

No. 691,940.

Patented Jan. 28, 1902.

A. F. P. HAYMAN.
STOPPER FOR INCLINED GAS RETORTS.

(Application filed Nov. 15, 1901.)

(No Model.)

Fig. 1.

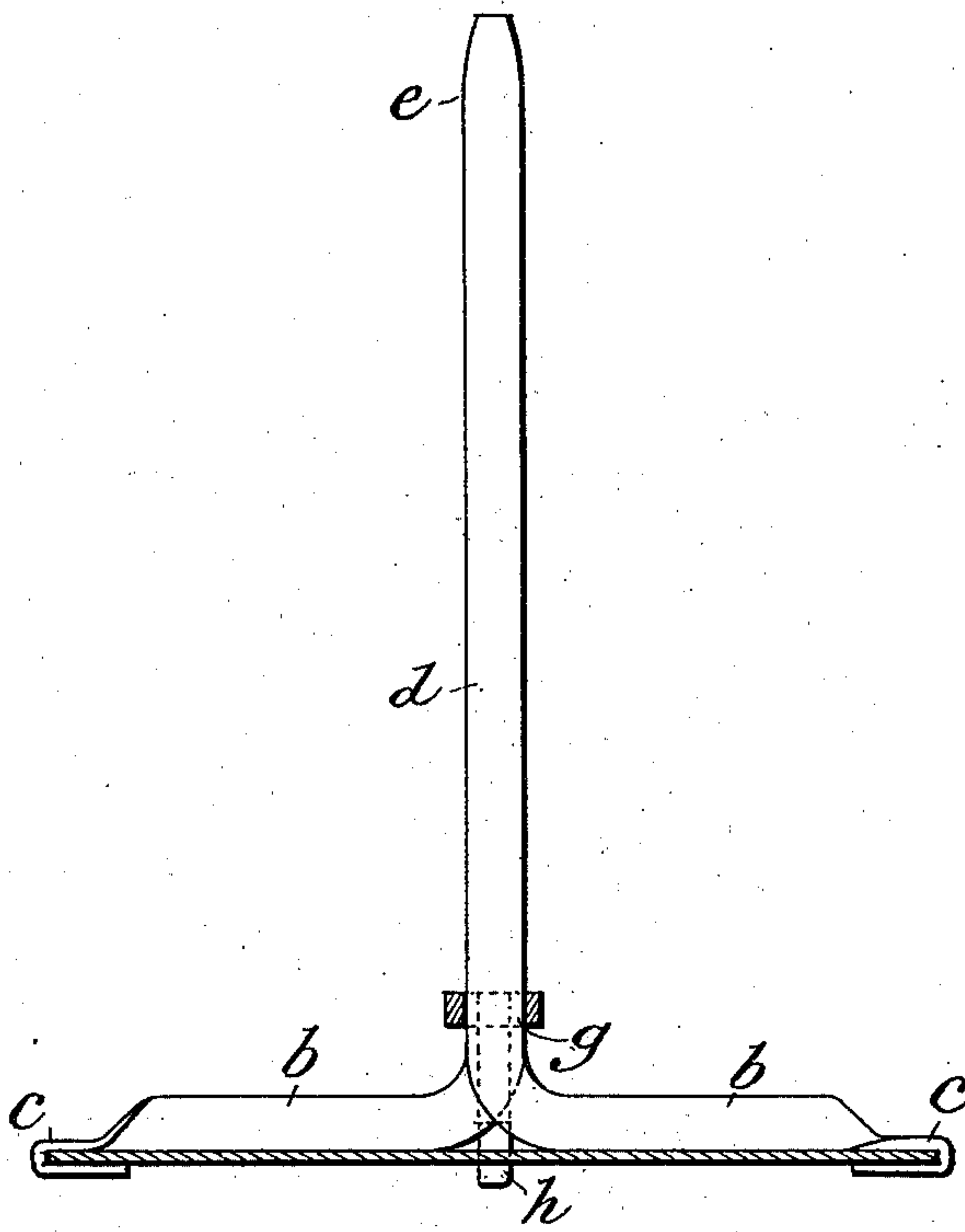


Fig. 2.

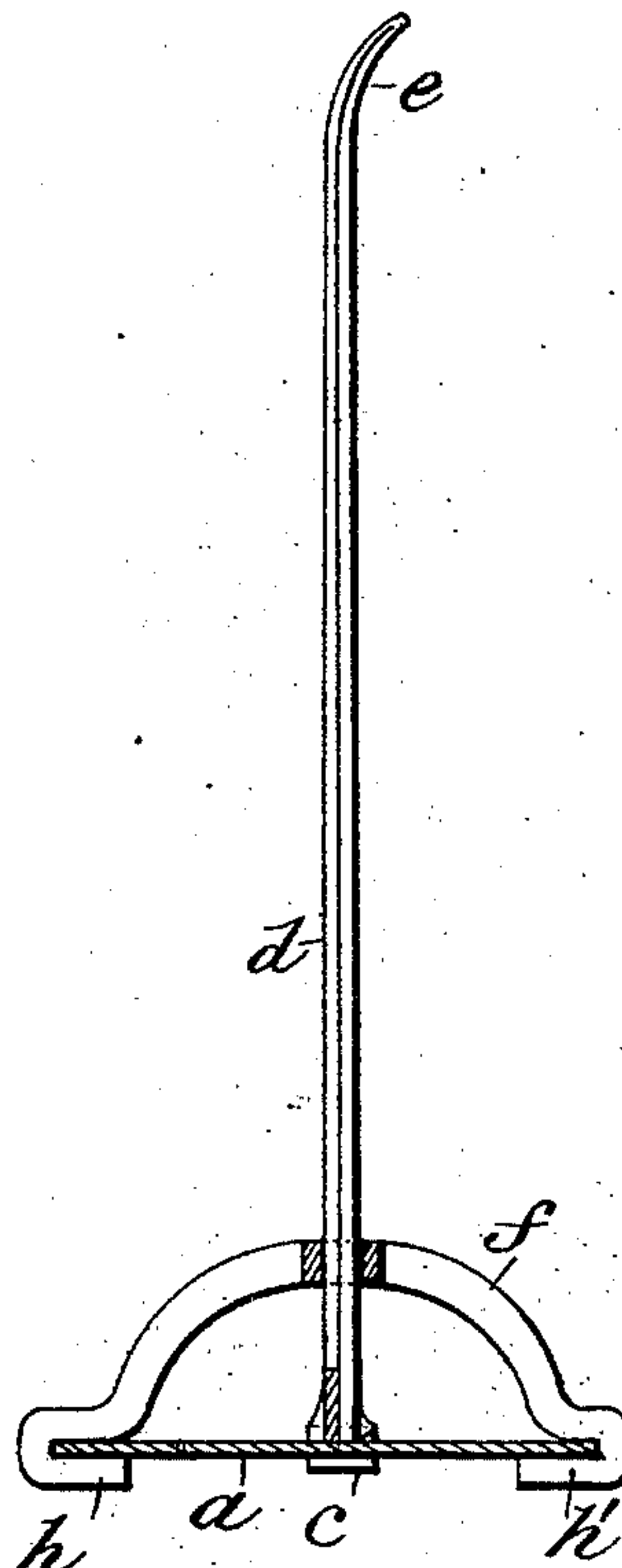
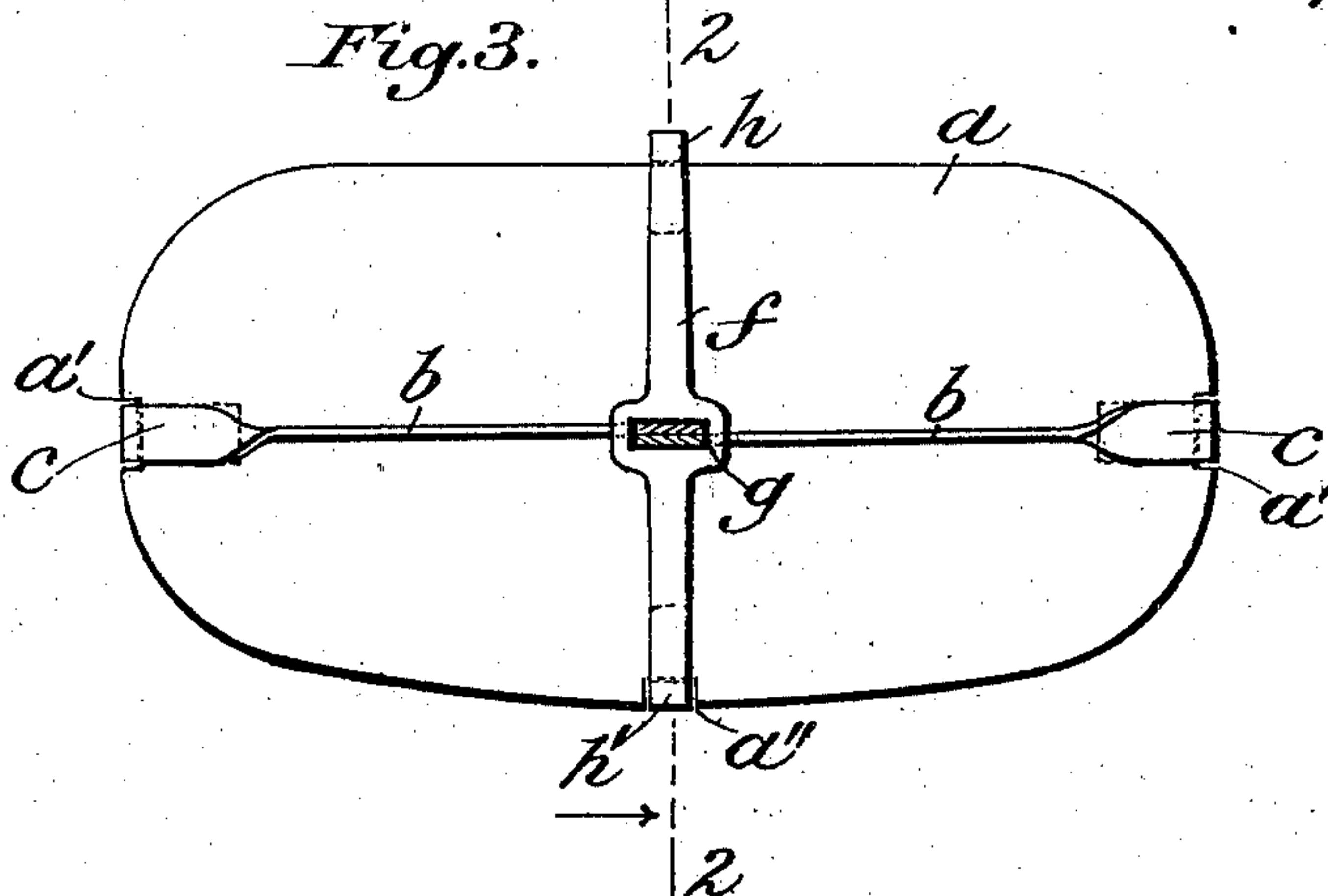


Fig. 3.



WITNESSES:

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ARTHUR FREDERIC PIERPOINT HAYMAN, OF BERLIN, GERMANY.

STOPPER FOR INCLINED GAS-RETORTS.

SPECIFICATION forming part of Letters Patent No. 691,940, dated January 28, 1902.

Application filed November 15, 1901. Serial No. 82,378. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR FREDERIC PIERPOINT HAYMAN, a British subject, residing at 19 Gitschinerstrasse, Berlin, Prussia, Germany, have invented certain new and useful Improvements in Stoppers for Inclined Gas-Retorts; and I do hereby 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.

This invention relates to stoppers for inclined gas-retorts, and the object is to provide a simple, effective, and durable stopper device in which the plate is not liable to be warped or distorted in shape or be loosened from its handle-bar under the action of the high heat and frequent changes of temperature to which it is subjected.

The stoppers for gas-retorts for preventing the coal from descending into the discharging-mouthpiece of the retort hitherto in use were very easily rendered useless owing to the rivets which connect the plate to the handle-bar getting loose. In the present device there are neither rivets, bolts, nor screws for connecting the plate with its handle-bar, and by means of my improved construction the wear and tear is very small and the life of the stopper therefore considerably greater.

The improvements constituting my invention will be defined in the claims.

The details of construction of my improved stopper are illustrated in the accompanying drawings, in which—

Figure 1 represents a longitudinal section of the stopper-plate. Fig. 2 represents a vertical transverse section. Fig. 3 represents a top plan or outer face view.

The stopper-plate *a* is made elliptical to suit the shape of a transverse section of the retort and is held in place by the two flat iron bars *b*, preferably set with their edges against the face of the plate and turned at each end *c* at an angle of ninety degrees. The ends *c* are let into the opposite ends of plate *a* by means of notches *a'* and turned over against the inner face thereof, as shown in Figs. 1 and 3. The prolongations of these flat bars are bent upward or outward at about the center of the plate and applied one against the other and of sufficient length to serve as

a handle-bar *d*. They are joined together, preferably, by welding at their outer ends, and in order to provide an effective and convenient handle-bar the welded end *e* is slightly bent or curved, as shown in Fig. 2.

Close over the plate *a* the handle-bar *d* is passed through a hole or eye *g* in the bridge-piece *f*, which extends over the plate *a* and holds it in the direction of the transverse axis. One end *h* of the bridge-piece may be simply bent over the straight edge of the stopper-plate, while the other end *h'* is preferably let into the edge by means of the notch *a''* and bent against the inner face of the plate, as shown in Figs. 2 and 3. By this construction the stopper-plate and handle-bar are securely held together, so that in spite of the great heat and frequent changes of temperature to which the plate is subjected it keeps its shape and does not work loose from the handle-bar.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A stopper for inclined gas-retorts comprising a plate suited to the transverse area of the retort, bars adjacent to the face of the plate and having their ends bent over and embracing its opposite edges, also bent centrally, prolonged and joined at the outer ends to form a handle-bar, substantially as described.

2. A stopper for inclined gas-retorts comprising a plate, a handle-bar and intersecting arms connecting therewith and having their four ends bent over and embracing the opposite edges of said plate, substantially as described.

3. A stopper for inclined gas-retorts comprising a plate, a handle-bar having lateral arms bent at their ends to embrace the edges of the plate and a transverse bridge-piece engaging with said bar and bent at its ends to embrace the edges of the plate, substantially as described.

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

ARTHUR FREDERIC PIERPOINT HAYMAN.

Witnesses:

HARRY W. P. NUGENT,
PERCY G. LEDGER.