

I. Searles.

Felting Machine.

N<sup>o</sup> 13963

Patented Dec. 18, 1855.

Fig. 1

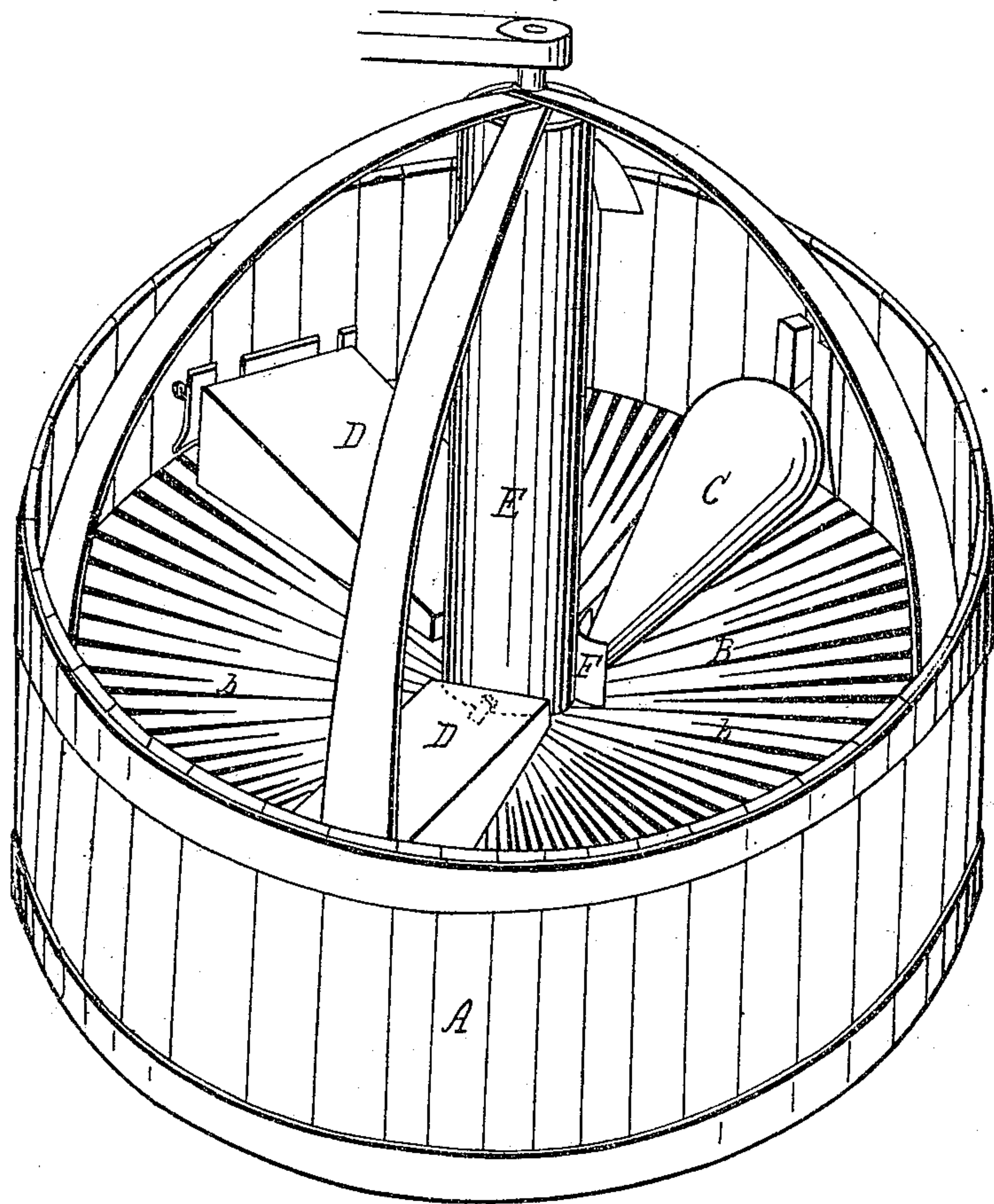
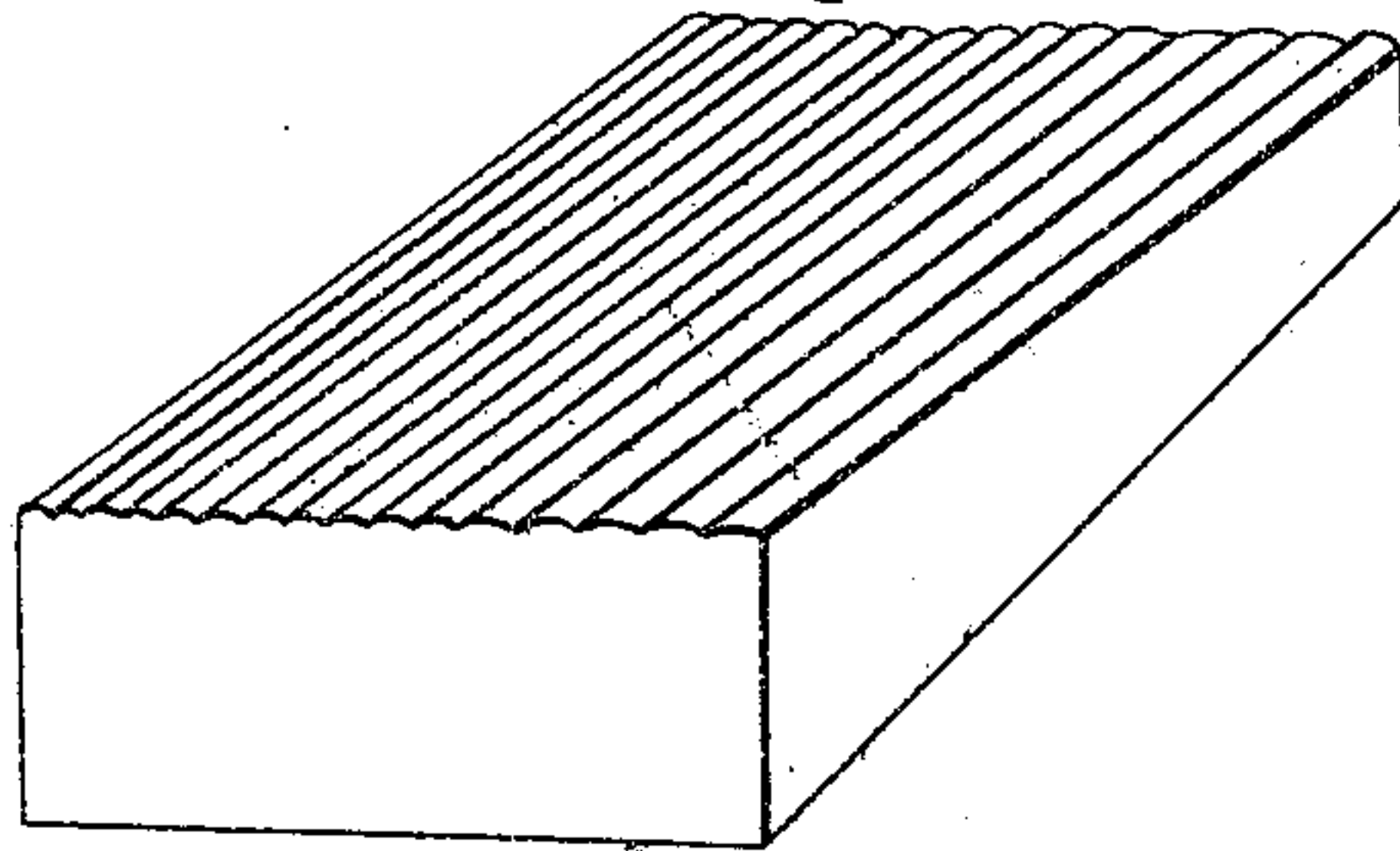


Fig. 2



Witnesses

D. Brigham

James P. McLean

Inventor

Isaac Searles

# UNITED STATES PATENT OFFICE.

ISAAC SEARLES, OF NEWARK, NEW JERSEY.

## FELLING HAT-BODIES.

Specification of Letters Patent No. 13,963, dated December 18, 1855.

*To all whom it may concern:*

Be it known that I, ISAAC SEARLES, of Newark city, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in the Construction of a Machine for Sizing and Planking Hat-Bodies; and I hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, which are lettered to correspond with and made a part of this specification.

*Description.*—The nature of my invention consists in the construction of a circular bed revolving upon an axis at its center, having the lower end to run in a socket box at the center of the bottom of the tub, (A.) The upper end of the vertical shaft, runs in a box immediately over the center of the tub. This circular revolving bed (B,) has its upper side or face (*b*, *b*,) grooved as shown in the drawing Figure 1. I have one or more planking tables placed on the inside of the tub, as shown at letter (D), the lower faces of which are grooved similar to the upper face of the traveling circular bed (B). I also use one or more wooden cones, or their equivalent, covered with a woolen pad, (C) having a short gudgeon, in the upper end or base of the cone. This gudgeon plays in a box attached to the inner side of the tub, while the small end of the cone is kept in its place on a line with its base by a semicircular open plate of metal or other material (F,) that is attached to the vertical casing of the shaft (E,) thus bringing the entire circumference of the cone in contact with the grooved face of the revolving bed (B,) that causes the cone to rotate in proportion to the speed of the bed (B.) Water and steam being admitted into my tub the machine is then set in motion.

I will next go on to describe the operation

which is as follows. I first have my cone covered with a pad. I then place a cloth over the pad, then a body over that next a cloth, then a body, then a cloth, and another body, and so on to any amount, and lastly I draw a covering over the whole, that has a drawstring at the open or large end, and when drawn tight it holds the bodies in their places; secondly, I place the cone with its contents in the tub as described above, without having to stop the machine. After thus settling in the bodies, they are taken off the cone, (or stack,) rolled up, and placed under the planking tables (D,) a sufficient number of times to thoroughly finish the operation of planking and sizing.

The advantage and superiority of my machine over the ordinary mode of planking, and sizing hats by hand is that I can perform ten times the amount of labor more or less in any given time and at a great deal less expense than any other machine now in use.

Therefore I do not claim the construction of a wooden cone or of a set of planking tables (having their lower faces grooved) separately; nor yet the construction of a horizontal revolving bed inside of a tub: but.

What I do claim and desire to secure by Letters Patent of the United States is—

The combination of the circular revolving bed (B,) with one or more planking tables, and one or more cones; constructed, and operating, substantially, as described in the above specification.

In testimony whereof I hereunto subscribe my name in the presence of two witnesses.

ISAAC SEARLES.

Witnesses:

D. BRIGHAM,  
JAMES P. McLEAN.