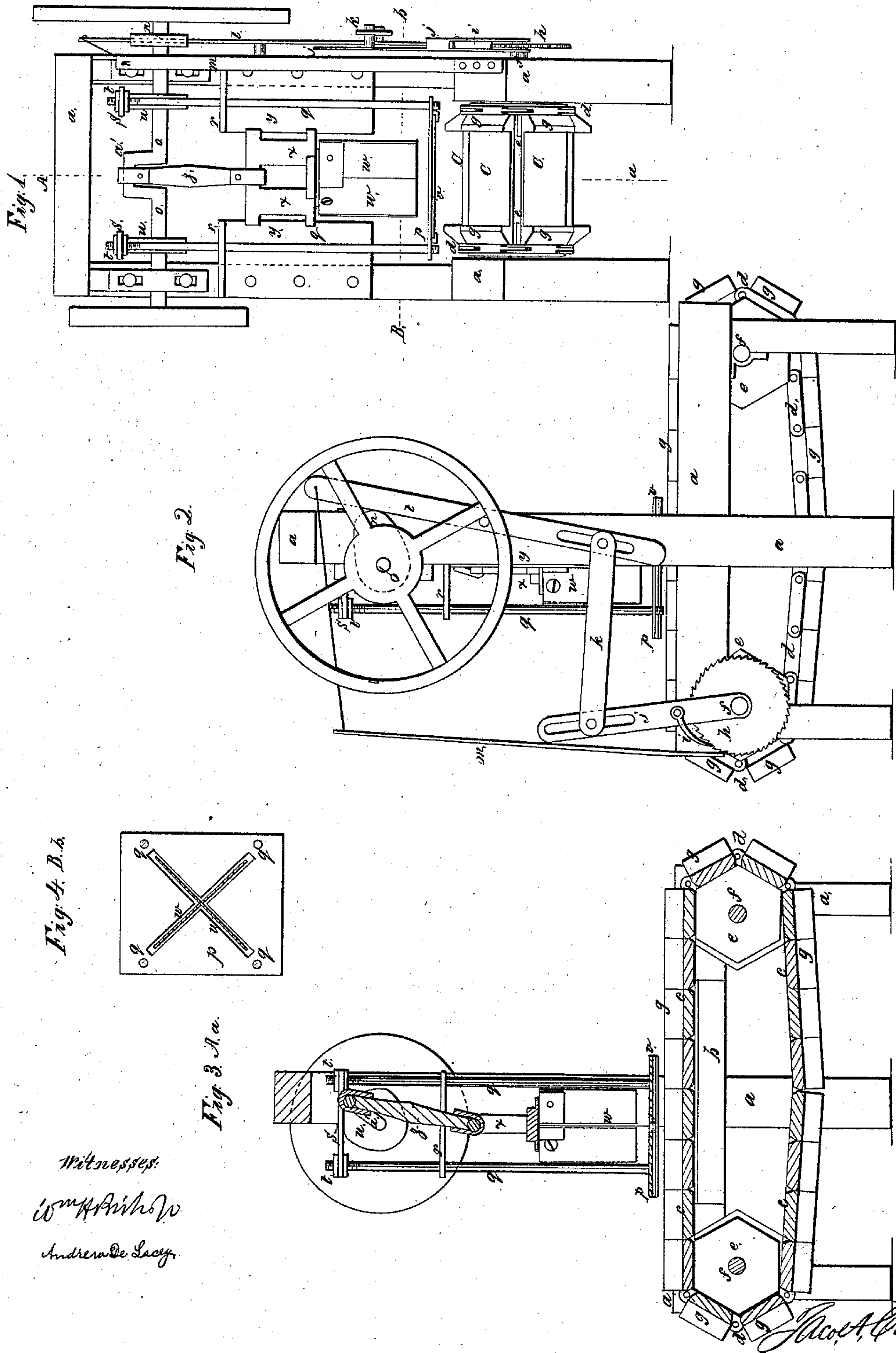


J. A. Canover,
Splitting Wood.

N^o 12,857.

Patented May 15, 1855.



Witnesses:
Wm. H. Smith
Andrew De Lacy.

Inventor
J. A. Canover

UNITED STATES PATENT OFFICE.

JACOB A. CONOVER, OF NEW YORK, N. Y.

MACHINE FOR SPLITTING WOOD.

Specification of Letters Patent No. 12,857, dated May 15, 1855.

To all whom it may concern:

Be it known that I, JACOB A. CONOVER, of the city, county, and State of New York, have invented a new and Improved Machine for Splitting Kindling-Wood, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1, is a front elevation of the machine; Fig. 2, a side elevation; Fig. 3, a longitudinal vertical section taken at the line A, *a*, of Fig. 1; and Fig. 4, a horizontal section taken at the line B, *b*, of Fig. 1, showing the knives *w*, and plate *p*.

The same letters indicate like parts in all the figures.

In my said invention the blocks of wood to be split, and which have been previously sawed of the required length, are placed upright on a movable platform, bed or carriage, which for convenience I prefer to make in sections linked together in the form of an endless chain passing over a suitable table and around wheels or drums at each end. By means of a suitable feed motion the carriage is moved by an intermittent motion to carry the blocks formed under the action of splitting knives attached to a stock which has a reciprocating motion at right angles to the surface of the carriage, to split the blocks as they are brought under the cutters. And as the cutters rise they are cleared from the blocks by a clearing plate placed above and provided with suitable apertures in which the cutters play freely. And with the view to the better operation of this clearing plate and to make it answer the additional purpose of a holder its under surface is provided with an elastic pad of india rubber or other elastic substance and the plate receives an intermittent up and down motion to make it press upon and hold the blocks during the operation of splitting, and relieve them for the feed motion.

In the accompanying drawings *a*, represents a suitable frame, and *b*, a table on which slides an endless bed *c*, formed in sections and linked together by chains *d*, at each side, passing around suitable polygonal wheels *e*, *e*, one set at each end, and mounted on shafts *f*, *f*.

The sections of the bed *c*, are formed with flanges *g*, *g*, so as to form a sort of endless moving trough to receive the blocks of wood to be split. One of the shafts *f*, passes

through the frame and is provided with a ratchet wheel *h*, operated by a feed hand *i*, on a vibrating arm *j*, connected by a joint link *k*, with a lever *l*, drawn in one direction by a spring *m*, and alternately forced in the opposite direction by a cam *n*, on the driving shaft *o*. The joint link *k*, is connected by wrist pins which can be shifted in slots in the vibrating arm and lever for the purpose of adjusting the feed motion, which is thus to be imparted to the endless bed, to suit the size to which it may be desired to split the wood.

The blocks of wood are held down upon the endless bed during the operation of the cutter by means of a plate *p*, placed above the bed and suspended by four rods *q*, *q*, *q*, *q*, working in guides *r*, *r*, and connected in two pairs by two cross braces *s*, *s*, with adjusting nuts *t*, *t*, tapped into the rods, by which the height of the plate *p*, above can be regulated to suit the various lengths of wood to be split. The two cross braces rest on cams *u*, *u*, on the driving shaft by the rotation of which the plate is alternately lifted up from the blocks of wood to permit the feed motion to take place, and then let down to hold the blocks during the operation of splitting. A sheet of india rubber or other elastic substance *v*, is secured to the under face of the plate *p*, to form an elastic pad the better to hold the blocks down onto the bed.

The splitting knives *w*, with the edge in the form of a cross, is secured to a stock *x*, adapted to slide between vertical ways *y*, *y*, and connected by a rod *z*, with a crank *a'*, on the driving shaft from which the cutters receive a vertical reciprocating motion. The cutter passes through and works freely in a slot in the plate *p*.

The blocks of wood are placed upright on the endless bed, and so soon as the plate *p*, is lifted up, the feed motion takes place to advance the blocks to the knife. The plate *p*, is then permitted to descend onto and to hold the blocks in place while the cutter descends to effect the splitting, and as the cutter rises the blocks are kept down by the plate *p*, and when the cutters are cleared the plate is then lifted to permit the next feed motion to take place.

I do not confine myself to the form of knife described and represented, as that can be changed at pleasure, although I prefer the form described. Nor do I confine my-

self to the use of an endless bed, as a reciprocating bed or carriage will answer the purpose, but not so well. Nor do I confine myself to the making of the holding or clearing plate movable, or with an elastic pad on its under surface, as it will answer the purpose of a clearer without these features which add to it the function of holding down the blocks firmly during the operation of splitting.

It will be obvious to the mechanician that the several parts constituting the said machine may be varied in form or by the substitution of equivalents, and still possess the substantial mode of operation which I have invented.

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

1. The movable bed or carriage for carrying and advancing the blocks of wood, in combination with the reciprocating cutters operating at right angles with the sur-

face of the bed or carriage, substantially as and for the purpose specified.

2. I also claim, in combination with the bed or carriage and reciprocating cutter substantially as specified the employment of the clearing plate through which the cutters pass, substantially as and for the purpose specified.

3. And finally I claim, providing the said clearing plate with an elastic pad, and imparting to it an up and down motion substantially as specified, in its combination with the bed or carriage and reciprocating cutter, as specified, by means of which the said plate under the combination specified performs the double office of holding the blocks and clearing the cutters as specified.

JACOB A. CONOVER.

Witnesses:

WM. H. BISHOP,

ANDREW DE LACY.