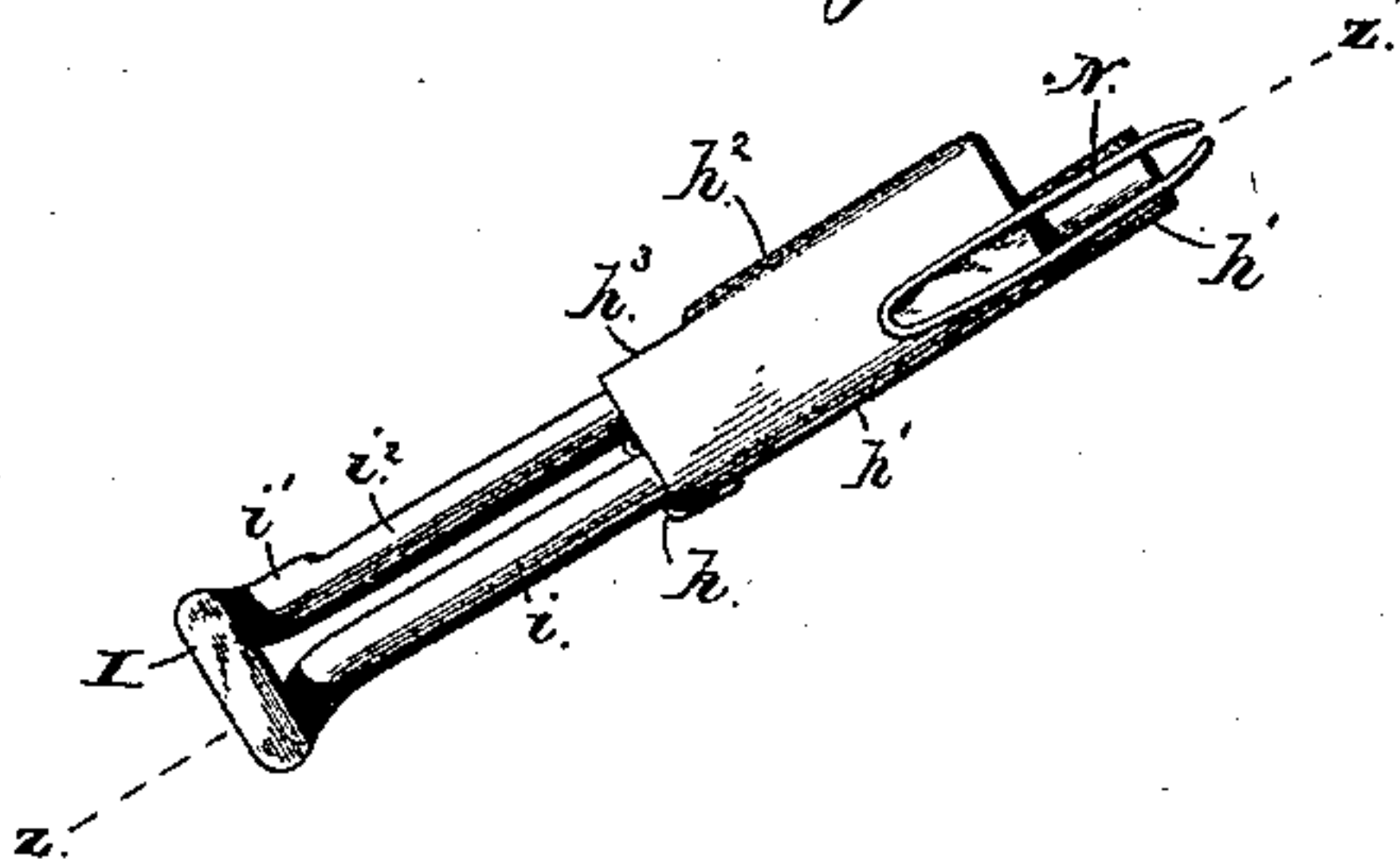


Fig. 5.

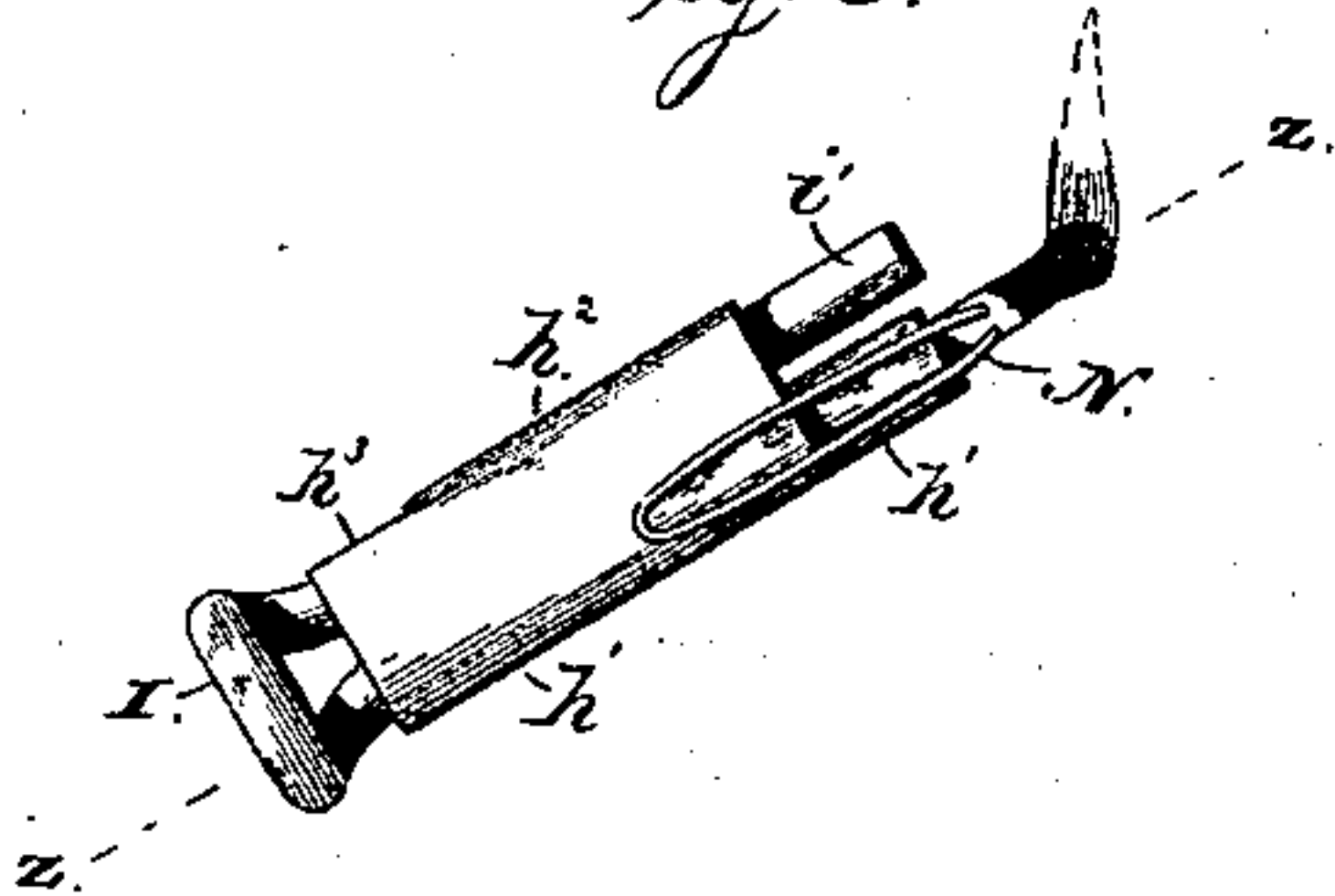


Fig. 6.

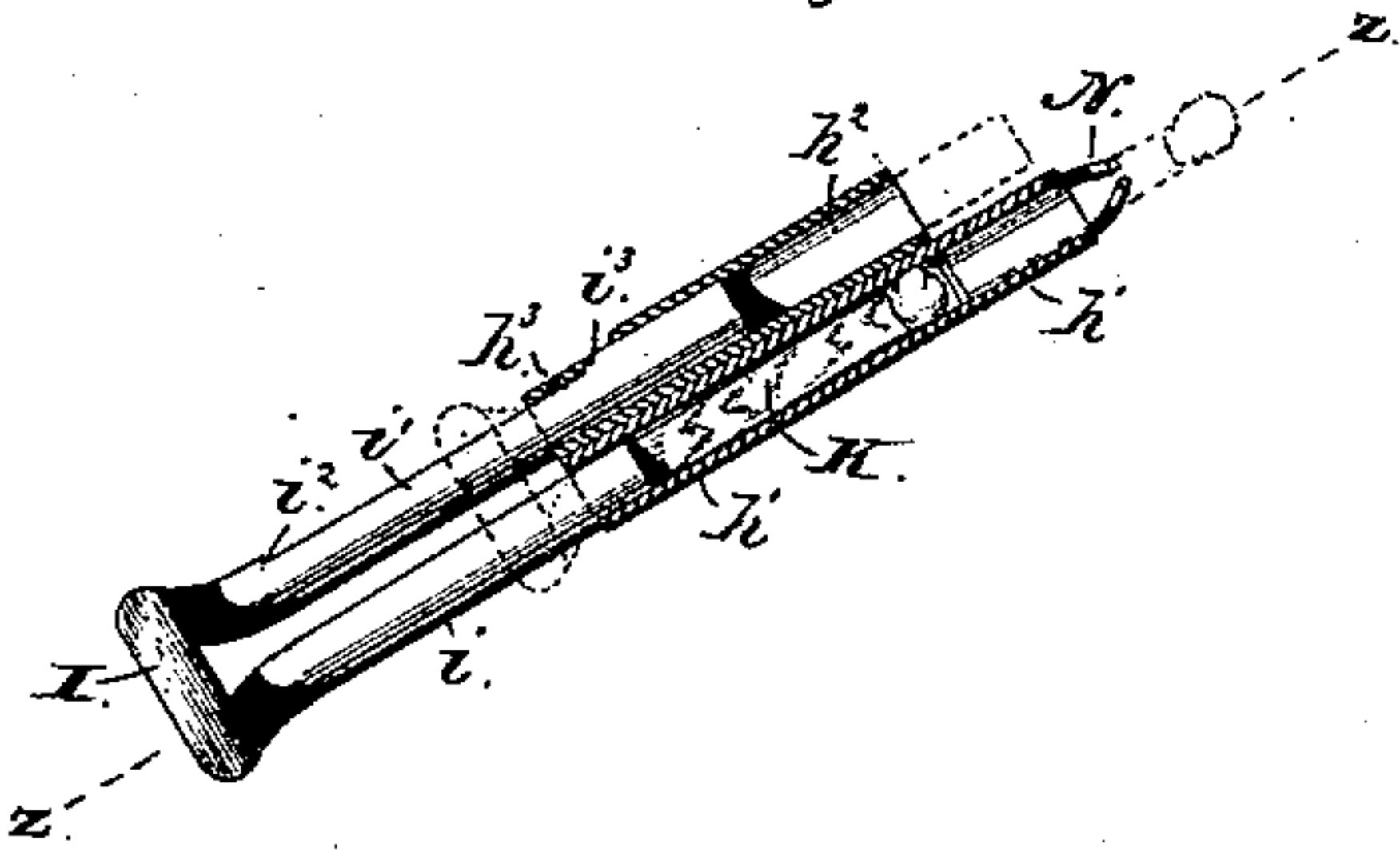
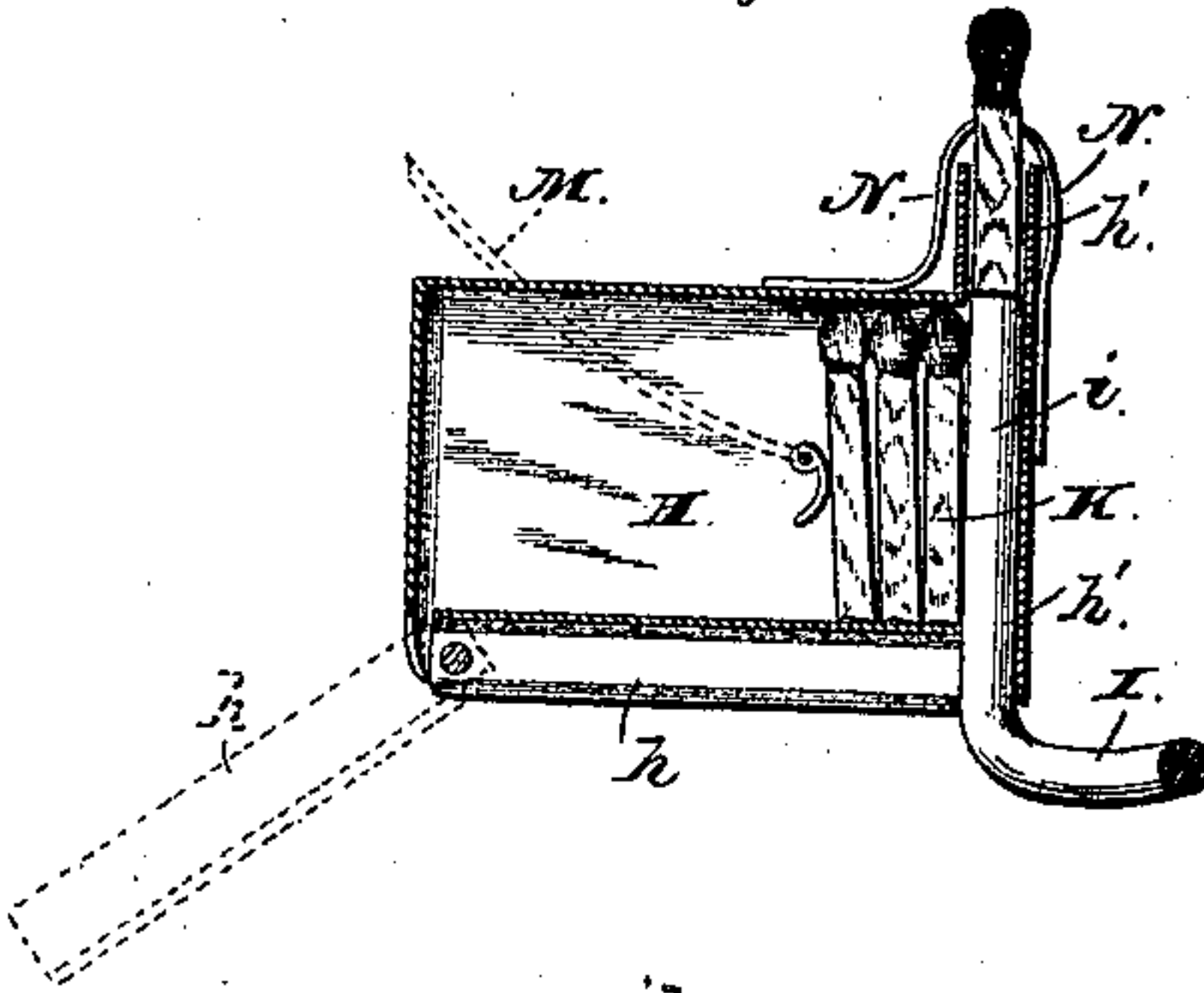


Fig. 7



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UNITED STATES PATENT OFFICE.

WILLARD D. DOREMUS, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR
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LIGHTING MECHANISM FOR LAMPS.

SPECIFICATION forming part of Letters Patent No. 450,483, dated April 14, 1891.

Application filed August 1, 1889. Serial No. 319,376. (No model.)

To all whom it may concern:

Be it known that I, WILLARD D. DOREMUS, of Washington, in the District of Columbia, have invented certain new and useful Improvements in Lighting Mechanism for Lamps; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a lantern provided with my improvements. Fig. 2 is a plan view of the lower portion of the lamp, the full lines showing the position of the lighting mechanism before the wick is ignited and the dotted lines the position of said mechanism after the ignition of the wick. Fig. 3 is a plan view of the lower side of the supporting-plate for the globe and lighting mechanism. Figs. 4 and 5 are side elevations of the lighting mechanism, and show, respectively, the positions of parts before and after the ignition of the wick. Fig. 6 is a section upon line xx of Fig. 2, and Fig. 7 is a like view upon line zz of Figs. 4, 5, and 6.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to enable an ordinary lantern to be lighted with ease and certainty without requiring that the casing be opened or the globe or chimney removed, to which end my said invention consists in the construction of the lighting mechanism and its combination with the lamp, substantially as and for the purpose hereinafter specified.

While my invention is applicable to any style of lantern its operation and advantages will be sufficiently shown in its application to one form, which, as seen, is that commonly used, and consists, essentially, of a combined base and lamp-body A, to which, at opposite sides, are attached two hollow standards a and a , that from thence extend in a curve upward and outward, and at their upper ends are united by a cross-bar a' , the whole forming a supporting-frame.

To the upper ends of the standards a and a is pivoted a bail-handle B, while to the lower side of the cross-bar a' is secured a deflector or shield C, to which in turn is secured a wire clamp D, that operates as a holder for

confining the upper end of a globe E. The lamp-body A is provided with a burner F, and around the same is a perforated disk G, which receives the lower end of and operates to support the globe E, and also as a support for my lighting mechanism.

Secured within an outward and downward inclined slot in the disk G is a sheet-metal casing H, which has a length of about one and one-half inch, a breadth of about one inch, and interiorly has a depth somewhat greater than the diameter of an ordinary friction-match head. The lower outer edge of said casing is inclosed by a hinged cover h , by means of which access may be had to its interior.

The location of the casing H is such as to bring one of its ends upon a line with one end of the wick-opening in the burner-cone, and to such end of said casing are secured two tubes h' and h^2 , the first of which h' is upon a line with and opens into the interior of the casing, while said tube h^2 is placed directly above said tube h' . Within said tubes is placed a wire I, that is bent together, so as to bring its arms parallel and in such relative position as to enable one arm i to enter into and be contained within the tube h' , and the other arm i' to be in like manner contained within the tube h^2 , by which arrangement said arms may be simultaneously moved longitudinally within their tubes, the amount of such motion being limited by flattening the upper side of said arm i' , so as to form thereon two shoulders i^2 and i^3 , that are engaged by a depressed portion h^3 of the upper side of said tube h^2 .

The casing H is intended for the reception of the friction ends of matches K and K, each of which matches is broken to proper length by inserting its friction end into a gage-tube L, that is secured upon the lower side of the disk G, and then turning the projecting portion to one side. Said match ends are pressed toward the tube h' , so that one of the same will, when permitted, enter the latter, by means of a spring M, which is secured at one end upon said disk G, and at its opposite free end passes into a slot h^4 , that is provided within the upper side of said casing, said slot being arranged centrally and lengthwise of the latter, and said spring being adapted to

exert a pressure lengthwise of said slot and toward said receiving-tube h' . As thus arranged, in order to fill such casing, the hinged cover is opened, said spring pressed to the rear limit of its motion and the matches then inserted, after which by closing said hinged cover said matches will be securely held in place. The length of the lower arm or plunger i is such that when the wire I is drawn to the outer limit of its motion, the end of said arm will be at or outside of the lower outer edge of the casing H , so as to leave the tube h' unobstructed and permit of the entrance thereto of a match, after which by moving said wire inward said match will be pressed longitudinally inward through said tube until its friction end is adjacent to the edge of the lamp-wick, and its rear end is beyond the friction end of the adjacent match. In order that when thus moved inward a match may be ignited, there are secured to the inner end of the tube h' a number of springs N and N , which extend longitudinally inward beyond said tube and have their ends curved inward, as shown, so as to engage with the match and produce such friction upon the end of the same as it is moved inward as to ignite the fulminate and fire the wick. The charred end of each match is expelled by the inward movement of the next succeeding match, so that the mechanism is always ready for use when supplied with matches.

From the foregoing description it will be seen that in order to light the lamp it is only necessary to retract the plunger and then press it quickly inward, the operation of the other portions of the mechanism being automatically performed as long as a match remains.

As will be seen, owing to the amount of movement the plunger has and which it gives to a match, the match receptacle or casing H is placed such a distance from the wick that there is no danger, when the latter is ignited, of the matches in the casing being affected. Said casing therefore can be secured in the slot in the globe-supporting disk in a fixed relation to said wick, so that at all times the device is ready for use and may be used by simply operating the plunger without preliminarily adjusting said casing.

Having thus described my invention, what I claim is—

1. As an improvement in match-lighting mechanism, in combination, a plunger which is adapted to be reciprocated within a tube, an arm attached to said plunger only at one extremity and extending parallel with it, a tubular guide for said arm, and means for feeding matches into position to be ejected by said plunger and ignited, substantially as and for the purpose specified.

2. As an improvement in match-lighting mechanism, in combination, a match-receptacle receiving its support from the globe-supporting disk of a lamp, the match-ejecting mechanism, and the mechanism for feeding

matches to the latter, consisting of a spring having one end attached to said disk and its other match-engaging end working in a slot formed in the side of said receptacle, substantially as and for the purpose shown.

3. As an improvement in lighting mechanism for lamps, in combination, a match-receptacle attached to the globe-supporting disk of a lamp, a reciprocable plunger arranged in said receptacle, and a match-feeding spring attached at one end to said disk and having its other end working in a slot formed in the upper side of said receptacle, the latter also having in its end an opening for the admission of matches, to be used substantially as and for the purpose set forth.

4. As an improvement in match-lighting mechanism, in combination, a plunger reciprocable within a tube, an arm attached to said plunger only at one extremity and extending parallel with it, a tubular guide for said arm, an offset formed in the latter to engage with a shoulder on said arm to limit its movement, and a match-feeding device, substantially as and for the purpose specified.

5. As an improvement in lighting mechanism for lamps, in combination with the burner and the globe-supporting disk of a lamp or lantern, the flat match-receiving box or casing supported by said disk outside the burner-cone at an angle or incline so as to have its inner end project above the disk within the lamp and its outer match-receiving end at the under side of the disk outside the lamp, the plunger-tube at one end of said casing, the reciprocable plunger consisting of a rod in said tube, having its operating-handle outside the lamp, and the match-feeding mechanism consisting of a spring secured at one end to said globe-supporting disk and whose free end is adapted to operate upon matches within said receiving box or casing, substantially as and for the purpose specified.

6. As an improvement in lamp-lighting mechanism, the combination of the slotted globe-supporting disk, the match-receptacle arranged within the slot in such disk so as to extend partially within and partially without the lamp-casing, said receptacle receiving its support from said disk, and means for forcing matches out of said receptacle and effecting their ignition, substantially as and for the purpose specified.

7. As an improvement in lighting mechanism, in combination with a match-ejecting plunger, a guide-arm attached thereto, and a tube in which said arm moves having an offset, said arm being flattened on its side to form shoulders to engage with said offset, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of July, A. D. 1889.

WILLARD D. DOREMUS.

Witnesses:

HENRY C. HAZARD,
GEO. S. PRINDLE.