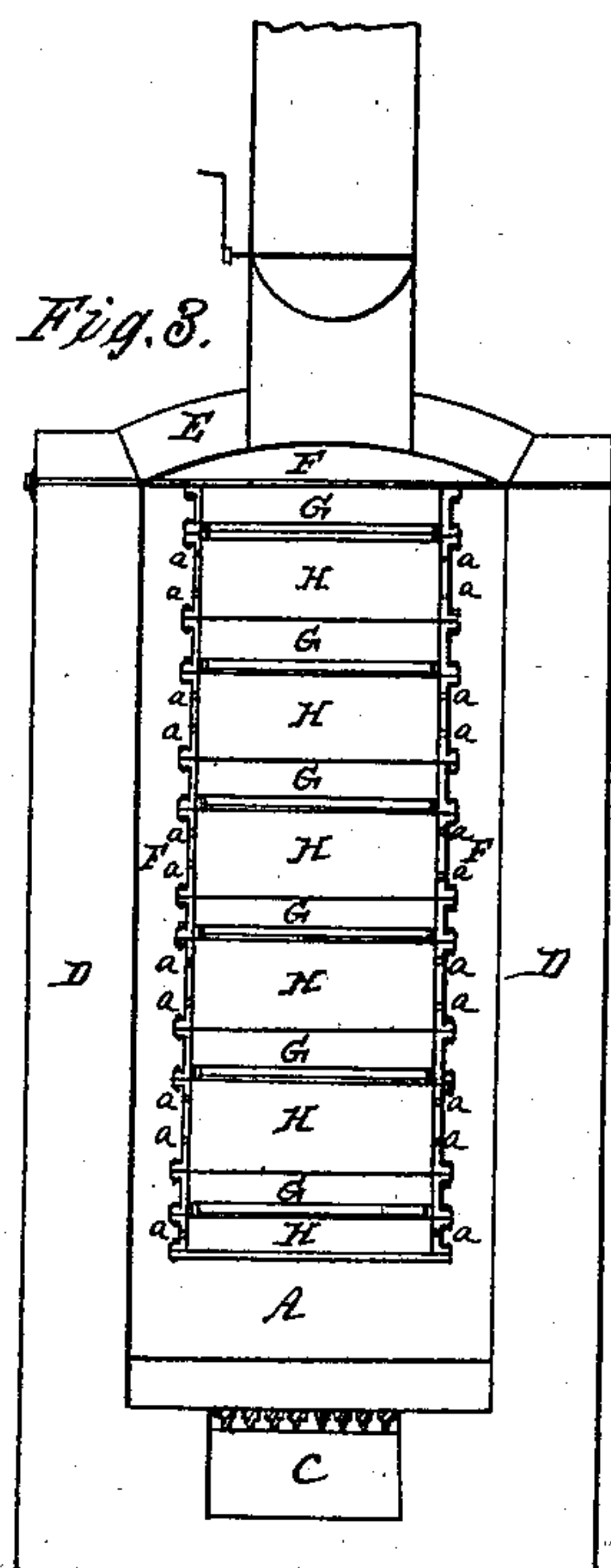
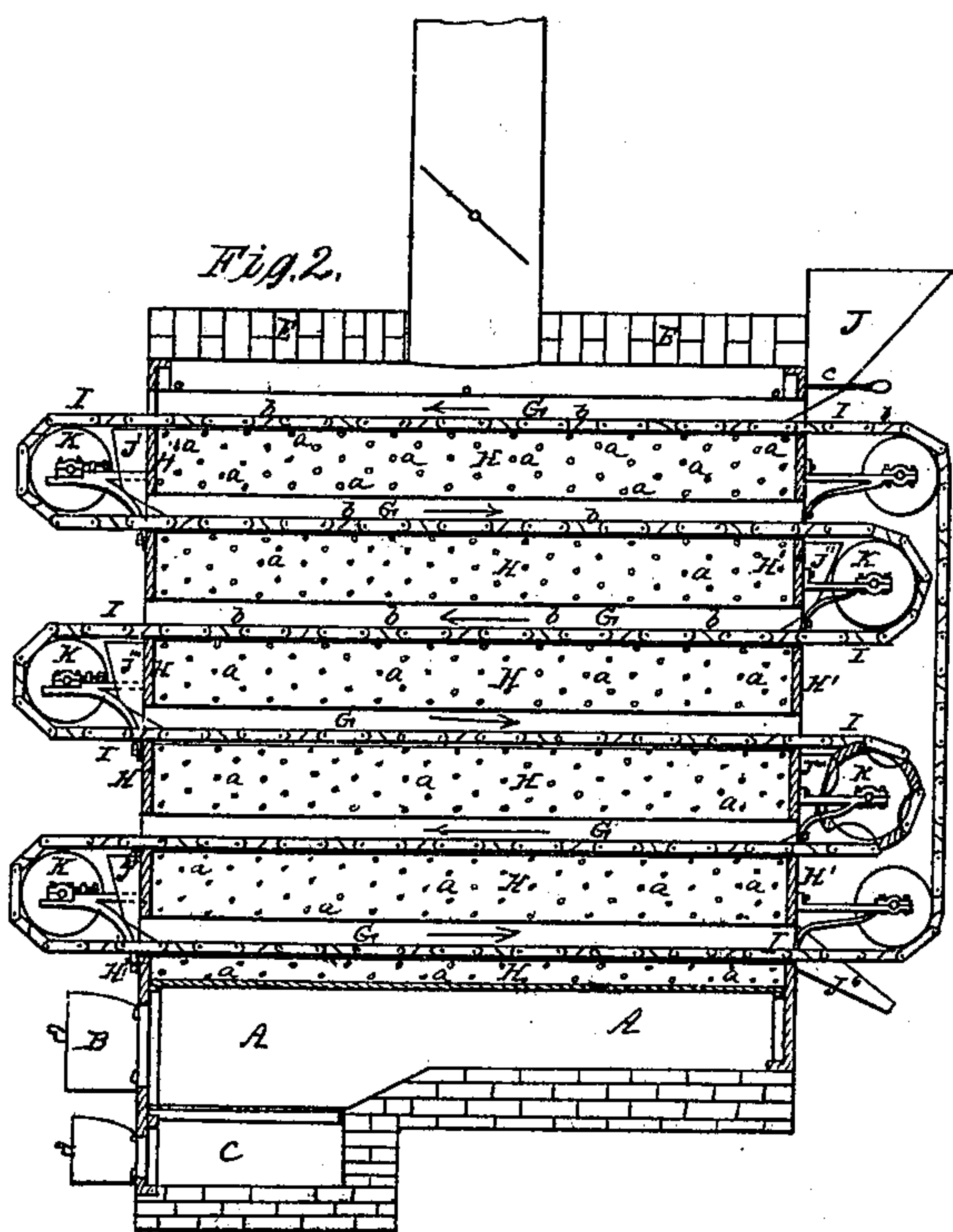
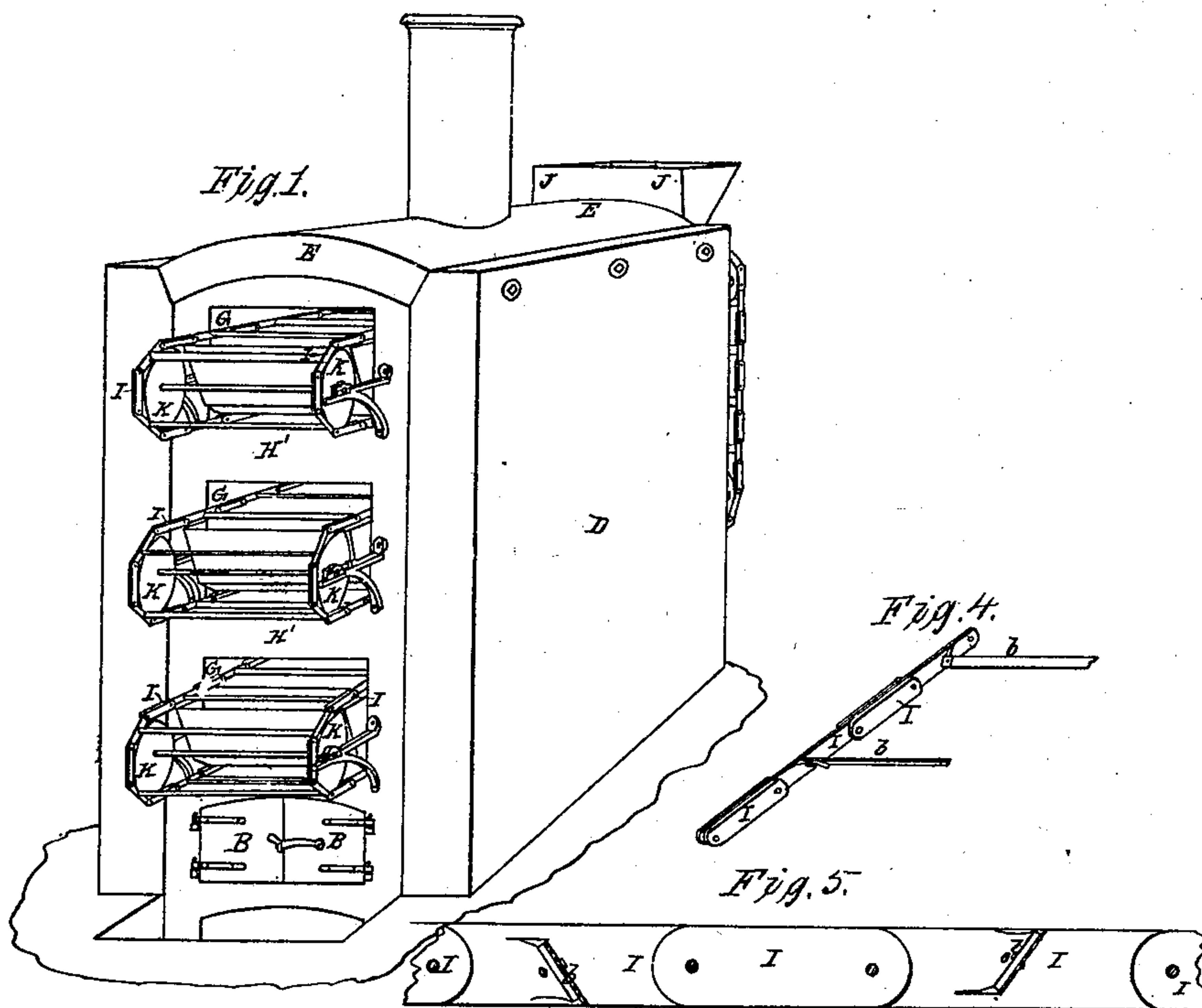


H. H. SCOVILLE.  
KILN FOR DRYING GRAIN.

No. 5,816.

Patented Sept. 26, 1848.





# UNITED STATES PATENT OFFICE.

HIRAM H. SCOVILLE, OF CHICAGO, ILLINOIS.

## GRAIN-DRIER.

Specification of Letters Patent No. 5,816, dated September 26, 1848.

*To all whom it may concern:*

Be it known that I, HIRAM H. SCOVILLE, of Chicago, in the county of Cook and State of Illinois, have made certain new and useful Improvements in the manner of Constructing a Kiln for the Drying of Grain; and I do hereby declare that the following is a full and exact description thereof.

In the accompanying drawing Figure 1, is a perspective view of my kiln. Fig. 2, a vertical longitudinal section thereof, through the middle. Fig. 3, a vertical cross section. Fig. 4, a part of the links composing the endless band, or chain, for carrying the scrapers; and Fig. 5, the same on a larger scale.

In each of these figures where the same parts are represented they are designated by the same letters of reference.

A, A, is a fire chamber of which B, B, are the doors, and C, C, the ash pit.

D, D, are the side walls, which may be built of brick or stone, and E, E, a corresponding arch. A brick arch may also be formed immediately over the fire chamber; or double plates of metal, or other analogous device may be used to lessen the direct action of the heat on the lower cell of the apparatus, which is also defended by having one of the spaces H, below it.

F, F, F, is a flue space between the outer walls, and the compartments through which the grain is to pass and within which it is to be dried.

G, G, are rectangular spaces constituting these compartments, and formed of flat plates of sheet metal, these spaces being open at both ends of the kiln, but inclosed at their sides. Upon the lower sides, or floors, of these spaces the grain is to be made to pass along, being first delivered into the top space, and passing thence successively through the respective spaces below it.

On each side of these spaces, the flue spaces F, F, ascend, and between their upper and lower sides there are also hot air spaces into which the heated air from the flues is allowed to pass freely. These heated air spaces are shown at H, H; they are inclosed at their ends as shown at H', H', Figs. 1 and 2, but the plate of metal that forms their sides, and that forms also the inner sides of flues F, F, is perforated with nu-

merous holes, as shown at *a, a, a*, so as to admit the air from the flues to pass into them.

Through the spaces G, G, there pass endless chains I, I, that carry between them scrapers *b, b*, which are in contact with the floor, or lower sides of these spaces, and carry the grain from end to end thereof. The scrapers *b, b*, are set, alternately so as to have their scraping edges on opposite sides of the endless chains, as they are brought into action at their opposite edges as they pass from one space G, to that next below it. The grain is fed in at a hopper J, J, so as to pass into the upper space G.

The feeding may be regulated by a slide *c*, or by a shoe, or in any other known way that may be preferred; as it is fed in, the endless chain being in motion, the scrapers will carry the grain to the opposite end of the space, each scraper delivering its portion into a second trough J', and so on successively, into the respective trough J, placed alternately at the ends of the spaces; escaping from the last one, as at J<sup>6</sup>.

Motion may be given to the endless chains by any adequate power; and instead of arranging the chains in one continued length as shown in the drawings; there may be pulleys like K, at each end of each of the spaces H, H, carrying these separate endless chains; motion being communicated between the pulleys of the respective chains, by bands and whirls connecting them with each other. From my experience I am apprehensive that this latter method of gearing will be preferred.

Having thus fully described the manner in which I construct my kiln for the drying of grain, what I claim therein as new, and desire to secure by Letters Patent, is—

The particular manner in which I have combined and arranged the respective parts thereof; that is to say, I claim in combination, the spaces G, G, and H, H, and the scrapers passing through the former by the action of endless chains, or bands, the said spaces being connected with the flues, and the whole operating substantially in the manner, and for the purpose, herein fully made known.

HIRAM H. SCOVILLE.

Witnesses:

MICHAEL MCGUIRE,  
H. S. RUCKER.