(No Model.)

C. NELSON.

CORK MACHINE.

No. 432,212. Patented July 15, 1890.

Fig. 1.

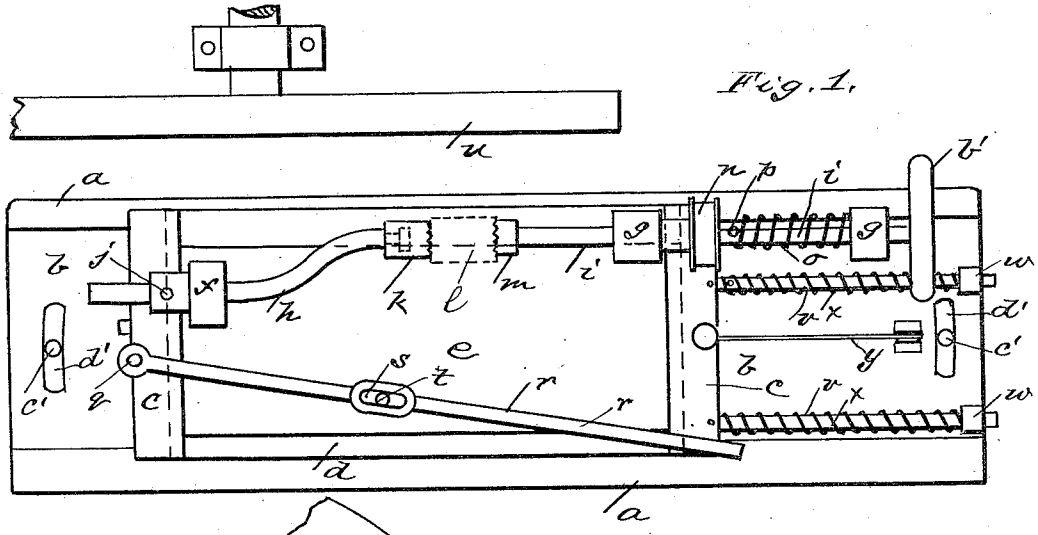
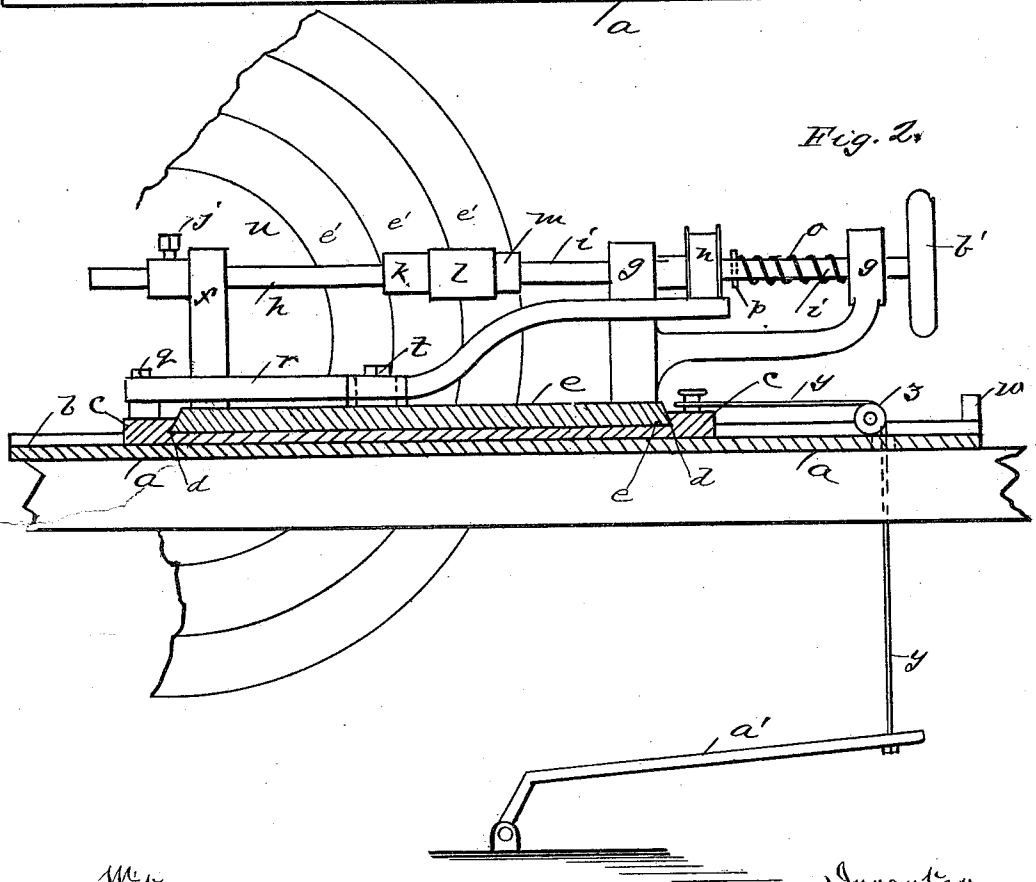


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHRISTIAN NELSON, OF PITTSBURG, PENNSYLVANIA.

CORK-MACHINE.

SPECIFICATION forming part of Letters Patent No. 432,212, dated July 15, 1890.

Application filed November 21, 1889. Serial No. 331,116. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN NELSON, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Cork-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved machine for making corks; and it consists in a frame having mounted thereon in suitable guides two carriages adapted to move at right angles to each other, a means for holding the blank piece of cork and releasing the same, and devices for moving the said carriages toward or along the face of a grinding-wheel, together with certain other details of construction and combination of parts, as will be fully set forth hereinafter.

In the accompanying drawings, Figure 1 is a plan view of my improved machine. Fig. 2 is a sectional elevation of the same, partly shown in section.

To put my invention into practice I provide a frame *a*, of suitable size and form of construction, having formed in the direction of its length the female portion *b* of a dovetail slide. Operating in this slide *b* is a carriage *c*, provided with a similar slide *d*, arranged in an opposite direction to that below and provided with a second carriage *e*. Mounted on the top of this last-mentioned carriage *e*, in suitable bearings *f g*, are two short shafts *h i*, one of which is slightly bent to and secured in its bearing *f* by a set-screw *j*. This shaft *h* may be moved in the direction of its length and held in any desired position by the set-screw *j*. On the inner end of this shaft *h* is loosely attached a clutch *k* for engaging with one end of the cork *l*. The other shaft *i* is supported loosely in its bearings *g*, and is also provided with a clutch *m* for engaging with the cork *l*. Rigidly attached to this shaft *i* is a pulley-wheel *n* for giving the same a rotary movement by a suitable belt. About this same shaft *i* is a coil-spring *o*, secured against a pin *p* and one of the bearings *g* in a manner that when the said shaft *i* is moved to release the cork *l* the same will recover or go back to its original position. Secured to one end of the lower carriage *c* by a pivot *q* is a lever *r*, provided with an open slot *s*, which engages with an upwardly-projecting pin *t*, attached to the upper or top carriage *e* in a manner that the said carriage *e* and its several parts may be moved toward or away from the flat face of a large grinding-wheel *u*. Attached to one end of the lower carriage *c* are two rods *v*, which move through two bearings *w*, against which the one end of two coil-springs *x* finds a bearing, the other ends of these springs *x* resting against the carriage *c*. Attached to this same carriage *c* is a cord or chain *y*, which passes over a small roller *z* and then attached to a foot-treadle *a'*. This treadle *a'* when operated moves the carriages *c e* in the direction of the length of the machine and are brought back to their former position by the two coil-springs *x*.

In operation the cork is cut in suitable lengths and a single piece placed between the two clamps *k m*. By means of the lever *r* the said piece *l* is brought in contact with the side of a large grinding-wheel *u*, the shaft *i* is given a rotary motion, and the cork *l* ground circular in form and then removed by drawing the said shaft *i* back. This shaft *i* may either be revolved by power or the same turned by hand by means of a small hand-wheel *b'*, secured to the outer end of the same.

In order to make a tapering cork, the entire machine is canted or turned so that the carriages and the work clamped therein lie at an angle to the plane of the vertical working-surfaces on the grinding-wheel instead of being parallel therewith, as shown in Fig. 1, and the machine, together with its carriages and several appliances, is secured in the desired position by bolts *c'*, passing through slots *d'*, formed in the ends of the frame *a*. The grinding-wheel *u* is provided on one of its faces with annular sand-paper rings *e'*, as clearly shown in Fig. 2, each of which being of a different grade or degree of fineness, so that when the blank is first moved against a coarse ring the edges may be quickly removed and then by means of the treadle the said cork moved along the face of the wheel *u* to finish the same on paper with a fine sand.

Having thus described my invention, what I

claim, and desire to secure by Letters Patent, is—

In a machine for grinding corks, the combination of an endwise-movable carriage *c*, a rotary grinding-disk arranged alongside of said carriage *c* with its lateral working-face adjacent thereto, springs for normally impelling the carriage *c* in one direction and substantially parallel with the lateral working-face of said grinding-disk, a treadle connected to the carriage for moving the same in a contrary direction, another carriage *e* mounted on the carriage *c* to slide in a line at right angles to the movement of the carriage *c*, a lever fulcrumed at one end on the carriage *c* and connected directly to the carriage *e* for moving the latter carriage at will toward or from the grinding-disk, and the rotary work-clamps mounted on the carriage *e*, as and for the purpose described.

In testimony that I claim the foregoing I hereunto affix my signature this 24th day of October, A. D. 1889.

CHRISTIAN NELSON. [L. S.]

In presence of—
M. E. HARRISON,
C. C. LEE.