

J. PETRIE, Jr.
Wool Drier.

No. 34,864.

Patented April 1, 1862.

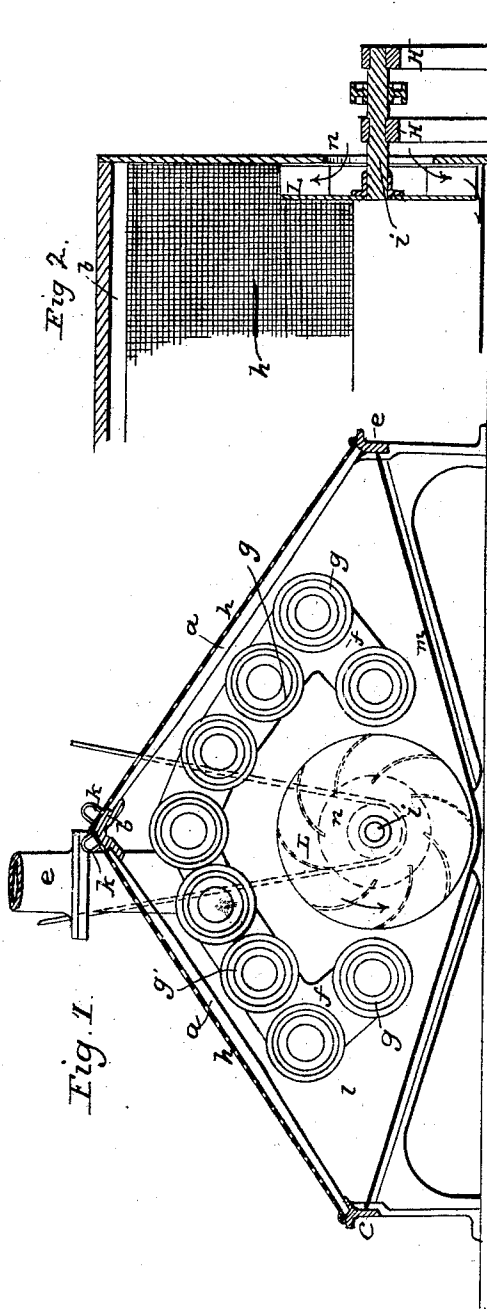


Fig. 2.

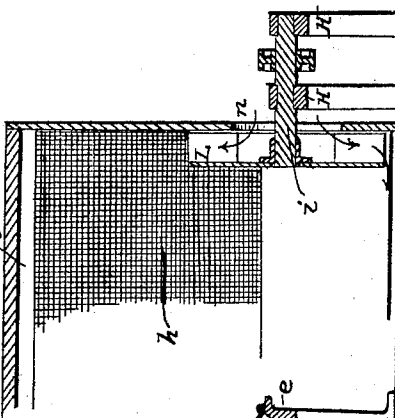
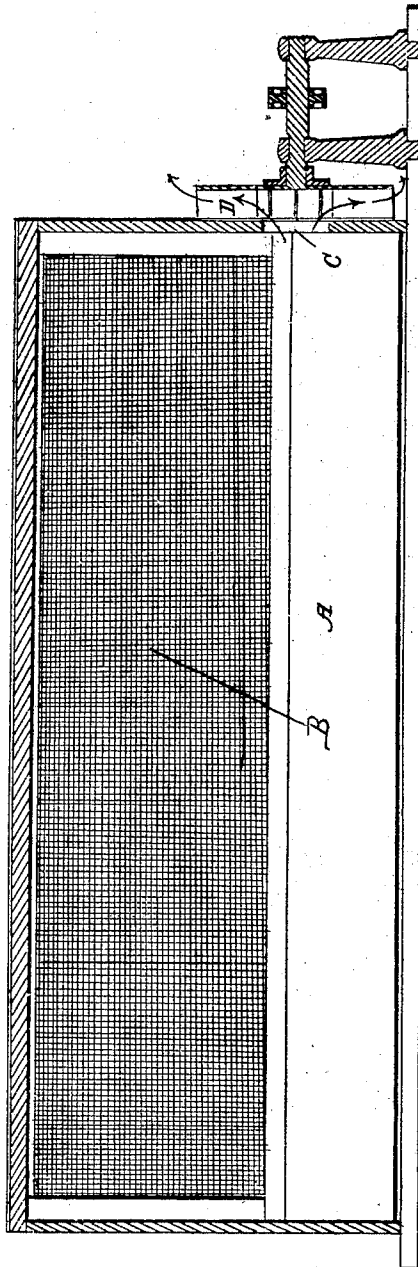


Fig. 3.



Witnesses:
John H. Smith
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Inventor:
John Petrie, Jr.
By A. B. Smith, atty.

UNITED STATES PATENT OFFICE.

JOHN PETRIE, JR., OF ROCHDALE, COUNTY OF LANCASTER, ENGLAND,
ASSIGNOR TO JOHN COOKE.

IMPROVEMENT IN MACHINES FOR DRYING WOOL, &c.

Specification forming part of Letters Patent No. 34,864, dated April 1, 1862.

To all whom it may concern:

Be it known that I, JOHN PETRIE, Jr., of Rochdale, in the county of Lancaster, England, have invented Improvements in Machinery or Apparatus for Drying Wool or other Fibrous Substances; and I do hereby declare that the following is a full and exact description thereof.

The nature of my invention consists in the peculiar construction and arrangement of the case, air-chamber, fan, and inclined perforated or woven-wire flaps to receive the wool to be dried, said flaps being so arranged as to expose the wool on an extended surface to the immediately-surrounding air, to facilitate its placement, drying, and removal, as will be explained in connection with the accompanying drawings.

The drawings Nos. 1 and 2 represent the apparatus in vertical section, and the length of the same may be varied according to circumstances.

In the aforesaid sectional views, *a a* represent two of a series of iron bars, there being a repetition of the same at suitable intervals throughout the length of the apparatus. These bars are secured at top to a ridge-piece *b* and at bottom to a longitudinal framing *c*.

The ends of the apparatus are closed by metal or wood work *l*, affixed to the frame *c*, and the bottom by sheet-iron *m*. At one end of the box there is an opening *n* left for the passage of air to the fan. At the other end of the chamber thus formed is a pipe *e*, leading from a steam-generator to another pipe *f*, from which several other pipes *g* extend in a longitudinal direction. To the framing *c* are fixed hinges, to which are jointed a series of flaps *h*, of perforated metal, wire-gauze, or other suitable material, adapted in width of suitable size for being turned over, or a flap in one piece may be adapted, if preferred.

H H are the bearings for a shaft *i*, upon which is mounted a fan *L*, to which rotary motion is communicated by any suitable means.

The supports for the steam-pipes are not shown in the drawings, but they may be car-

ried by the frame-work, or by any other convenient means.

The wool to be dried is placed upon the perforated flaps *h*, and the shaft *i* is then put in motion, by which means air entering through the opening *n* will be propelled over the steam-pipes *g*, and from thence through the perforated flaps *h* and the wool thereon. When the wool or other material is sufficiently dried, the flaps may be turned over by the ring *k*, so as to deposit it upon the floor, or into any receptacle placed there. The steam-pipes *g* are drawn into one at the other end of the machine, at which situation I apply any ordinary apparatus for allowing the water of condensation to pass off; but another mode of drying wool, which I have found to answer equally well, is shown in Fig. 3, and in which case I dispense with the steam-pipes and use air at the ordinary temperature, which leaves the wool in a better state for working.

Fig. 3 shows the apparatus in longitudinal section. *A* is a box or chamber, the sides of which are composed of iron, wood, or other suitable material, covered on the top with perforated metal, wire-gauze, or other suitable material *B*, upon which the wool or other substance to be dried is placed. A hole or aperture is made in the end of the box at *C*, through which the air is drawn by means of an exhausting-fan *D* or other suitable means, a current of air being thus forced downward through the wool and drying it by the operation.

I may here mention that I prefer to divide the box *A* into two parts longitudinally for convenience, but this does not effect the principle in any way.

I am aware that air has been driven through an inclosed chamber for the purpose of drying material placed therein. This I do not claim; but

What I do claim, and desire to secure by Letters Patent, is—

The construction and arrangement of the case, air-chamber, fan, and inclined perforated or woven-wire flaps to receive the wool to be dried, said flaps being so arranged as to

expose the wool on an extended surface to the immediately-surrounding air to facilitate its placement, drying, and removal, the whole being constructed, arranged, and combined in the manner and for the purpose set forth.

In witness whereof I, the said JOHN PETRIE,

Jr., have hereunto set my hand this 26th day of August, 1861.

JOHN PETRIE, JR.

Witnesses:

ALFRED LEAF,
GEO. S. HARWOOD.