D. S. YEOMAN.

Machine for Splitting or Slicing Cork.

No. 217,188. Patented July 1, 1879.

Fig: 1

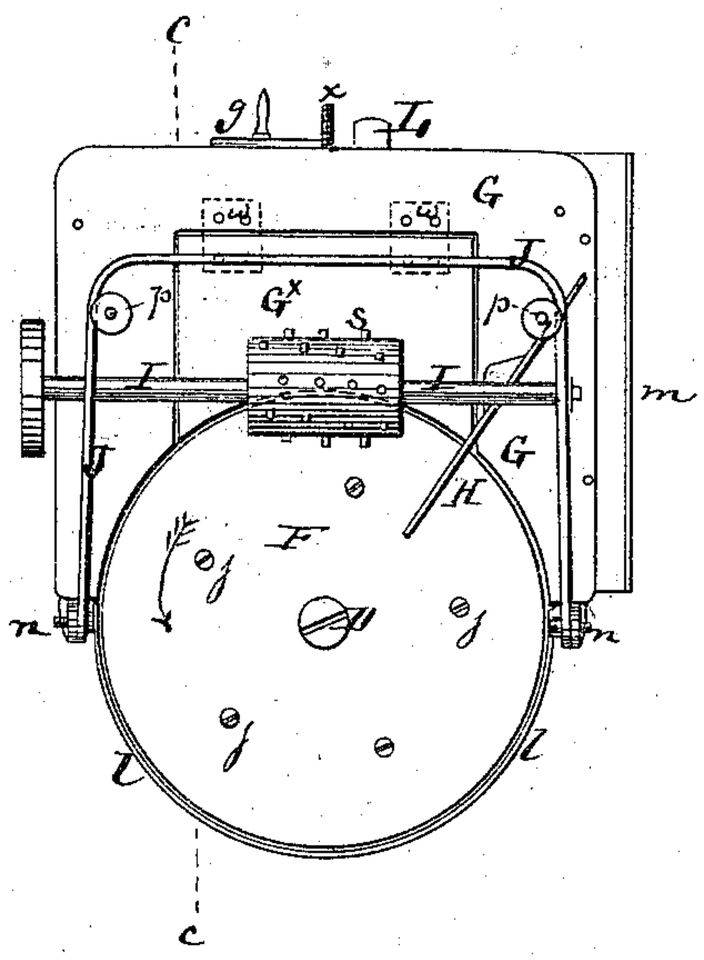


Fig: 2

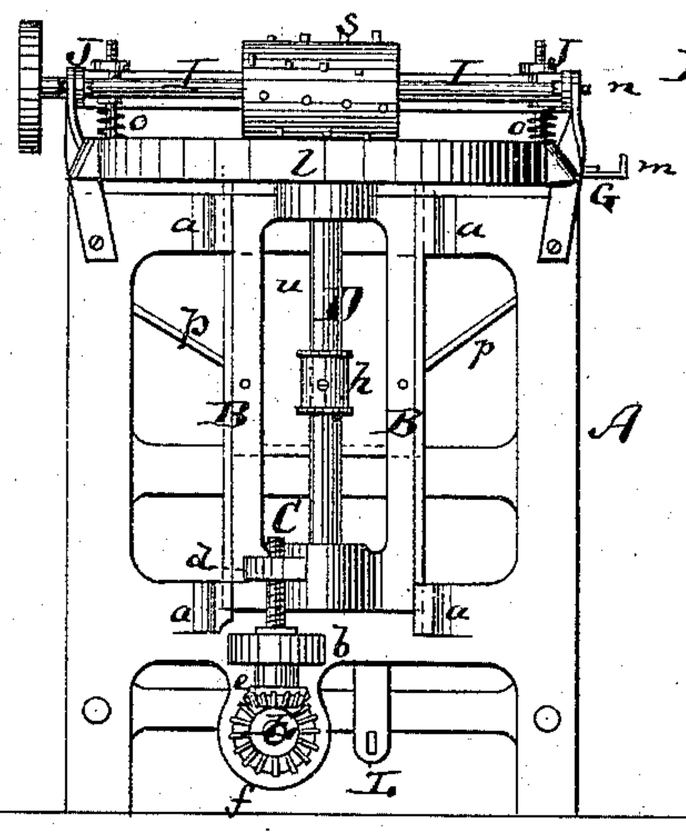
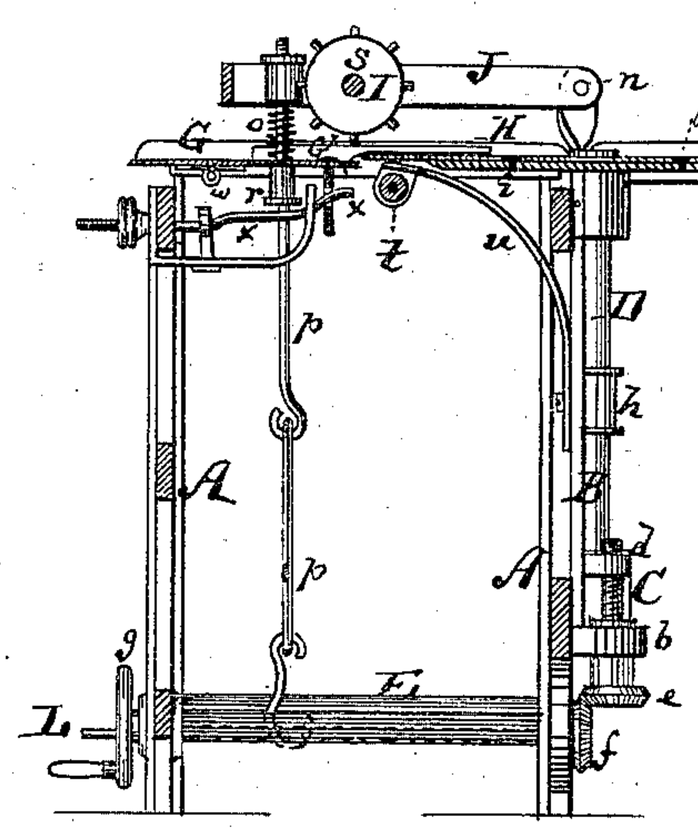


Fig: 3



Witnesses:

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UNITED STATES PATENT OFFICE.

DAVID S. YEOMAN, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN MACHINES FOR SPLITTING OR SLICING CORK.

Specification forming part of Letters Patent No. **217,188**, dated July 1, 1879; application filed May 7, 1879.

To all whom it may concern:

Be it known that I, DAVID S. YEOMAN, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Machine for Splitting or Slicing Cork, &c., of which the following is a specification.

Figure 1 is a plan or top view of my improved machine for splitting or slicing cork, &c. Fig. 2 is a rear elevation of the same. Fig. 3 is a vertical longitudinal section of the same on the line *c c*, Fig. 1.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to a new machine for slicing cork or other substances, or splitting the same into pieces of any desired thickness; and consists in a novel arrangement of vertically-adjustable circular knife, novel feed mechanism for carrying the piece of cork to be cut to the knife, novel discharge-guide applied to the under side of the knife, and also in a new oblique guide, arranged above the knife, for carrying the block or piece of cork from which a slice has been detached back to the hand of the operator.

In the accompanying drawings, the letter A represents the frame of my improved machine, which frame may be made of metal, wood, or both, of proper form and size. B is a vertically-adjustable upright frame, placed in the rear of the frame A, and guided between suitable lugs *a a*, so as not to have any lateral, but only up-and-down, motion. This frame B can be moved up or down by means of a screw, C, which is swiveled in an ear, *b*, of the frame A, and fits into a nut, *d*, that it is rigidly attached to the frame B. It is evident that by turning the screw C the frame B is moved up or down at will.

For greater convenience of access, I attach a bevel-gear wheel, *e*, to the screw C, and cause it to mesh into another bevel-gear wheel, *f*, which is secured to the end of a horizontal shaft, E, which shaft extends to the front of the machine, and carries a hand-wheel, *g*, so that the attendant, who stands at the front of the machine, may conveniently rotate the shaft E, and thereby turn the screw C and raise or lower the frame B, without having to step to the back of the machine.

The frame B carries a vertical shaft, D, which is hung in proper bearings and provided with a pulley, *h*, or equivalent device, for receiving a rotary motion. To the upper end of the shaft D, above the frame B, is affixed a disk or enlargement, *i*, which serves to carry the circular knife F. This knife is of larger diameter than the disk *i*, as shown, and is secured to the upper face of the disk by means of screws *j j*, or other fastening devices. If screws are used, their heads should be sunk into the body of the knife, so as not to project upwardly beyond the same.

It is evident from the foregoing description that by turning the screw C the frame B, shaft D, and knife F will be raised or lowered without interfering with the rotary motion of the knife.

The frame A carries at its upper part a table, G, which has an about semicircular recess, matching the circumference of the front part of the knife, as shown. In other words, the shaft D is about in line with the back of the frame A, so that half the knife enters the recess of the table. A hoop or band, *l*, is attached to the back of the frame A, and embraces the back part of the knife, projecting above the top of the same, constituting, in fact, a sort of ledge to prevent things from dropping off the knife.

H is a blade or guide-piece attached to the top of the table G, and projecting obliquely backward, so as to overlap a portion of the knife, as shown. That side of the table G which is nearest the blade H has an upwardly-projecting ledge, *m*, to prevent pieces of cork from flying off the table at that side.

I is a horizontal transverse shaft, hung in a vibrating frame, J, which, at its rear end, is pivoted by pins *n n* to ears that project upwardly from the frame A. Suitable springs *o* serve to hold the frame J in horizontal position; but the frame J may be drawn down by means of a treadle, L, which connects by links or rods *p* with the frame J. When the treadle is released the springs throw the frame J up to its horizontal position, suitable stops *r* on the rods *p* preventing its further elevation.

The treadle is at the front of the machine, convenient for the operator there stationed. The shaft I carries a drum, *s*, whose circum-

ference is studded or roughened, so that it will serve as a feeding-drum.

The operation is as follows: The screw is turned to bring the knife as far above the surface of the table G as it is intended to produce thicknesses of cork by slicing from a block. The operator places a block of cork upon the table, beneath the drum *s*, and then as rotary motion is imparted to the shaft I the drum feeds the cork against the elevated cutting-edge of the knife, which knife, being also rapidly revolved, gradually cuts into the block and slices a piece of the desired thickness off the lower part of the block. The piece sliced off drops down below the knife into a suitable receptacle, and is guided into the proper direction by a friction-roller, *t*, which is hung in an arm, *u*, that projects forwardly from frame B, as shown in Fig. 3. The piece of cork remaining on top of the knife is whirled around after the knife has done its duty in the direction of the arrow shown in Fig. 1 until it strikes the outer face of the oblique guide-piece H, the centrifugal force sufficing to throw the piece of cork along the blade H toward the ledge *m*, within convenient reach of the operator, who can take the block, replace it on the table G beneath the feed-drum *s*, and proceed as before stated. For slicing thicker pieces the knife is raised; for thinner pieces it is lowered.

Instead of making the knife vertically adjustable, it may suffice to similarly adjust part of the table G. This modification is indicated in the drawings, where part $G^{\times}$ of the table G is shown to be hinged at *w*, a suitable sliding incline, *x*, serving to raise or lower the hinged portion $G^{\times}$ into the proper plane.

Instead of having a rotating rough feed, *s*, a sliding rough or studded feed may answer the same purpose.

I claim—

1. The combination of the feeding device *s* with the table G and rotating flat knife F, revolving above the plane of the table in direction parallel thereto, and with mechanism for regulating the distance between the planes of the knife and table, substantially as herein shown and described.

2. In combination with a vertically-adjustable knife, F, and with the table G, the friction-roller *t*, hung below the knife, substantially as herein shown and described.

3. In combination with the table G and rotating knife F, the oblique guide H, extending over the surface of the knife, for the purpose of guiding the substance to be sliced from the knife to the operator, substantially as specified.

4. The combination of the shaft E and bevel-gear wheels *e f* with the screw C, frame A, sliding frame B, shaft D, and knife F, substantially as herein shown and described.

DAVID S. YEOMAN.

Witnesses:
F. v. BRIESEN,
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