

G. Munday,
Saw Gummer.
No. 100,312. Patented Mar. 1. 1870.

Fig. 1.

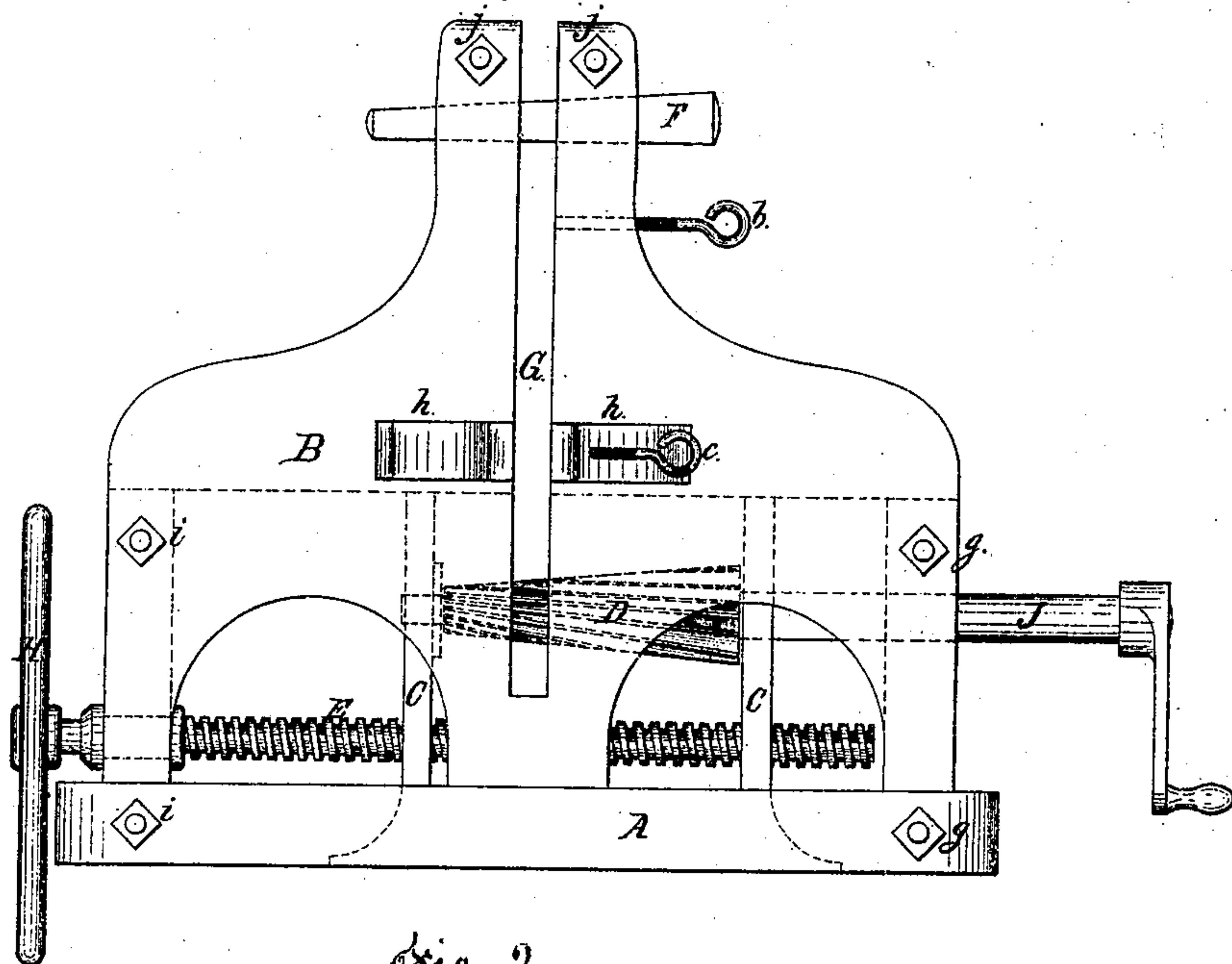


Fig. 2.

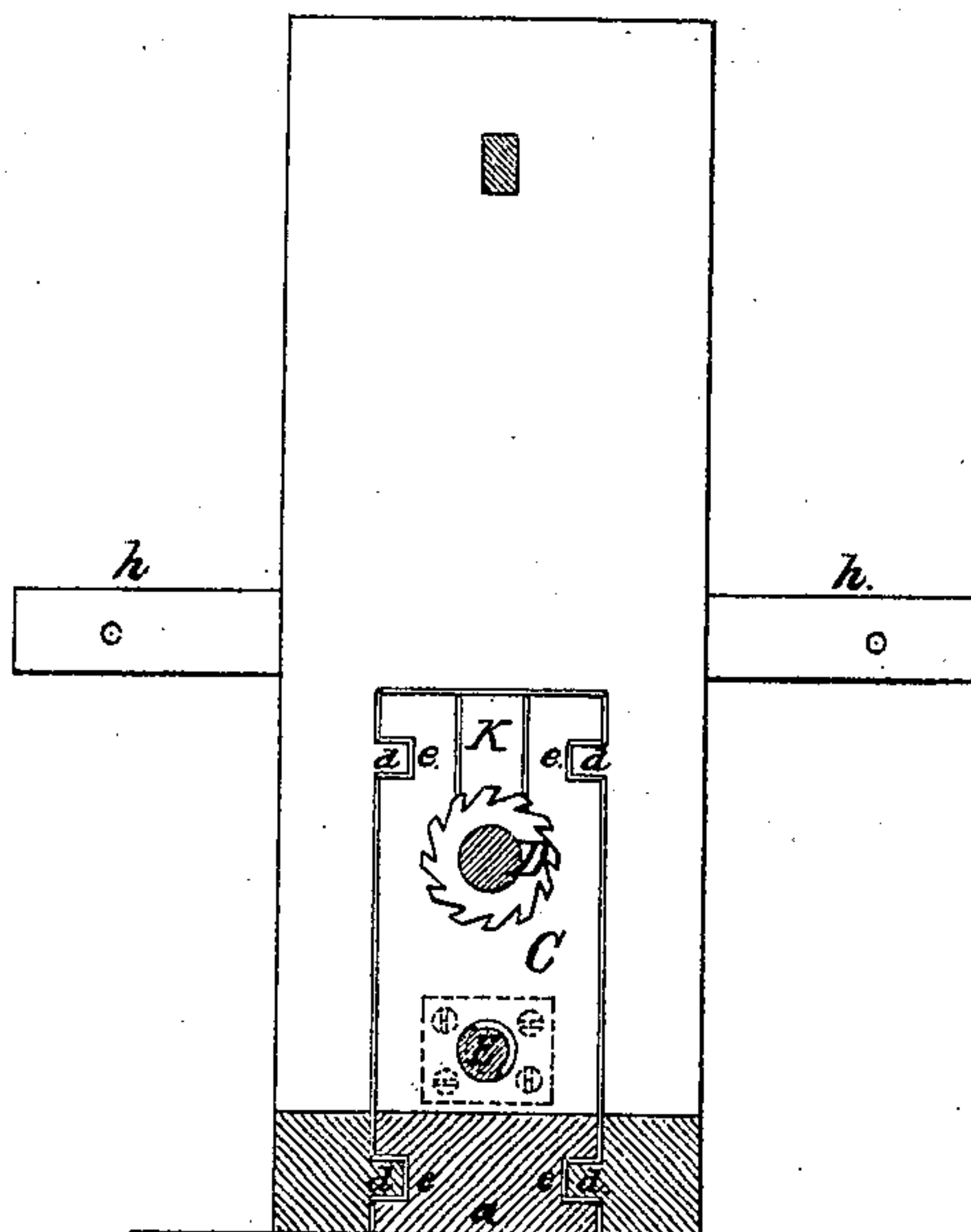


Fig. 3.

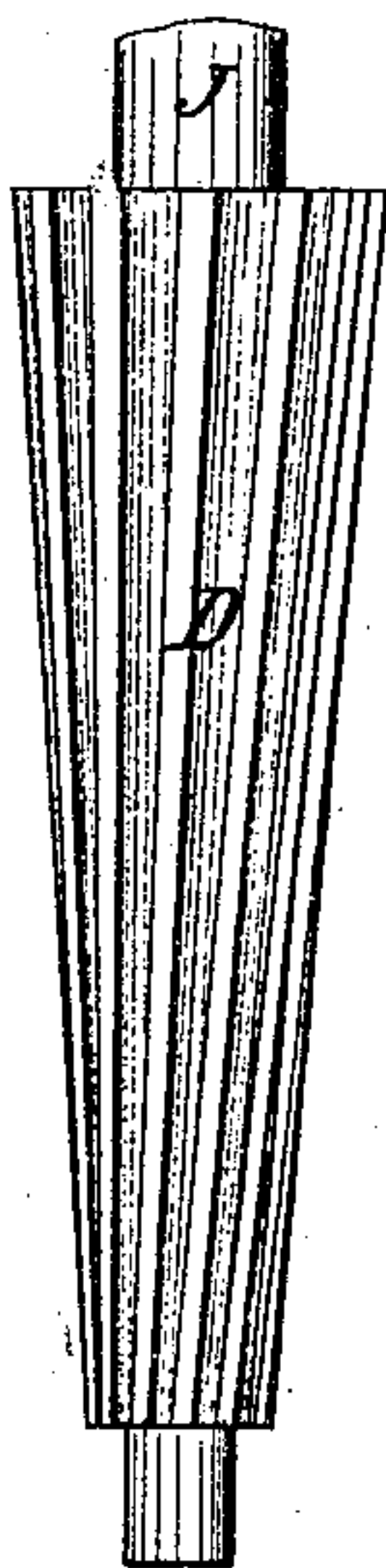
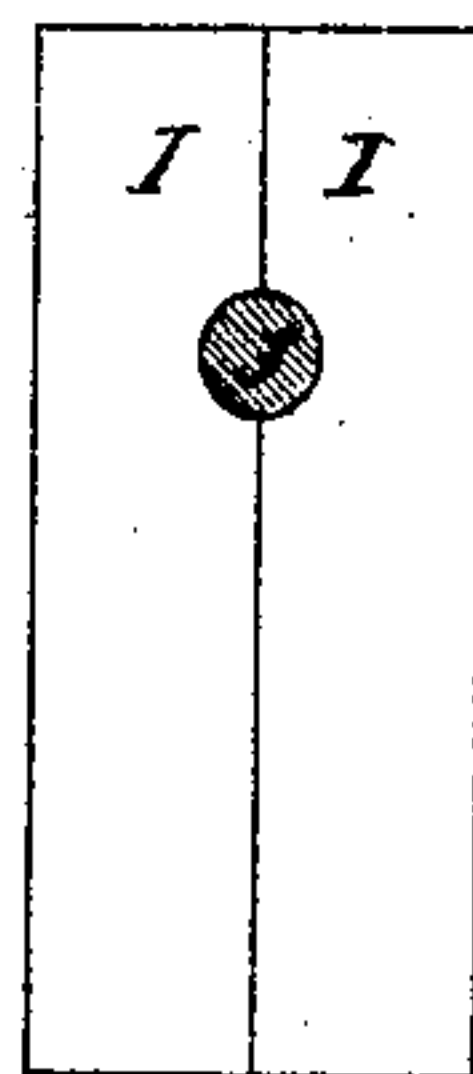


Fig. 4.



Witnesses.

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United States Patent Office.

GILBERT MUNDAY, OF MONTEZUMA, OHIO.

Letters Patent No. 100,312, dated March 1, 1870.

IMPROVEMENT IN SAW-GUMMER.

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, GILBERT MUNDAY, of Montezuma, in the county of Mercer, and State of Ohio, have invented a new and improved Saw-Gummer, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a side elevation of my machine.

Figure 2 is a sectional view.

Figure 3 shows the improved cutter or bur, as detached from my machine.

Figure 4, a view of the detachable blocks separate from the machine.

A is the base or supports on which the frame of my machine rests.

B is the frame-work.

C C, the inner box or frame.

D, the tapering or cone-shaped bur or cutter.

E, the temper or feed-screw.

I I, the detachable blocks.

F, the wedge used to hold cross-cut or mill-saws up against the gummer.

K, a small slide-box.

This invention consists of a saw-gummer, whose parts are so arranged that the cutter or bur can be removed and others of different sizes and shapes used; also, in the peculiar form of the bur or cutter, and its inner frame or box carrying said cutter, arranged to slide back and forth on tongues or ways arranged within the frame B.

It further consists in a cutter or bur having both a reciprocating and rotary motion while operating upon the saw-tooth, as hereinafter more fully described.

In order to enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is the base or platform, composed of two beams with cross-pieces *a a*, in which the frame rests.

B is the frame of my machine, having openings of arch shape on both sides.

On the inner sides of the frame B, at the top and bottom, are ways or tongues *d d*, on which the inner frame or box C, carrying the cutter D, is arranged to slide.

The frame B of my machine has an opening, G, through its center for the reception of the saw, and is held in position upon the saw by the set-screws *b b c c*.

The frame B may be taken apart, if necessary, by removing the bolts *g g i i j j*, used in holding the side pieces together, it frequently becoming necessary in order to repair the machine.

Arranged on each side of the frame B are arms *h h*, four in number, which rest on each side of the saw-blade, and having set screws *c c*.

Just above the arms *h*, on one end of the frame B,

are two additional set screws *b b*, which, if necessary, may be used to further secure the machine on the saw. These screws clamp the saw-blade, and, by their number and arrangement, serve to effectually prevent any "wabbling" or "reeling" of the tool, during which movement tends to make an irregular edge on the saw-tooth.

Above the screws *b b* is a wedge, F, used only when gumming cross-cut or mill-saws, for the purpose of holding the saw firmly up against the cutter D, and is removed when operating upon circular saws.

Working in the frame B is an inner frame or box, C, carrying the gummer or cutter D, said frame having grooves *e e*, to fit and slide upon the tongues or ways *d d*, and operated by the feed-screw E and hand-wheel H. By this means and with my form of cutter any size of tooth can be gummed without removing the cutter or bur from the machine.

D is the bur or cutter, the cutting edges being spiral, bearing at an angle of about ten degrees to axis of the cutter, and which I make of tapering or cone shape, which greatly obviates the necessity of changing the cutter for saws of different sizes, although, if necessary, there may be several forms or sizes of cutters, and may be taken out and replaced at the pleasure of the operator, it frequently being necessary to remove the gummer for sharpening, as it will in constant use become dull.

In order to make the cutter easily removable, I form at one end of the frame B blocks I I, which also act as a bearing for the shaft or crank-end J of the cutter to work, and are removable by means of the bolts *g g* running through the side plates of frame B. I use a small box or journal, K, which supports the smaller end of the cutter D, and is intended to be used when cutters of smaller size are used.

The operation of my machine is as follows:

The machine is set on the saw by sliding the saw up through the opening G of the frame B, and is secured or held firmly to its place by means of the screws *c c b b*. The inner frame or box C carrying the cutter D is run back upon the ways or tongues *d d* by the action of the feed-screw E and hand-wheel H until the small end of the cutter is over the tooth of the saw. Then turn the crank until the frame is drawn the length of the cutter or bur D. Then loosen the set screws *c c b b*, and slide the machine back to the smaller end of the cutter. Again clamp the saw by means of the screws before mentioned, repeating operation until the desired depth in the tooth is obtained.

My machine can be set so as to cut or gum on a straight or curved line without the least danger of breaking any part of the machine, all the strain being on the feed-screw and inner frame or box C.

The advantages of my machine over all others are,

first, the cutter or bur, which, instead of being drawn directly across the tooth of the saw, is gradually moved lengthwise through the machine and over the tooth of the saw, and, at the same time, having a rotary motion; then, by cutting gradually during its movement until reaching the end of the cutter, making a more true and much smoother tooth than by the machines now in use, and not tending to break the teeth of the saw, or dull and injure the cutting-edges of the gummer, as is frequently the case in gumming large and heavy saws.

It is believed that by my arrangement of saw-gummer a more simple and efficient device is obtained than those heretofore used, and capable of being more readily manipulated and applied to its work. The device as a whole is very simple and efficient, and may be constructed at a smaller cost, and without the liability of getting out of repair, or having any part deranged by constant use.

Having fully described the construction and operation of my machine,

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

1. The tapering cutter or bur D, having its cutting edges arranged spirally or nearly so, when operated substantially as set forth.

2. A cutter or bur, constructed and arranged as described, upon a frame of a saw-gummer, whereby said

cutter may have both a rotary and reciprocating motion while operating upon the saw-tooth.

3. The frame B, having ways *d d*, in combination with the box or inner frame C C carrying the cutter D, and operated by the feed-screw E, arranged substantially as described.

4. In combination with the inner box or frame C C the removable or detachable blocks I I, substantially as described.

5. The inner frame or box C C, arranged to slide back and forth in the frame D, said frame having removable blocks I I, box or bearing K, and carrying the cutter or bur D, substantially as described.

6. The frame B, having the slot or opening G, wedge F, arms *h h*, set or clamp-screws *b b c c*, in combination with frame C C and cutter D, arranged substantially as described.

7. Frame B, having the opening G, wedge F, arms *h h*, set or clamp-screws *c c b b*, inner frame or box C C with grooves *e e* working on the tongues or ways *d d*, removable blocks I I, box or bearing K, shaft J, and feed-screw E, all arranged substantially as described.

GILBERT MUNDAY.

Witnesses:

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