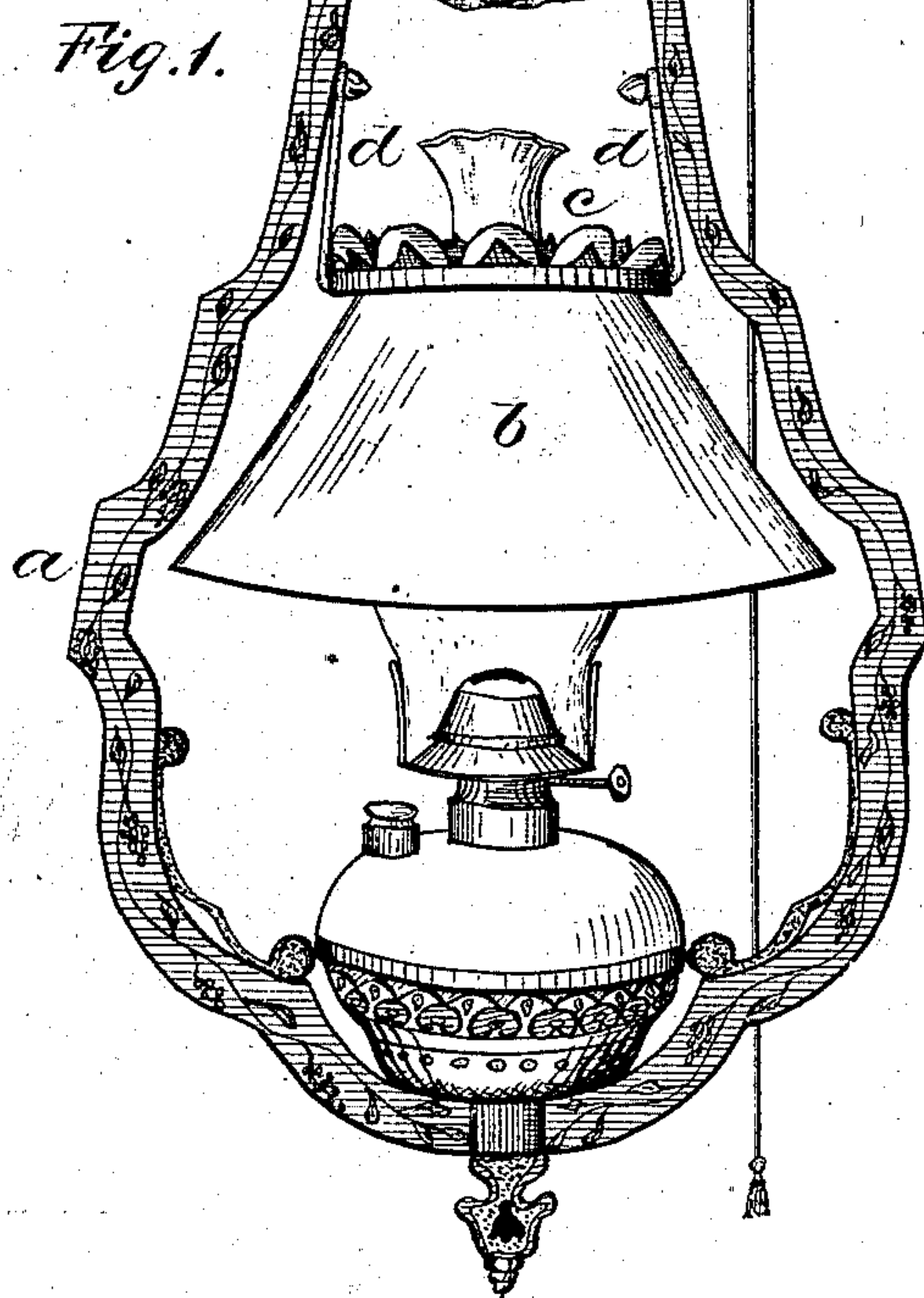
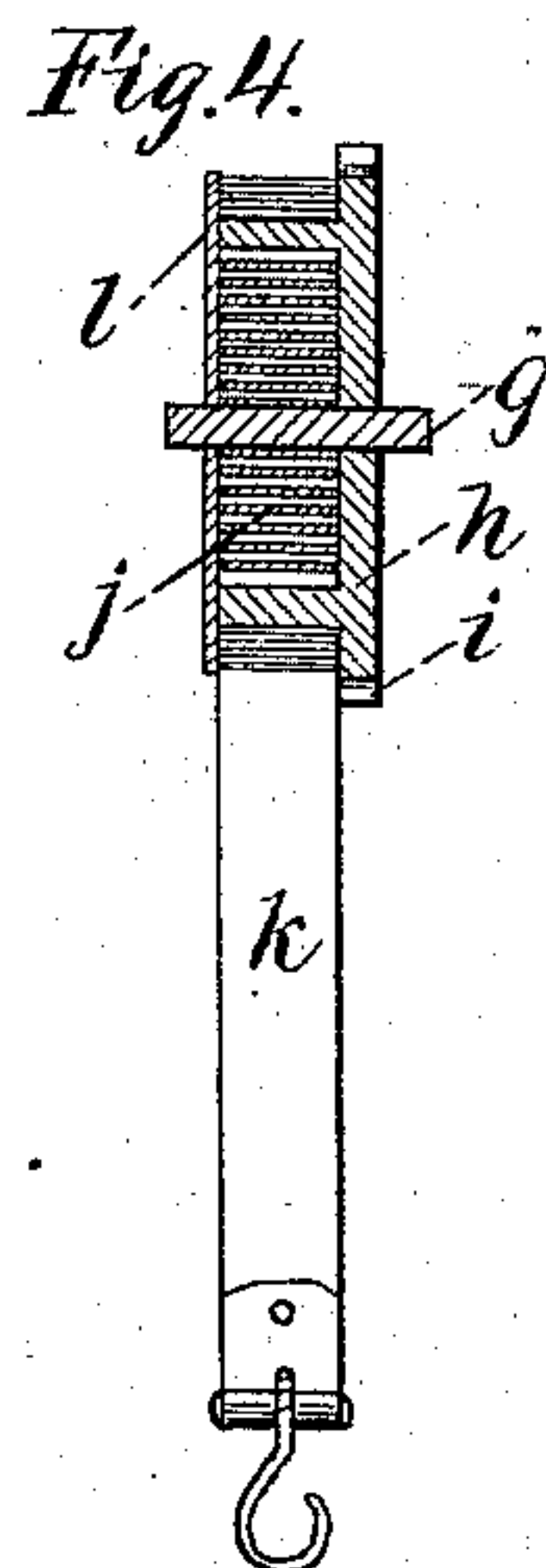
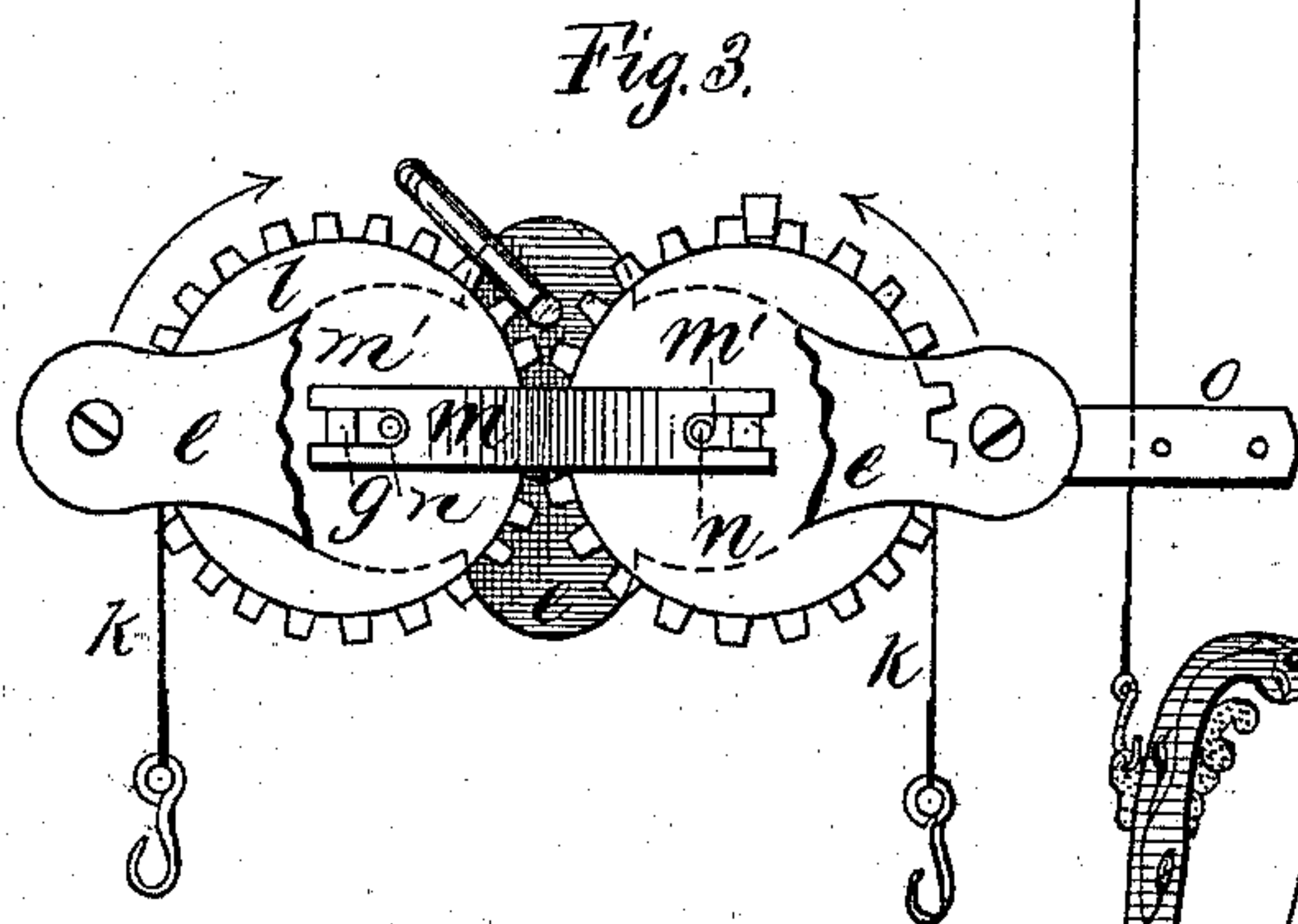
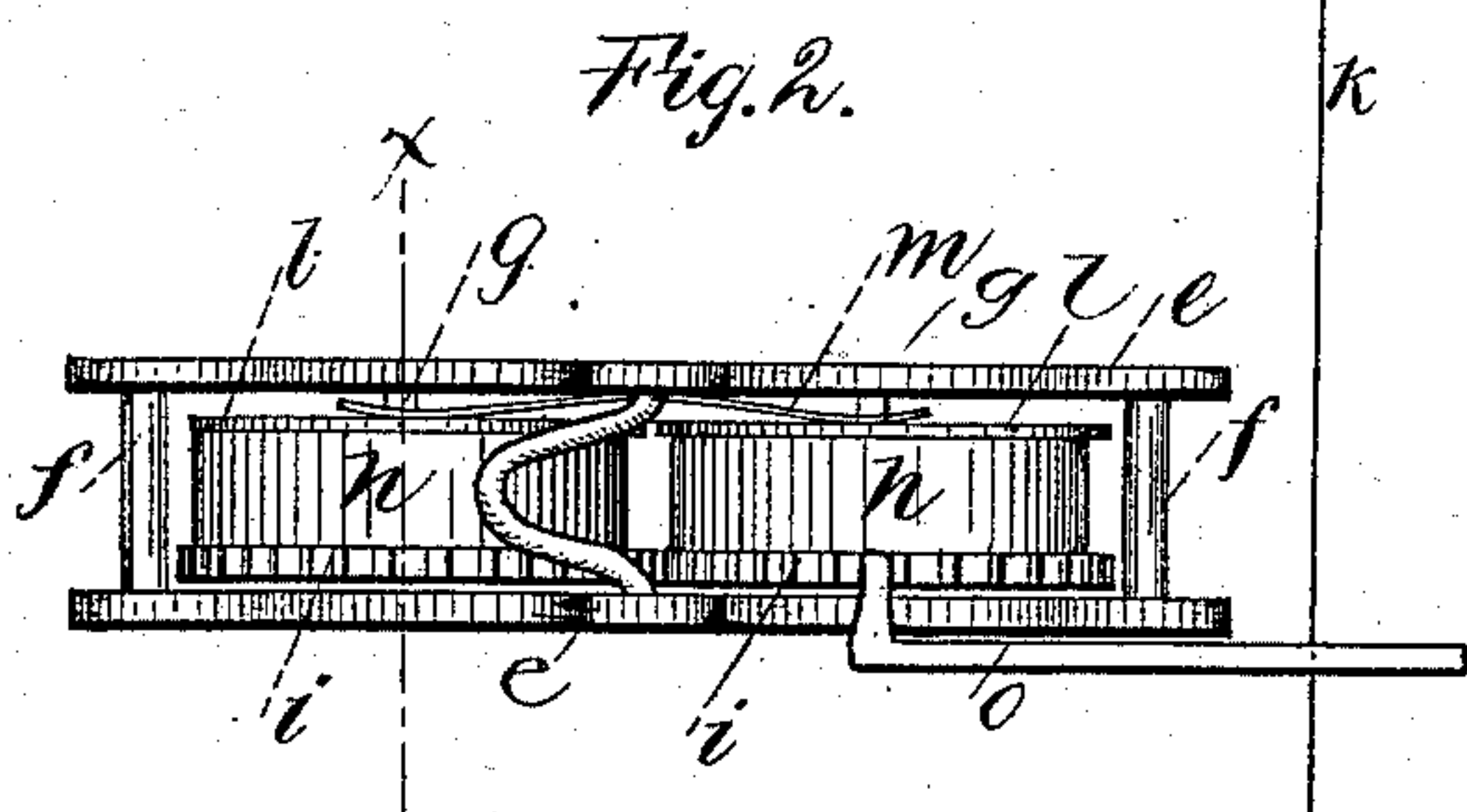


T. D. HOTCHKISS.
Hanging Lamp.

No. 224,538.

Patented Feb. 17, 1880.



Attest:

R. J. Gaylord,
Carpenter

Inventor:

T. D. Hotchkiss
By W. E. Simonds
Atty

UNITED STATES PATENT OFFICE.

TIMOTHY D. HOTCHKISS, OF CROMWELL, CONNECTICUT.

HANGING LAMP.

SPECIFICATION forming part of Letters Patent No. 224,538, dated February 17, 1880.

Application filed May 9, 1879.

To all whom it may concern:

Be it known that I, TIMOTHY D. HOTCHKISS, of Cromwell, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in and pertaining to Hanging Lamps, of which the following is a specification, reference being had to the accompanying drawings, wherein—

Figure 1 is a side view of the whole device. Fig. 2 is a top view of the suspending apparatus. Fig. 3 is a side view of the suspending apparatus, from the side opposite to that shown in Fig. 1, with the side plate removed in order to expose to view the parts under it. Fig. 4 is a view of the suspending apparatus in vertical cross-section on the plane indicated by the dotted line *x x*, Fig. 2.

I will first describe the whole device, and then in the claims specify the parts in which my invention resides.

The letter *a* denotes a frame, usually an ornamental casting, in which is hung the lamp or other light, with its chimney or globe. The letter *b* denotes a shade or reflector hung by its neck in the collar *c*, which is pivotally connected to the arms *d*, the upper ends of which are pivoted to the frame *a*, so that the shade can swing, like a pendulum, in the frame.

This construction, besides its ornamental appearance, has advantages, among which is that of its capability of allowing the shade to be swung to one side for convenience in removing the chimney or globe.

The letters *e e* denote the two side plates of the suspending apparatus, and *ff* the two end posts connecting the same. The letters *g g* denote two corresponding stationary shafts (non-rotary) hung in the side plates. On these shafts are hung the rotary drums *h h*, bearing the intermeshing gears *i i*, so that the drums rotate in opposite directions synchronously.

Within the drums are coiled springs *j j*, with one end attached to the stationary shafts and the other end to the drums, so that their tendency and effect is to rotate the drums in the directions denoted by the overlying arrows in Fig. 3.

On the exterior of the drums are wound the bands *k k*, with one end attached to the drums, and with the frame *a* hooked to the opposite ends.

From this construction it is obvious that the springs are to counterbalance the weight of the frame *a* and its appurtenances, and to cause the bands *k k* to wind upon the drums when the frame is raised.

On the shafts *g g* are hung somewhat loosely the friction-plates *l l*, which bear against the edge of the drums, being held thereto by the pressure of the spring *m*. These friction-plates are held from rotation by the pins *n n*, borne thereon and striking into the bifurcations *m' m'* of the spring *m*.

The letter *o* denotes a pawl striking into one of the gears *i*. It may be used as a lock against the rotation of the gears in either direction, or as a lock against rotation in one direction only.

It is possible to use a set-screw in place of the spring *m*; but the set-screw does not work so well as the spring.

I am made aware of the patents to P. J. Clark, No. 184,506, dated November 21, 1876, which shows a pendant with a shade turning on a fixed bearing, and which does not show my pendulous arms *d'*, for swinging the shade out from the frame, and to J. A. Evarts, No. 186,332, dated January 16, 1877, consisting of two oppositely-acting spring-barrels, which differ from mine, insomuch as they have no intermeshing gears, as mine do, and one may be moved without affecting the other, thus disarranging the lamp below, which fault is obviated by my intermeshing gears.

I claim as my invention—

1. The lamp-frame *a*, the arms *d*, pivoted thereto, the collar *c*, pivoted to said arms, and the shade *b*, all combined substantially as described.

2. The combination, in a light-suspending device, of the springs *j j*, the drums *h h*, the intermeshing gears *i i*, and the bands *k k*, all substantially as described, and for the purpose set forth.

3. The combination of springs *j j*, drums *h h*, bands *k k*, friction-plates *l l*, and spring *m*, all substantially as shown and described.

TIMOTHY D. HOTCHKISS.

Witnesses:

R. F. GAYLORD,
WM. E. SIMONDS.