

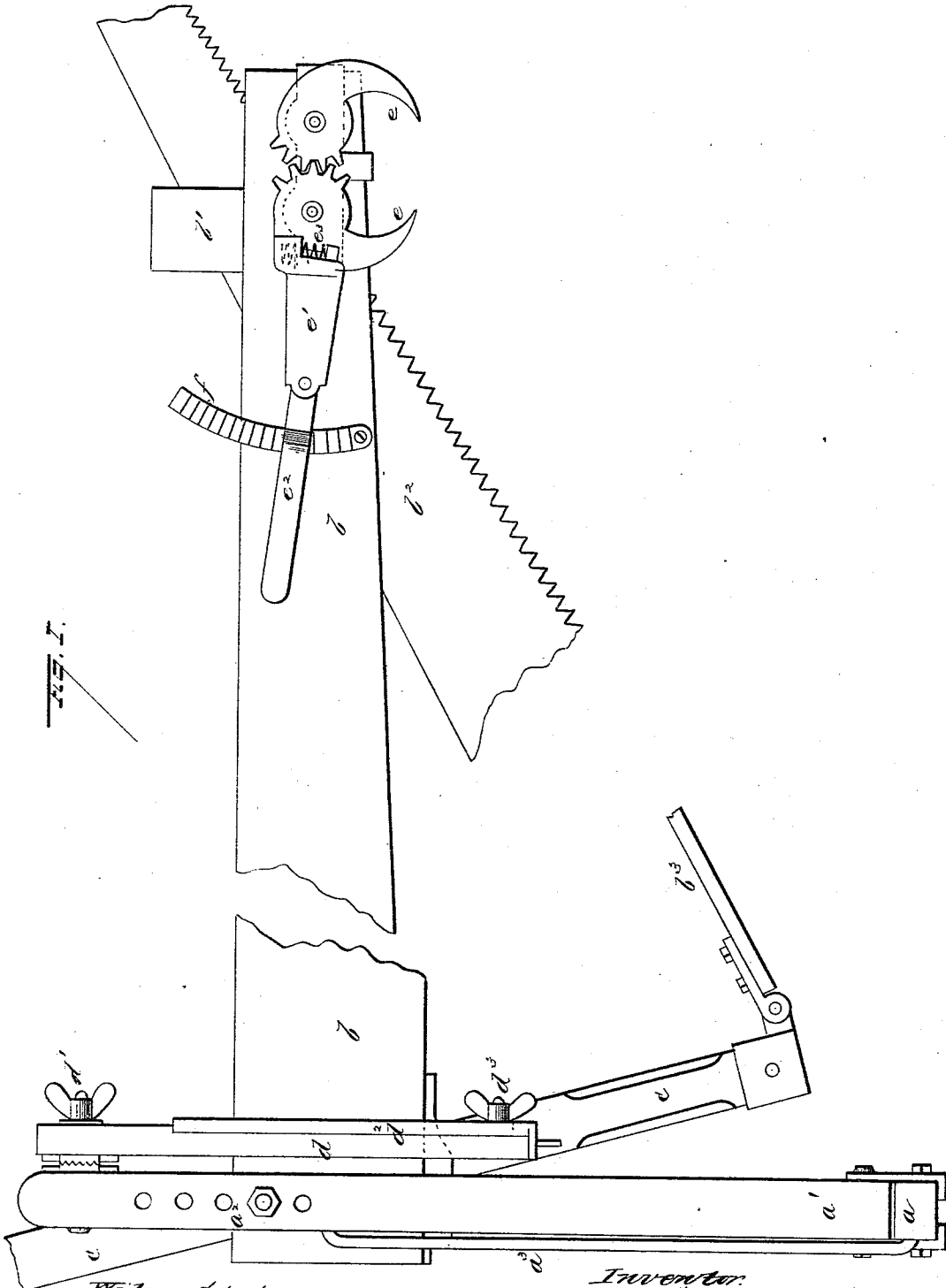
(No Model.)

2 Sheets—Sheet 1.

M. O. SMITH.
CLAMP FOR DRAG SAWS.

No. 420,115.

Patented Jan. 28, 1890.



Witnesses:
H. C. McArthur
Chas. W. Arthur

Inventor:
Marvin C. Smith
by H. Harrison
Attorney

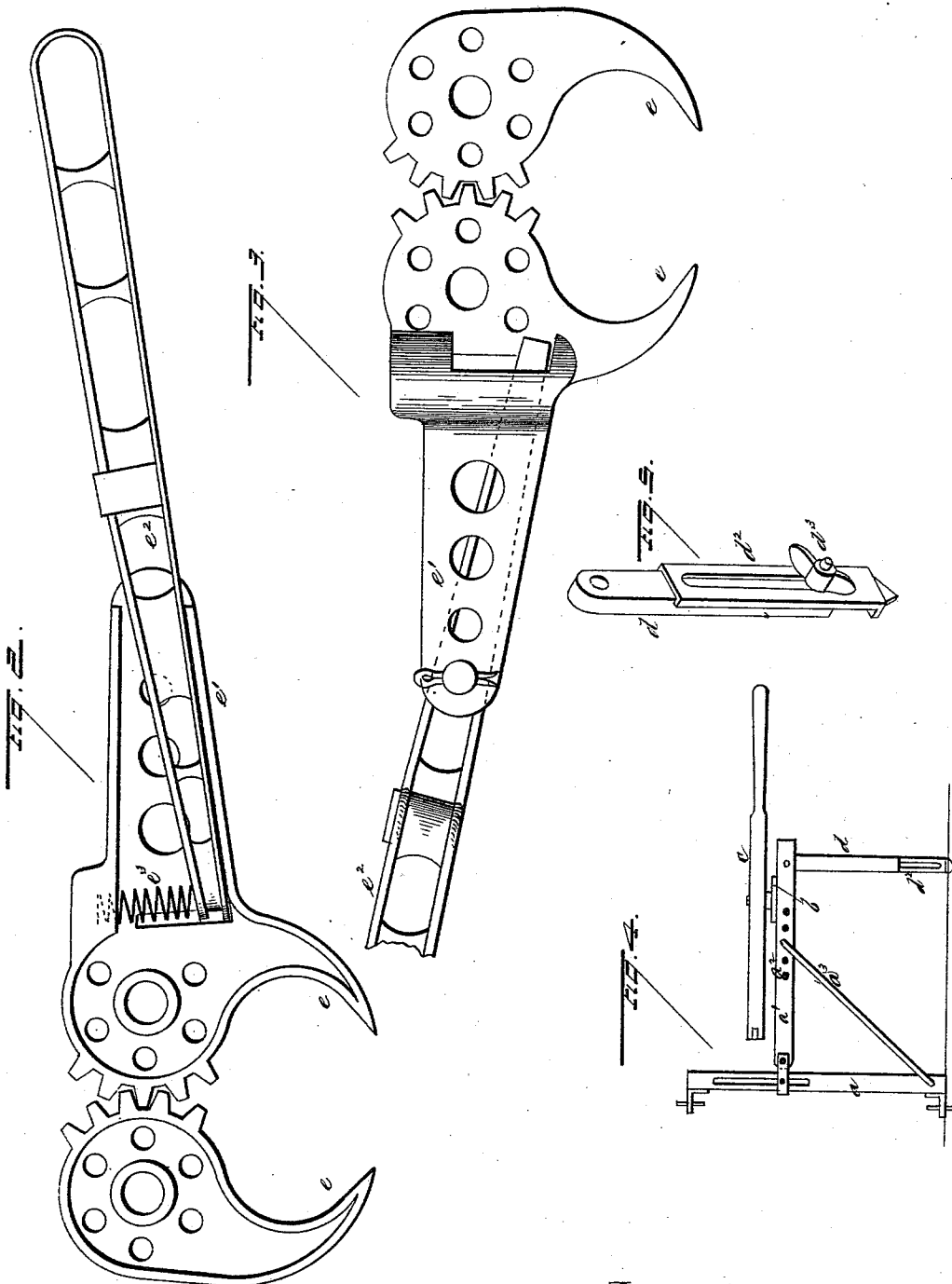
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 Attorney.

UNITED STATES PATENT OFFICE.

MARVIN O. SMITH, OF NEW BUFFALO, MICHIGAN.

CLAMP FOR DRAG-SAWS.

SPECIFICATION forming part of Letters Patent No. 420,115, dated January 28, 1890.

Application filed November 7, 1888. Renewed December 26, 1889. Serial No. 334,940. (No model.)

To all whom it may concern:

Be it known that I, MARVIN O. SMITH, a citizen of the United States, residing at New Buffalo, in the county of Berrien and State of Michigan, have invented certain new and useful Improvements in Clamps for Drag-Saws, of which the following is a specification, to wit:

This invention relates to drag-saws; and it consists in certain novel details of the construction and arrangement of the same, substantially as will be hereinafter more fully set forth and claimed.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe its construction and operation, referring to the accompanying drawings, in which—

Figure 1 is a side view of my machine. Fig. 2 is a rear and Fig. 3 a front detail view of my improved gripping-claw. Fig. 4 is a rear elevation of the machine as used in felling trees, and Fig. 5 is a detail of the extension-leg for supporting the saw in this position.

The main frame of my machine consists of a foot *a*, to which is pivoted a standard *a'*, provided with a series of holes *a²*, and connected to the foot by a brace *a³*, so as to adjust the standard to any suitable angle for convenient work. From this standard a board or guide-arm *b* is extended forward and provided near its end with a slotted guide-block *b'*, in which the saw-blade *b²* runs. This blade is connected by a pitman *b³* with an operating-lever *c*, pivoted on the standard *a'*, and the saw is operated by working the lever back and forth, as is usual in this class of machines. These parts are all well known, and do not need detailed description at this point, as they form no part of my present invention. These machines are used not only for cutting up logs, but for felling trees, and, as in the latter use it is necessary to turn the machine upon its side to bring the saw into proper position, as in Fig. 4, I provide a leg *d*, pivoted upon the standard *a'*, and provided at its pivotal point with a pair of serrated disks and a clamping thumb-nut *d'*, in

order that when the leg is turned out it may be held rigidly in place. This leg is also provided with a slotted extension *d²*, secured to the main part by a thumb-nut *d³*, as in Fig. 5, in order that any unevenness of the ground may be compensated by the adjustment of the leg, which firmly supports the machine when in this position, as will be evident at once on an inspection of the drawings.

To firmly secure the machine to the log or tree to be cut, I use the device seen in Figs. 1, 2, and 3. This consists of a pair of pointed claws *e e*, pivoted upon the guide-arm and connected together by toothed segments, as shown. One of these claws is provided with a handle made in two parts *e' e²*, one of which is pivoted upon and overlaps the other, between the main part *e'* and the forward end of the piece *e²*, I place a spring *e³*, as shown in Figs. 1 and 2. The guide-arm is provided with a curved rack *f*, into which the handle *e²* is caught when pushed down, to hold the claws firmly in position.

In use the handle is lifted till the claws are opened as far as need be, and then when the handle is pressed down till the spring is compressed the claws are forced into the material and held there, the tension of the spring serving to retain them in place and keep the pressure upon them, even when the motion of the machine would otherwise work them loose.

It is obvious that, if desired, the handle may be made in one piece and the claws forced into the wood as before; but I prefer the two-part spring-handle, as it does not necessitate the trouble of tightening the grip of the claws after working the machine a short time, the spring forcing the claws farther in as they work loose.

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

1. The combination, with the main frame of a drag-saw, of a pair of claws pivoted upon the frame and connected by toothed segments, and an operating-handle pivoted upon one of the claws and provided with a cushion-

ing-spring at its inner end, substantially as and for the purpose set forth.

2. A clamp for holding drag-saws to the material under operation, consisting of the 5 pivoted claws e e , formed with cogged segments which intermesh, in combination with the handle e^2 , its spring e^3 , and the curved rack f' , all constructed and arranged to oper-

ate substantially as and for the purpose set forth. 10

In testimony whereof I affix my signature in presence of two witnesses.

MARVIN O. SMITH.

Witnesses:

W. C. MCARTHUR,
W. S. MCARTHUR.