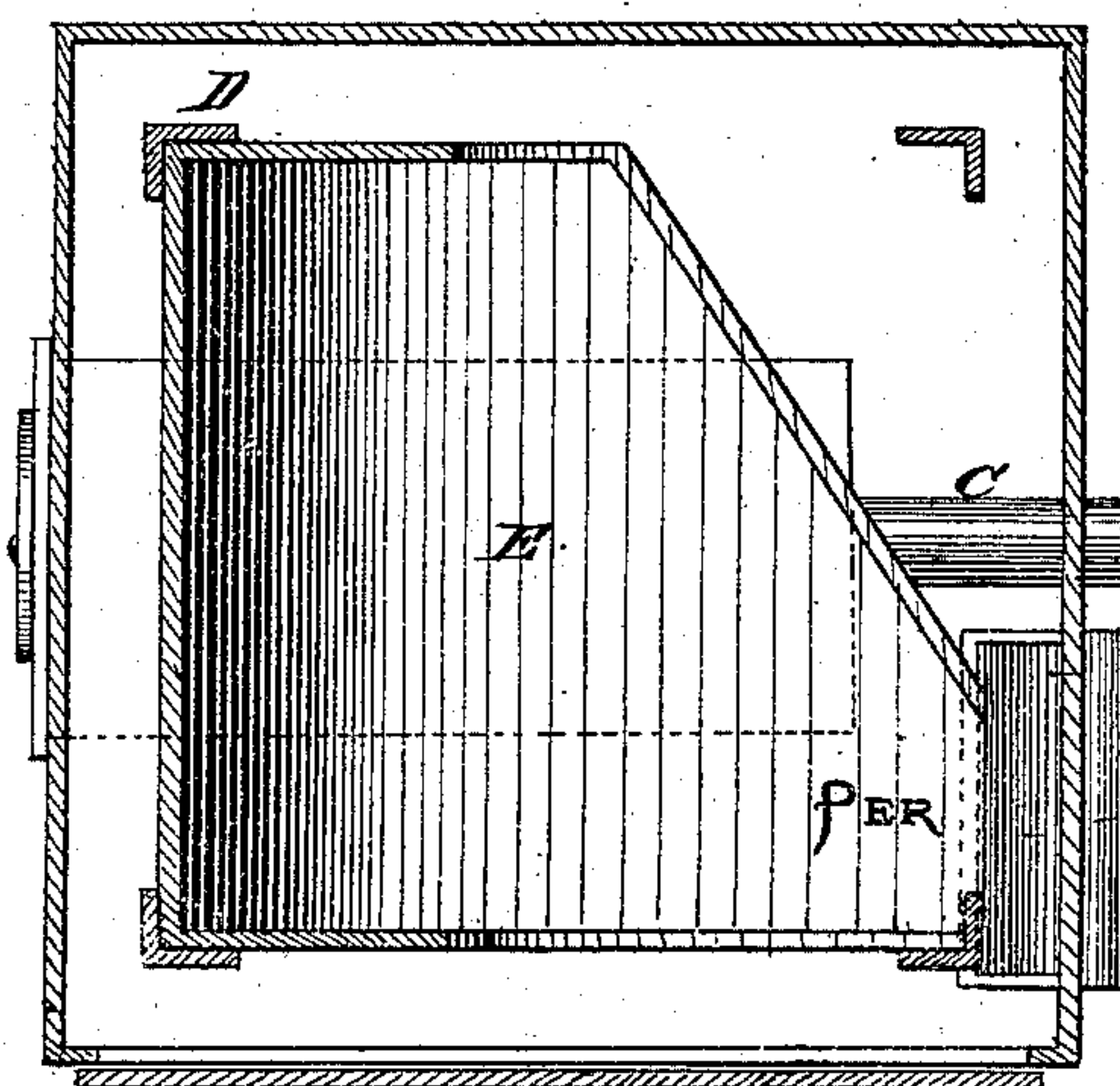
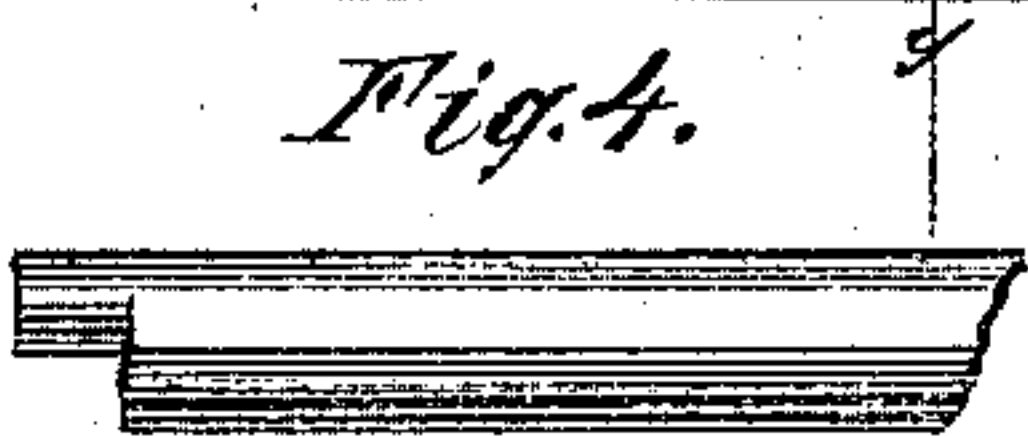
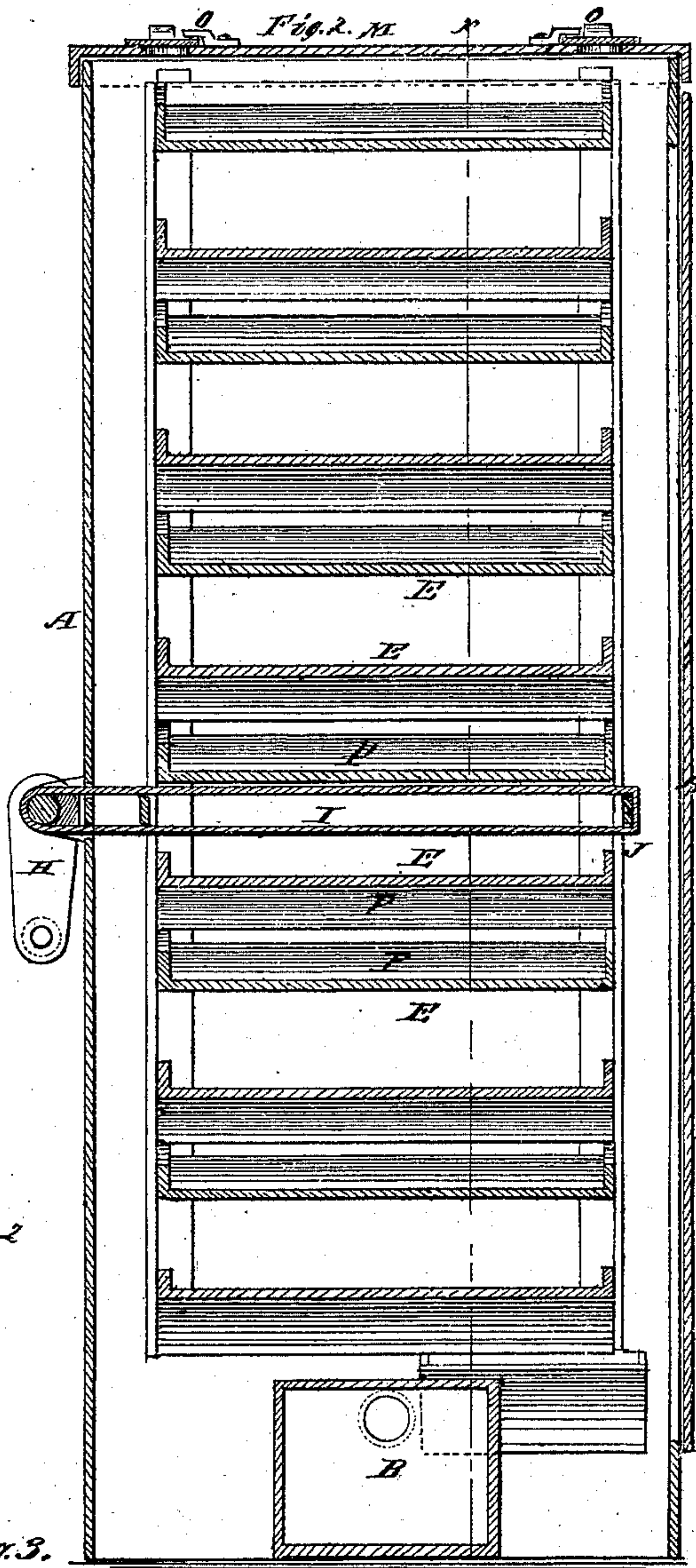
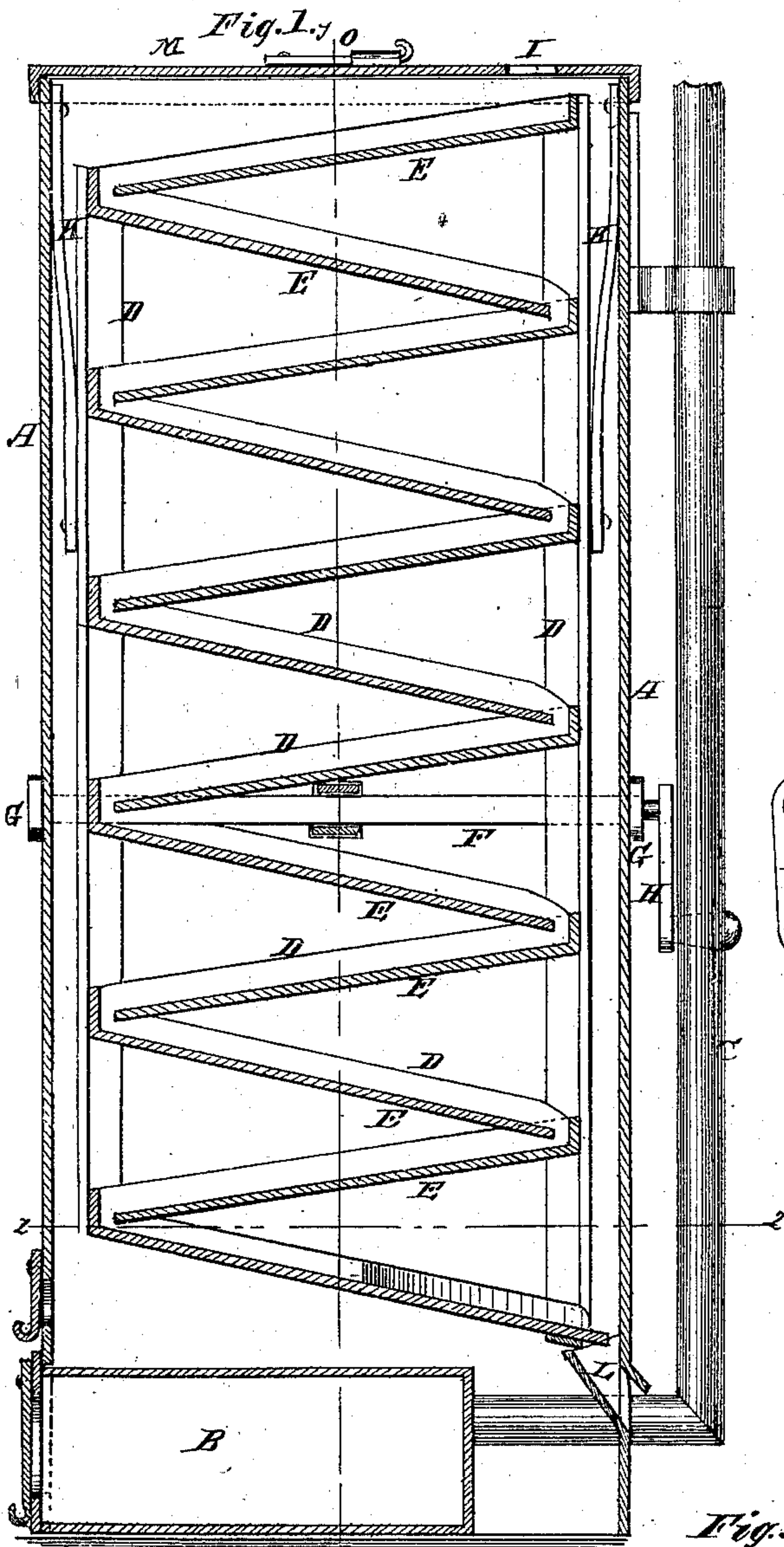


E. S. FORGY.  
Grain-Driers.

No. 137,606.

Patented April 8, 1873.



Witnesses:  
P. C. Dietrich  
S. J. Gineck

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# UNITED STATES PATENT OFFICE

EDWIN S. FORGY, OF DAYTON, OHIO.

## IMPROVEMENT IN GRAIN-DRIERS.

Specification forming part of Letters Patent No. **137,606**, dated April 8, 1873; application filed February 15, 1873.

*To all whom it may concern:*

Be it known that I, EDWIN S. FORGY, of Dayton, in the county of Montgomery and State of Ohio, have invented a new and useful Improvement in Portable Grain-Drier, of which the following is a specification:

An apparatus for drying grain and other similar substances which can be moved from place to place, and which will fully utilize the heat generated, is a desideratum. My object in this invention is to furnish such a drier; and it consists in an upright case and a vibrating zigzag, and a furnace in combination therewith, the construction being as hereinafter described.

In the drawing, Figure 1 represents a vertical section of Fig. 2, taken on the line *x x*. Fig. 2 is a vertical section of Fig. 1 taken on the line *y y*. Fig. 3 is a horizontal section of Fig. 1 taken on the line *z z*. Fig. 4 is a detail of the eccentric-rod or vibrator.

Similar letters of reference indicate corresponding parts.

A is a casing made of sheet metal of any desired size and height, and either square, rectangular, or cylindrical in cross-section. B is a stove arranged in the base of the casing, with which is connected a pipe, C, which passes through the casing and extends upward on the outside to conduct off the smoke and gaseous products of combustion. D is the zigzag, which consists of a frame in which is fastened a series of inclined plates, E, so arranged that grain or similar substances, or material placed upon the upper plate, will, when the zigzag is vibrated, descend from one plate to another, or from the top to the bottom of the zigzag, and be discharged near the bottom of the casing. The zigzag has room to play laterally within the case, and is vibrated by means of the eccentric-rod F, which is supported on eccentric-journals in the boxes G G

on the sides of the case, a rotating motion being given the eccentric-rod by means of a crank, H, or a pulley, so that hand or other motive power may be applied. The rod is connected with the zigzag by means of a strap, I, which passes around a stay, J, but the connection may be made in any other suitable manner. K represents straps at the four corners, by which the zigzag frame is suspended to the casing. L is the orifice through which the grain is discharged. M is the cap over the top of the case. N is the hopper-orifice through which the grain is introduced; O, an orifice through the cap, provided with sliding shutters, by means of which moisture and heat may be discharged from the case.

By this arrangement the grain is subjected to a gradually-increasing temperature as it descends. The vibrations of the zigzag will evenly spread the grain over the plates and set it in motion.

The plates may be made of wire-cloth or perforated metal, if desired.

P represents side flanges for confining the grain to the plates, and also for strengthening the zigzag frame.

This drier can be placed and operated wherever there may be grain to be dried, and is especially adapted for mills and grain warehouses.

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

An apparatus for drying grain and similar material, consisting of the case A, zigzag D, stove B, pipe C, and eccentric-rod F, when the same are arranged to operate as and for the purposes described.

EDWIN S. FORGY.

Witnesses:

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