

J. J. Ralya.

Dressing Staves for Barrels.

N^o 71326

Patented Nov. 26, 1867

Fig. 2

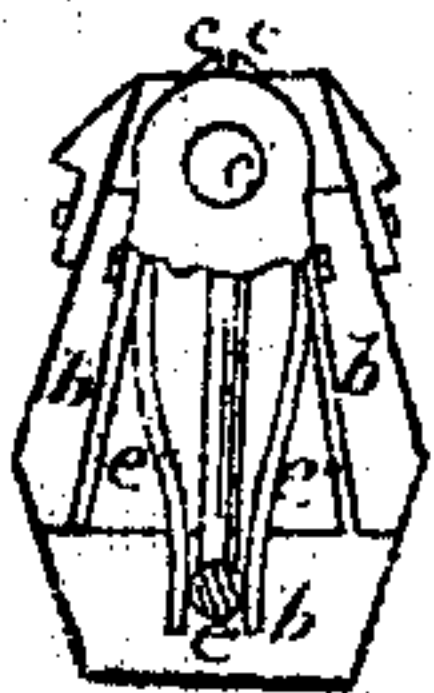


Fig. 1.

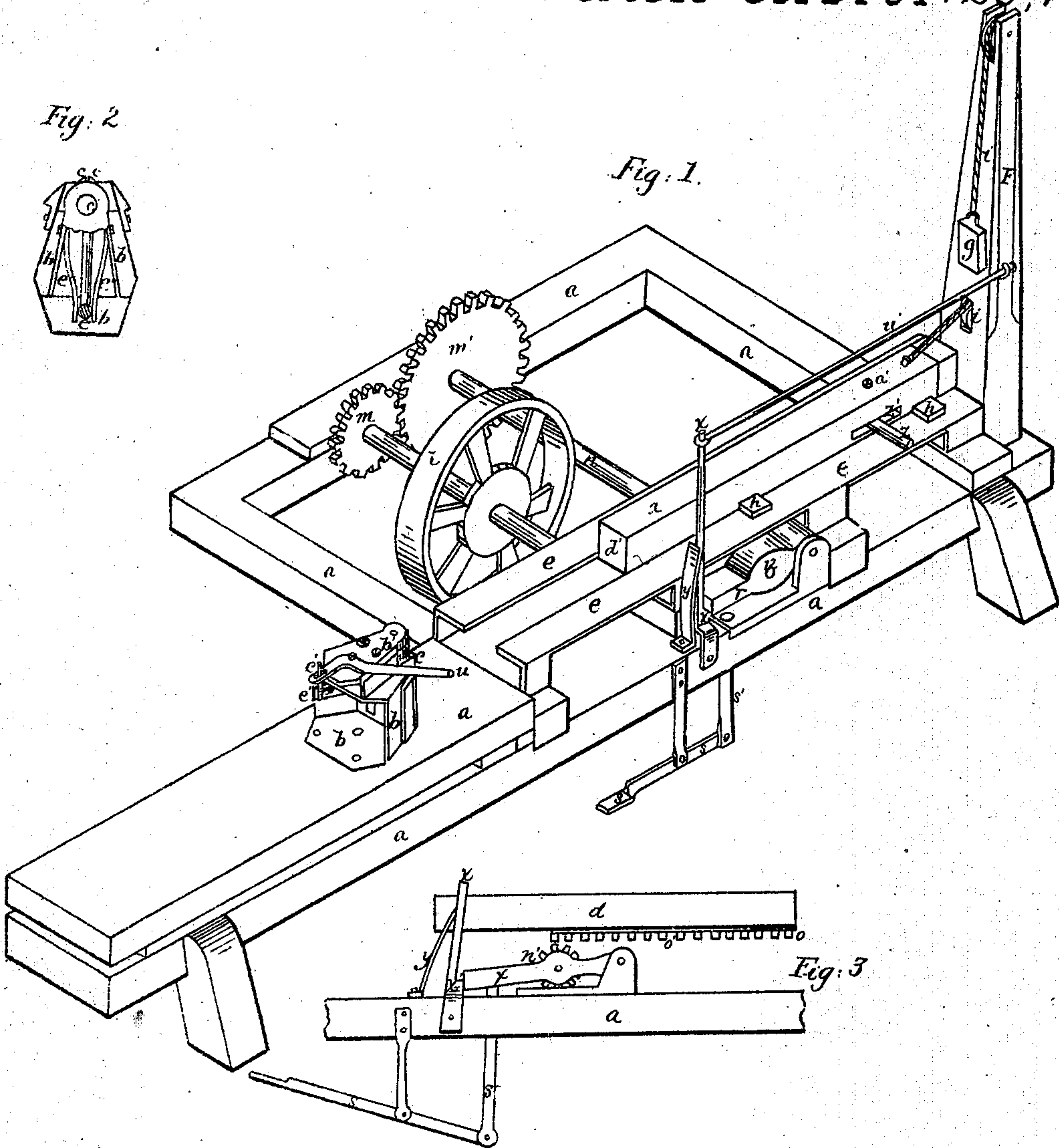


Fig. 3

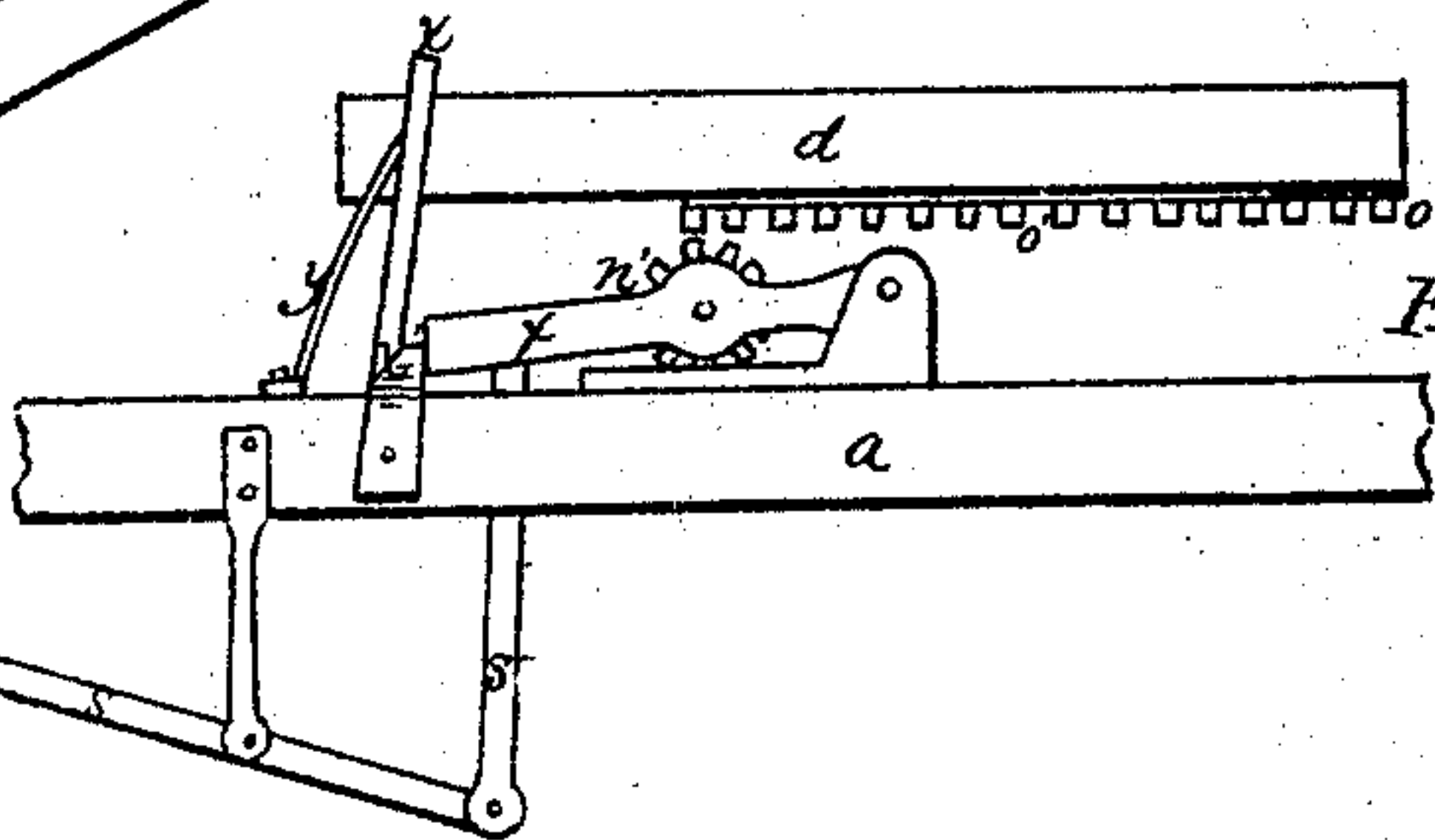
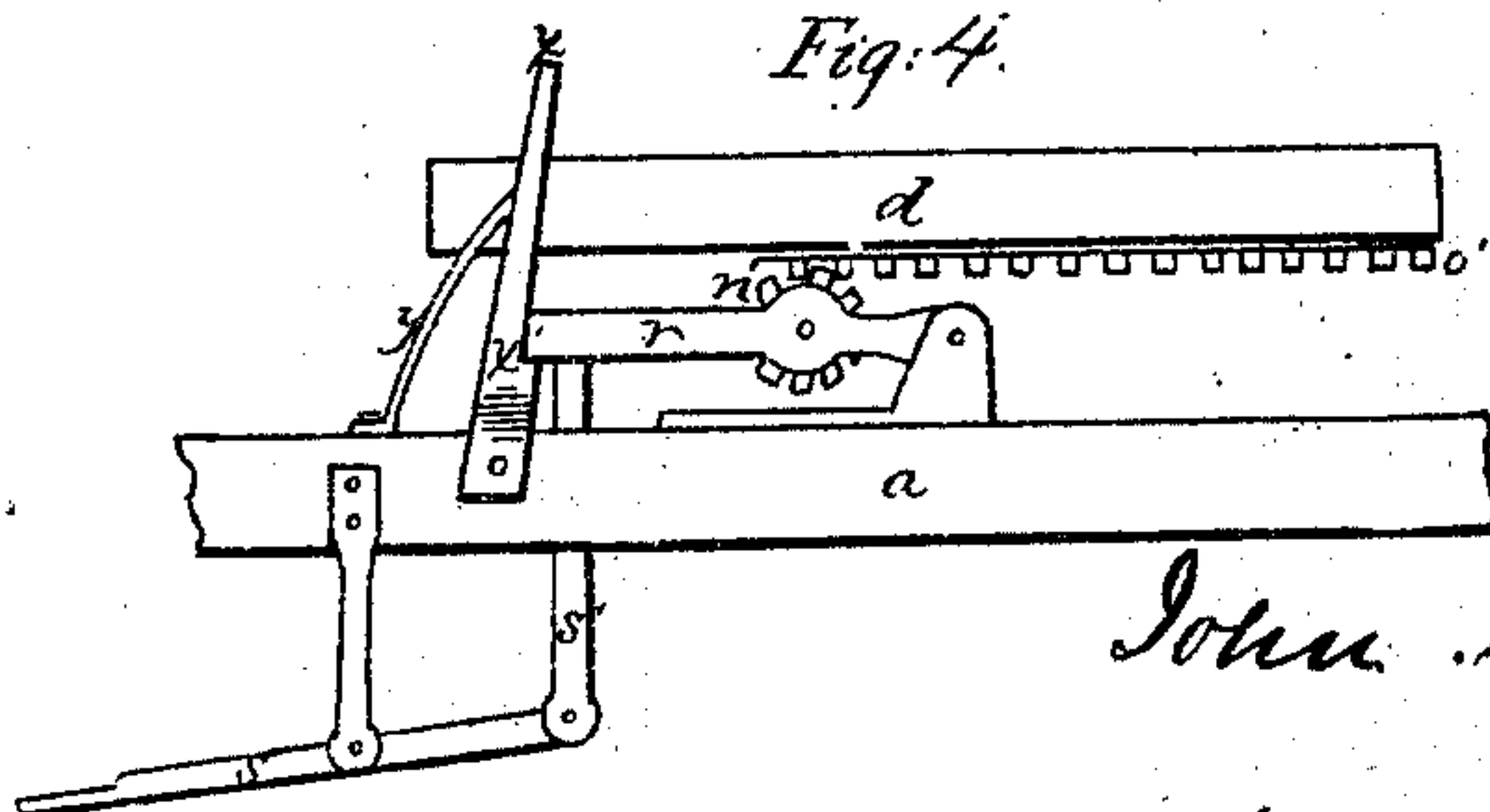


Fig. 4.



Inventor:

John J. Ralya

by his attorneys

Bakewell & Crisby

Witnesses:

W. D. Lewis

Blanchard

United States Patent Office.

JOHN J. RALYA, OF ALLEGHENY CITY, PENNSYLVANIA.

Letters Patent No. 71,326, dated November 26, 1867.

IMPROVEMENT IN MACHINES FOR DRESSING STAVES FOR BARRELS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN J. RALYA, of Allegheny City, in the county of Allegheny, and State of Pennsylvania, have invented a new and useful Improvement in Power Stave-Dresser; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my improved stave-dresser.

Figure 2 is a top or plan view of certain devices used in the head-stock for the purpose of regulating the action of the cutters, and

Figures 3 and 4 illustrate by side elevation the action of the rack and pinion in producing a reciprocating motion in the ram.

Like letters of reference indicate like parts.

The nature of my invention consists in the construction and arrangement of devices for operating a movable pinion, in connection with a toothed rack of a stave-dressing machine, for the purpose of imparting a reciprocating or back-and-forward motion to the ram, and in an improved construction of the head.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and mode of operation.

On the framework *a*, or other convenient foundation, rests the apparatus which I employ. *b* is the head-stock, carrying cutters or knives *c*, and constructed and operating as hereinafter to be explained. *d* is a ram moving backward and forward on the slides *e*, and with its forward movement driving a stave resting against its head or end *d'* endways between the cutters *c*. To this ram *d* a cord, band, or chain, *i*, is attached, which passes through a slot, *i'*, in the pulley-post *f*, and over a pulley-wheel *o*, and carries a weight, *g*, sufficiently heavy to cause the return stroke or back movement of the ram *d*. The lower face of the ram *d* may be grooved, furrowed, flanged, or shouldered, or operate between guides to secure a direct motion, or projections *h* may be used for the same purpose. The motion requisite for operating the machine is communicated in any ordinary way, but as shown in the drawings, by a hand-wheel, *l*, and through the gear-wheels *m* *m'* to the axle *n*, which carries a pinion, *n'*, and which latter gears into a toothed rack *o'*, attached to the ram *d*, to produce the forward motion of the ram, and ungears at the end of the stroke to allow the ram *d* to slide back preparatory to another stroke. To secure this movement the end of the axle *n*, near which the pinion *n'* is attached, plays in a swinging bar, *r*, which has sufficient vertical motion to gear and ungear the pinion *n'* and toothed rack *o'*. In fig. 3 they are shown ungearing and the ram *d* drawn back. To throw them into gear, the foot of the operator may be placed on the outer end of the lever *s*, and by the application of a moderate pressure the tripper *s'* is caused to raise the swinging bar *r*, and with it the pinion *n'*, till the latter gears into the toothed rack *o'*, as shown in fig. 4. The post *x*, notched or shouldered as at *x'*, receives the end of the swinging bar *r*, and, being braced by a spring, *y*, or held in position by an elastic band, *y'*, or by other form of spring, or by weight and cord, supports the bar *r* till the ram *d* completes its forward stroke. A pin or lug, *z*, attached to the ram *d*, then strikes the post *x*, forces it back, releases the bar *r*, which drops, whereby the pinion *n'* and rack *o'* are ungearing, and the ram is carried back by the weight *g*. Another forward motion is then produced, as above described, another stave driven through between the cutters *c*, and the motion continued forward and back, as above described.

As the wear on the head *d'* of the ram *d* is considerable, it is liable to be worn off. To meet such exigency I attach the pin or lug *z* to a cross-head or plate, which operates in the slot *z'*, and is held in place at any desirable point of adjustment by a set-screw. As the head *d'* wears off the lug *z* may be set back in its slot *z'*. The rack *o'* in such case should extend back toward the pulley-post *f* a distance corresponding to the range desired for such adjustment.

With the head-stocks heretofore in use it has been found somewhat difficult to adapt the action of the cutters *c* to the sinuosities or crookedness of the staves. Such result has generally been secured by setting the knives or cutters *c* on journals *e'*, which could be turned either way, as occasion might require, by a crank attached thereto. This necessitated a considerable exertion on the part of the operator, and was quite wearisome. To control the knives or cutters *c* more easily, I attach to one of the journals *e'*, which carries them, a rigid arm, *e'*, and by the springs *e''*, one on each side, allow for any necessary vibration of the cutters from

side to side, and still apply any desirable amount of pressure, according to the stiffness of the springs, to keep them in that position in which they will most properly receive and dress the staves forced in as above described. The arm *e'* is turned upward, near its rear end, so as to pass through or back of the cap-plate *b'* of the head-stock, where it is attached to or connected with a lever, *u*, of any desirable construction, pivoted to the cap-plate *b'*. With this arrangement the operator can easily, and without weariness, control the direction of the knives, as the staves are forced through by the action of the ram *d*.

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

1. A swinging bar, *r*, in a stove-dressing machine, carrying a pinion to operate in connection with a toothed rack attached to the ram, in combination with a support, *x*, to hold the pinion in gear, and tripper *s'* and pin *z* to throw it in and out of gear respectively, or their mechanical equivalents, substantially as above set forth.
2. Adapting the direction of the action of the knives of a stove-dresser to the crookedness of the staves by a lever, *u*, attached to the head-stock, in combination with a rigid arm, *e'*, attached to the journal which carries the knives, and with or without the springs *e''*, substantially as and for the purposes above set forth.

In testimony whereof I, the said JOHN J. RALYA, have hereunto set my hand.

JOHN J. RALYA.

Witnesses:

W. S. KERRUSH,

GEO. A. KOLBE.