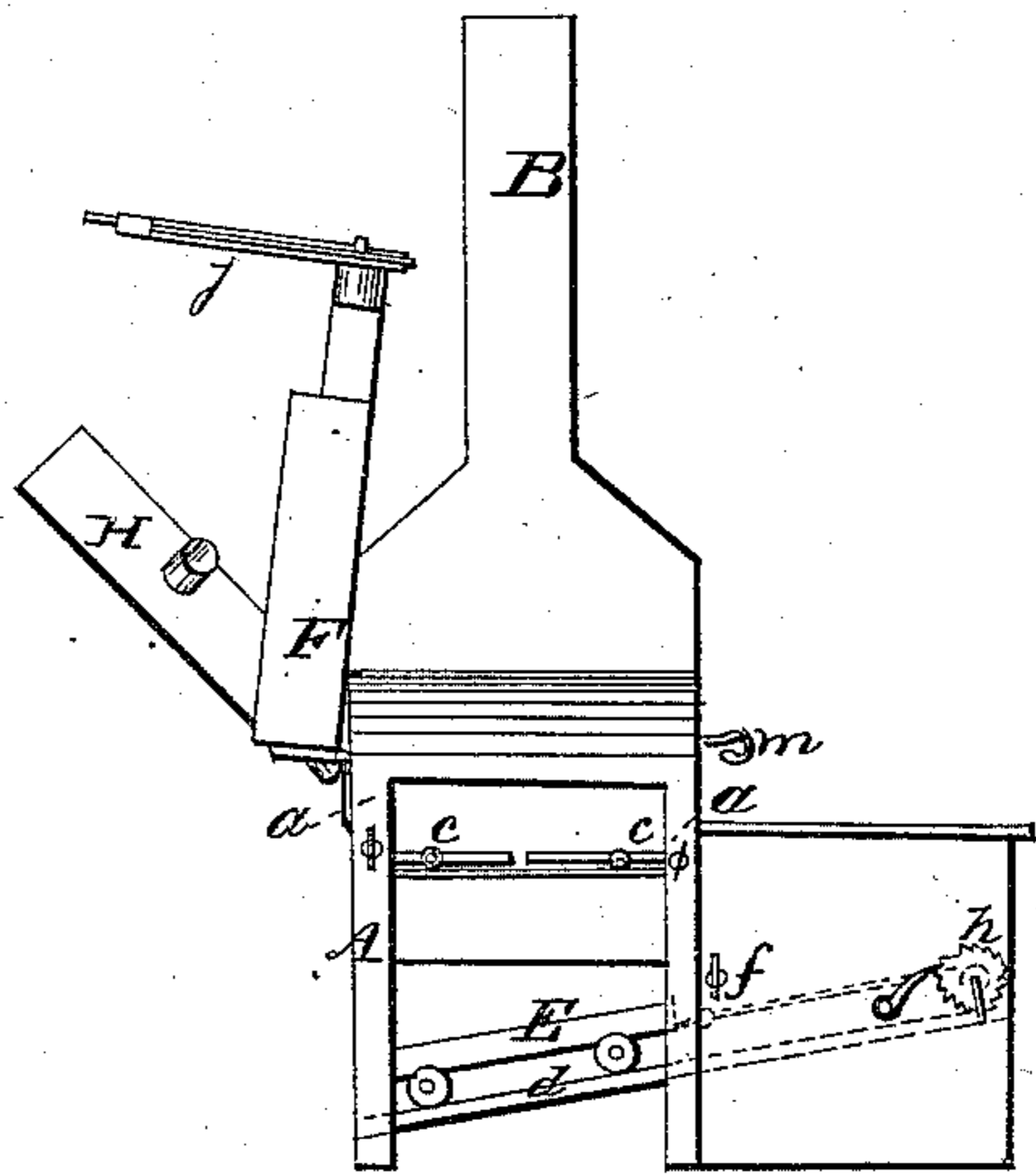
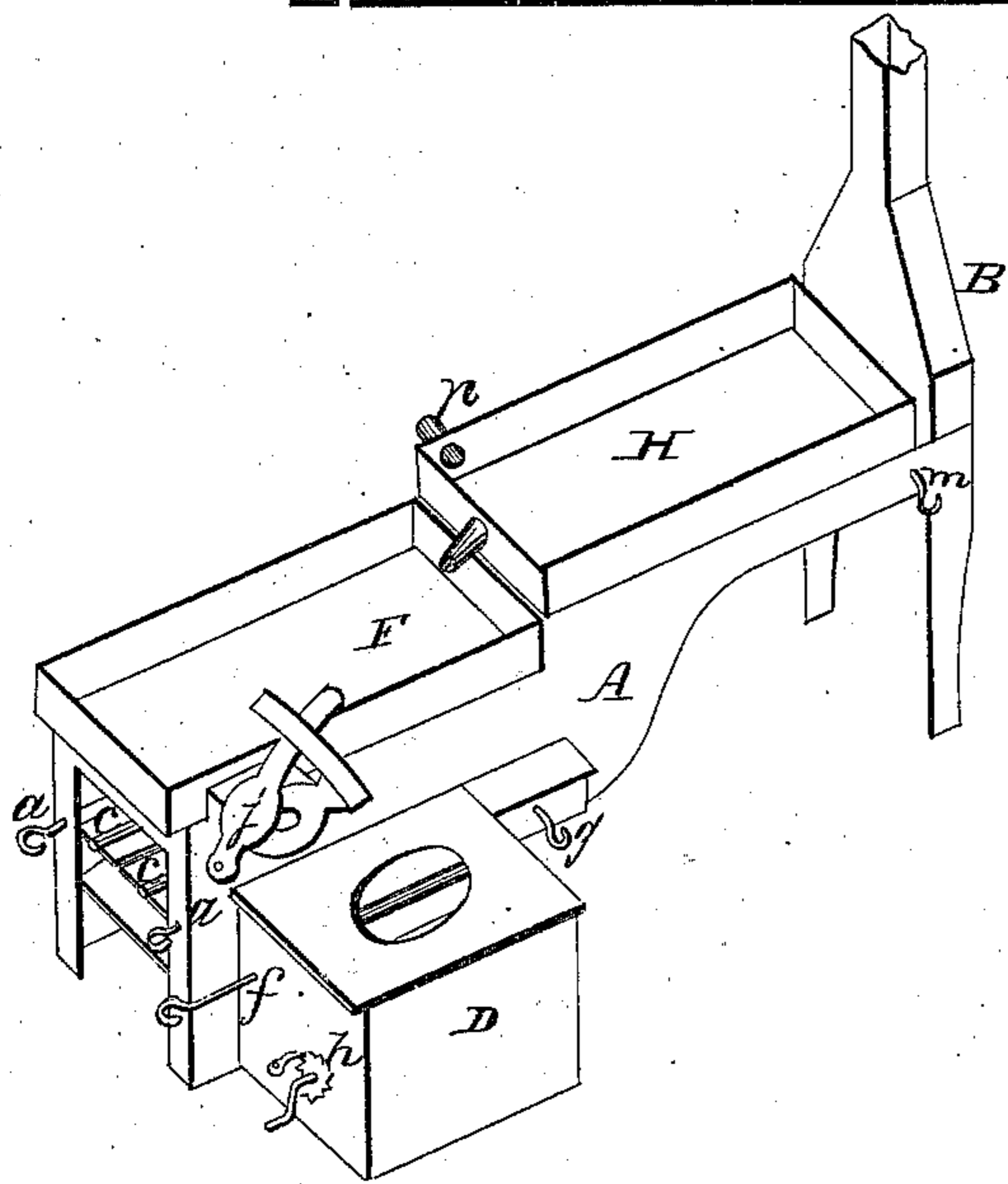
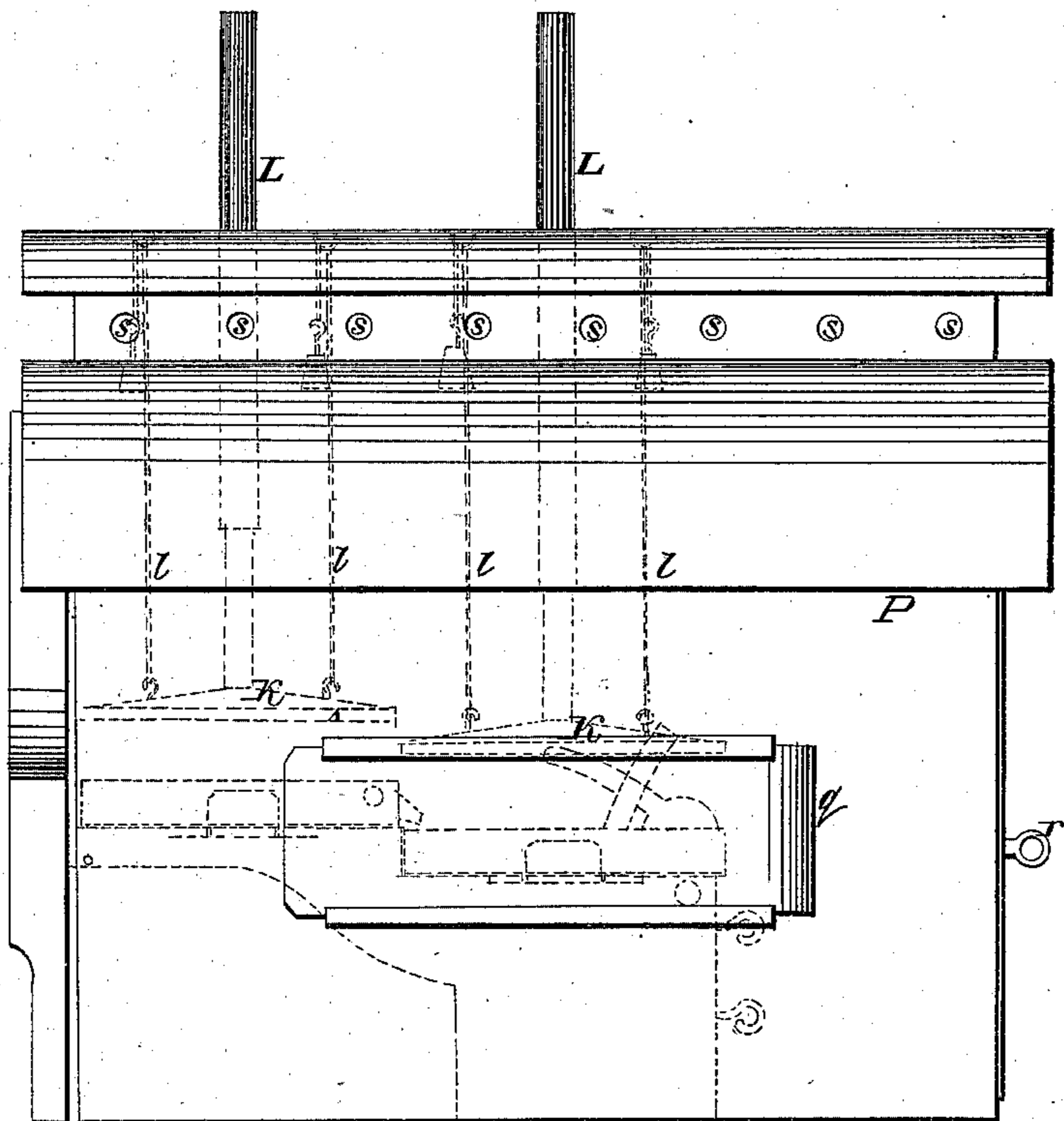


B. F. CAUFFMAN.

Evaporating Pan.

No. 81,752.

Patented Sept. 1, 1868.



Witnesses
A. A. Schutman.
V. D. Stockbridge.

Inventor.
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per
Alexander P. Mason
Atty.

United States Patent Office.

B. F. CAUFFMAN, OF MILLERSTOWN, PENNSYLVANIA.

Letters Patent No. 81,752, dated September 1, 1868.

IMPROVEMENT IN EVAPORATORS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, B. F. CAUFFMAN, of Millerstown, in the county of Perry, and in the State of Pennsylvania, have invented certain new and useful Improvements in Evaporators; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and the letters of reference marked thereon.

In the annexed drawings, making a part of this specification, A represents the side of a fireplace or furnace, the bottom of which is made in the form shown in the drawings, and supported on suitable legs.

The grate of the furnace is adjusted in and forms a part of the bottom thereof at the front end.

Above the grate, and hinged to one side of the furnace A, is a pan or boiler, F, and situated just above and back of said boiler is another pan, H, which I call the scumming-pan, and which has a pipe, *x*, leading into the boiler F. The boiler F and pan H form the top of the furnace, and thereby secure or obtain all of the heat from the furnace.

Beneath the boiler F, and between it and the fire-grate, are longitudinal double dampers *c c*, which are operated by means of suitable handles *a a*. These dampers are formed by hinging two strips of metal together, and then hinged or pivoted to the sides of the furnace in any convenient manner, and may be used to cover the whole fire, or one-half, as may be required.

When the said dampers are wholly turned down, another damper, *g*, placed horizontally across the furnace, is raised, so as to allow the smoke and heat to pass under the pan H, and out of the flue B.

These dampers *c c* are used to prevent scorching or burning the substance in the boiler F, when the same is nearly empty.

Another damper, *m*, is placed at the intersection of the furnace and flue, so that all draught may be shut off, whenever desired.

D represents a small side-furnace, which is attached to the side of the main furnace, as shown, provided with a hole through its top, on which a pan or kettle may be placed, and is a great convenience in finishing up or "sugaring off."

A track, *d*, is adjusted and extends from beneath the grate of the main furnace to the side-furnace D.

E represents a car, made to run on the track *d*, and having its bottom slotted or perforated, so as to form a grate, and is used to convey coals from the main grate to the side-furnace.

A damper, *f*, is adjusted so as to allow of a draught from the side-furnace into the main one, and so as to close the said draught when not required.

The car E is operated or drawn up the track *d* by means of a suitable windlass, *h*, which is adjusted across the side-furnace D.

The boiler F is provided with a faucet, *j*, for convenience in drawing off the substance from it.

The boiler F and pan H are provided with movable lids K K, which are suspended by means of cords *l l*, and suitable weights.

These lids K K are made with a steam-pipe, which extends up and works in the steam-pipe L, so as to carry off all steam of the juice or liquid. These covers or lids are to be used as may be required.

The cords *l l* pass over suitable pulleys or through loops in or near the top of the building P.

P represents the plan of my building in which I adjust my evaporating-device, and is provided with a hinged door, *r*, in one end, and with sliding windows *q* on each side, and with perforations or series of hole *s s*, near the top thereof, as is fully shown. The perforations *s s* and sliding windows *q q* are for the purpose of affording perfect and complete ventilation.

I use another small pan, which is not shown, for finishing off sirup or molasses.

I first put the juice in the scumming-pan H, and it is then heated, and is then passed through the pipe *x*, into the boiler F, where it is boiled down to suitable consistency, when it is drawn off into a small pan, not represented, and said pan set into the boiler F, which has some juice left in it, and the lid K let down, and the

steam confined as much as convenient, and finish in the boiling juice, which gives it, by means of the steam therefrom, the flavor of steamed molasses.

While drawing the juice off from the boiler, I attach a pipe to the short pipe *p*, and carry it around, so as to conduct the steam from the pan H between the dampers *c c* and the boiler F, for the purpose of preventing any burning or scorching of the juice therein, or the boiler.

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

1. The furnace A, provided with double dampers *c c* and dampers *g e m*, in combination with a small side-furnace, D, boiler F, and pan H, and the lids K K, the several parts being constructed, arranged, and used as and for the purpose specified.

2. The arrangement of the track *d*, car E, and windlass *h*, with the grate of the larger furnace A, with the side-furnace D, when operated and used as and for the purpose set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this day of , 1867.

B. F. CAUFFMAN.

Witnesses:

DAVID S. ZIDERS,

J. J. MITCHELL.