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Patented Oct. 21, 1902.

C. O. HINE & F. G. WATERS.

COWL FOR CHIMNEYS.

(Application filed Mar. 11, 1902.)

(No Model.)

Fig. 4.

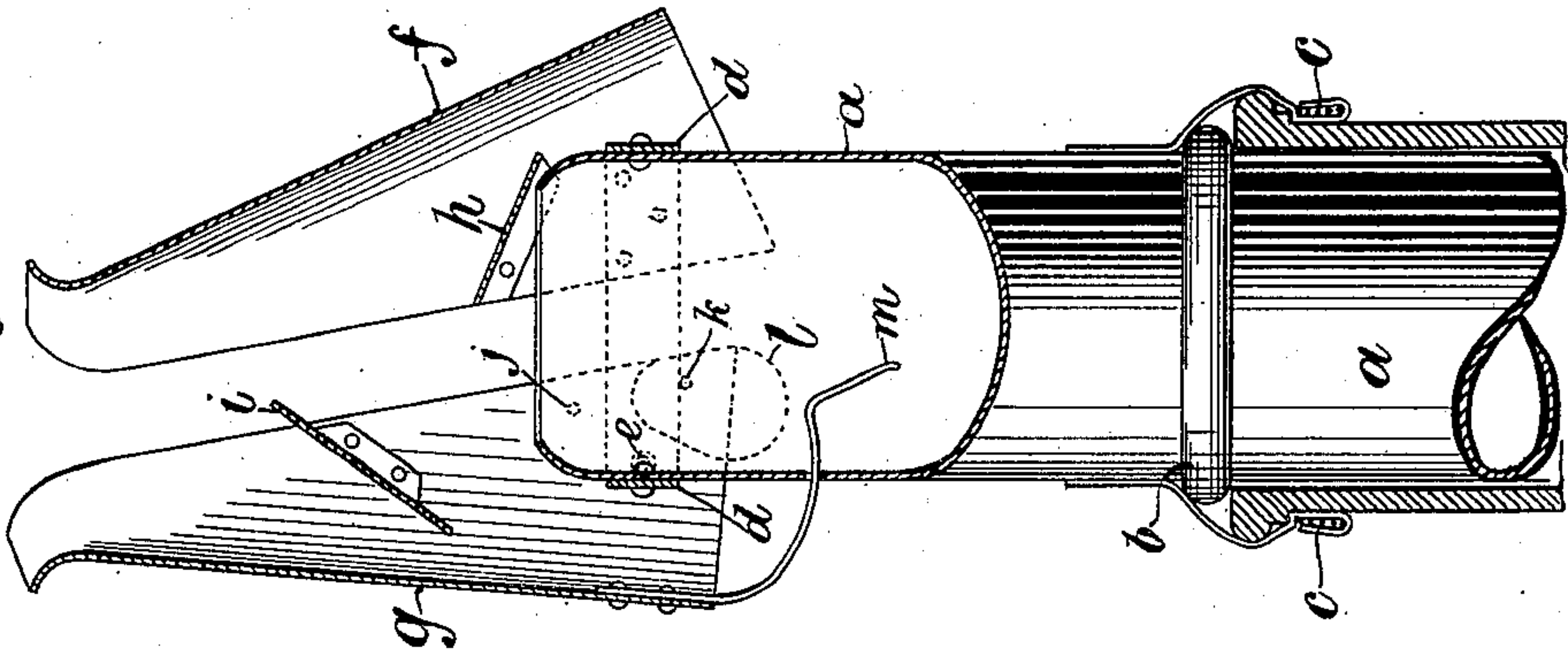


Fig. 1.

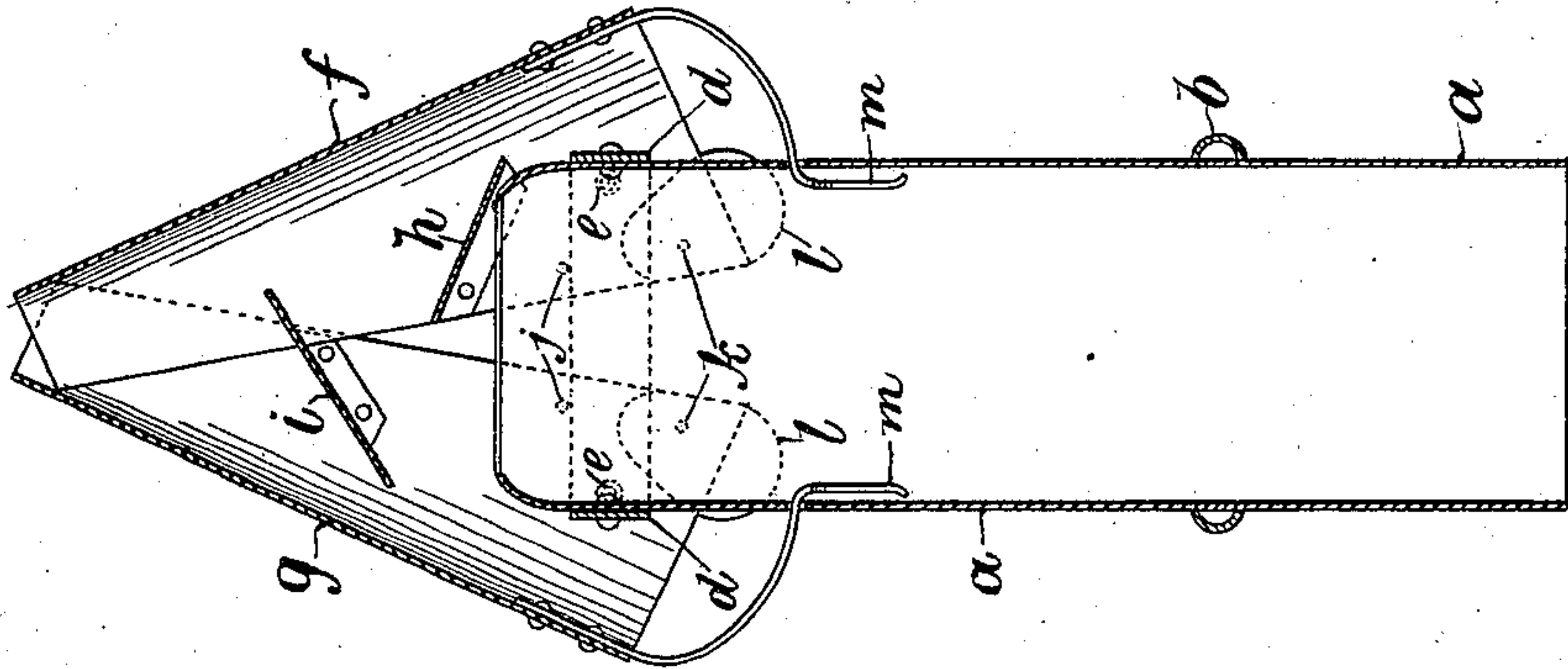


Fig. 2.

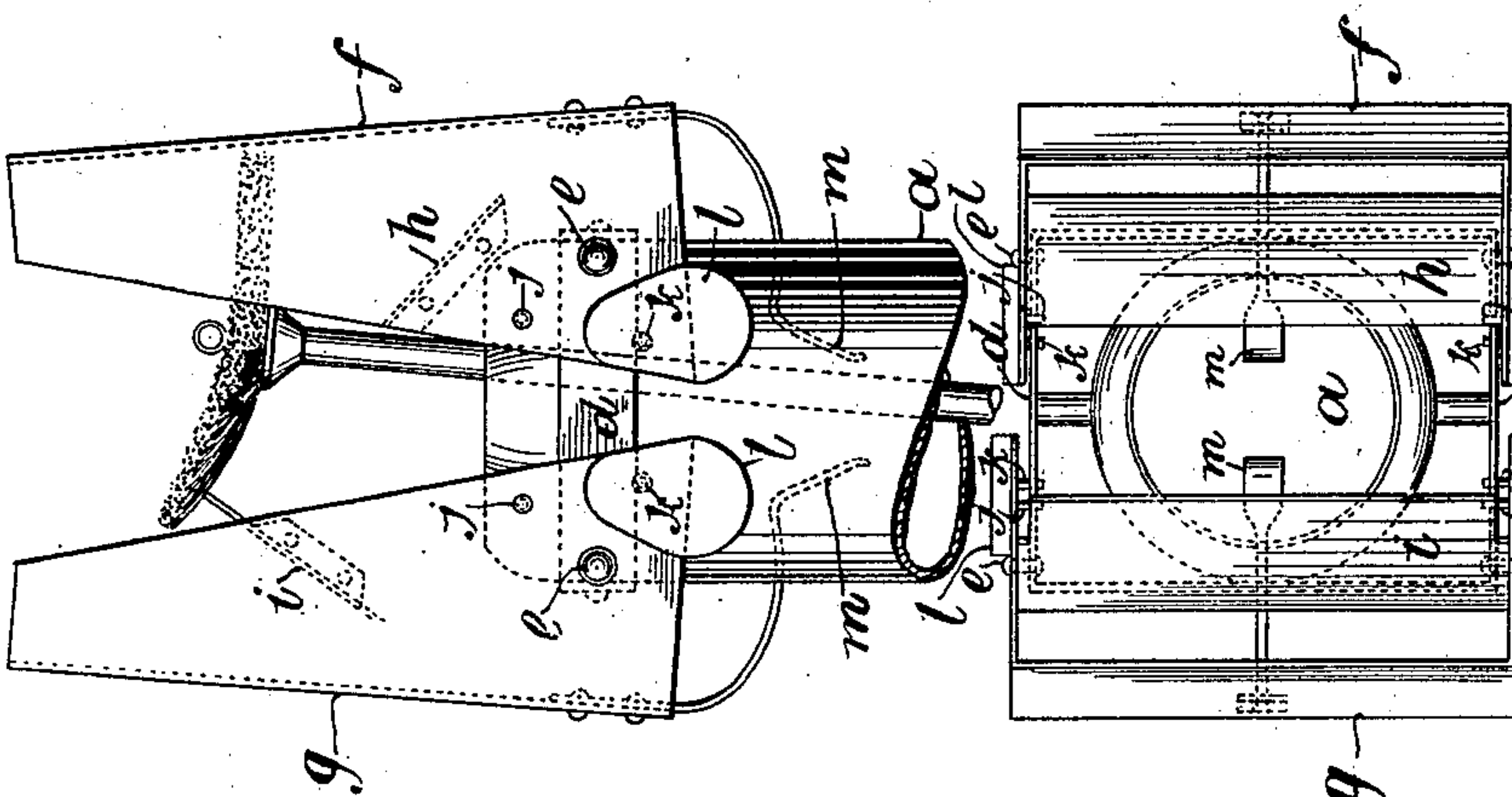


Fig. 3.

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CHARLES OWEN HINE, OF BATTERSEA, AND FREDERICK GEORGE WATERS,
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COWL FOR CHIMNEYS.

SPECIFICATION forming part of Letters Patent No. 711,497, dated October 21, 1902.

Application filed March 11, 1902. Serial No. 97,719. (No model.)

To all whom it may concern:

Be it known that we, CHARLES OWEN HINE, of No. 15 Shillington street, Battersea, in the county of Surrey, and FREDERICK GEORGE WATERS, of No. 13 Scarsdale Terrace, Wrights Lane, Kensington, in the county of Middlesex, England, have invented certain new and useful Improvements in Cowls for Chimneys and in Terminals for Ventilating-Shafts; and we 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 an improved construction for use as a chimney-cowl or as the terminal of a ventilating-shaft in which inclined deflecting-plates are provided, some or all of which are affixed to one or more separately-constructed portions which are pivoted to another portion which is secured to the top of the chimney or ventilating-shaft. The advantages of such a construction are that when the movable pivoted portion or portions are opened outward an unobstructed passage will be provided through the chimney-top for the sweep's brush, and when the pivoted portion or portions are closed the sectional area of the top of the chimney will be entirely shielded and the downward passage into the chimney of air, rain, or anything else will be completely prevented. By these means not only will it be impossible for a downdraft of air outside to effect an entrance into the chimney, but on account of the overlapping disposition of the inclined plates a downdraft outside will induce a suction up the chimney and effectually cure a chimney of "smoking." The construction will also preclude the entrance of rain, hail, and snow and baffle the attempts of daws to make their nests in chimneys thus protected.

Referring to the drawings which form a portion of our specification, Figure 1 is a sectional elevation showing the construction in the operative closed position. Fig. 2 is an outside elevation showing the construction in the open position which it assumes when the sweep's brush is being used. Fig. 3 is a plan view of Fig. 2; and Fig. 4 shows a modifica-

tion in which only one side of the terminal is pivoted, the other side being fixed.

In the views, *a* is a cylinder which fits into the mouth of a chimney or ventilating-shaft, resting on the top of the latter by means of the astragal *b*, being secured thereto by wiring bendable strips of metal *c c*, as shown in Fig. 4. The upper end of *a* is shown slightly coned. To *a* is secured, by rivets or screws, an oblong frame *d*, which carries the pivots *e e e e*, on which the movable portion of the cowl is mounted.

f and *g* are two plates so shaped and bent as to form when in the closed position a truncated pyramid. These are mounted on the pivots *e e e e*, brass bushes being provided in *f* and *g* to widen the bearing and avoid rusting together. To *f* is secured the deflector-plate *h* and to *g* the plate *i*. These plates are inclined upward toward one another and are so relatively placed in the position shown in Fig. 1 that the upper edge of the plate *i* overhangs the upper edge of plate *h*, there being a space between *h* and *i* and also between *h* and *f* and between *g* and *i*. Further, the lower edges of the deflector-plates *h* and *i* overhang the upper edge of the cylinder *a*, which forms an extension of the shaft. Limits to the outward and inward positions of the pivoted portions *f* and *g* are provided by stop-studs *j j j j* and *k k k k*, which rest, respectively, against the lower and the upper edges of the oblong frame *d*. Counterbalance-weights *l l l l* are provided, which maintain the pivoted portions in the closed position when they are so placed; but it is arranged that they are not sufficient to cause the pivoted portions to close when they are in the wide-open position. To effect the automatic closing after they have been thrust open by the sweep's brush, tail-rods *m m* are secured to each pivoted portion. In the closed position the bent-down ends of these rods lie close against the interior of the cylinder *a* and offer no obstruction to the upward passage of the sweep's brush. When the pivoted portions are thrust outward, the tail-rods *m m* take the position shown in Figs. 2 and 3. On the withdrawal of the brush the tail-rods are pressed downward, causing the portions *f* and *g* to revolve

on their pivots into the closed position, as shown in Fig. 1. There will be sufficient width for the brush to emerge even if the portion *f* is not pivoted but is rigidly secured to the frame-piece *d*, as shown in Fig. 4, in which the pivoted portion *g* is shown thrown back for the purpose of cleaning the chimney-shaft. In this case it is only the portion *g* which is provided with a tail-rod for the purpose of automatically closing the cowl. In order to facilitate the withdrawal of the brush in the event of the cowl becoming closed by the action of a high wind, the upper edges of the portions *f* and *g* may be ornamentally curved outward, as shown in Fig. 4.

In many cases the chimney-tops are readily accessible, and the sweeping of these chimneys is often done from above. Under such circumstances the tail-rods and counterbalance-weights may be dispensed with and the two half-pyramid-shaped portions kept together by a simple latch on each side, to be opened by hand for the purpose of cleaning or inspecting the chimney-shaft. In such a case it will generally be advantageous that the portion *g* only should be pivoted.

Although the merits of our invention are most pronounced when it is applied to a chimney, yet ventilating-shafts also require cleansing in order that they may be maintained in an efficient condition. By using fixed overhanging caps, plates, and louvers easy cleansing is precluded. The absolute elimination of downdraft and the inducement of an updraft which our invention provides, coupled with the facilities it offers for cleansing, renders it also a very effective terminal for a ventilating-shaft.

We claim—

1. A cowl for a shaft consisting of a combination of a portion which is formed of a plate shaped like the surface of a truncated half-pyramid, within which a deflector-plate is secured, a portion fixed to the shaft and forming an extension thereof and adapted to provide pivots about which the former portion can be swung and a third portion similarly shaped to the first and containing secured within it, another deflector-plate, the two deflector-plates being inclined upward toward one another and so relatively placed, when

least apart, that one overhangs the upper edge of the other and a space is left between the two deflector-plates and between the deflector-plates and the internal surfaces of the half-pyramids, the lower edges of the deflector-plates also overhanging the upper edge of the shaft, substantially as described.

2. A cowl for a shaft consisting of a combination of two similarly-constructed portions which, when least apart, together form a hollow truncated pyramid and a third portion which is secured to and adapted to form a continuation of the shaft, each of the two former portions being pivoted to the third portion and having affixed within it a deflector-plate, the whole being adapted, when in the closed position, to overhang the sectional area of the shaft and leave a devious way through and, when in the open position, to leave a clear straight path through the cowl from the shaft, substantially as described.

3. In a cowl for a shaft, a combination of a cylinder forming a continuation to the shaft, and adapted to be secured thereto, an oblong frame rigidly secured to the cylinder, two truncated hollow half-pyramids each having a deflector-plate secured therein, either half-pyramid being pivoted to the oblong frame and adapted to be force-closed toward the other, substantially as described.

4. In a cowl for a shaft, a combination of a cylinder forming a continuation to the shaft, and adapted to be secured thereto, an oblong frame rigidly secured to the cylinder, two truncated hollow half-pyramids, each having a deflector-plate secured therein, either half-pyramid being pivoted to the oblong frame and provided with a counterbalance-weight tending to effect the closed position and being also fitted with a tailpiece which, in the closed position, lies in contact with the cylinder and in the open position projects into the interior of the cylinder, substantially as described.

In witness whereof we have hereunto set our hands in the presence of two witnesses.

CHARLES OWEN HINE.

FREDERICK GEORGE WATERS.

Witnesses:

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