

I. B. COTTRELL.

DRIER.

No. 171,355.

Patented Dec. 21, 1875.

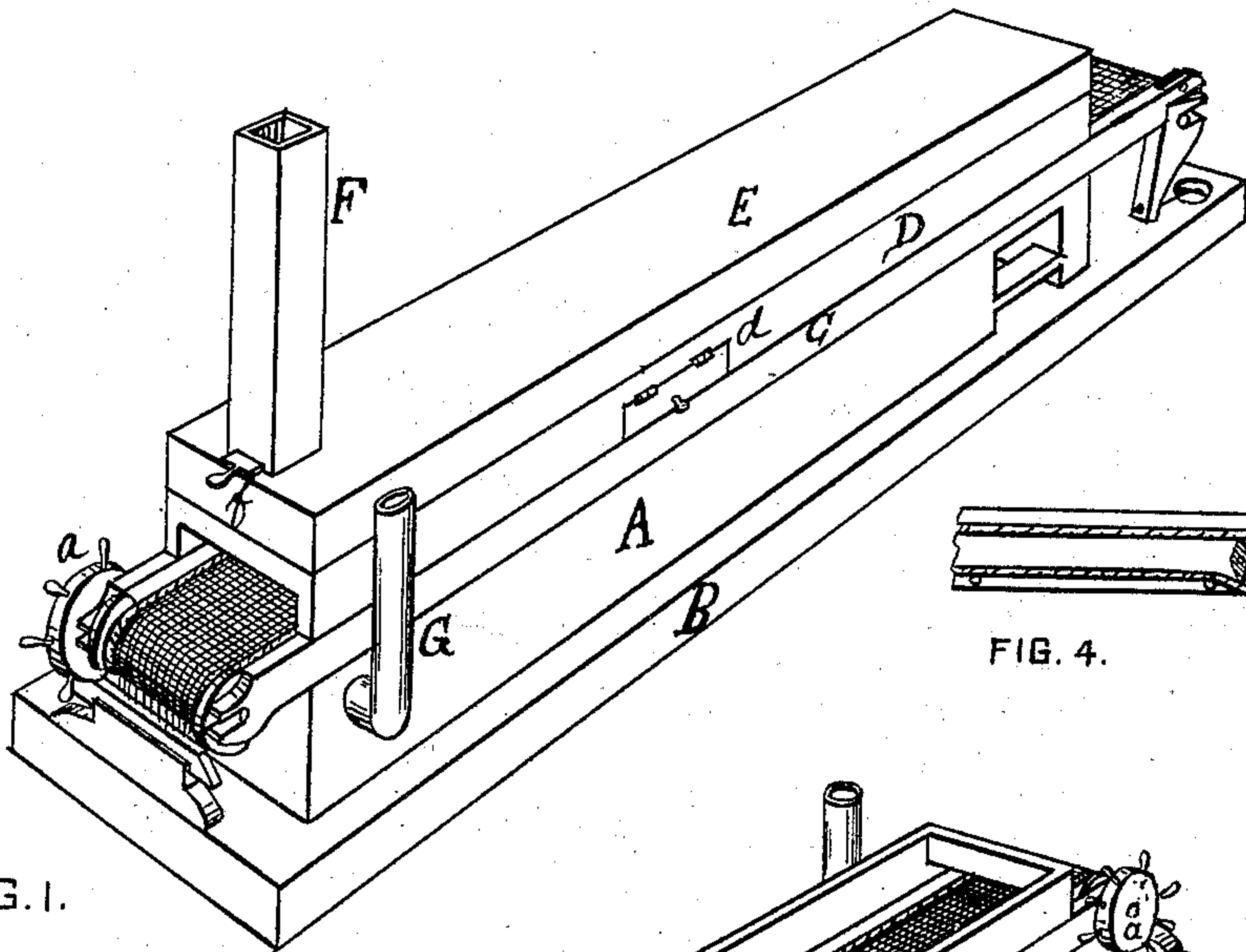


FIG. 1.

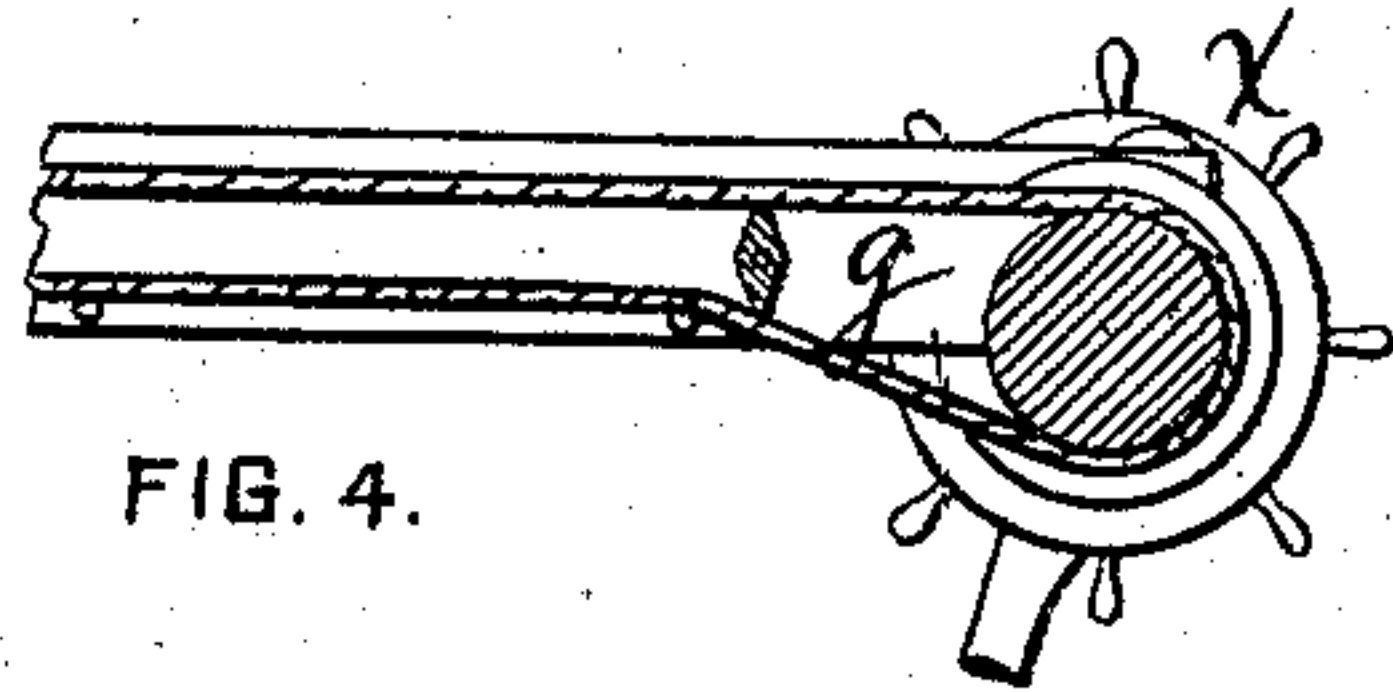


FIG. 4.

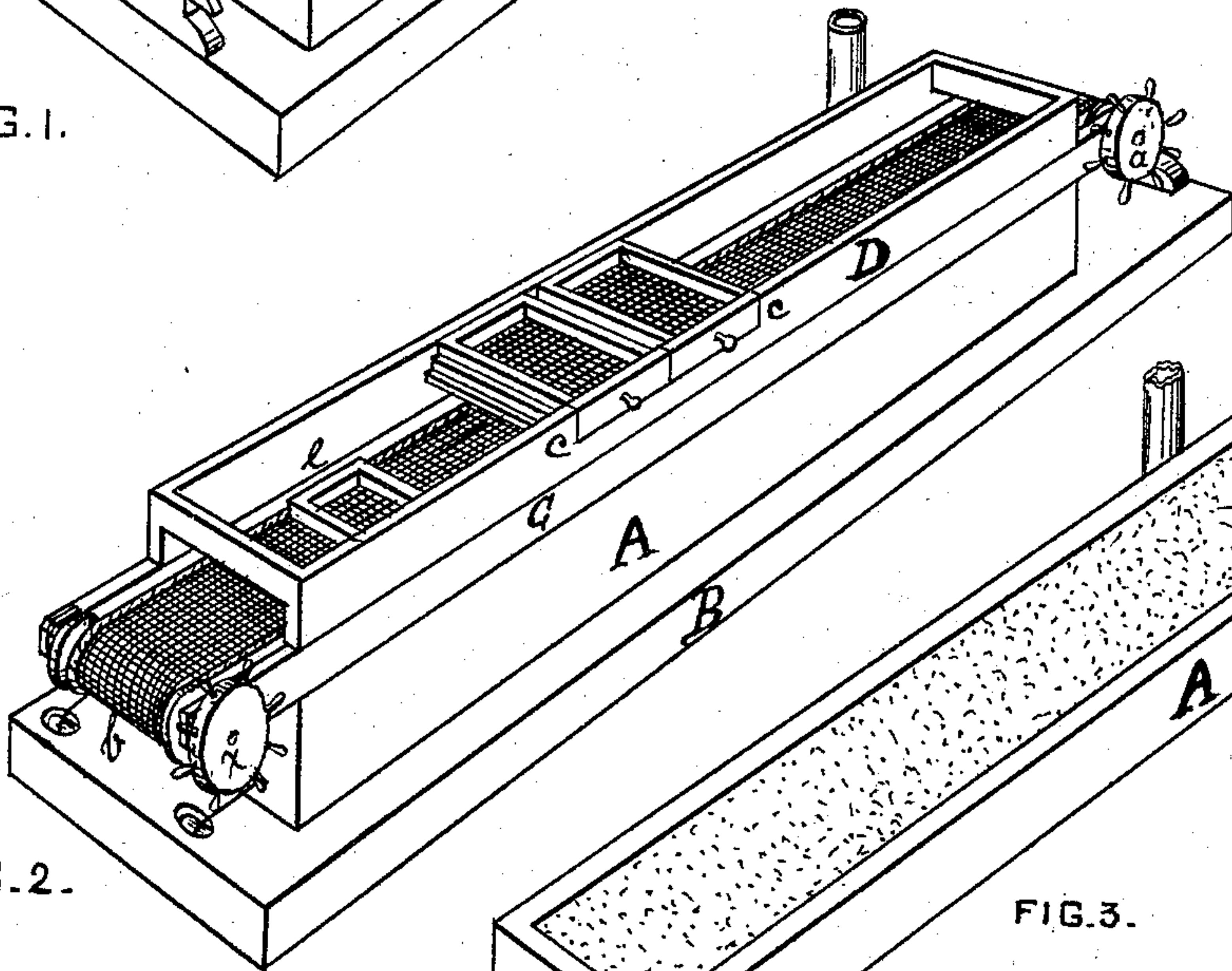


FIG. 2.

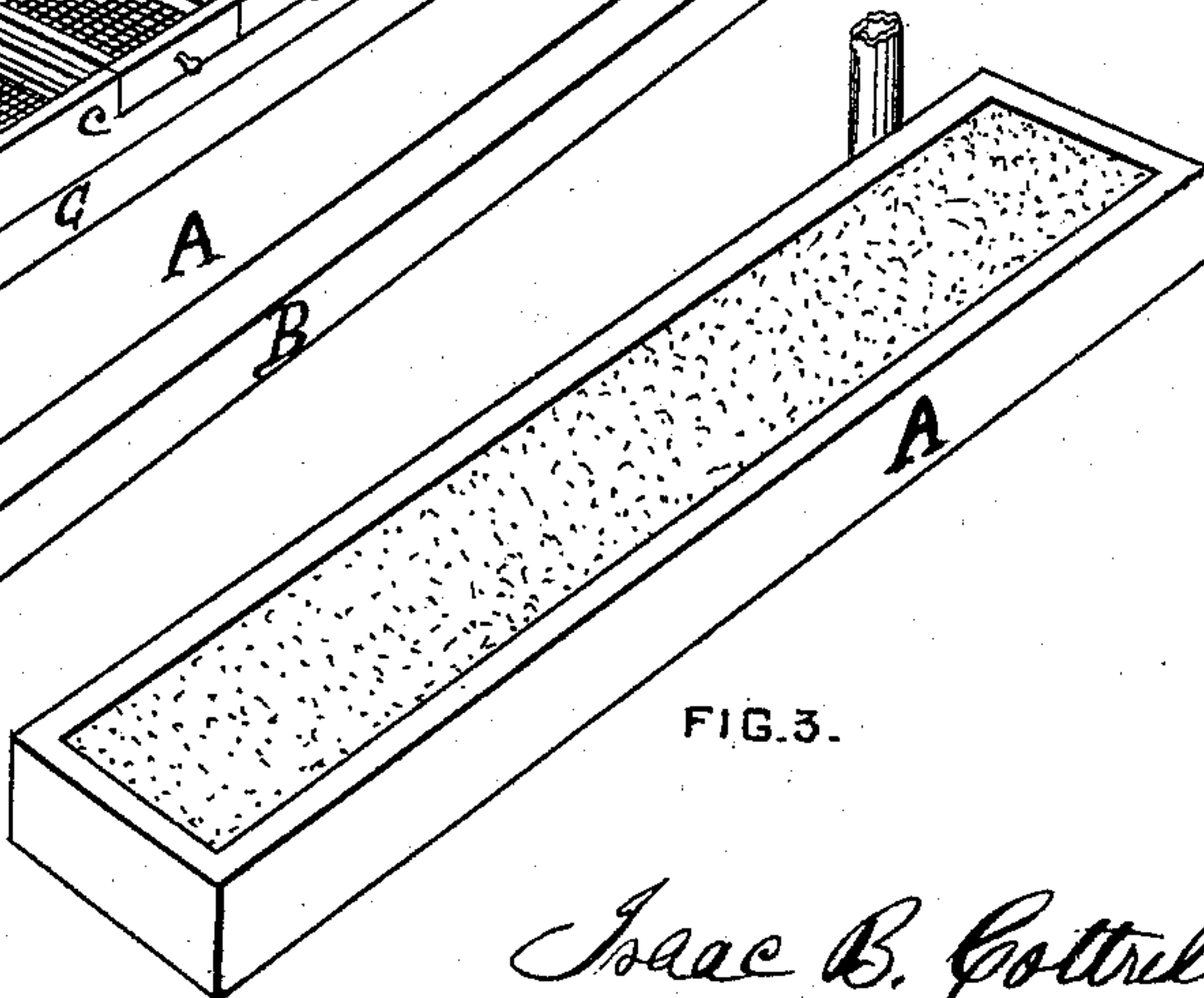


FIG. 3.

WITNESSES:

*Geo. R. Milburn.*  
*G. A. C. Smith.*

*Isaac B. Cottrell*  
INVENTOR.

*J. M. C. Perkins*  
ATTORNEY.

# UNITED STATES PATENT OFFICE.

ISAAC B. COTTRELL, OF BRIDGEVILLE, DELAWARE.

## IMPROVEMENT IN DRIERS.

Specification forming part of Letters Patent No. **171,355**, dated December 21, 1875; application filed August 7, 1875.

*To all whom it may concern:*

Be it known that I, ISAAC B. COTTRELL, of Bridgeville, in the county of Sussex and State of Delaware, have invented certain new and useful Improvements in Drying-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The same letters and figures of reference are used to indicate the corresponding parts.

After describing the invention its nature and extent will be shown in the claims.

My invention is an improvement on Letters Patent granted to me August 26, 1873, No. 142,147, for an improvement in fruit-driers.

Figure 1 is a perspective view of my invention. Fig. 2 is also a perspective view, with the top or vapor-cover removed. Fig. 3 is a view of the furnace covered with sand. Fig. 4 is a sectional view, showing the movement of the endless wire-apron.

B is the bed on which rests the masonry A, which is the furnace. C, D, and E are removable horizontal sections of my drying-machine. C is provided on either end with the drums *a x*, over which the endless apron moves. D is provided with a side opening, *d*, through which trays of fruit may be placed on or removed from the apron, and has an opening at either end to admit the fruit-trays

in their passage in and out of the drying-chamber. E is a top or vapor-cover, provided with a vapor-chimney F. By means of the valve *f* the vapor may be shut in or allowed to escape from the chimney F. A valve to regulate the supply of cold air is shown at *g*. This valve is placed near the rear drum X, and between the upper and lower surface of the apron. Instead of placing the rope or chain on pulleys fastened to the shafts of the drums *a x*, I fasten the rope, chain, or wire cord to the sides of the endless apron. The apron may also be made in sections, if preferred, leaving intervals for the passage of hot air. The top of the furnace A is covered with sand, in order the more completely to equalize and soften and moderate the heat.

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

1. The furnace A, covered with sand or its equivalent, bed B, covers C D E, E being provided with the vapor-chimney F and valve *f*, substantially as described, and for the purposes set forth.

2. The valve *g*, in combination with the drums *a x* and the endless apron.

In testimony that I claim the foregoing I have hereunto set my hand this 22d day of July, 1875.

ISAAC B. COTTRELL.

Witnesses:

ARTHUR D. WOODCOCK,  
HORACE SUDLER.