A. FABRE.

Machine for Cutting Cork.

No. 199,047. Patented Jan. 8, 1878.

Fig. 1.

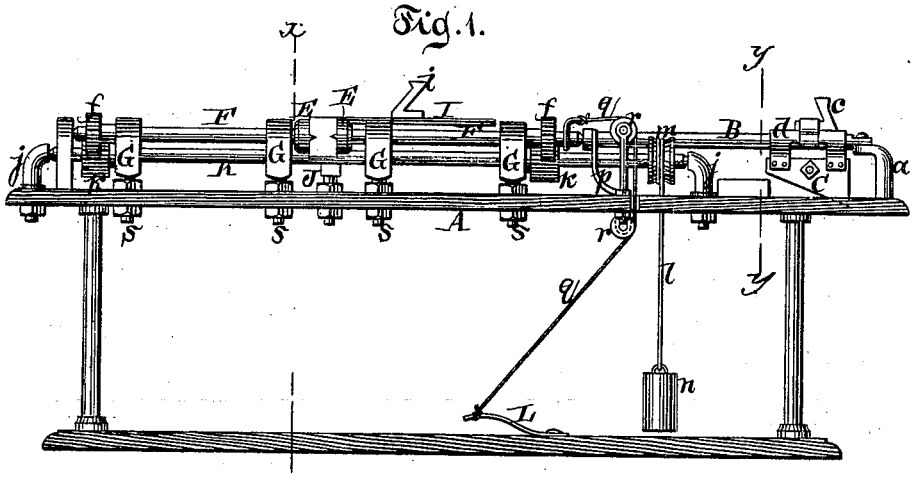


Fig. 2.

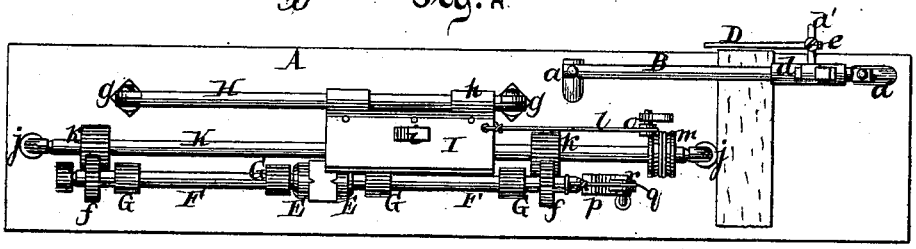


Fig. 3.

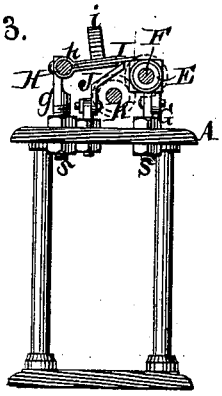
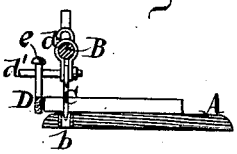


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

ANTONIO FABRE, OF NEW YORK, N. Y.

IMPROVEMENT IN MACHINES FOR CUTTING CORKS.

Specification forming part of Letters Patent No. **199,047**, dated January 8, 1878; application filed November 23, 1877.

To all whom it may concern:

Be it known that I, ANTONIO FABRE, of the city, county, and State of New York, have invented a new and useful Improvement in Cork-Cutting Machines, which invention is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a side elevation of a machine constructed according to my invention. Fig. 2 is a plan or top view thereof. Fig. 3 is a cross-section in the plane of the line *x x*, Fig. 1. Fig. 4 is a like section in the plane of the line *y y*, Fig. 1.

Similar letters indicate corresponding parts.

My improvement relates to machines for cutting or shaping cork for bottle-stoppers; and it consists in the combination of a bed-plate, a knife-receiving socket in said bed-plate, a knife-guide located above the bed-plate, and a blank-cutting knife moving on said guide, and projecting into said receiving-socket, in such manner that, if a strip of cork is placed on the bed-plate transversely to said knife, the same can readily be cut into blanks of suitable form to be finished or shaped into bottle-stoppers; also, in combining with the parts above enumerated an adjustable gage, for regulating the size of the blanks into which the cork is cut by said blank-cutting knife; also, in the combination, with a clutch-shaft, of a hinged finishing-knife, reciprocating on a guide made adjustable relatively to the clutch-shaft, so that a tapering form is given to a cork or stopper operated upon by the knife.

In the drawings, the letter A designates the bed-plate of my machine, in which is formed a knife-receiving socket, *b*, Fig. 4, and B is a knife-guide, having the form of a rod, which is located above the bed-plate A, and supported by standards *a a*. C is the blade of the blank-cutting knife, preferably made with an oblique cutting-edge, and which is secured to a stock, *d*, embracing the guide B, so as to move or slide thereon, and having a handle, *c*.

A strip of cork of a width equal to the length of the bottle-stoppers to be produced, and of a thickness equal to the diameter thereof, is placed on the bed-plate A, transversely to the blade C of the blank-cutting knife, and then this knife is moved forward by taking hold of the handle *c*, so as to penetrate and cut through the cork, thus producing a blank of block form, and suitable to be finished or shaped into a bottle-stopper. The cork is fed or moved into the path of the knife, after each blank is cut, by hand; and in order to insure the uniformity of the blanks produced, I make use of a gage or stop, D, which serves to arrest the cork as it is fed or moved forward, as stated. This gage D is made adjustable, so as to permit of regulating the size of the cork-blanks, and in the example shown it is attached to a bar, *d'*, projecting from the blade C of the blank-cutting knife, so that the gage is caused to move with said knife. Said gage, moreover, is attached to the bar *d'* by means of an adjusting-screw, *e*.

The letter E designates the two sections of a clutch secured to the inner ends of a divided shaft, F, which has its bearings in standards G, rising from the bed-plate A, and to the outer ends of which are secured cog-wheels *f f*. Adjacent to the clutch-shaft F is located a guide, H, for the finishing-knife I, this guide, like the knife-guide B, having the form of a rod, which is supported by standards *g g*. The blade of the finishing-knife I is secured to a stock, *h*, which embraces the guide H, so as to move or slide thereon, and is supported in a horizontal position, or nearly so, by a rest or bracket, J, (see Fig. 3,) this knife-stock being, moreover, provided with a handle, *i*.

The letter K designates a driving-shaft, having its bearings in standards *j j*, and provided with cog-wheels *k k*, which mesh with the cog-wheels *f f* of the clutch-shaft, so that the latter partakes of the motion of said driving-shaft. The driving-shaft K connects with the stock *h* of the finishing-knife in such way that when the latter is moved forward a revolving motion is imparted to said shaft.

In the example shown this object is effected by connecting to the stock *h* of the finishing-knife one end of a cord or chain, *l*, which is wound on a pulley, *m*, secured on the driving-shaft K, and to the other end of which is fastened a weight, *n*, said cord being guided on the pulley *m* by a wheel, *o*. (See Fig. 2.) When the knife-stock *h* is moved forward the cord or chain *l* is unwound from the pulley *m*

at one end, and wound thereon at its other end, whereby said pulley, and with it the driving-shaft K, is caused to revolve. When said knife-stock is moved back to the position shown, the cord or chain *l* is returned to its normal position by the action of the weight *n*.

The cork-blank to be finished is held or clamped in the clutch E, the parts of which have a tendency to move toward each other, one section of the clutch-shaft F being subjected to the action of a spring, *p*, for this purpose, while to the same section of said shaft is connected a rope or chain, *q*, by which it can be drawn back against the action of said spring, so as to release the cork-blank. The rope or chain *q* passes over one or more wheels, *r*, and is connected to a treadle, L.

When the cork-blank has been fastened in the clutch E, the finishing-knife is moved forward by taking hold of the handle *i*, the same being allowed to lie on its rest J during this movement, when such blank is revolved by reason of the revolution of the clutch-shaft F and clutch, while at the same time the blank comes in contact with the blade of the finishing-knife I, and is thereby cut or shaped to the form of a bottle-stopper.

The position of the knife-rest J determines the diameter of the stopper produced by the finishing-knife I; and in order to permit of producing stoppers of different diameters, I make said knife-rest adjustable.

In order to permit of giving to the stoppers produced a tapering form, I make the clutch-shaft F and the finishing-knife guide H (either or both) adjustable in a vertical direction, so that one or the other thereof can be inclined, which has the effect of giving to the stopper a tapering form.

In the example shown both said clutch-shaft F and the knife-guide H are adjustable, and the method of accomplishing this object consists in securing the standards G *g g*, which support said shaft and guide, to the bed-plate A by means of screw-bolts *s*, as shown.

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

1. In a cork-cutting machine, the combination of a bed-plate, a knife-receiving socket in said bed-plate, a knife-guide located above the bed-plate, and a blank-cutting knife moving on said guide and projecting into the receiving-socket, substantially as described.

2. The combination, in a cork-cutting machine, of an adjustable gage for regulating the size of the cork-blank with a bed-plate, a knife-receiving socket in said bed-plate, a knife-guide located above the bed-plate, and a blank-cutting knife moving on said guide and projecting into the receiving-socket, substantially as described.

3. The combination, in a cork-cutting machine, of a clutch-shaft and a hinged finishing-knife, reciprocating on a guide made adjustable with relation to the clutch, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand this 16th day of November, 1877.

ANTONIO FABRE.

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.