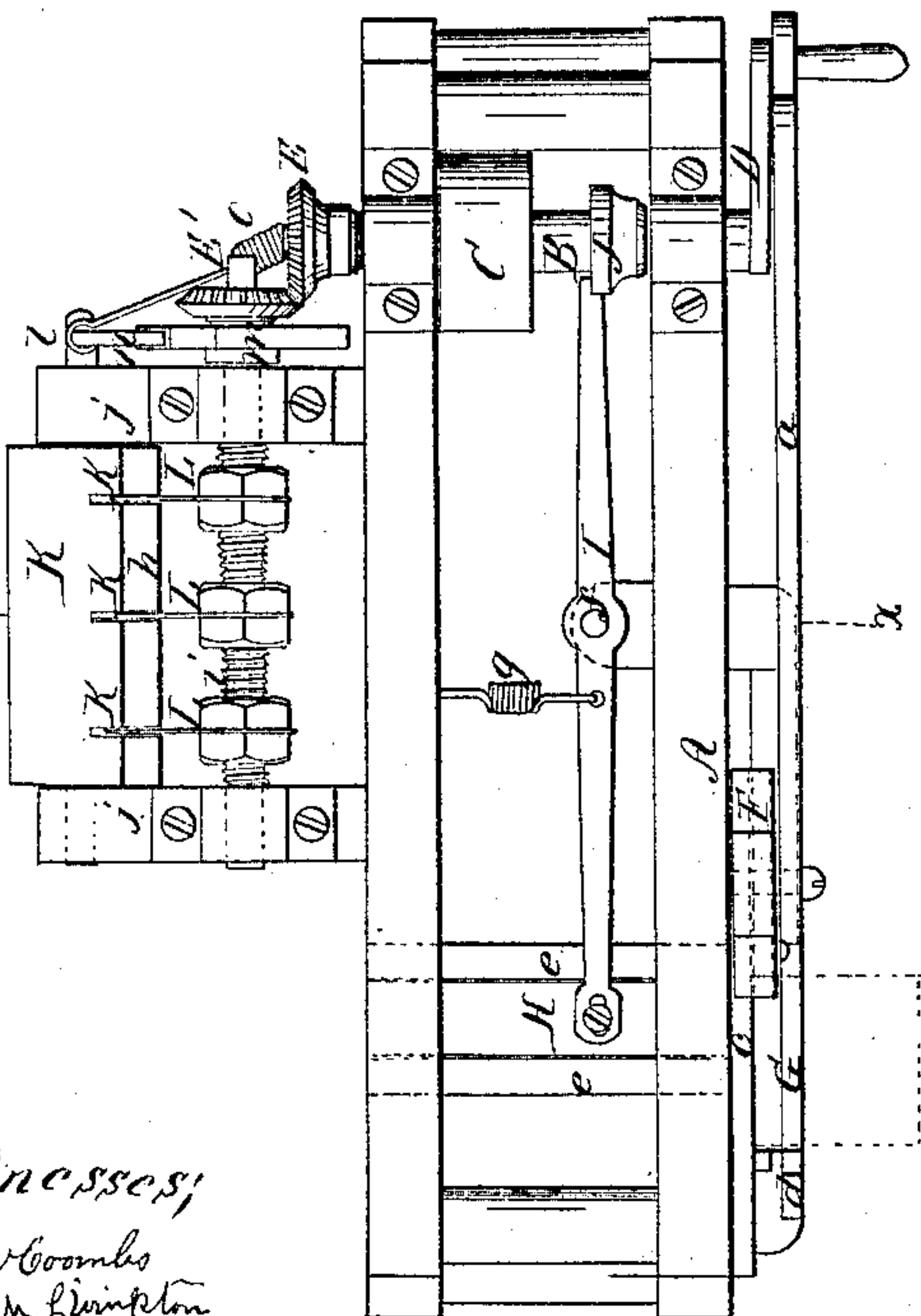


E. Conroy,
Cork Machine,

No 34,291.

Patented Feb. 4, 1862.

Fig: 1.



Witnesses,
J. W. Coombs
M. M. Livingston

Fig: 3.

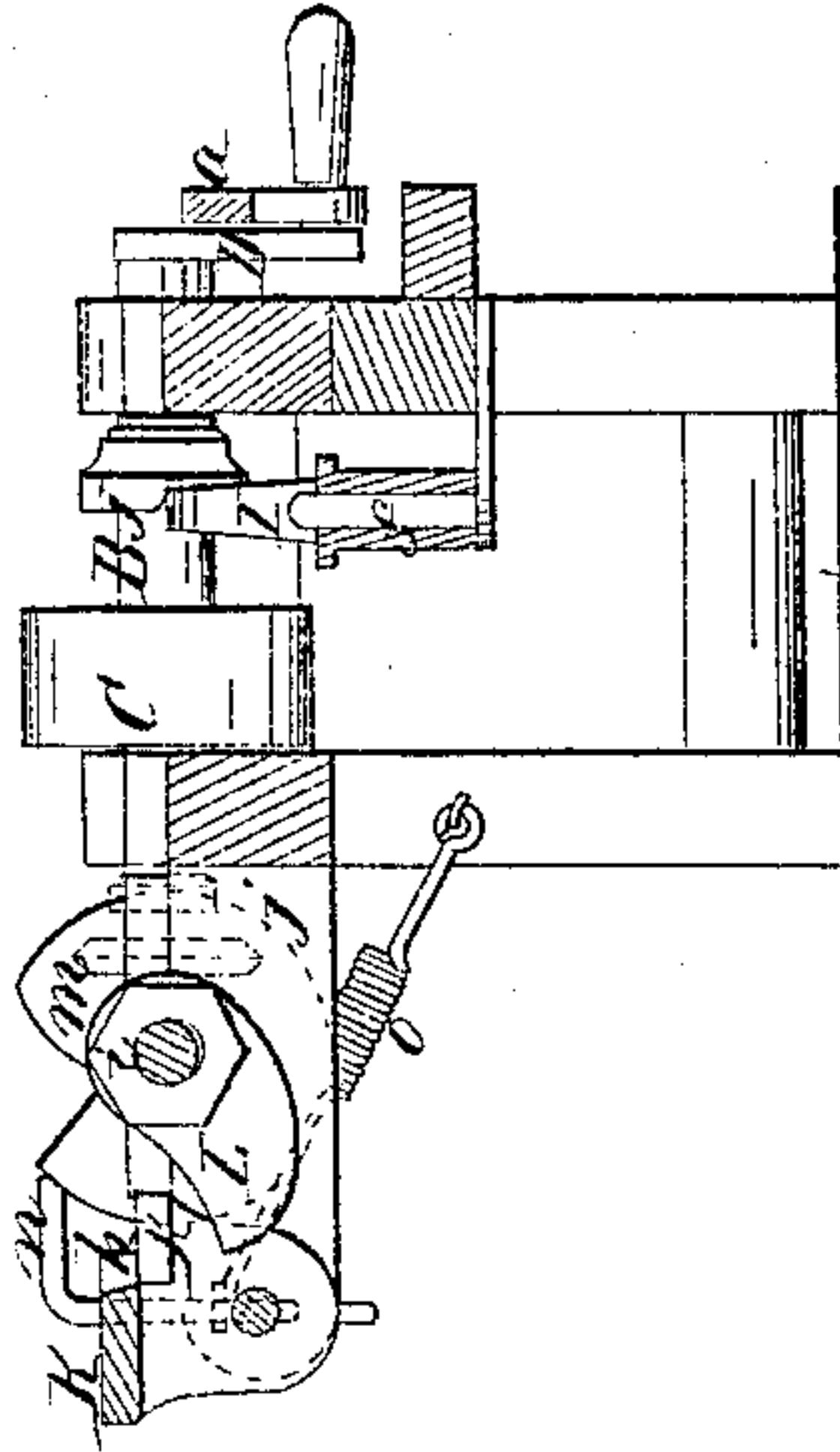
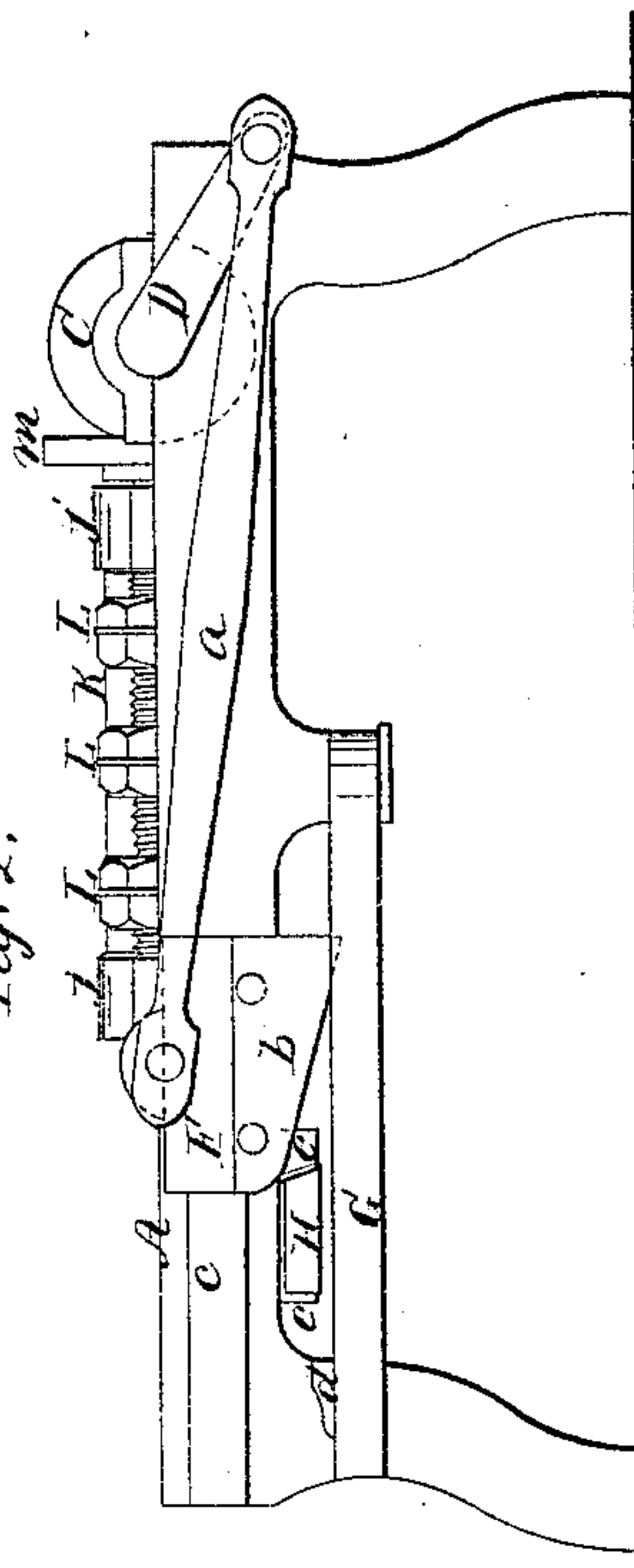


Fig: 2.



Inventor,
E. Conroy
Per Munn & Co
Attorneys

UNITED STATES PATENT OFFICE.

EDWARD CONROY, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR CUTTING CORKS.

Specification forming part of Letters Patent No. 34,291, dated February 4, 1862.

To all whom it may concern:

Be it known that I, EDWARD CONROY, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Cork-Cutting Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a plan or top view of my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a transverse vertical section of the same, the line *xx*, Fig. 1, indicating the plane of section.

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

This invention consists in the arrangement of a reciprocating sliding knife in combination with a vibrating gage-plate and with a stationary rest, in such a manner that the blocks of cork can be cut into slices or sticks of the desired thickness, and that said sticks after being cut are caused to drop freely from under the knife by the action of the vibrating gage, thereby enabling the operator to proceed with his work without interruption and without danger of choking the machine.

It consists, also, in the employment of an automatic tilting table, in combination with a series of revolving cutters for the purpose of cutting the sticks into pieces of suitable length for the corks to be manufactured.

To enable those skilled in the art to make and use my invention, I will proceed to describe it with reference to the drawings.

The frame A, which may be made of wood or any other suitable material, forms the bearings for the driving-shaft B, to which motion is imparted by means of a pulley C. Both ends of the shaft extend beyond the frame, and firmly secured to one end is the crank D, and to the other the bevel-wheel E. The crank D connects by the pitman *a* with the cutter-head F, to which the knife *b* is firmly secured. The cutter head slides on the V-shaped guide-bar *c*, which projects beyond the side of the frame, and it receives a reciprocating rectilinear motion by the action of the crank D.

The cork to be cut is placed on the platform or rest G, which is provided with a stop or

shoulder *d*, to prevent the block slipping under the action of the knife *b*. The edge of the knife is inclined so that it acts gradually on the cork, and the lowest point of the cutting-edge extends below the surface of the rest G, thus cutting the cork clear through without fail.

The thickness of the slices or sticks to be cut off is determined by the gage-plate H, which extends transversely across the frame, being retained by V-shaped strips *e* in such a manner that it slides easily backward and forward. The position of said gage-plate is determined by a double-armed lever I, which is fulcrated on a pivot *f*, and one end of which is pivoted to the gage-plate, while its other end is forced by a spring *g* against the face of the cam J, that is attached to the driving-shaft B. This cam is so shaped that by its action a slight retrograde motion is imparted to the gage-plate H just after the knife has commenced to cut into the cork. By this motion the knife is permitted to pass freely through the cork, and after it has passed clear through the slice or stick cut off drops down and the next slice or stick can be cut off without interruption.

The sticks thus cut off on one side of the machine are brought on the other side to be cut up into pieces of the desired length. To effect this purpose a table K is produced, which is furnished with a rectangular recess *h* to receive the sticks and to hold them while they are acted upon by the rotary cutters L. These cutters are arranged at suitable distances apart on the shaft *i*, which has its bearings on arms *j*, extending from the side of the frame A, and to which a rotary motion is imparted through the action of the bevel-wheel E on the main shaft B, gearing into a similar bevel-wheel E' on the cutter-shaft *i*. As the cutters rotate they pass through slots *k* in the table K, and the sticks placed on said table are cut up in pieces, the length of which is determined by the distance of the cutters L.

The table K is firmly secured to a rock-shaft *l*, which has its bearings in the ends of the arms *j*, and to which an oscillating motion is imparted by the action of a cam *m* on a hooked tappet *n*. The cam *m* is firmly secured to the cutter-shaft *i*, and the tappet *n*, which is rigidly attached to the rock-shaft *l*, is

pressed against the surface of the cam by a spring *o*. The cam is of such a shape that it retains the table K in a horizontal position until the cutters have passed clear through the stick and through the slots *k*; but when the cutters have turned clear of the table the latter is tilted automatically, and the pieces of cork drop down, and long before the cutters have completed their revolution the table is brought back in a horizontal position, ready to receive a fresh stick. By these means the operation of cutting the blocks of cork into rectangular pieces suitable for certain sizes of corks can be carried on with ease and facility, and without danger of choking the machine.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The arrangement of the vibrating gage-plate H and stationary rest G, in combination with the reciprocating knife *b*, constructed and operating substantially in the manner and for the purpose shown and described.

2. The arrangement of the tilting table K, in combination with one or more rotary cutters L, constructed and operating substantially as and for the purpose set forth.

EDWARD CONROY.

Witnesses:

WM. HOWELL REED,
SIDNEY WILLARD.