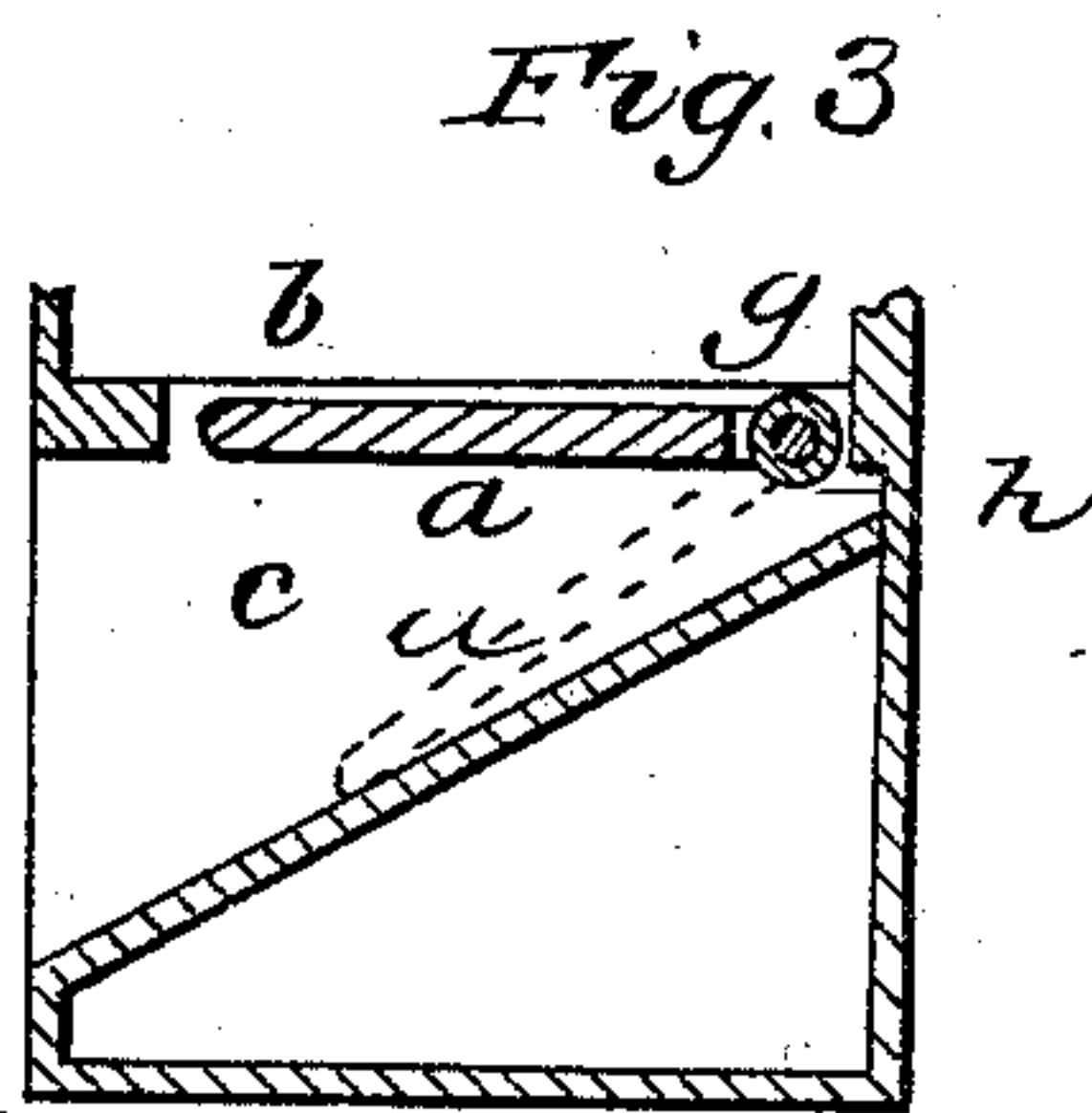
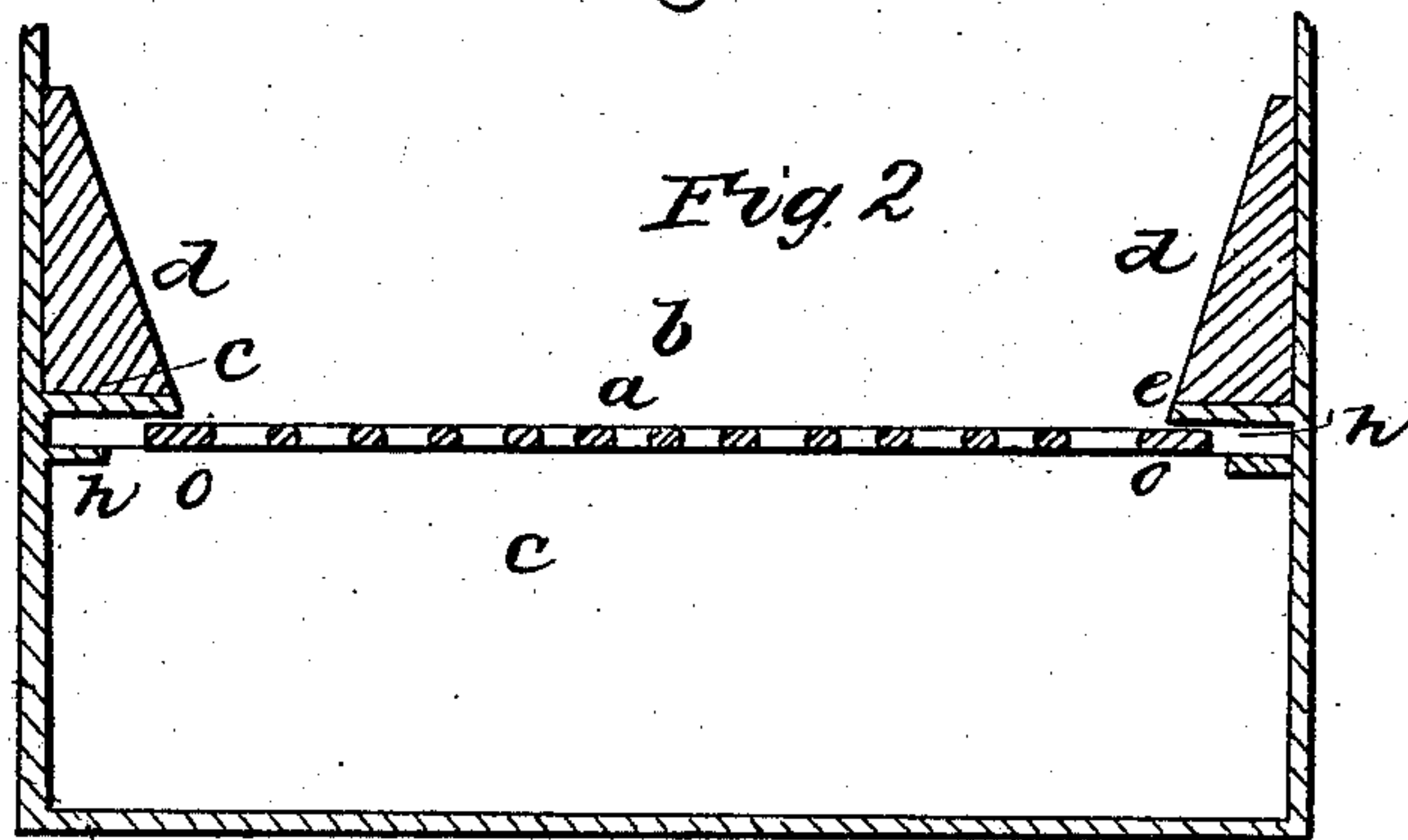
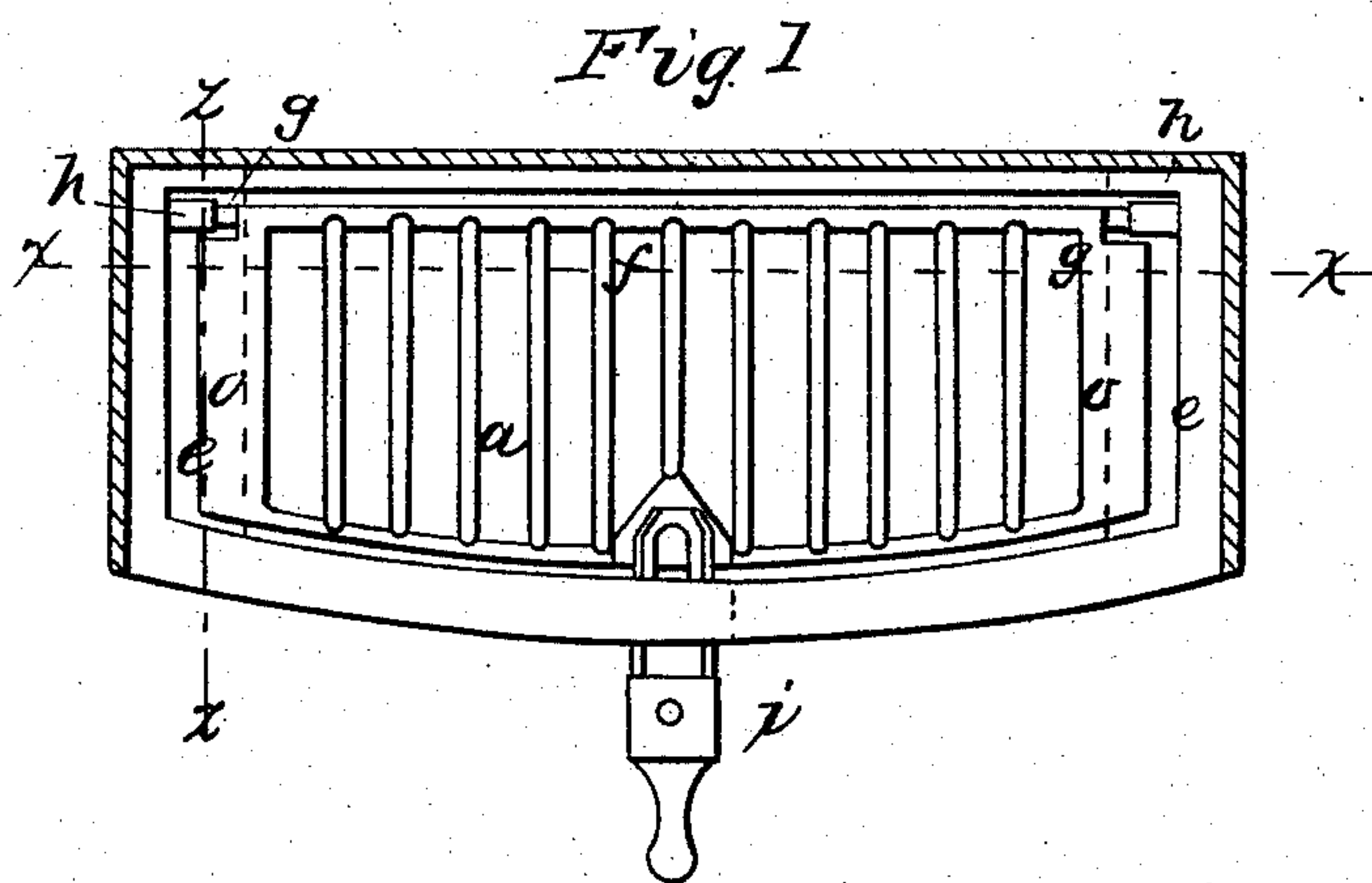


G. W. WALKER.

Stove Grate.

No. 45,883.

Patented Jan. 10, 1865.



WITNESSES
Francis Gould.
W. B. Gleason.

INVENTOR
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UNITED STATES PATENT OFFICE.

GEORGE W. WALKER, OF BOSTON, MASSACHUSETTS.

IMPROVED STOVE-GRATE.

Specification forming part of Letters Patent No. 45,883, dated January 10, 1865.

To all whom it may concern:

Be it known that I, GEORGE W. WALKER, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Stove-Grates; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

This invention relates to the construction of stoves with hinged or jointed grates; the object of the invention being to so construct and apply the grate, that while it is capable of "letting down" from the front of the stove it shall also be capable of being reciprocated horizontally to clear the fire-pot from ashes, both of these purposes being effected by my construction without liability of the movement of the grate being obstructed by the wedging of coals between the outer boundaries of the grate and the adjacent parts of the stove.

The invention consists in so constructing and applying a grate hinged at its rear side and so far from the front that it may be reciprocated lengthwise of the fire-pot to clear the grate from coals and from ashes.

The drawings represent a grate and such adjacent parts of a stove as embody and serve to illustrate my invention.

Figure 1 shows a reversed plan of the grate; Fig. 2, a vertical section on the line *x x* of Fig. 1, and Fig. 3 a vertical section on the line *z z* of said Fig. 1.

a denotes the grate; *b*, the fire-pot; *c*, the ash-pit; *d*, the fire-pot lining. Each end bar, *o*, of the grate, is made of greater width than the other bars, such width being sufficient to prevent the outer edge of the bar from being projected beyond the edge of the lining *d*, above it or beyond a projection, *e*, upon which said lining rests when the grate is shaken. The back bar, *f*, has journals *g* projecting from its opposite ends and in line with said bar, these journals being supported in bearings, *h*, as seen in Figs. 1 and 3. The journals are so constructed and so arranged with respect to the bearings as to permit a free longitudinal hori-

zontal movement to the grate, the front bar of the grate resting during the movement upon the "shaker" *i*, by which the reciprocations are produced.

By withdrawing the shaker the grate falls, as seen by dotted lines in Fig. 3, and, it will be readily observed, neither in the letting down of the grate nor in the reciprocating movements imparted to it is there any chance for obstruction of its free movements by the coals.

It is well known that with grates as heretofore constructed to move horizontally, while at the same time having a capability of turning vertically upon journals to clear the grate from ashes and coals, this vertical movement has been from journals placed somewhere between the back and front bars of the grate, the rear part of the grate rising into the fire-pot, while the front part fell into the ash-pit. The weight of the coal and ashes upon the back part of the grate and the wedging of the coal between the bars and the lining of the fire-pot will, at almost all times with such construction, prevent the easy falling of the grate, and causes much difficulty in clearing out the fire-pot. This difficulty is fully obviated by my construction, as will be readily understood from the above description, the sliding movement of the grate presenting no hinderance to its turning upon its journals, nor this latter movement to its easy reciprocation.

I claim—

1. A stove-grate having capabilities both of horizontal reciprocation and of vertical swinging movement, when the grate is hung at its rear side to allow these movements, substantially as set forth.

2. In a grate so constructed, giving to each end bar of the grate such width and disposition that in its sliding movement under the stove-lining the capability of free movement of the grate is maintained, substantially as described.

GEO. W. WALKER.

Witnesses:

J. B. CROSBY,
FRANCIS GOULD.