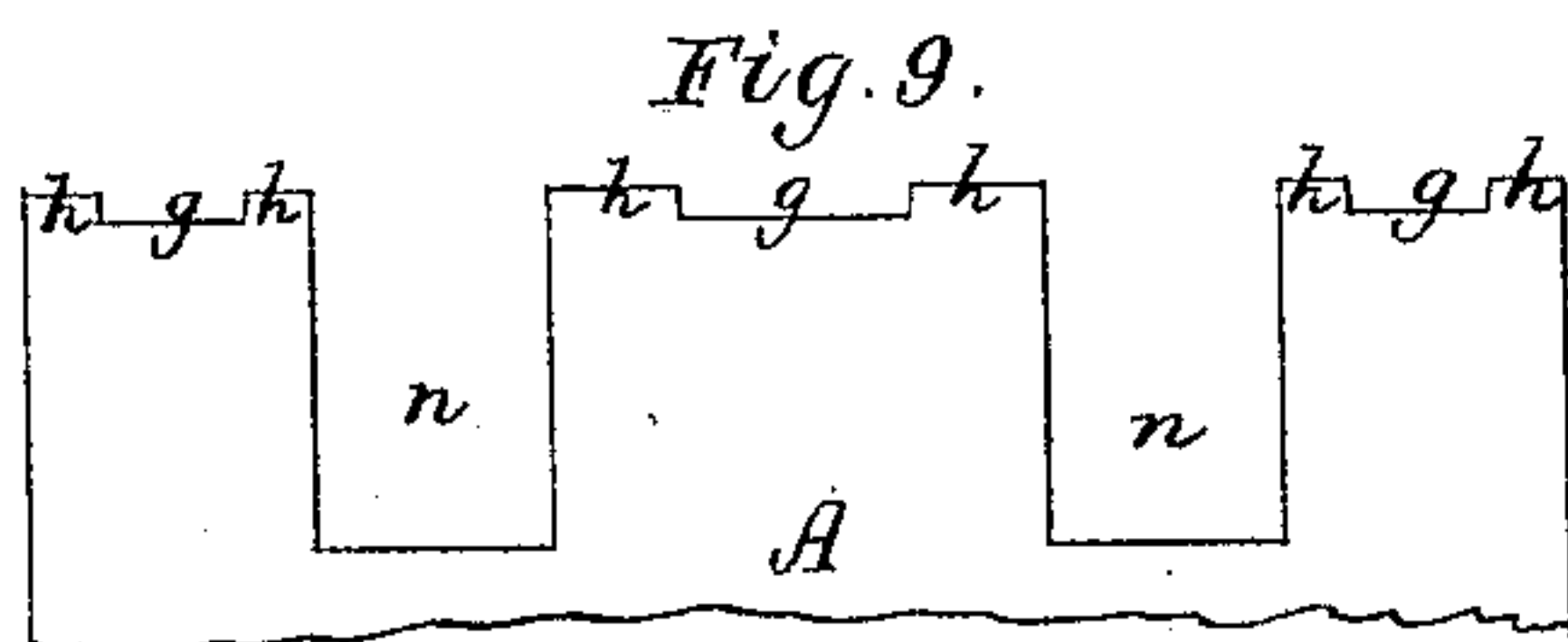
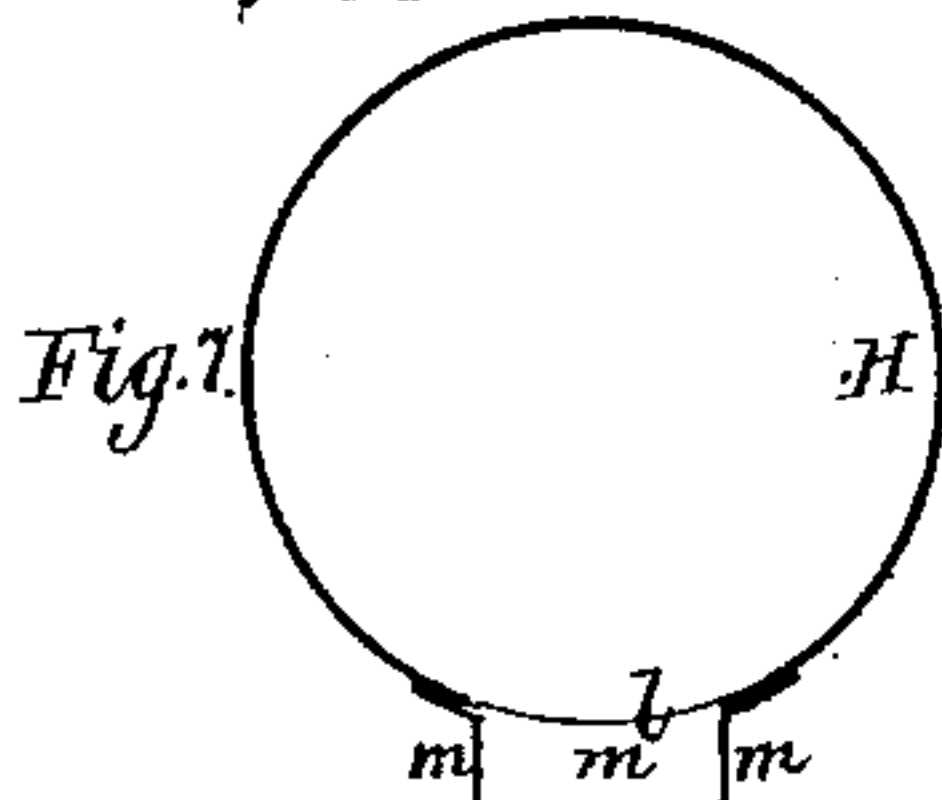
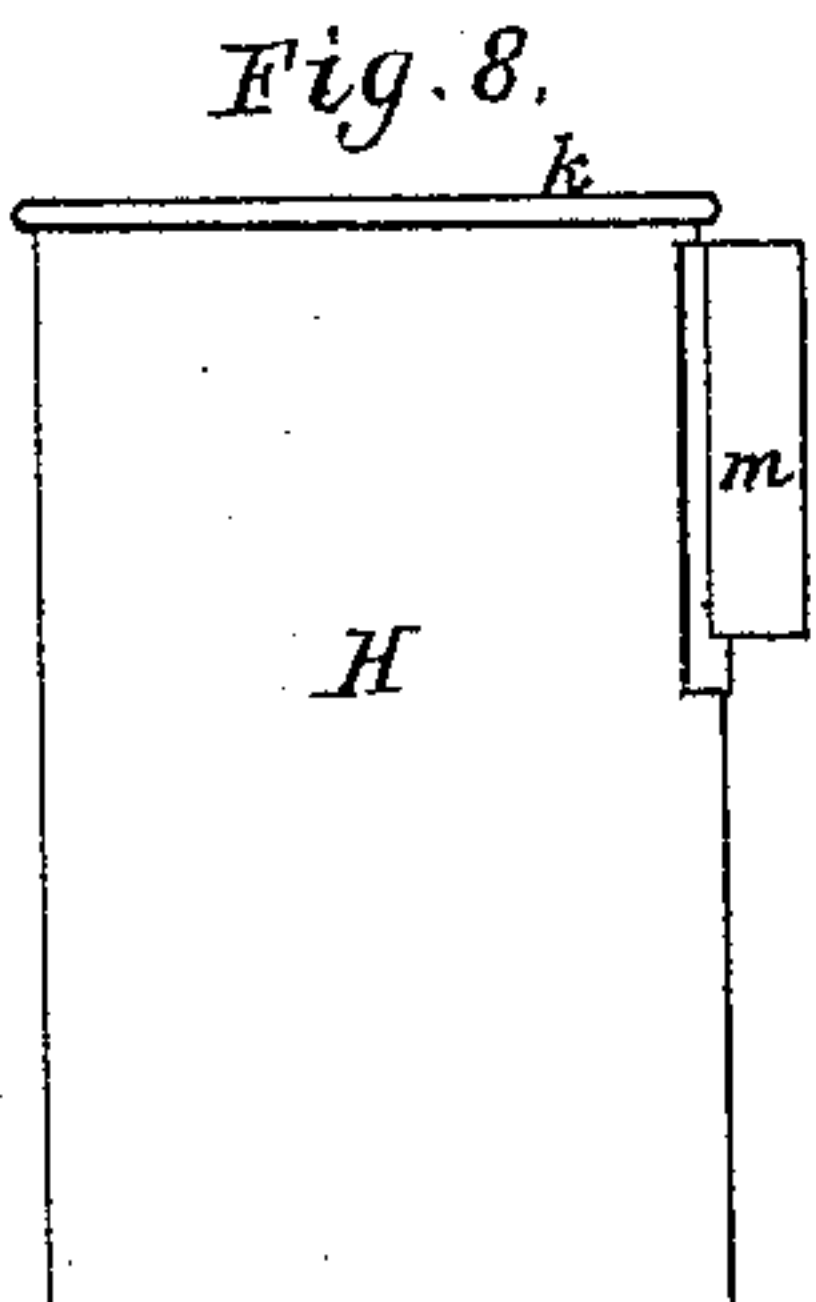
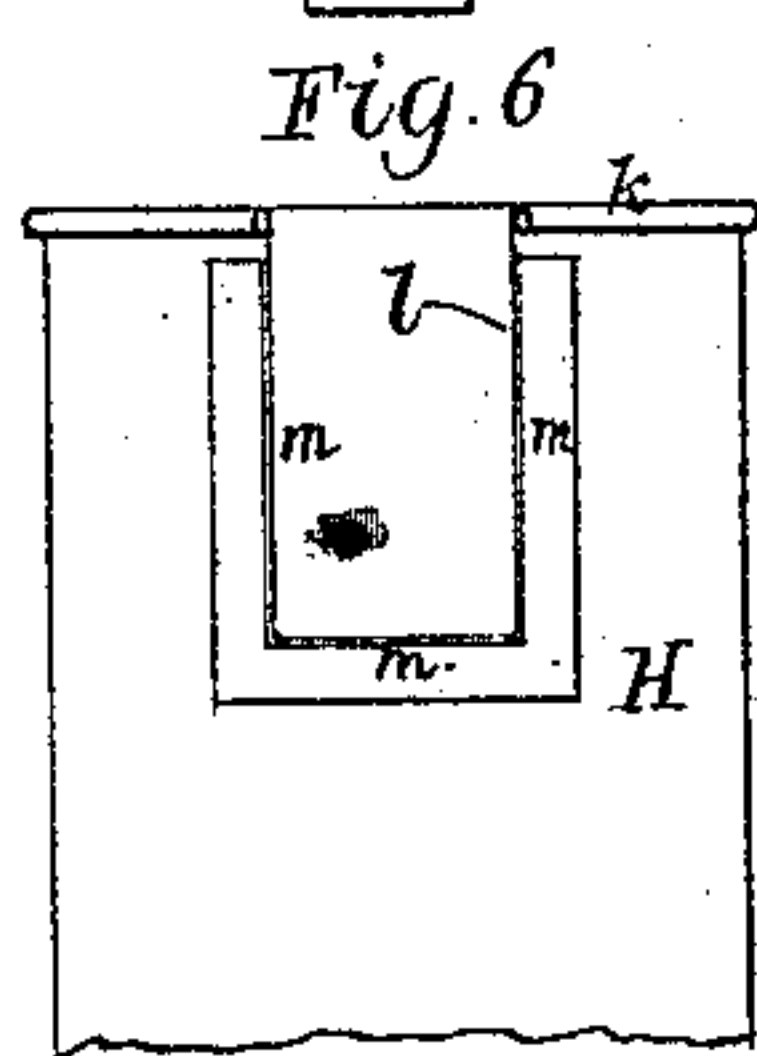
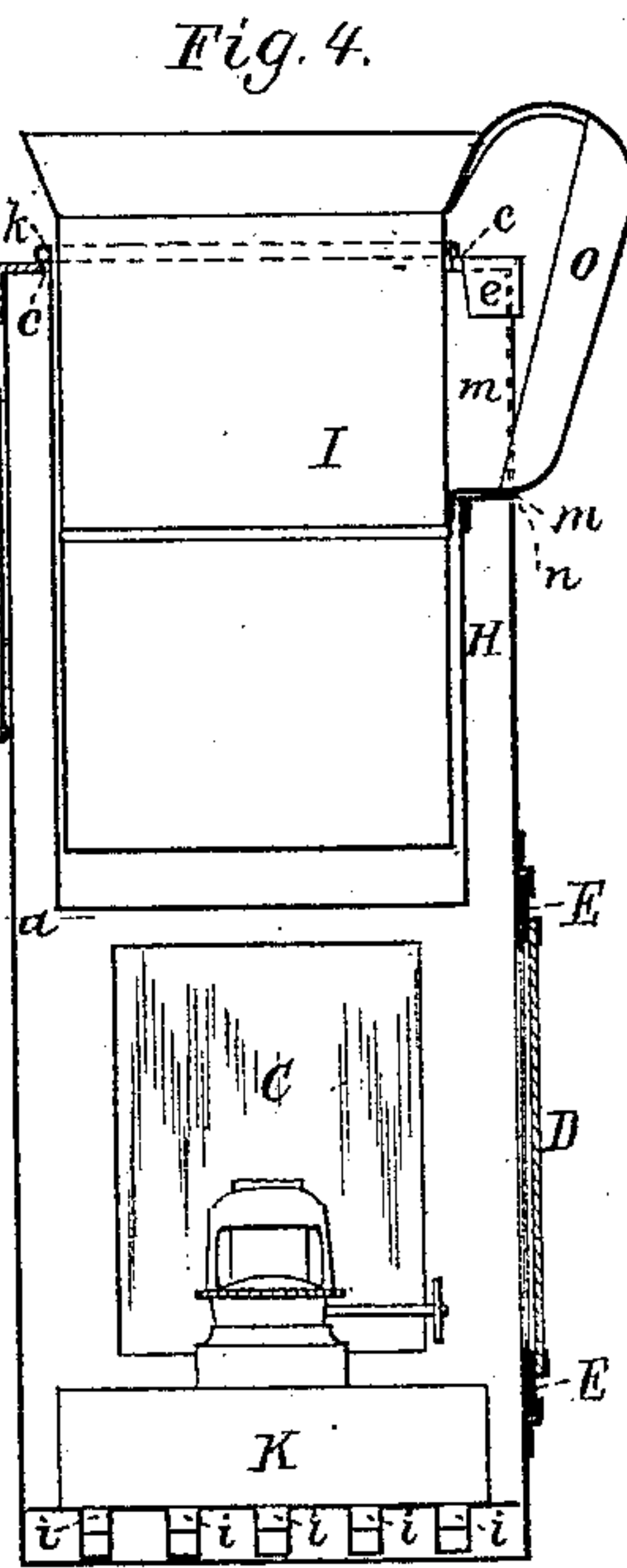
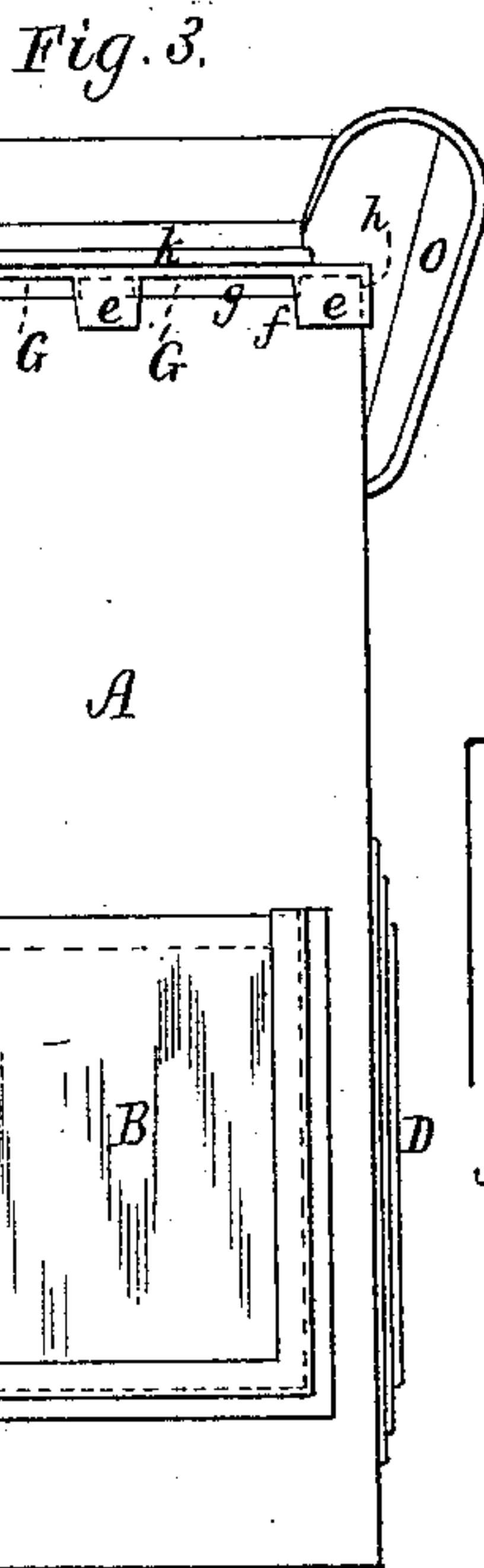
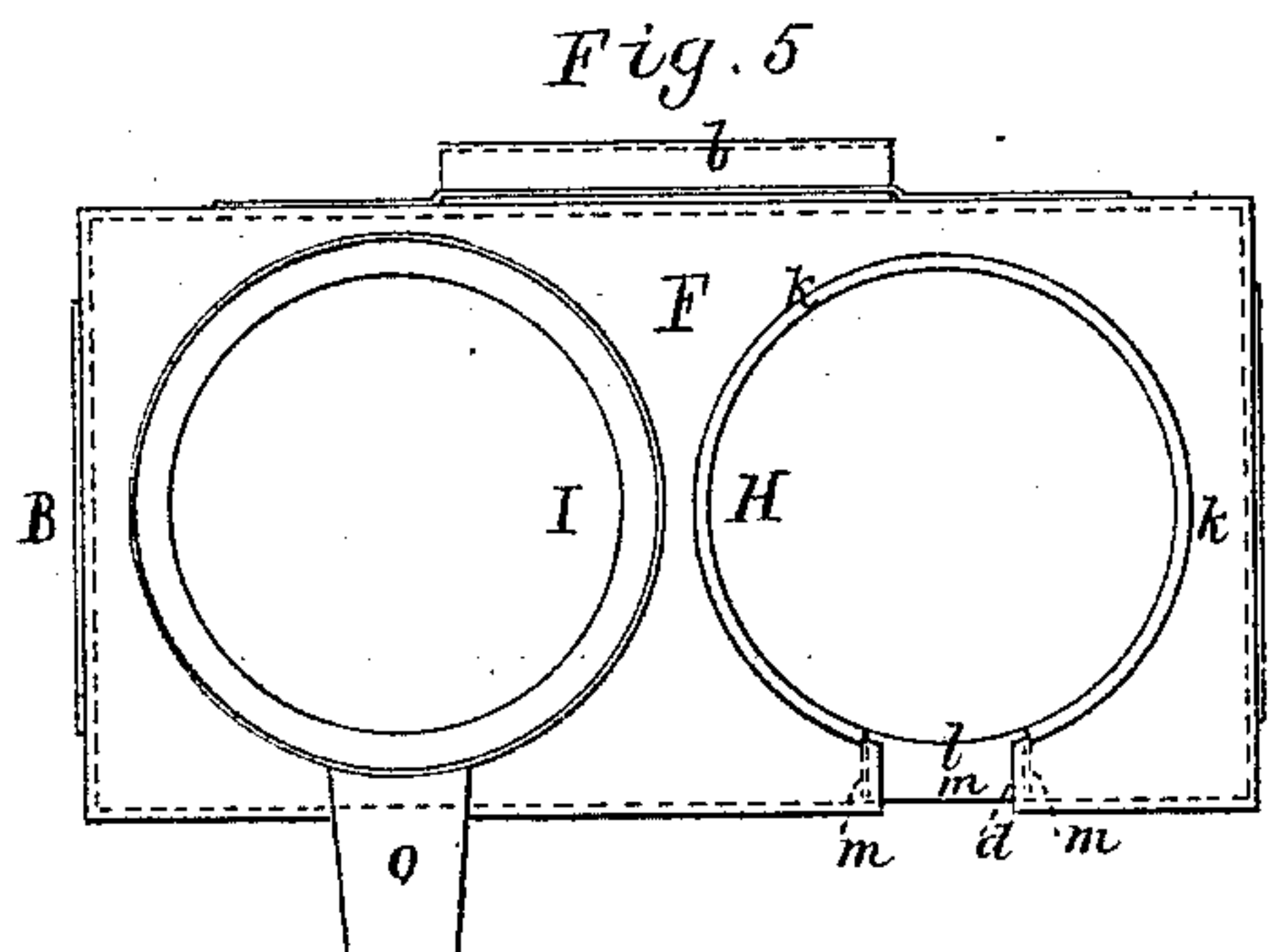
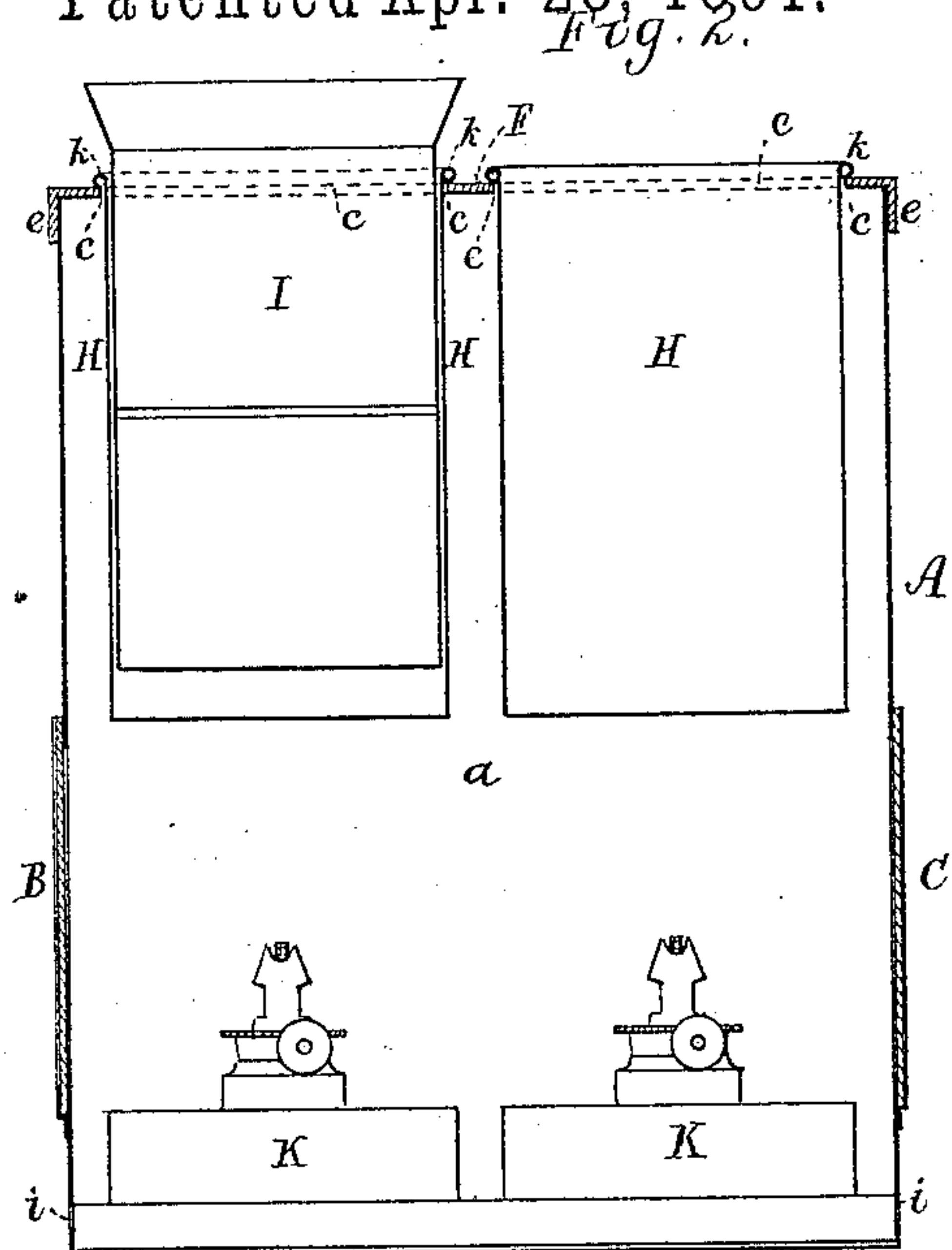
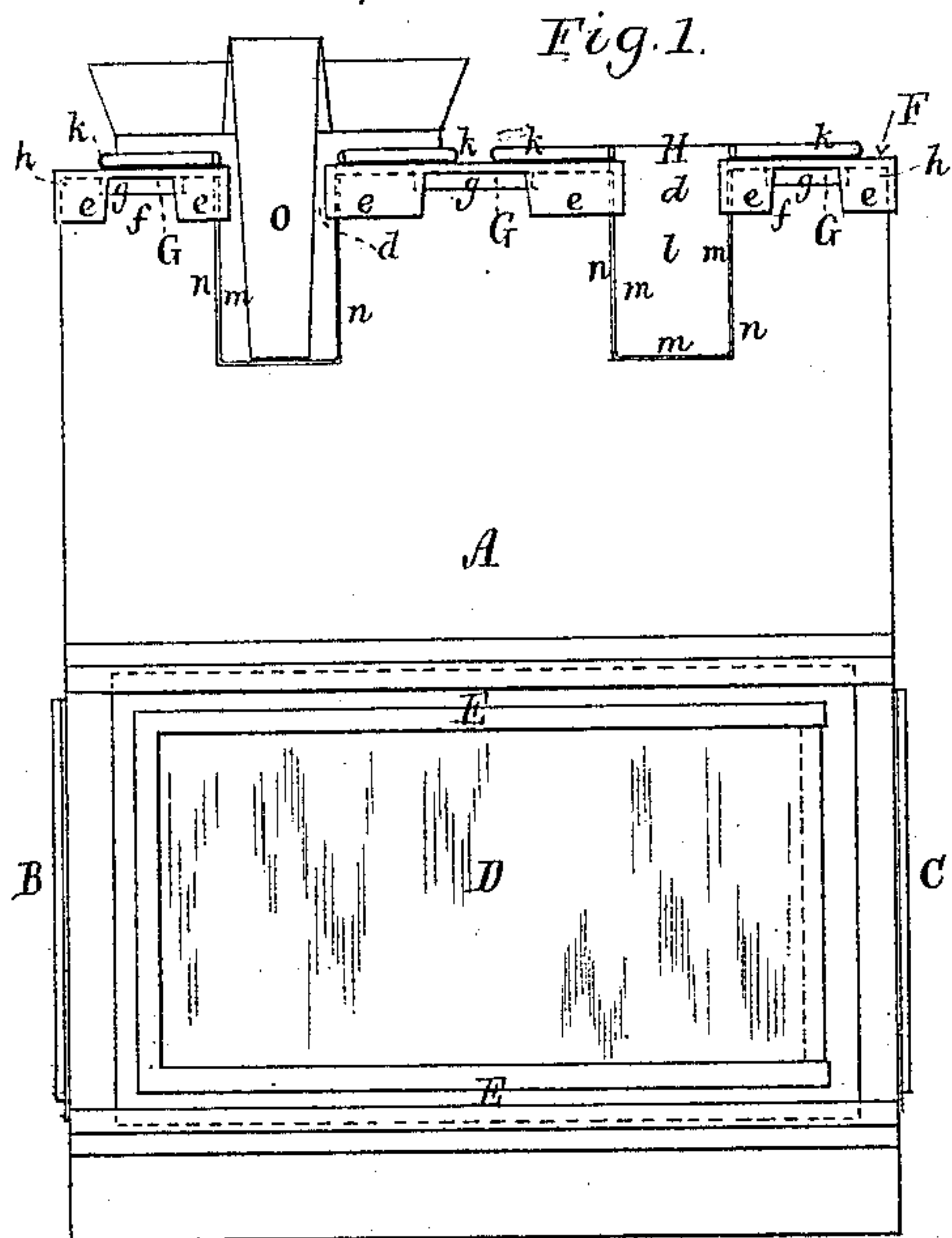


(No Model.)

A. J. HOWE.
COMBINED MILK MEASURE AND HEATER.

No. 451,444.

Patented Apr. 28, 1891.



Witnesses.

W. E. Piper
A. J. Piper

Inventor.
Alfred J. Howe.
by S. N. Piper, atty.

UNITED STATES PATENT OFFICE.

ALFRED J. HOWE, OF LOWELL, MASSACHUSETTS.

COMBINED MILK MEASURE AND HEATER.

SPECIFICATION forming part of Letters Patent No. 451,444, dated April 28, 1891.

Application filed December 23, 1889. Serial No. 334,685. (No model.)

To all whom it may concern:

Be it known that I, ALFRED J. HOWE, a citizen of the United States, residing at Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Combined Milk-Measure Holders and Heaters; 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 of reference marked thereon, which form a part of this specification.

Figure 1 is a front elevation; Fig. 2, a vertical, median, and longitudinal section. Fig. 3 is an end elevation, and Fig. 4 a vertical and transverse section, of a milk-measure holder and heater constructed in accordance with my invention. Fig. 5 is a top view of the same. Fig. 6 is a front view, Fig. 7 a horizontal section, and Fig. 8 a side view, of one of the wells H. Fig. 9 is a front view of the upper part of the case A.

The apparatus hereinafter described is especially designed for the use of milkmen during the winter months, and is for the purpose of keeping the measures sufficiently warm to prevent the milk from freezing to and filling up their interior space, as it will do unless prevented, and materially interfere with the proper measurement of the milk. It also serves as a support or holder for the measures; and, furthermore, it answers as a lantern to light the interior of the wagon in those parts of it where light is required, and also in front of the wagon, all as hereinafter specified.

In the drawings, A denotes the case of the apparatus, which is usually constructed of sheet metal, the back side *a* of said case having a hook *b* connected to it for supporting the case on one of the side rails of the wagon and above the bottom of it. Below the middle of the case each end of it and the front side are furnished with a window, B and C being the end windows and D the front one, applied to a door E arranged to slide in the case or in ways fixed thereto, or said door may be hinged to the case, if preferred. To the upper end of the case is applied a metallic

cap F, having circular openings *c* through its top, which communicate with an opening *d* through the front edge of it, as shown. Flanges *e* project downward from the cap, between the sections of which are notches *f*, coinciding with notches *g* formed in the top edge of the case A. The projections *h* of the said case between the said notches *g* constitute bearings for the cap, and the said notches *f* and *g* together form draft-passages G, which allow the air admitted through the holes *i* in the bottom or lower part of the case, after circulating throughout its interior, to escape.

In the openings *c* in the cap F are arranged wells H, each supported by a flange *k* extending from the top of it, as shown, and each well has in the upper portion of its front an opening *l*, surrounded on its sides and bottom by a flange *m* projecting from the periphery of it, and through the opening *n* in the front of the case A, as represented. The said openings through the wells and case constitute passages to receive the handles *o* of the measures I, the latter being supported in the wells by the handles *o* bearing on the bottom portion of said flange *m*, and sustaining the said measures with their bottoms above the bottoms of the wells, as represented. Arranged below the wells are one or more lamps K for heating said wells, and also for furnishing light to enable the occupant of the wagon to measure the required quantity of the milk and leave the wagon with it without the aid of the lantern usually employed, the rays of light passing through one of the end windows and the front one, lighting the interior of the wagon, and those passing through the other end window lighting the steps and around the front of said wagon.

From the foregoing it will be seen that by my invention the measures are provided with a suitable support, and also can be kept clean and free from obstruction by frozen milk during cold weather, and it also furnishes suitable light for the purpose, as set forth.

I make no claim to a combined dinner-pail and lantern, as I am aware that several patents have been granted for different constructions of such; but

What I claim is—

1. A combined milk-measure holder, heater, and lantern, as described, consisting of the

case provided with the windows and door and air-passages near its bottom and top, and a cap having the circular openings *c* and the openings *d*, leading through one side of said cap, 5 the wells H, having the flanges *k* and *m* and sustained in the cap, the case and the wells provided with the handle-openings, in combination with one or more lamps arranged within the case below the wells, all essentially as represented. 10

2. The combined milk-measure holder and heater, substantially as described, consisting of the case provided with a door and air-passages near its bottom and top, and a 15 cap provided with circular openings *c* and other openings *d*, leading through one side of said cap, and the wells H, having the flanges *k* and *m* and sustained in the cap, the case and the wells provided with the handle-openings,

in combination with one or more lamps arranged within the case below the wells, all essentially as explained. 20

3. The case A, provided at top with the projections *h*, the notches *g*, and openings *n*, the cap F, formed with the notched flange *e*, the 25 circular openings *c*, and openings *d*, leading through one side of said cap, combined with the wells having the flanges *m* bordering the bottom and vertical sides of the handle-openings in said wells, as set forth and represented, 30 said flange *m* also entering and resting in the handle-opening *n* of the case, as shown.

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

ALFRED J. HOWE.

Witnesses:

S. N. PIPER,

C. F. DANIELS.