

H. PENNIE.

Leak Alarm.

No. 86,246.

Patented Jan. 26, 1869.

Fig. 1

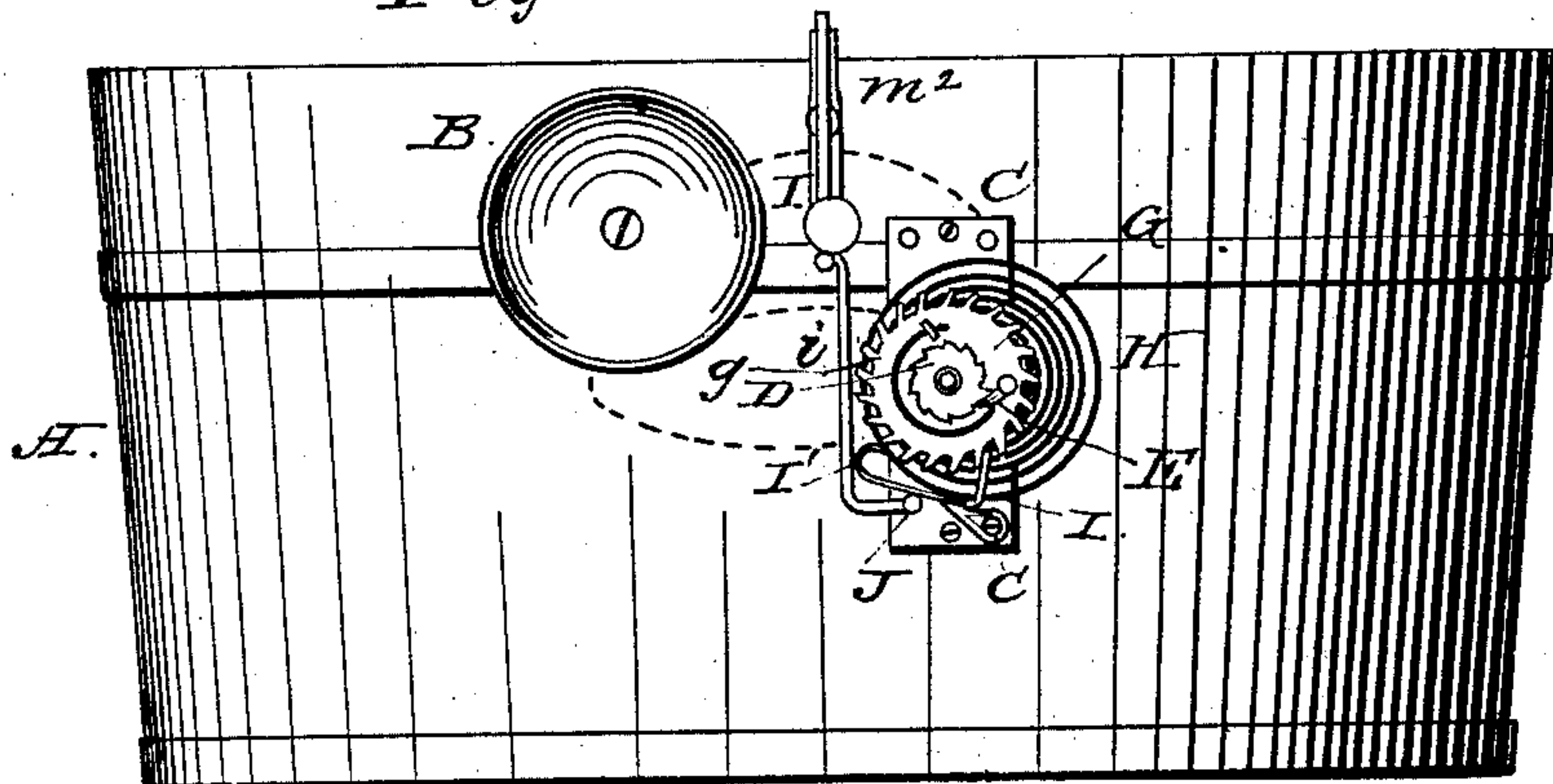


Fig. 2.

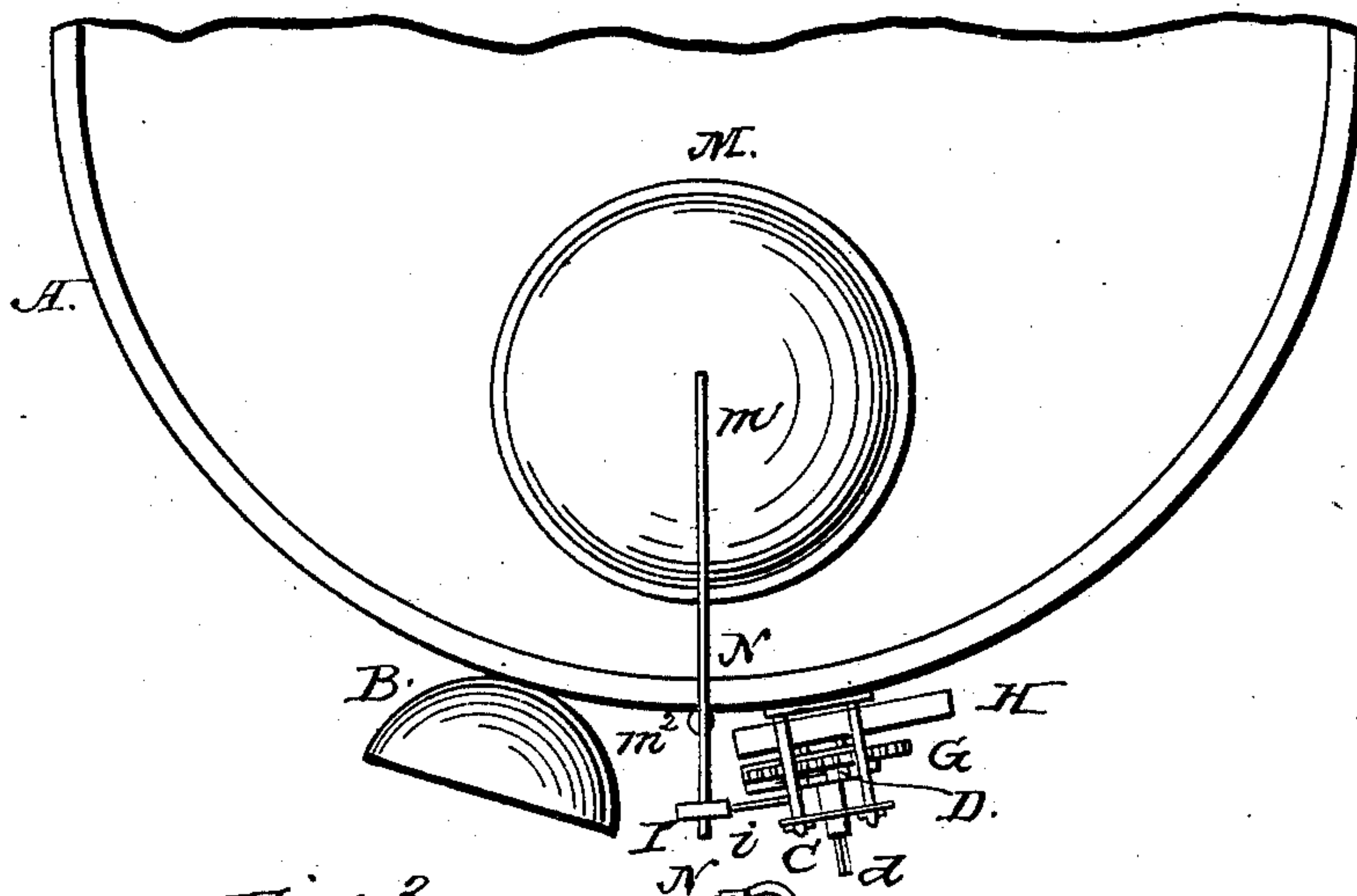
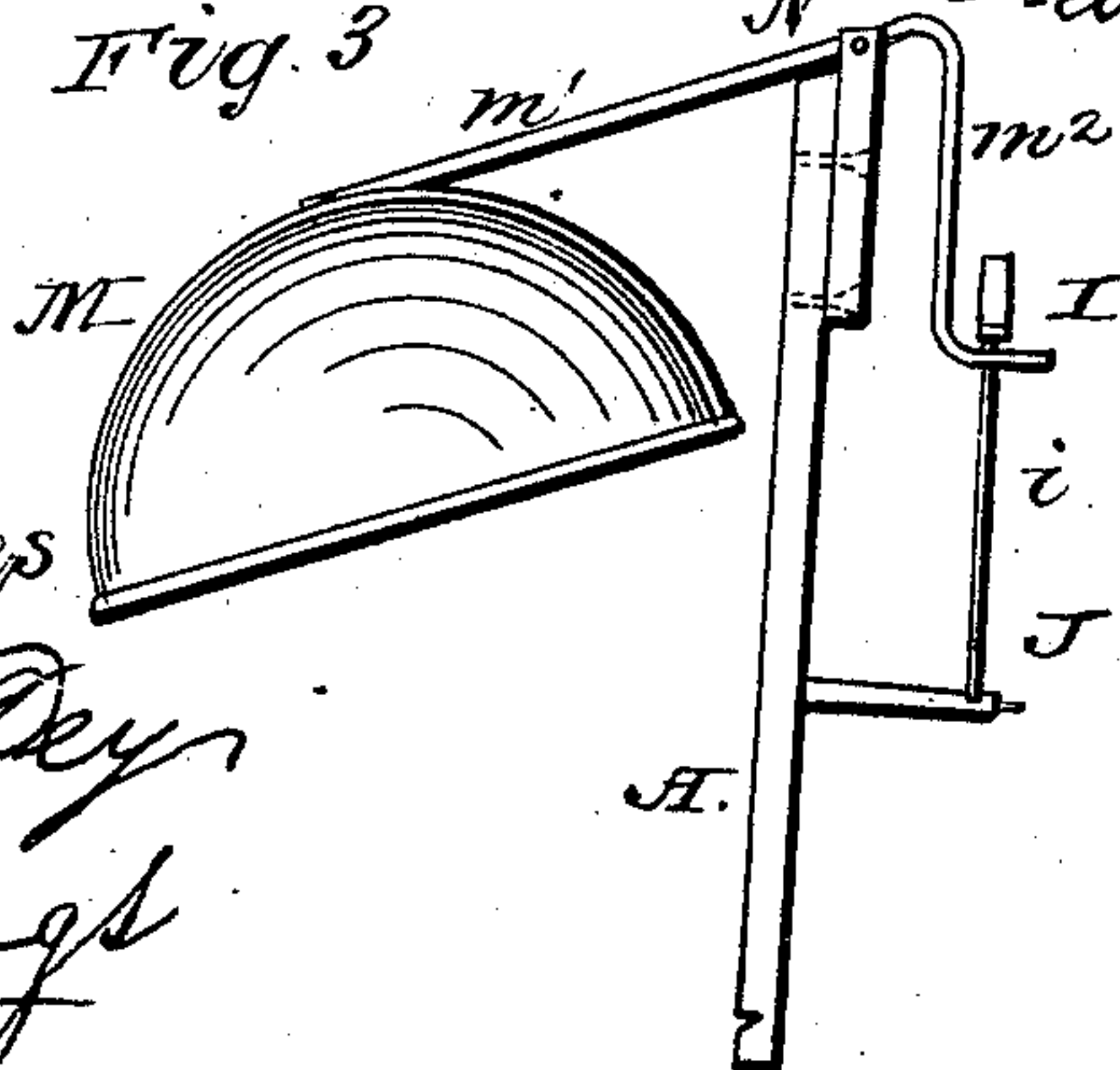


Fig. 3



Witnesses

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Inventor

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# United States Patent Office.

HENRY PENNIE, OF BROOKLYN, NEW YORK, ASSIGNOR TO L. H. MACE AND COMPANY, OF NEW YORK CITY.

Letters Patent No. 86,246, dated January 26, 1869.

## IMPROVED ALARM-TANK FOR REFRIGERATORS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HENRY PENNIE, of Brooklyn, in the county of Kings, and State of New York, have invented a certain new and useful Alarm-Tank, intended, more especially, for catching the water dripping from refrigerators, but which may be used for other purposes; and I do hereby declare that the following is a full and exact description thereof.

I have arranged a float and connected parts with clock-work, or analogous mechanism, for sounding a bell, or the like, so that the use of the float sets the clock-work in motion, and gives a loud and long-continued alarm, calling attention to the fact that the tank is nearly full, and is liable to run over.

Much difficulty is experienced with refrigerators, even on the most approved plans, in consequence of an overflow of the water, resulting from the melting of the ice. The tub or other vessel which receives the drippings is usually out of sight, and is liable to be neglected. The overflow is sometimes sufficient to do serious damage in apartments below.

I will first describe what I consider the best means of carrying out my invention, and will afterward designate the point which I believe to be new.

The accompanying drawings form a part of this specification.

Figure 1 is a side elevation of a common low tub, adapted to slide under a refrigerator, and provided with my apparatus, the front part of the apparatus being removed, to better show the interior.

Figure 2 is a plan view of half the tub, with the alarm-apparatus.

Figure 3 shows a few of the parts, with a vertical section of a stave of the tub.

Similar letters of reference indicate like parts in all the figures.

A is the tub, made of wood, hooped with iron in the usual approved manner.

B is a bell, fixed thereon.

C is a frame-work, in which is mounted a revolving shaft, *d*, having a ratchet-wheel, D, fixed thereon.

The pawl E is pivoted on the pallet-wheel G, and pressed in contact with the ratchet-wheel D by the spring *g*, and the whole is turned by the force of the coiled spring H, which is attached, at one end, to the frame-work C, by the stud *c*, and at the other, to the shaft *d*, in the manner ordinarily employed in making clock-springs.

A hammer, I, mounted on the end of the lever *i*, turns upon the pivot J, and is operated by the pallet-wheel G, through the medium of the pallet I' I'', as will be obvious.

The end of the shaft *d* is squared, and adapted to receive a key, like that employed in winding clocks.

By turning this shaft, the device is wound up, and on liberating it, the force of the spring H is ready to be

expended in vibrating the lever *i*, and striking a succession of blows, with the hammer I, against the bell B, thus sounding a loud and long-continued alarm.

This alarm becomes available whenever the tub A is nearly filled, and is of no effect when the water is at a lower level.

The determination of the conditions under which the alarm will sound, is effected as follows:

M is a hollow metallic vessel, fixed on the arm *m*<sup>1</sup> of the lever *m*<sup>1</sup> *m*<sup>2</sup>, which is pivoted on the tub at the point N, as represented.

The arm *m*<sup>2</sup> extends first outward, then downward, then again outward, in such a position that the superior gravity of the vessel M tends to hold the arm *m*<sup>2</sup> in contact with the lever *i* of the hammer I. This is at or near the centre of the traverse or vibration of the lever *i*, and it is immaterial whether it holds the hammer on the side of itself nearest the bell B, or farthest from the bell B. In either case it prevents the motion of any of the parts, and consequently prevents any alarm being given.

The attendant having wound up the spring H, by turning the shaft *d*, need give no further attention to the apparatus, while the water, trickling more or less rapidly through the ordinary outlet in the refrigerator, accumulates in the tub.

The apparatus does not prevent the withdrawal and tilting of the tub, to empty it at regular periods, but, when, in consequence of any neglect, or from any cause, the tub becomes too full, the water in the tub, by floating the hollow vessel M, tilts the lever *m*<sup>1</sup> *m*<sup>2</sup>, and releases the hammer I. The moment this occurs, the spring D uncoils itself rapidly, producing a series of vigorous blows by the hammer I upon the bell B.

The attendant, thus called, empties the tub, rewinds the alarm, and all is again adjusted.

This invention is obviously superior to any index simply visible to the eye.

This alarm can readily be heard in distant parts of the house, in day or night, and every neglect is not only recognized by the attendant, but also by the master or mistress of the house.

In emptying the tub, the alarm should be on the upper side, that is to say, the water should be poured from the tub on the side opposite the alarm.

It is well to place the finger on the arm *m*<sup>1</sup>, to insure the silence of the alarm, whenever the tub is being moved.

I extend a wire, T, down through the mechanism, between the pallet-wheel G and the spring H. This serves as a convenient shield between the parts, to prevent their interfering with each other.

Many modifications of the details of my apparatus may be made by any good mechanic, without sacrificing the advantages due to my invention.

I propose, in some cases, to extend the framing C,



so as to support the bell B and the hinge N on a single piece of brass, or other suitable material.

The projecting end of the shaft *d* may have a button, or convenient thumb-piece, permanently attached, to facilitate its turning, if preferred.

The entire device may be adapted to be removed, and again affixed at pleasure, by clamping on the side of the tub, in a manner analogous to a clothes-pin, or to a clothes-wringing machine, if preferred.

Having now fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is as follows:

I claim an alarm-mechanism, substantially as herein described, in combination with the tank A, and with the movable stop *m*<sup>2</sup>, which stop is removed by the rise of the water in the tank, and the alarm consequently given, substantially in the manner and for the purposes herein set forth.

HENRY PENNIE.

Witnesses:

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C. C. LIVINGS.