

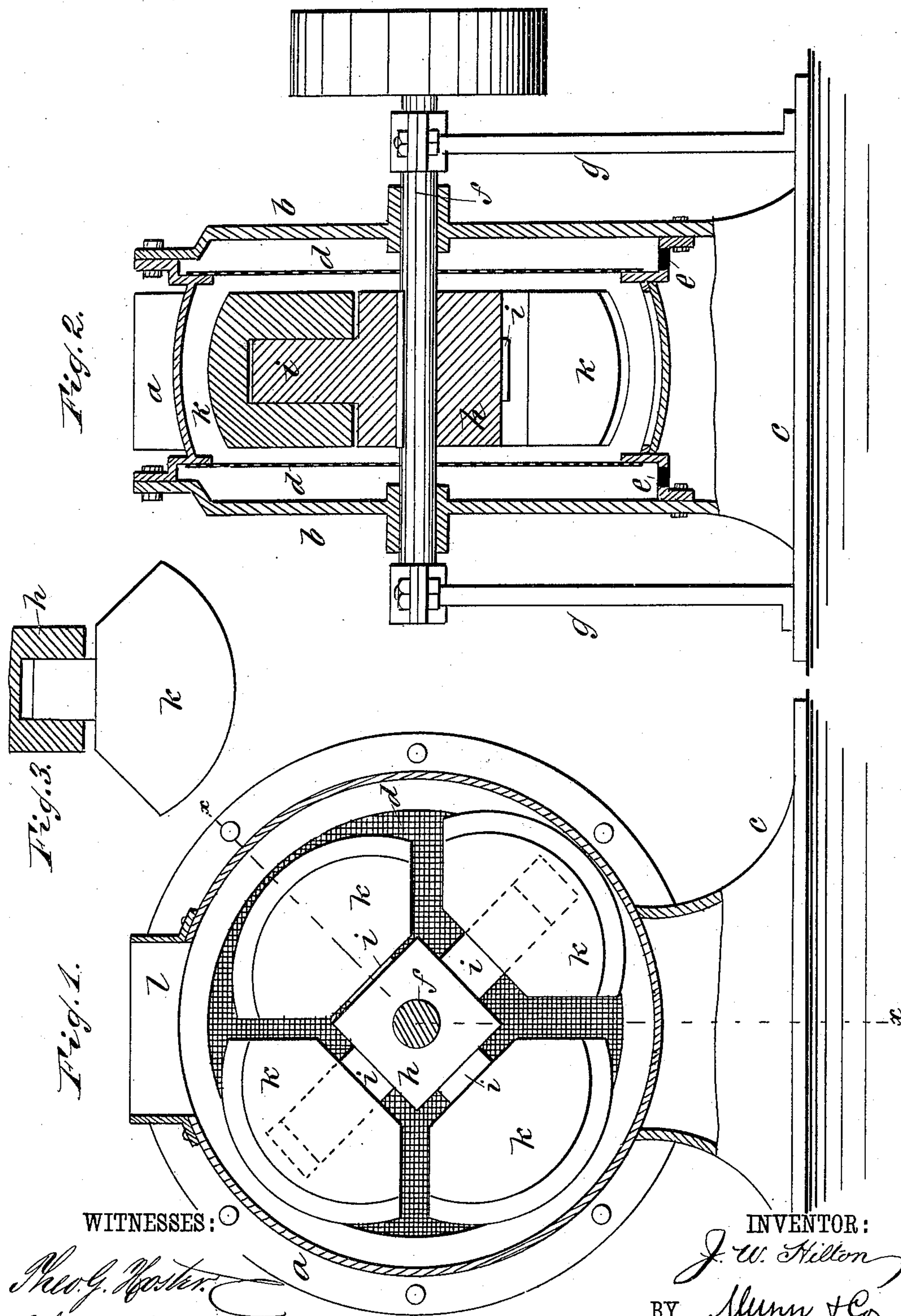
(No Model.)

J. W. HILTON.

MACHINE FOR PULVERIZING ORES, &c.

No. 323,147.

Patented July 28, 1885.



WITNESSES:

Geo. G. Foster.
C. Sedgwick

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UNITED STATES PATENT OFFICE.

JAMES W. HILTON, OF BROOKLYN, NEW YORK.

MACHINE FOR PULVERIZING ORES, &c.

SPECIFICATION forming part of Letters Patent No. 323,147, dated July 28, 1885.

Application filed October 3, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. HILTON, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Machines for Pulverizing Ores and other Materials, of which the following is a full, clear, and exact description.

This invention pertains to improvements in machines for pulverizing ores and other materials; and it consists of the combination of parts and their construction, substantially as hereinafter fully set forth and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical section of the machine in a plane at right angles to the shaft. Fig. 2 is a section on line *xx* of Fig. 1, and Fig. 3 shows a modification.

The case of the machine consists of a cylindrical shell, *a*, and side plates, *b b*, which are attached by means of bolts passing through flanges formed on the parts, and, as shown, the plates *b* are attached or formed with the supporting-base *c*. *d d* are side screens attached to interior flanges of the shell *a*, so that they set off from the sides *b* to allow escape of fine material. At *l* in the top of the shell is the feed-inlet, and at *e* is the outlet from the case for the pulverized material.

A horizontal shaft, *f*, supported in standards *g*, passes through the center of the case,

and carries a hub, *h*, that is provided with arms *i*, preferably four in number.

k k are the stamps or grinders, mortised to set freely on the arms *i* of the hub. In form the grinders are segments of cylinders; but they may be of any suitable shape, and they may be made of steel or other suitable material in solid form, or a shoe may be applied on the wearing portion. The case is to be lined with steel plates to form the wearing-surface.

In operation the grinders are moved out by centrifugal action and gravity against the sides and lower part of the shell *a*, and thereby crush and pulverize the material. The machine is adapted for either dry or wet crushing. When used for dry crushing, there may be fans on the hub to create a current of air to carry the fine material through the screens.

In the modification shown in Fig. 3 the arm or hub is mortised and the grinder *k* is made with a tongue entering the mortise. I do not limit myself in that respect.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, in a pulverizing-machine, of hub *h*, having arms *i*, grinders *k*, carried by the arms and sliding thereon, screens *d*, and the case consisting of shell *a* and plates *b*, substantially as shown and described.

JAMES W. HILTON.

Witnesses:

GEO. D. WALKER,
C. SEDGWICK.