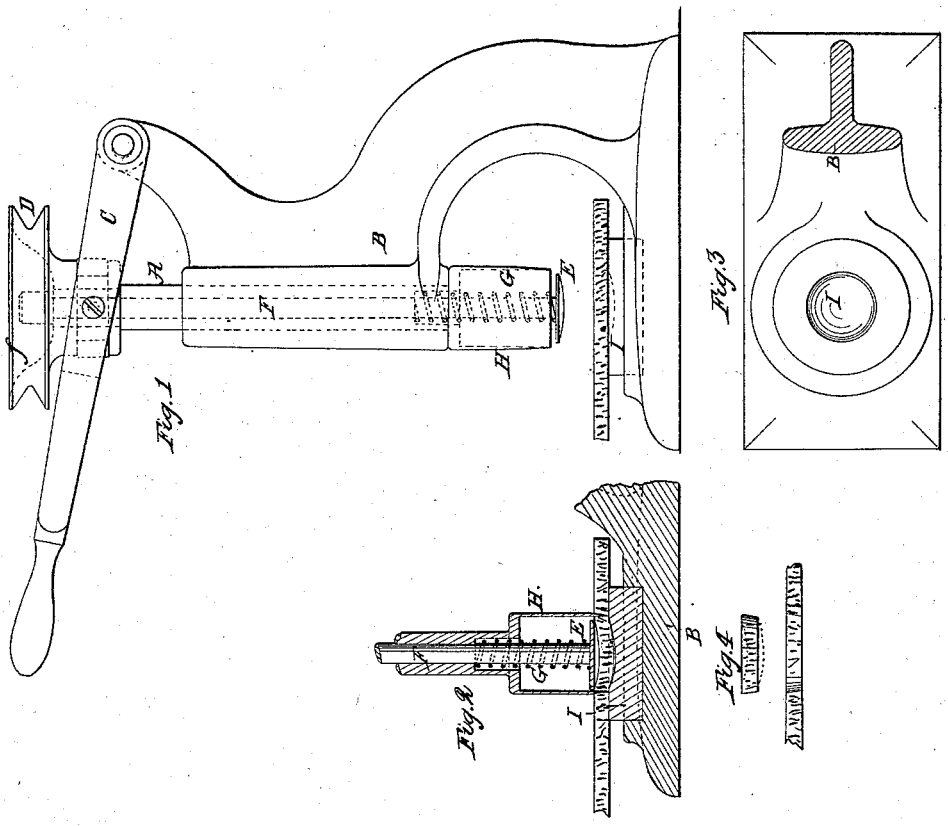
G. Hammer,

Cork Machine.

No. 54,896. Patented May 22, 1866.



Witnesses:

Theodore Bergner

Chas. E. Parsons

Inventor

George Hammer

UNITED STATES PATENT OFFICE.

GEORGE HAMMER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR CUTTING CORKS.

Specification forming part of Letters Patent No. **54,896**, dated May 22, 1866.

To all whom it may concern:

Be it known that I, GEORGE HAMMER, of the city of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Cork-Cutting Machines; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, and to the figures and letters of reference marked thereon.

The object of my invention is to provide a simple and expeditious means of cutting flat corks with a revolving cylindrical cutter in such a manner that their sides shall be tapered.

The nature of the improvement by which this end is accomplished consists in the use of a convex pressure-pad which is provided inside of the cylindrical cutter, and which pad, in conjunction with a correspondingly-concaved recess in the cutting-lock, strains the portion of the cork to be cut from the slab in such a manner that the same, after being cut out and sprung back to its natural unstrained condition, will be of a greater diameter at the top than at the bottom, although made by a cylindrically-cutting instrument.

And in order that my said invention may be fully understood, I will now proceed more particularly to describe the same.

On reference to the drawings, making part of this specification, and in which similar letters of reference allude to similar parts throughout the several views, Figure 1 is a side elevation of a cork-cutting machine containing my improvements. Fig. 2 is a sectional view of the improved parts. Fig. 3 is a plan of the cutting-block and stand. Fig. 4 is a detached view of a cork and of the slab from which it is cut as they appear after leaving the machine.

The revolving cutter-spindle A has its bearing in the frame or stand B, and is capable of being moved vertically in the direction of its axis by means of the hand-lever C.

D is the driving-pulley.

The pressure-pad E is attached to a long cylindrical stem, F, extending through the entire length of the hollow cutter-spindle A, and provided at the top with a collar, *f*. A spiral spring, G, coiled around the lower part of the stem F, serves to press the pad downward, so that it extends below the cutting-edge of the cylindrical cutter H, as seen in Fig. 1, the collar *f* resting on the top of the spindle.

The cutting-block I, upon which the cork rests, has a concavity corresponding in size and depth with the convex bottom surface of the pad E. When a slab of cork from which a series of flat corks are to be cut is laid on the block I, and the revolving cutter H moved downward for cutting the cork out of the slab, the pad E, projecting below the cutting-edge, is first brought in contact with the cork, which, to facilitate the cutting, is steamed or otherwise slightly moistened, and in this state is pliable enough to yield readily to the pressure of the pad, which forces it into the concavity below, (see Fig. 2,) thereby slightly expanding the cork at the bottom and converging its particles at the top, so that when the piece thus molded has been separated from the slab by the cutter following the pad in its downward movement, its upper diameter will be found greater than the lower diameter when the piece has sprung back to its former unstrained condition. It will be readily evident that by variation of the spring-pressure on the pad, or by more or less curvature to the pad and concavity in the block, the taper of the cork may be varied.

In quality of finish the tapered flat corks produced by means of this adjunct to the cylindrical knife are very superior, the quantity of corks cut in one machine varying from one hundred and twenty to one hundred and fifty gross per diem.

Having thus described the nature and operation of my improvements, I do not desire to limit myself in their application to any particular construction of machine or shape of cylindrical cutters, as these may be modified without thereby impairing my improvement; but

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

The use of pressure-pad E, when arranged and operating in combination with a cutter and cutting-block, substantially in the manner and for the purpose set forth.

GEORGE HAMMER.

Witnesses:

THEODORE BERGNER,
CHAS. E. PANCOAST.