

B. ROSE.
SINGEING-FURNACE.

No. 170,018.

Patented Nov. 16, 1875.

FIG. 1.

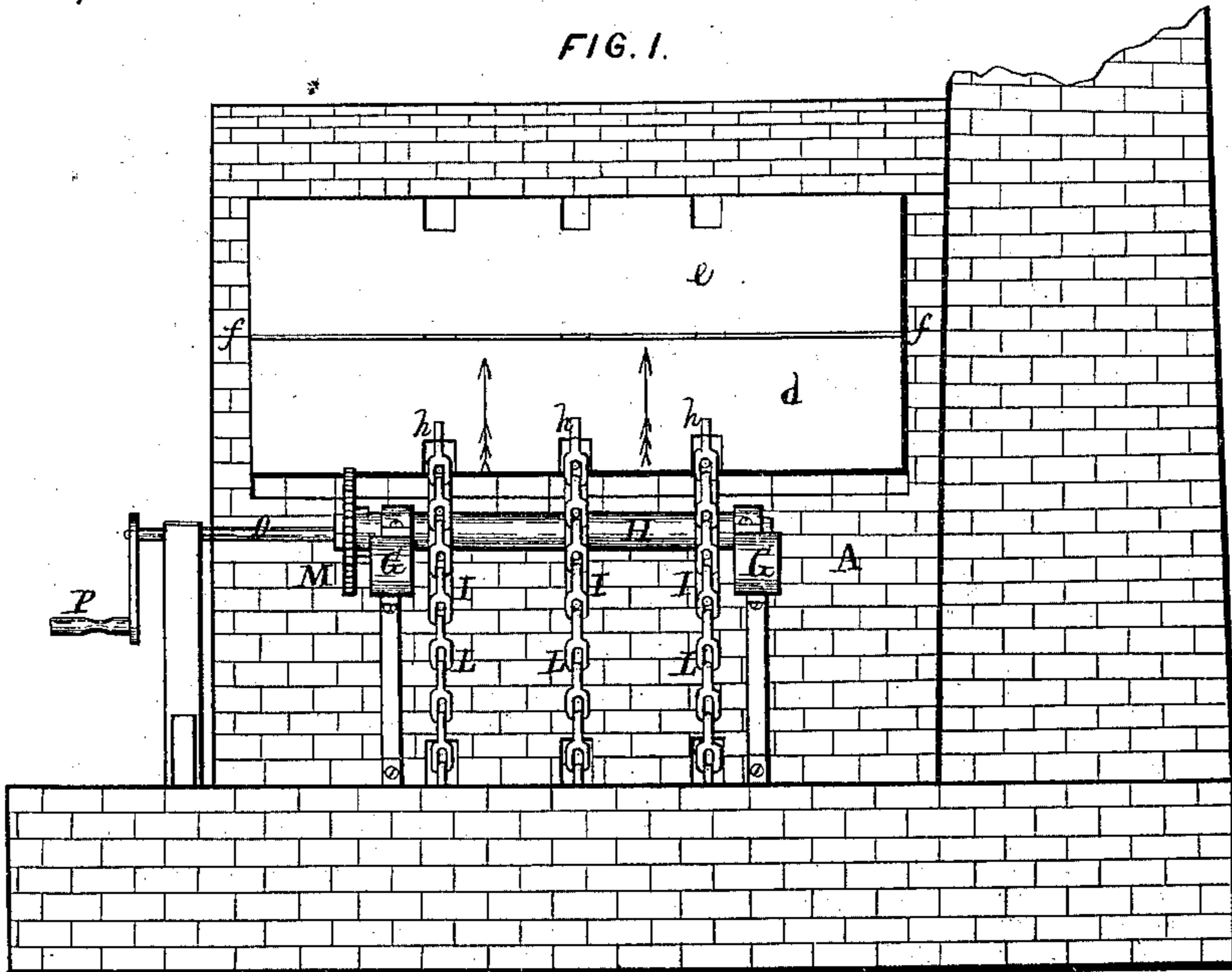
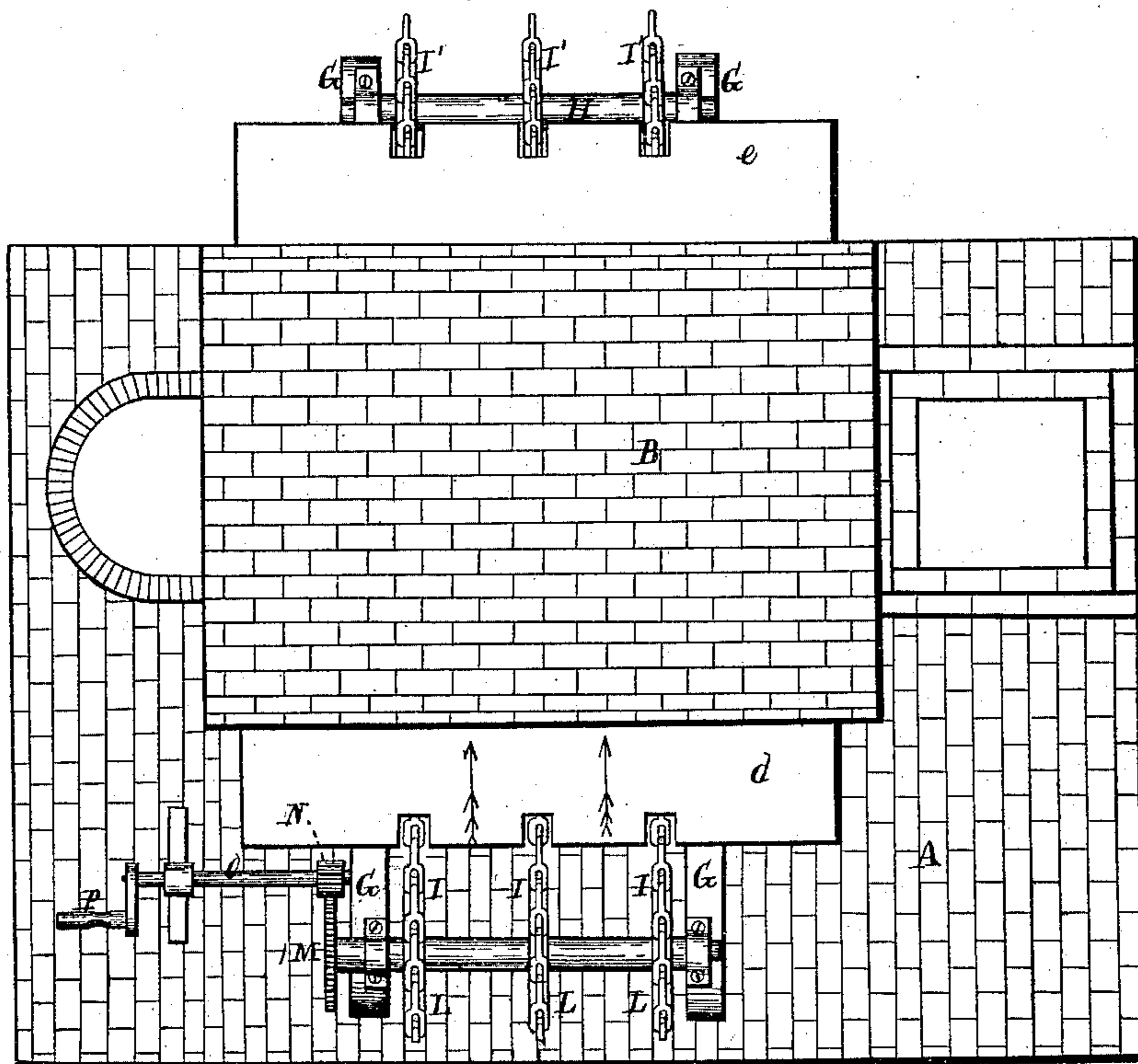


FIG. 2.



WITNESSES.

A. F. Gornall
Sam Curtis

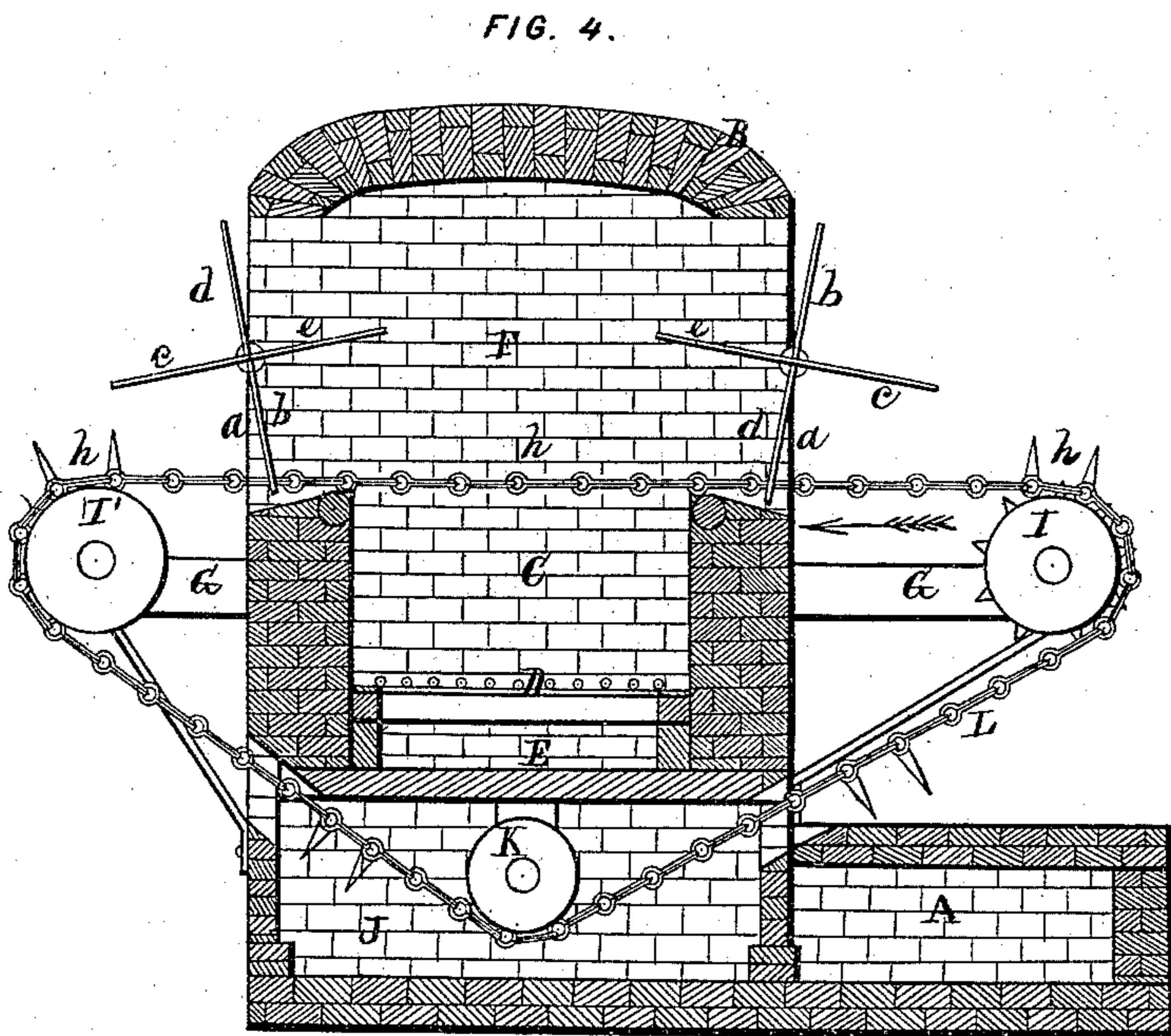
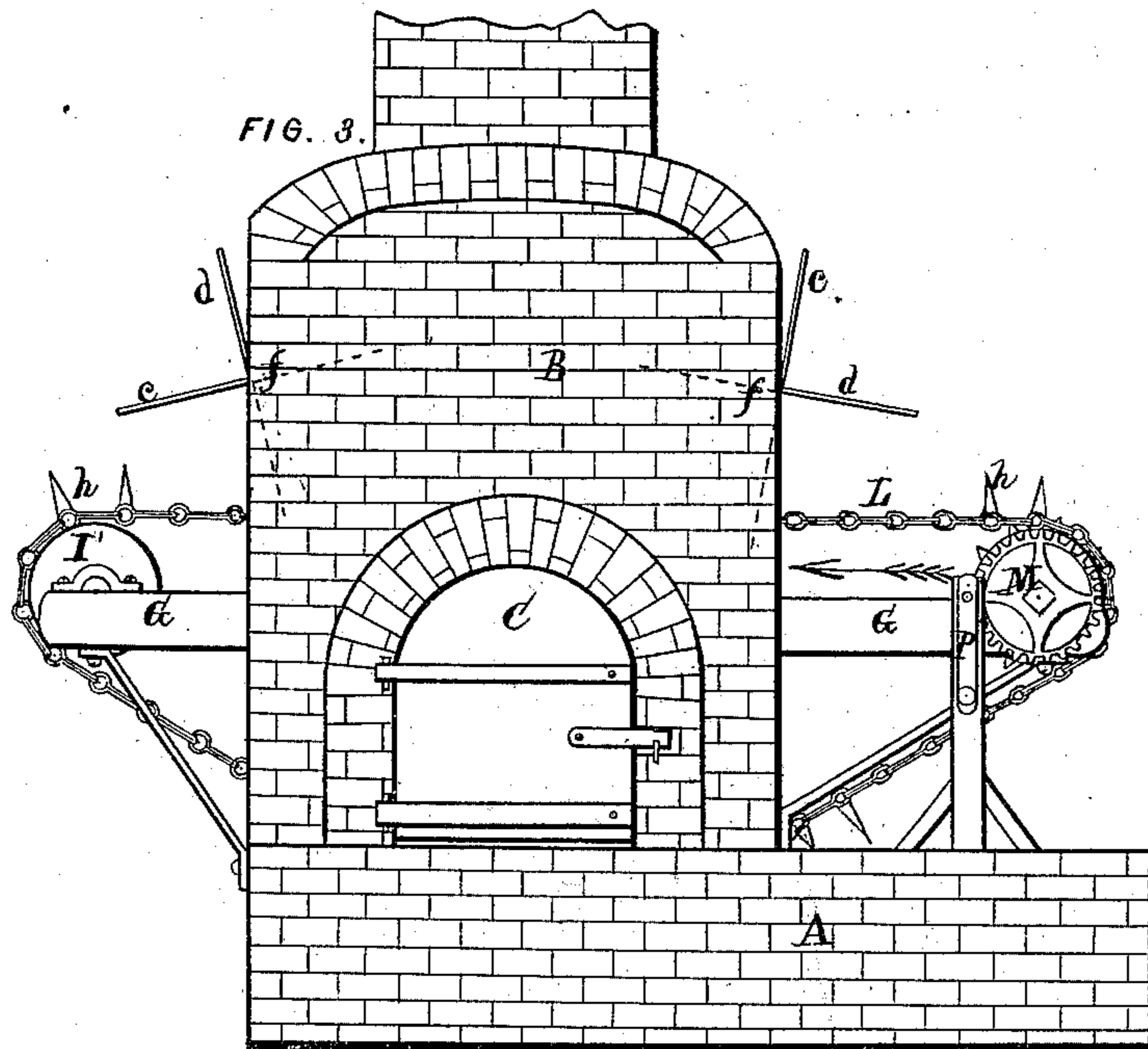
INVENTOR.

B. Rose
Per Burridge & Co.
Atty.

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WITNESSES.

A. T. Cornell.
S. J. Curtis,

INVENTOR.

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UNITED STATES PATENT OFFICE.

BENJAMIN ROSE, OF CLEVELAND, OHIO.

IMPROVEMENT IN SINGEING-FURNACES.

Specification forming part of Letters Patent No. **170,018**, dated November 16, 1875; application filed August 30, 1875.

To all whom it may concern:

Be it known that I, BENJAMIN ROSE, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and Improved Singeing-Furnace; and I do hereby declare that the following is a full, clear, and complete description thereof, reference being had to the accompanying drawings, making part of the same.

Figure 1 is a side elevation of the furnace. Fig. 2 is a plan view. Fig. 3 is a front view. Fig. 4 is a vertical transverse section.

Like letters of reference refer to like parts in the several views.

This invention is for singeing the hair from hogs, by means of a furnace, through which the animals are conveyed by an apparatus.

The construction and operation of said furnace and apparatus are substantially as follows:

In the drawing, A represents the ground whereon is erected the furnace B referred to. C, Fig. 3, is the fire-place; D, the grate; E, the ash-pit, and F, Fig. 4, the reverberatory space or chamber above the fire. Said chamber has an opening on each side, as will be seen at *a a*, Fig. 4, to which is fitted a revolving door or its equivalent, consisting of the four radial plates *b, c, d, and e* journaled in the sides of the openings at the points *f*. From each side of the furnace projects a pair of arms, G, in the outer ends of which is journaled a shaft, H, Figs. 1 and 2. On said shaft is secured sprocket-wheels I I', arranged in relation to each other that the wheels on one are in direct line with those on the opposite side, as will be seen in Fig. 2. Directly under the fire place is a reservoir, J, Fig. 4, in which is arranged guide-wheels, K, corresponding in number to the sprocket-wheels on one side of the furnace, and to which they are respectively related. L is an endless chain passing over the sprocket-wheels down to and under the guide-wheels K, as shown in Fig. 4, in which it will be seen that the chains pass through the furnace from wheel to wheel, the tension of the chains being such as to keep them horizontal. M is a cog-wheel, whereby the sprocket-wheels and chains are operated by the pinion N, Fig. 2, on the shaft.

The practical operation of the above-described furnace is as follows: The purpose of this invention is for singeing the hair from hogs, instead of removing the same by scalding. To this end the animal to be treated is laid upon the chains between the arms *h*. Now, on rotating the chains in direction of the arrows by means of the crank P and wheel and pinion M N, the animal will be carried forward to the revolving door, which it will push open, and continue to move onward into the furnace, (closing the door behind it,) wherein the hair is quickly singed from the body by the direct flame from below, and from that reverberated or deflected from the crown of the chamber. The singed animal continues to move onward across the furnace to the revolving door on the opposite side, which in like manner is pushed open, and the body comes forth and is passed from the chains into a tub of hot water, wherein it is cleaned for being dressed.

The chains in passing through the furnace become heated, which, however, are cooled off in passing through the reservoir J under the furnace, which is kept filled with cold water for that purpose. The fuel to be used in the furnace being of any kind suitable for the purpose of burning quickly, the flame soon scorches off the hair from the body; hence the body is simply run through the furnace, it not being retained therein long enough to heat or scorch the flesh.

In place of revolving doors there may be used doors arranged to slide up and down vertically by suitable means, or doors connected to the furnace by hinges or otherwise, so as to open and close, as may be required in the operation of singeing the animal.

What I claim as my invention, and desire to secure by Letters Patent, is—

The wheels I I', guide-wheels K, chains L, reservoir J, and furnace B, constructed and arranged to operate substantially in the manner as described, and for the purpose set forth.

BENJ. ROSE.

Witnesses:

W. H. BURRIDGE,
A. F. CORNELL.