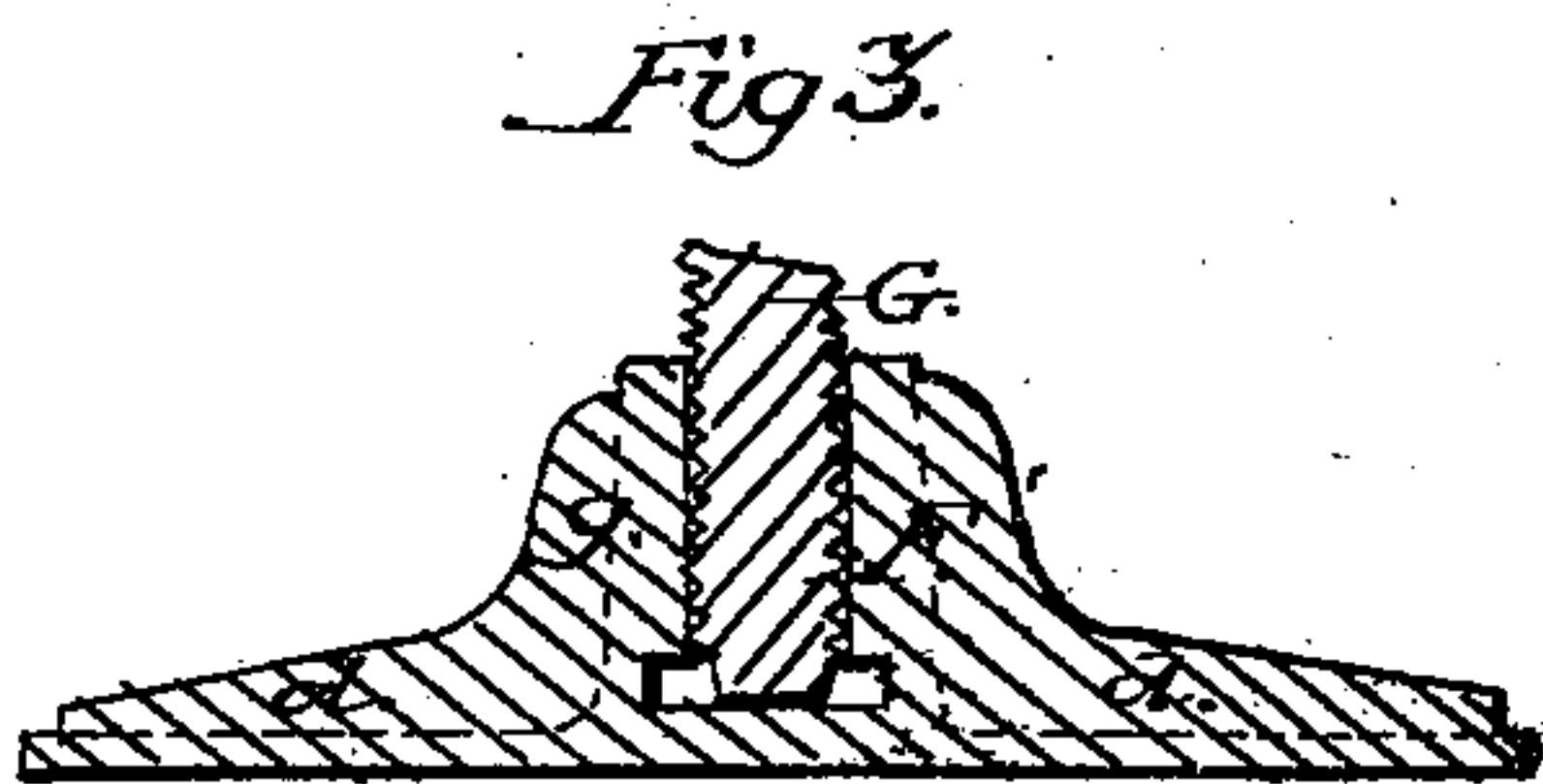
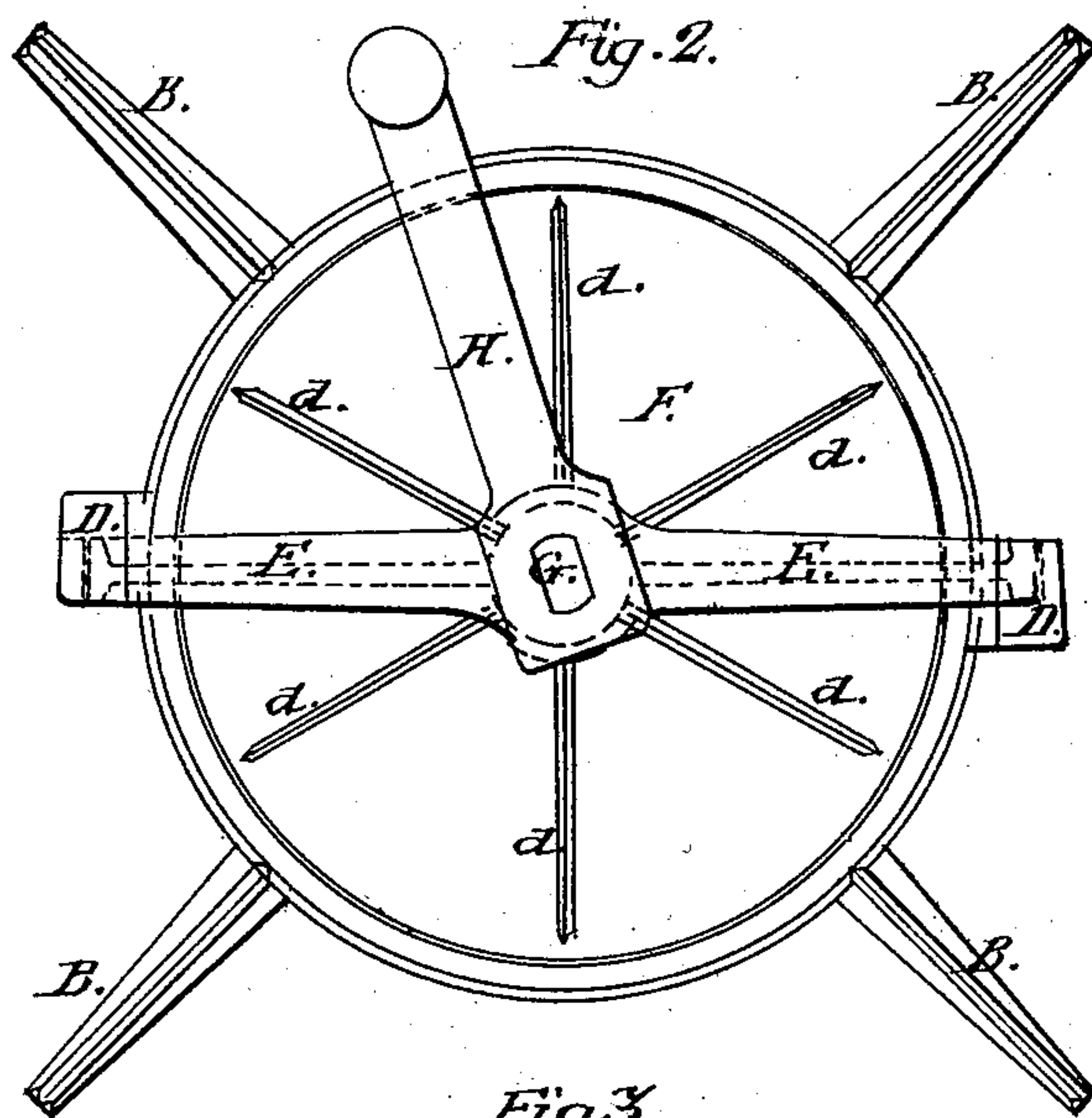
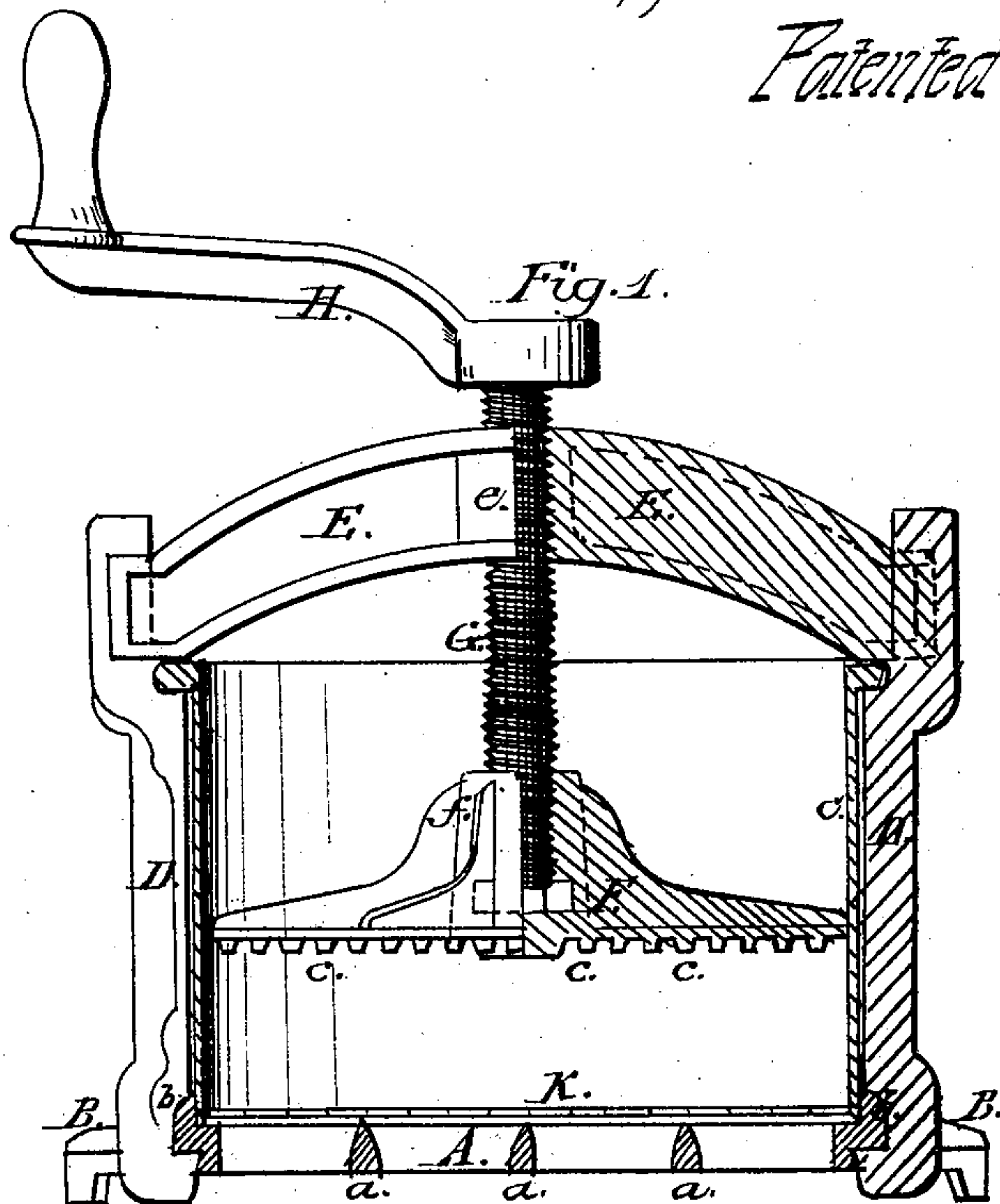


*J. H. Littlefield,*

*Lard Press.*

*No. 85,530.*

*Patented Jan. 5, 1869.*



*Witnesses:*  
*Sydney C. Smith*  
*P. C. Wilson*

*Inventor:*  
*Joseph H. Littlefield*  
*By his Attorney*  
*Chas. F. J. J. J. J.*



# United States Patent Office.

JOSEPH H. LITTLEFIELD, OF CAMBRIDGE, MASSACHUSETTS.

*Letters Patent No. 85,530, dated January 5, 1869.*

## COMBINED PRESS AND STRAINER.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, JOSEPH H. LITTLEFIELD, of Cambridge, in the State of Massachusetts, have invented certain new and useful Improvements in the Combined Press and Strainer; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side view, partly in elevation and partly in section, of the improved press and strainer;

Figure 2 is a top view of the same; and

Figure 3 is a vertical central section of the plain follower.

The same part is marked by the same letter wherever it occurs.

These improvements relate to a combined press and strainer invented by me, and patented, June 16, 1868.

They consist in an improved arrangement for operating the follower, whether in applying the pressure or in relieving it, and removing the follower from the vessel.

And, further, in an improved form of follower, and mode of operating it, so as to produce a grinding or disintegrating effect upon the materials in the vessel; all as hereinafter more particularly set forth.

To enable others skilled in the art to make and use my improvements, I will proceed to describe their construction and operation.

In the drawings—

A is a stand or frame, having arms, B B, intended to span a pot, pan, or other suitable vessel, and a grating, *a a*, upon which the strainer-plate K is supported.

The circular rim of the frame A has a flange, *b*, which receives the lower edge of the cylinder C, which forms the side of the chamber of the press.

On the outside of the cylinder are attached two standards, D D', the upper ends of which have recesses, which receive the ends of the yoke E, through the middle of which the screw G works.

These recesses are placed, as seen in fig. 2, on opposite sides of the standards D D', respectively, so that when the yoke E is rotated in one direction, its ends will be forced into the recesses, and when rotated in the opposite direction, they will be disengaged from the recesses, and leave the yoke and the parts attached to it free to be removed from the apparatus.

The central portion of the yoke E forms a nut, *e*, through which the screw G works.

On the upper end of screw G is a winch, H, by which it is turned.

Its lower end is received by a threaded socket, *f*, in the centre of follower F. As soon as the screw G is driven to the bottom of this socket, the follower F must

begin to turn with the screw, and continue to rotate as long as the screw is driven in the same direction.

The follower F is a circular plate, fitting the interior of cylinder C.

Its lower surface is covered with bosses, *c*, and on its upper surface are ribs, *d*, to give it strength.

When the follower is rotated, the bosses, coming in contact with the material in the vessel C, produce a grinding and tearing effect, which assists their rapid disintegration.

When it is not desired to produce this effect, but to limit the operation to simple compression, I make use of a plain follower, F', fig. 3, with no bosses on its lower surface, and with a plain socket, *g*, whose bore is large enough to allow the screw G to turn in it without engaging, and without rotating the follower F'.

On the bottom of the vessel C, and supported by the cross-bars of the frame A, is placed a strainer, K, made of wire gauze, or perforated metal, the size of the meshes or perforations being graduated according to the character of the work to be done.

The operation is obvious from the construction.

The advantages of this construction are, greater convenience in applying the pressure, holding all that is gained, the facility of removing the follower, and the addition of the grinding or disintegrating-action to that of mere compression.

I have contemplated several modes of operating the follower; for instance, the screw G may be attached, by its lower end, to the centre of the frame A, and stand in the middle of the chamber C, the follower forming a nut, and being screwed up and down upon it; or a wire may be attached spirally around the outside of the vessel C, and engage with hooks in the lower ends of arms, united above by a cross-piece, to which the shaft of the follower is attached.

Though I have conceived these devices, I deem the construction I have described the best.

Having thus fully described my invention,

What I claim, and desire to secure by Letters Patent, in a combined press and strainer, is—

1. The combination and arrangement of the standards D, yoke E, screw G, and followers F or F', all constructed in the manner and for the purpose described.

2. The embossed follower F, constructed and operated as described.

The above specification of my said invention signed and witnessed at Boston, this 26th day of August, A. D. 1868

Witnesses: JOSEPH H. LITTLEFIELD.

SYDNEY E. SMITH,

CHAS F. STANSBURY.