

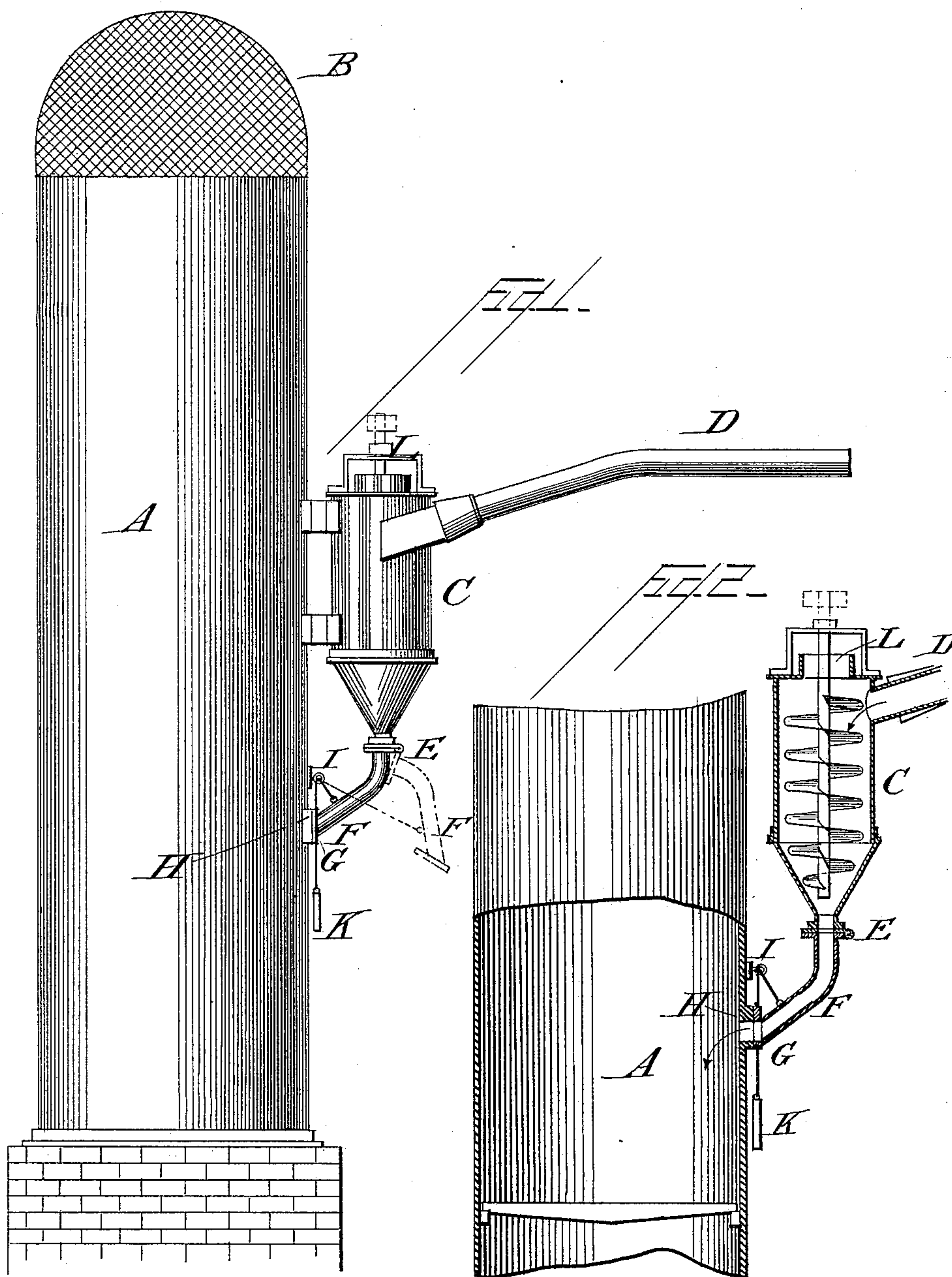
(No Model.)

T. MUNROE & H. PARK.

REFUSE BURNER.

No. 389,403.

Patented Sept. 11, 1888.



Attest:

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UNITED STATES PATENT OFFICE.

THOMAS MUNROE AND HUGH PARK, OF MUSKEGON, MICHIGAN.

REFUSE-BURNER.

SPECIFICATION forming part of Letters Patent No. 389,403, dated September 11, 1888.

Application filed March 31, 1888. Serial No. 269,139. (No model.)

To all whom it may concern:

Be it known that we, THOMAS MUNROE and HUGH PARK, citizens of the United States, residing at Muskegon, in the county of Muskegon and State of Michigan, have invented certain new and useful Improvements in Refuse-Burners; 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.

Our invention relates to an improvement in refuse-burners, the object thereof being to provide a ready and efficient means whereby the refuse from all kinds of factories—such as planing-mills, &c.—can be effectually disposed of with the least possible cost; and the invention consists in the construction, arrangement, and combination of parts, substantially as will be hereinafter fully described and claimed.

In the accompanying drawings illustrating our invention, Figure 1 is a side elevation of our improved refuse-burner, showing the construction and relative arrangement of the various parts. Fig. 2 is a vertical section of the same.

A denotes a burner or furnace. It is preferably made of iron and provided at its upper end with a spark-arrester, B. The size, shape, and structure of the burner, however, may vary within wide limits without departing from the spirit of our invention, and the burner designated A is shown here by way of example only in order to illustrate the manner of carrying our invention into effect.

The invention is applicable equally well to all the different kinds of furnaces which are used for the purposes of burning or consuming refuse; hence we are confined to no particular form of furnace.

C denotes the device which is ordinarily termed a "separator." This being a device in common use, its construction and purpose will be obvious without need of detailed description in this connection. In the drawings the separator is shown as attached to the furnace or burner at about midway of its height. Suitable attaching means are employed for connecting it firmly to the furnace. Into the separator the refuse from the machines in the mill with which our refuse-burner is employed is carried.

D indicates the connecting-pipe between the factory and the separator, through which the refuse is conveyed to the latter, said refuse being forced through this pipe by means of a blower or other suitable device. (Not shown.) The separator is formed with the usual conical bottom and has an opening, L, in the upper end to permit the escape of air. The apex of the conical portion of the cone is formed with an opening, and to said apex is fastened a plate forming one half of a hinged flange, E, the plate constituting the other half of said flange being fastened to the upper end of the pipe F. These plates are provided with suitable clamps or other fastening means, whereby they can be securely held together when desired.

The pipe F is bent or curved in such a manner that it may, when properly positioned, reach from the open apex of the separator to the furnace or burner A at a point where said furnace or burner is provided with an opening. The lower end of the pipe F is furnished with a small plate adapted to be fastened to a casting, H, riveted or otherwise secured to the burner or furnace at the point where the opening just mentioned is located. This opening is substantially equal in diameter to the diameter of the pipe F; hence it will be clearly perceived that by means of the pipe F a channel is provided between the separator and the burner, so that refuse which has been conveyed into the separator, and by means of the internal mechanism therein been driven down into the cone, can be conveyed thence into the burner and consumed. The pipe F, being hinged by means of the flange E, is adjustable, so that it may be located in a position where it will serve to convey the refuse into the burner; or it may be changed out of this position into the position shown in dotted lines, where it is useless.

Attached to the burner A, immediately above the casting H, is a bracket carrying a sheave, I, which is used for the purpose of upholding a chain or rope, one end of which is fastened to the side of the pipe F, while the lower end is secured to a plate, K, of proper size, shape, and structure to adapt it for the purpose of closing the aperture at the casting H. This plate will be used to close the aperture when the pipe F has been swung into the

position shown in dotted lines, where it is disconnected from the burner. Other equivalent means of closing the aperture in the burner may be devised without departing from the spirit of our invention.

It will be evident that when the pipe F is moved into the position shown in dotted lines the plate K will be automatically elevated, so as to close the aperture in the burner. In the practical use of our improved refuse burner the refuse will be carried into the separator through the pipe D, or whatever conduit may be provided for the purpose. On entering the separator the refuse is forced downward under the action of the mechanism therein toward the cone, and thence through the pipe F into the burner, where it is consumed, while the air is permitted to escape through the outlet L in the upper end of the separator.

Whenever it is desired to carry away the refuse, however, instead of burning it up, the pipe F will be disconnected from the burner and caused to hang in the position shown in dotted lines. This movement on the part of the pipe raises the plate K to a position opposite the casting H, where it closes the aperture in the burner. The refuse is now free to descend through the apex of the cone and fall upon the ground or into some vehicle or box placed there to receive it. Moreover, when the machinery stops, it will be found necessary to disconnect the pipe F, so as to prevent the fire within the burner from going up into the separator through the pipe D and reaching the mill.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the furnace or burner for consuming the refuse, the device known as a "separator" located in connection therewith, the connecting-pipe hinged to the separator, and the movable cover for the opening in the furnace, said cover being connected to and operated by the connecting pipe, substantially as described.

2. The combination of the furnace or burner, the separator, the connecting-pipe hinged to the conical portion of the separator, the movable plate for closing the opening in the furnace, the connecting-chain between the plate and the pipe, and the supporting-sheave for said chain, all of said parts being arranged to operate substantially as described.

3. The combination of the furnace or burner A, having an opening at H, separator C, having an air-outlet, L, and a conical bottom, the pipe F, hinged to the separator by means of flange E, and provided on its lower end with plate G, the plate K, sheave I, and the rope or chain, all arranged substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

THOMAS MUNROE.
HUGH PARK.

Witnesses:

GILBERT R. SHERMAN,
TATE STARKE.