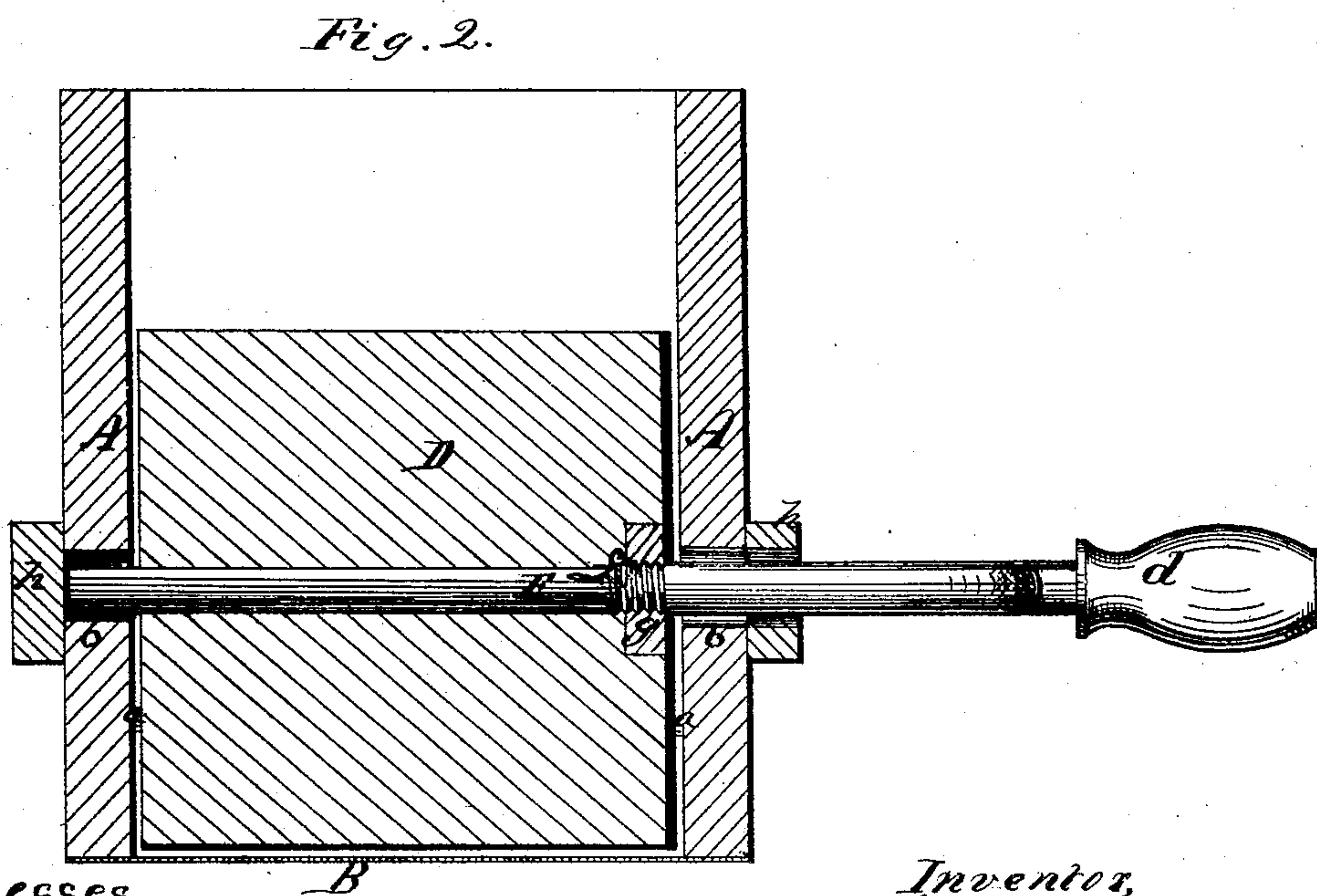
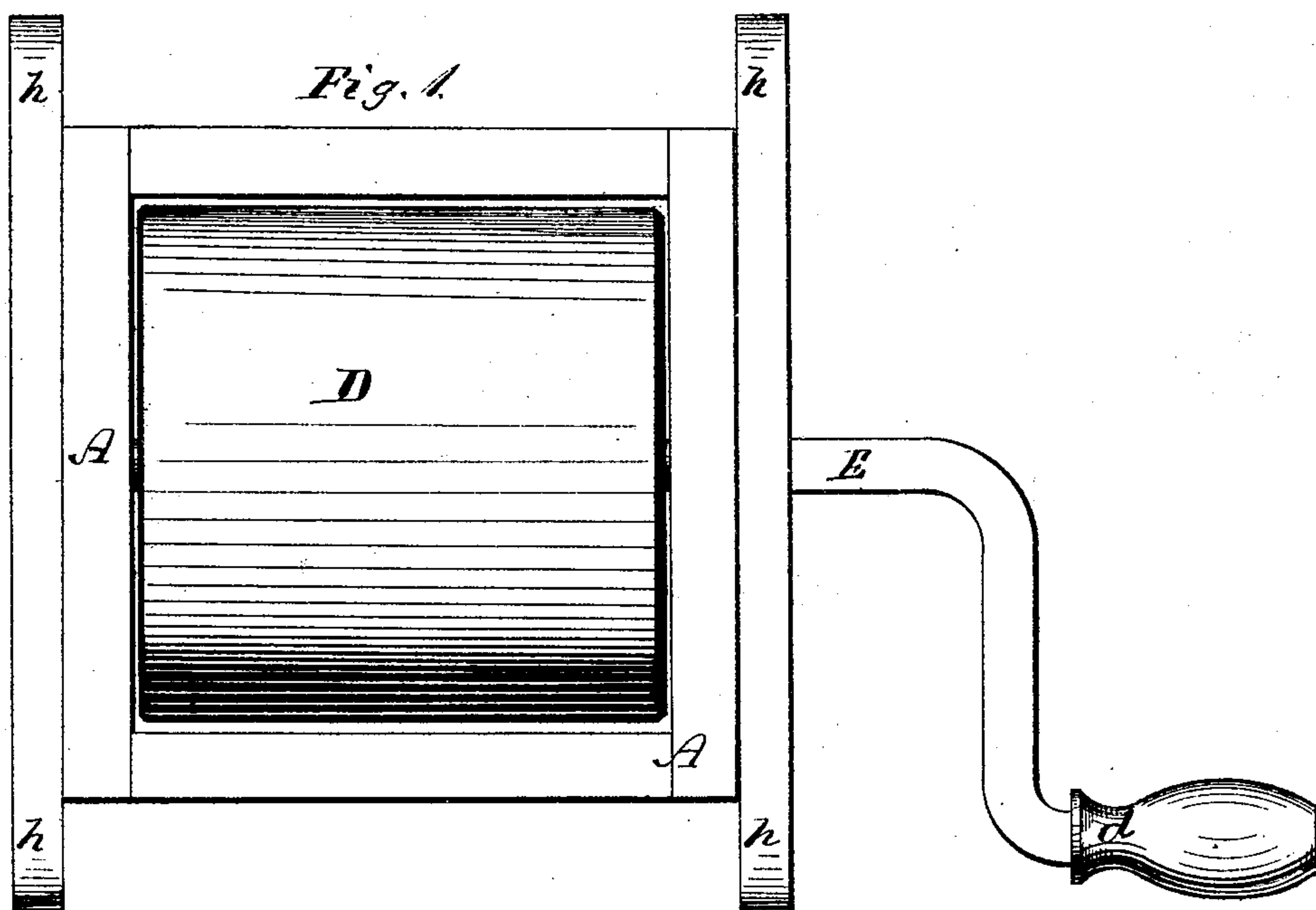


L. P. SMITH.
Cheese-Mills.

2 Sheets--Sheet 1.

No. 151,927.

Patented June 9, 1874.



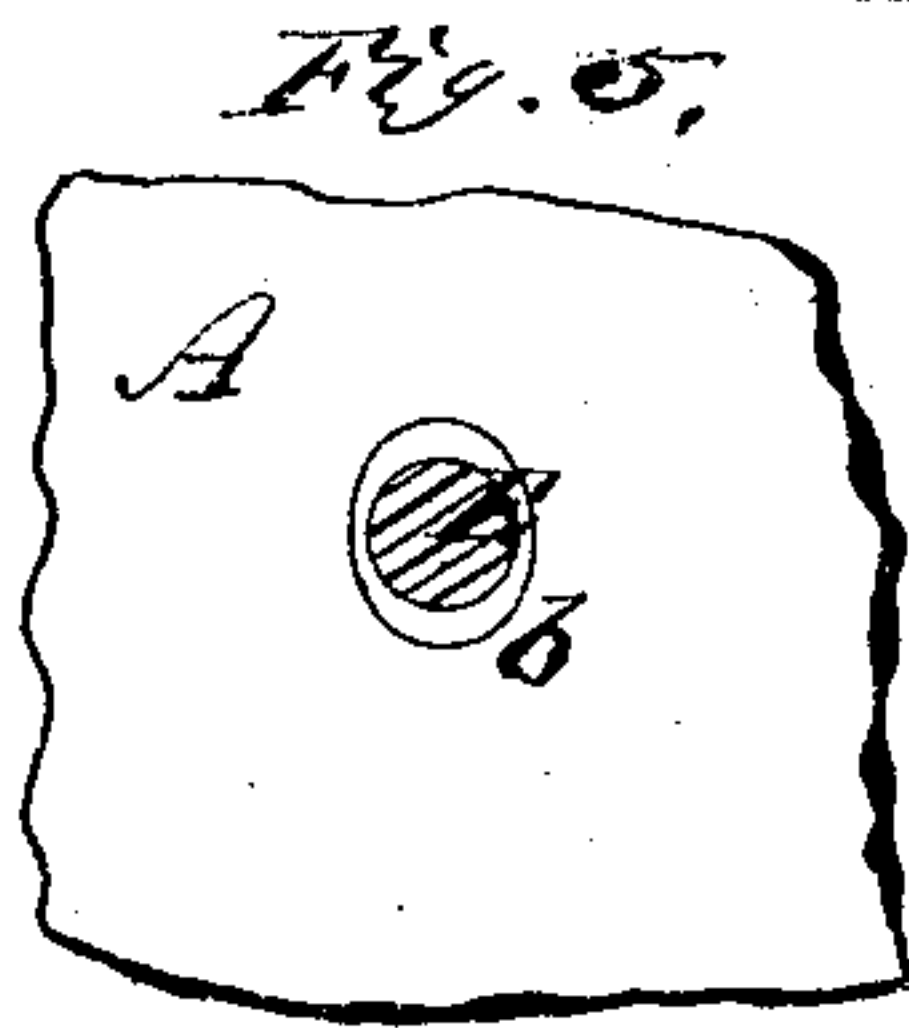
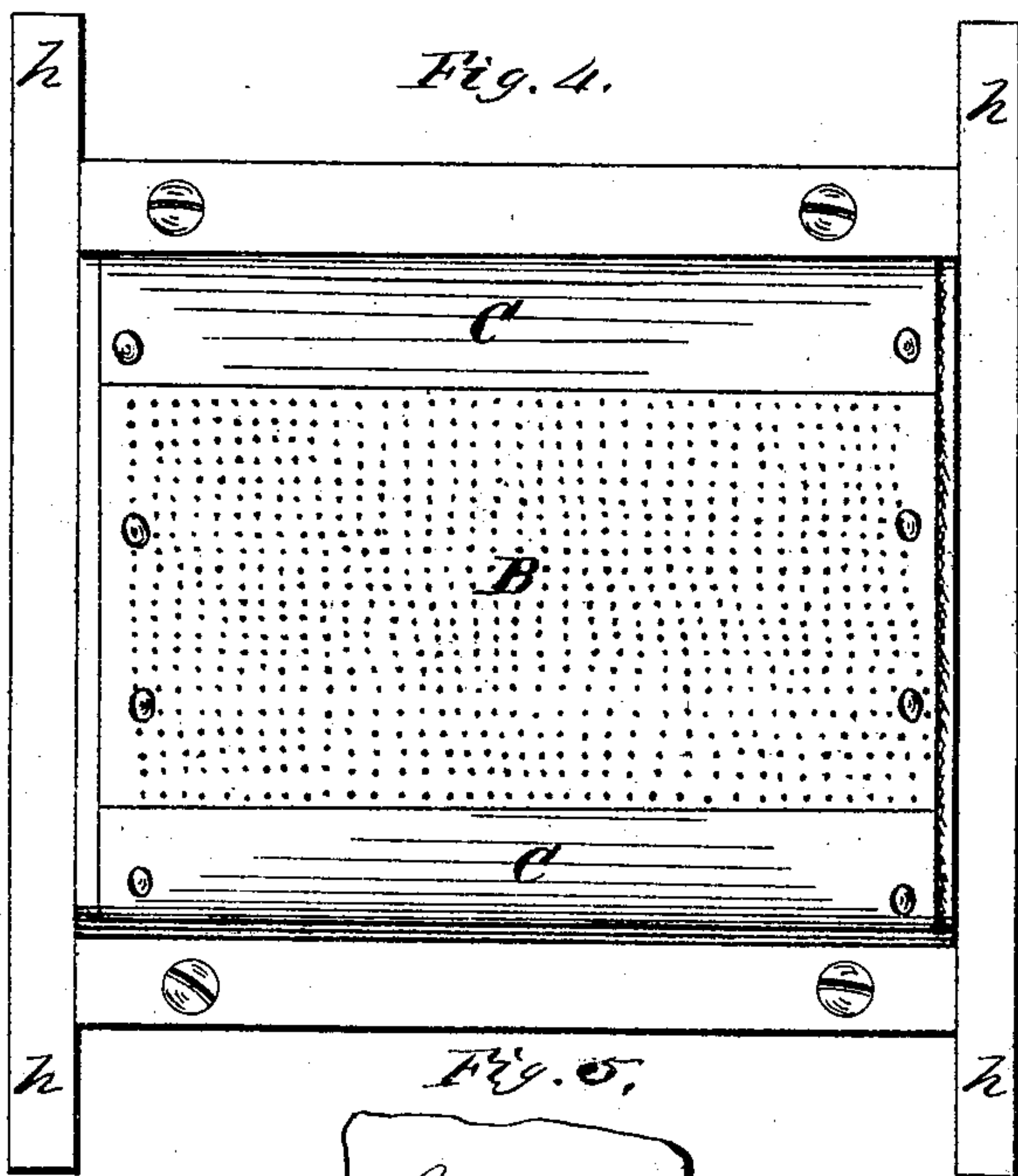
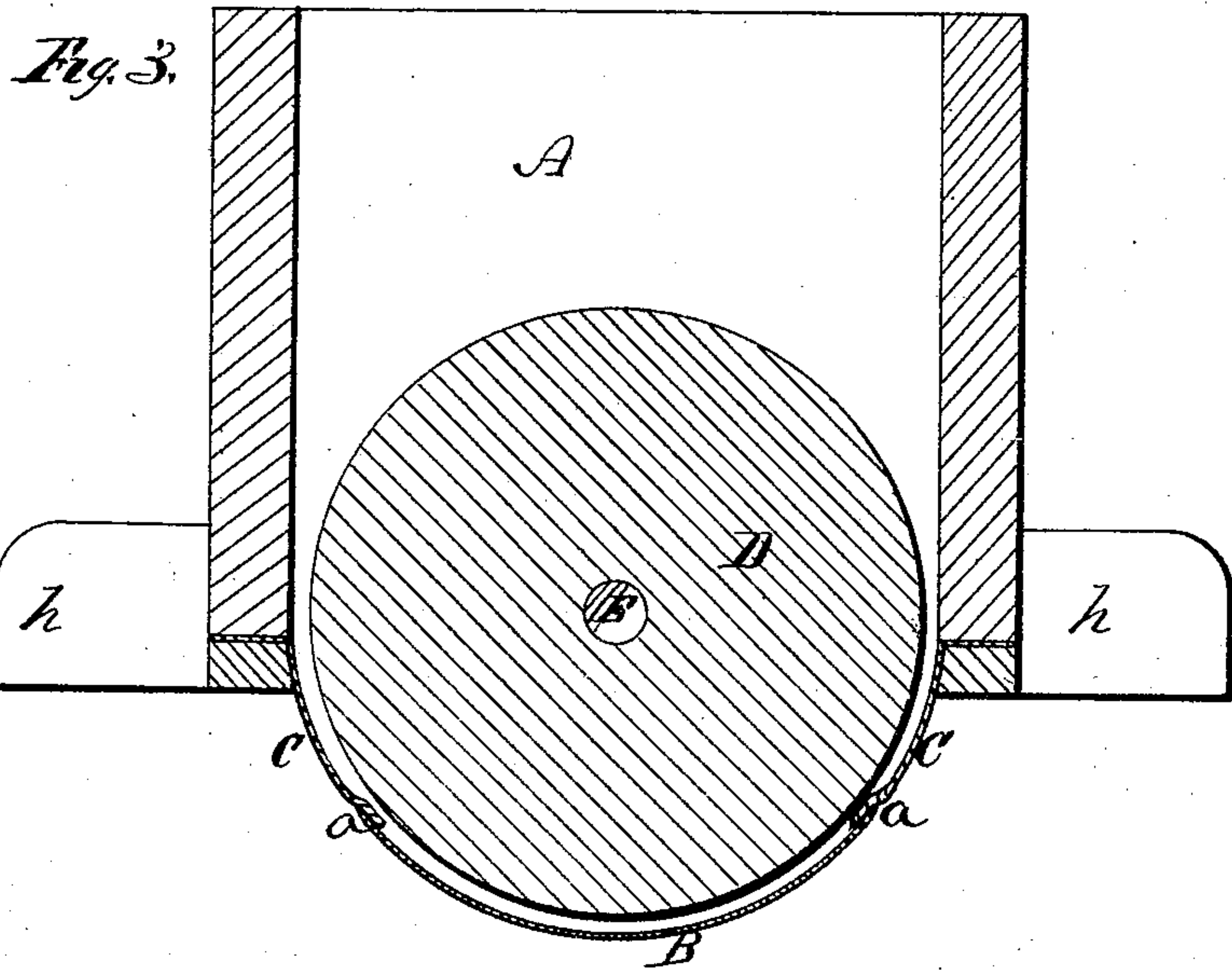
Witnesses,
E. M. Gallaher.
S. W. Wood.

Inventor,
Louis P. Smith,
By his atty.,
J. S. Brown.

L. P. SMITH.
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UNITED STATES PATENT OFFICE.

LOUIS P. SMITH, OF MIDDLETOWN, PENNSYLVANIA.

IMPROVEMENT IN CHEESE-MILLS.

Specification forming part of Letters Patent No. **151,927**, dated June 9, 1874; application filed February 10, 1874.

To all whom it may concern:

Be it known that I, LOUIS P. SMITH, of Middletown, in the county of Dauphin and State of Pennsylvania, have invented a new and Improved Cheese-Mill, for making "cottage-cheese" or smear-case; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a top view of the machine; Fig. 2, a vertical section thereof through the axis of the driving-shaft; Fig. 3, a vertical section of the same in a plane at right angles to the section in Fig. 2; Fig. 4, view of a part detached.

Like letters designate corresponding parts in all of the figures.

The purpose of my invention is to grind or rub the curd of sour milk for manufacturing cottage-cheese or smear-case, and its construction is substantially as represented in the drawings and herein described.

A rectangular box, A, of proper dimensions, is formed open at the top, and closed at the bottom with sheet-tin or other suitable sheet metal, of semi-cylindrical form. This sheet-tin may be entirely perforated with fine holes; but I prefer to have only the lower middle portion B of the perforated sheet metal, while the side portions C C are of the common imperforated sheet-tin. Where the imperforated and the perforated parts are united there are slightly-raised seams or ridges *a a* on the inside. In the lower part of the box A is located a cylindrical wooden roller, D, reaching at its ends close to the adjacent sides of the box, and at its periphery fitting quite closely to the adjacent sides of the box and to the semi-cylindrical bottom, but allowing a narrow space between sufficient to permit the curd, in small quantities at a time, to pass down under the roller. The journals of the roller-shaft E turn in bearings *b b* in the sides of the box, the said journals being somewhat less in diameter than the bearings, especially from top to bottom, as shown in Fig. 4, so that the roller may play a little up and down and sidewise in the box, in order to regulate the feeding down of the curd, and to press by its gravity upon the same, thereby assisting the grinding action of its periphery upon the curd, and helping to squeeze the curd through the perforations of

the tin plate. The shaft E is provided with a winch or crank, *d*, at one end, and extends through the center of the roller, to which it is secured by means of a screw-thread, *f*, on its periphery, turning into a fixed nut, *g*, in one end of the roller. Thus the shaft can be readily withdrawn for removing the roller from the box, and cleaning the same and the interior of the box, and for reinserting and mounting the roller. The box A is provided with supporting-arms *h h h h*, extending horizontally from near the bottom thereof, or with equivalent means of support.

Thus constructed, the machine operates as follows: The curd, dry or mixed with cream, is first put into the box, over and around the roller, and the box is placed over any suitable vessel to receive the ground curd, and rests, by its arms *h h h h*, upon the edges or sides thereof. The crank *d* is turned in either direction, and the roller D causes the curd to pass down in small quantities at a time, at one side of its periphery, and between it and the sheet-metal bottom of the box, the imperforated parts C C of which serve as rubbing-surfaces, and the perforated part B allowing the ground curd to pass through it into the receiving-vessel beneath, being assisted in the discharge by the weight of the roller in its enlarged bearings. The seams or ridges *a a* serve to scrape the curd from the roller, and to prevent its ascending at the rising side thereof. These seams also serve to strengthen the bottom of the box.

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

1. A mill for preparing cottage-cheese or smear-case having a perforated or reticulated bottom or surface, B, in combination with a crusher, D, arranged to move in near proximity to the said perforated surfaces, substantially as and for the purpose herein specified.

2. A mill for preparing cottage-cheese or smear-case having a roller, D, which turns in loose bearings over a perforated or reticulated bottom, B, as and for the purpose herein specified.

Specification signed by me this 4th day of February, 1874.

LOUIS P. SMITH.

Witnesses:

GEORGE W. ETTELE,
HARRY B. ENGLE.