

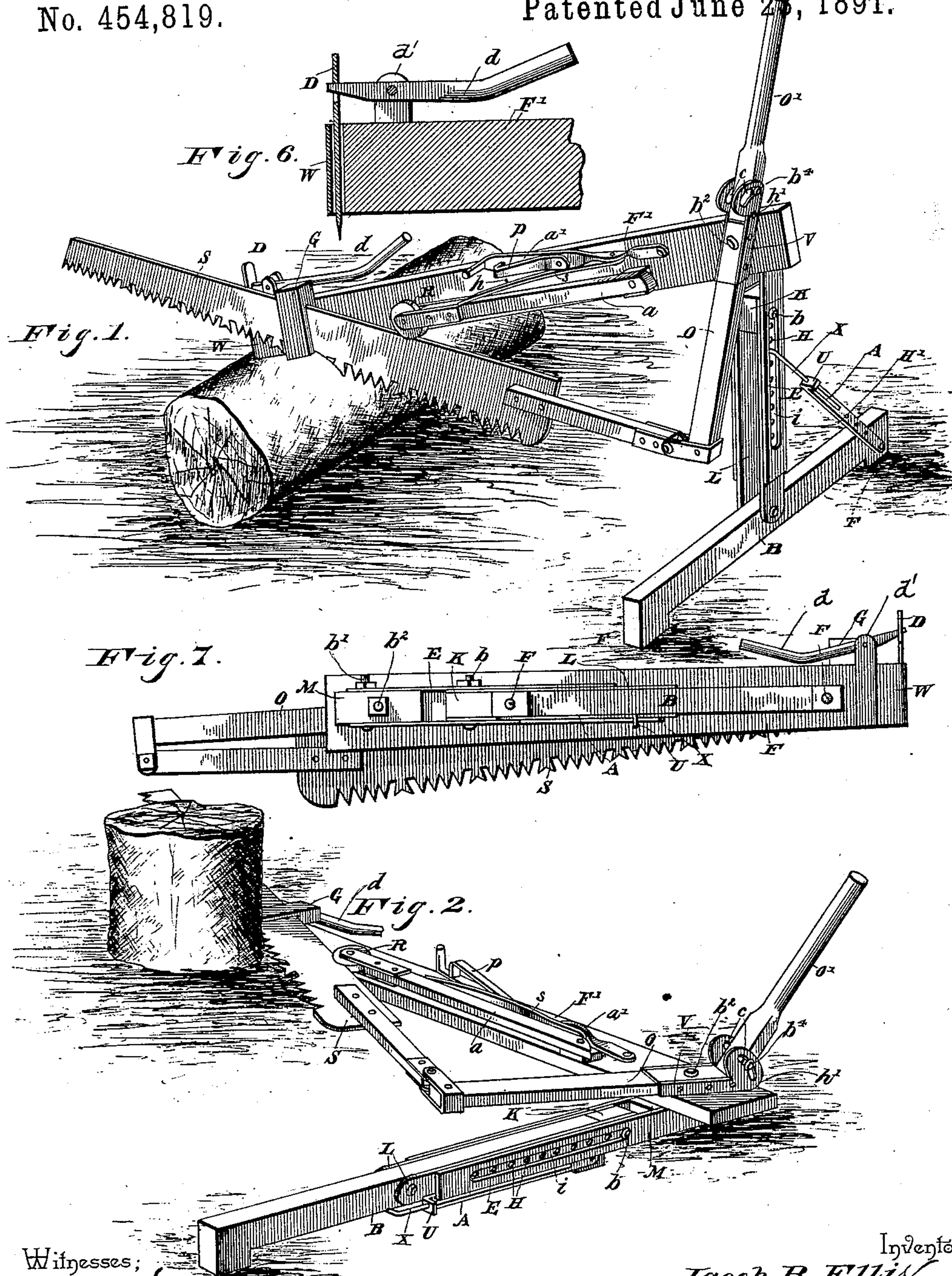
(No Model.)

2 Sheets—Sheet 1.

J. B. ELLIS.
SAWING MACHINE.

No. 454,819.

Patented June 23, 1891.



Witnesses;

J. M. Withers

A. J. Collamer

Inventor

Jacob B. Ellis

By *his* Attorneys,

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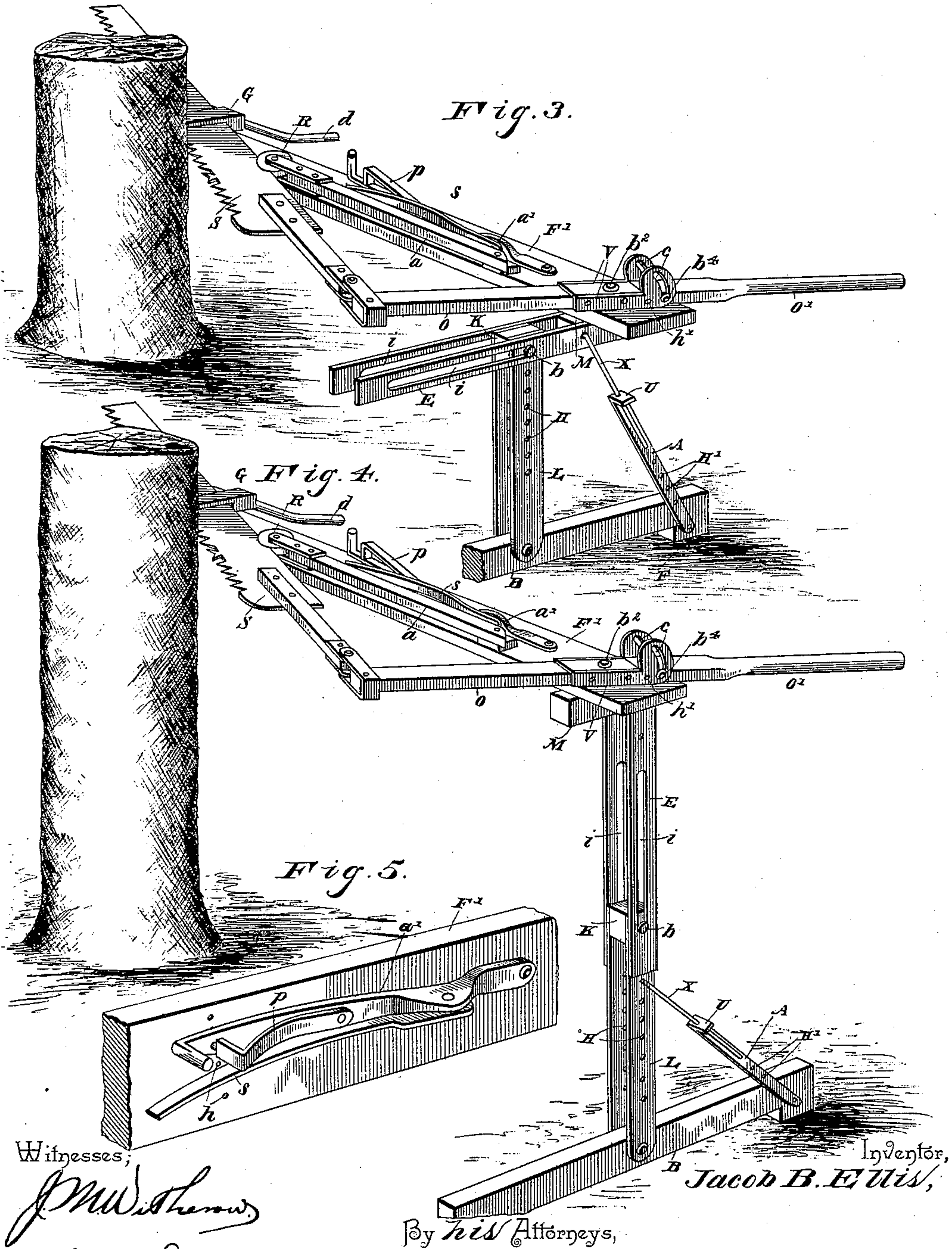
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SAWING MACHINE.

No. 454,819.

Patented June 23, 1891.



UNITED STATES PATENT OFFICE.

JACOB B. ELLIS, OF SEYMOUR, MISSOURI, ASSIGNOR OF ONE-HALF TO
WILLIAM B. TUNNELL, OF SAME PLACE.

SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 454,819, dated June 23, 1891.

Application filed October 31, 1890. Serial No. 369,877. (No model.)

To all whom it may concern:

Be it known that I, JACOB B. ELLIS, a citizen of the United States, residing at Seymour, in the county of Webster and State of Missouri, have invented a new and useful Sawing-Machine, of which the following is a specification.

This invention relates to sawing-machines, and more particularly to that class adapted to saw trees either when in their normal position or after they have been felled and lie upon the ground in the shape of logs; and the object of the invention is to provide a device of this character capable of various adjustments, whereby it is adapted to the purpose.

To this end the invention consists of the specific details of construction hereinafter more fully described and claimed, and as illustrated in the drawings, in which—

Figure 1 is a perspective view of this machine as arranged to saw a log. Fig. 2 is a similar view showing the device arranged to cut a standing tree at a point near the ground. Fig. 3 is a similar view arranged to make the cut a little higher up. Fig. 4 is another similar view arranged to make the cut a considerable distance from the ground. Fig. 5 is a perspective detail of the adjustable device for holding the roller-carrying arm. Fig. 6 is a large vertical section through the dog at the point of the frame. Fig. 7 is a plan of the machine folded.

Referring to the said drawings, the letter B designates a base having pointed feet F at each end adapted to imbed the ground, as is usual in machines of this class. Centrally pivoted to this base is an open link L of sufficient length to pass over each end of the base when turned down, as shown in Fig. 2, and one side of this link is provided with a number of holes H. Pivoted to one end of the base is a bracing-arm A, also having a number of holes H' in its body, and its upper end U is bent at right angles to its body and perforated. Through the perforation slides loosely an extension X, each of whose ends are bent, as shown, and one of these ends takes into the holes H in the link L, while the other takes into the holes H' in the bracing-arm A. By this means the link can be

adjusted at any angle to the base or can be folded upon the latter, so as to be parallel therewith.

In the upper end of the link L a block K is located, which is held therein by a transverse bolt *b*, and the ends of this bolt project through a longitudinal slot *i* in an extension-link E, which slides against the outer face of the link L. The upper end of the extension-link is in turn connected to the main pivot-block M of the machine by a bolt *b'*. Mounted on a vertical pivot-bolt *b*² through this block is a frame F', having a guide G near its free end. Pivoted to this frame is an arm *a*, carrying at its free end a roller R, and pivoted, also, to the frame F' is an adjusting-arm *a'*, having a spring *s*, bearing against the rear edge of the arm *a*, and also having a spring-pin *p*, passing through its body and taking into one of a number of holes *h* in the upper side of the frame F'. By this means the arm *a'* can be adjusted to set the spring so as to impart a greater or less amount of force to the roller-carrying arm *a*.

Pivoted on the bolt *b*² over the inner end of the frame F' is the operating-handle O, to one end of which is pivoted the saw-blade S, the back of the latter traveling against the roller R and within the guide G. The other end of the operating-handle is hinged, as at *h'*, and a bolt *b*⁴ through its body engages curved slots *c* in the sides of a bracket V, connected to the body of the operating-handle O. By this means the free end O' of the handle can be turned up, as shown in Fig. 2. On the outer end of the frame F' is a sheath W, through which slides a dog D, and pivoted in ears *d'*, projecting from the frame F', is a short handle *d*, engaging said dog, so as to project its points from the sheath and embed it in the wood being sawed.

With the above construction of parts the operation of my improved device and the manner of adjusting it for use under different circumstances will be as follows: When it is desired to saw a log on the ground, the machine is arranged, as seen in Fig. 1, with the base flat upon the ground, the links upright at right angles thereto, the frame F turned upon the bolt *b'*, so that the saw-blade shall stand in a vertical plane and the dog D dogged

into the log. The saw is worked, as will be obvious, by a reciprocation of the upper end of the handle member O'. A tree can be sawed off at the desired height by simply turning the block M and with it the frame F upon the bolt b', so that the saw-blade may stand flat and approximately at right angles to the growth of the tree, as shown in Fig. 4. The extension-link E can be adjusted upon the bolt b to raise or lower the frame F, as will be readily understood, or this extension-link can be turned at right angles to the link L and held in this position by the bracing-arm A and its extension X, as shown in Fig. 3, the block K being then turned upon the bolt b to cause the saw-blade to stand at the proper angle to the material being sawed. The roller-carrying arm a can receive more or less pressure from the spring s, according as the pin p of the adjusting-arm a' is adjusted in the holes h. The free end O' is in some instances, Fig. 2, bent upwardly, so as to be within easy reach of the operator, and held in proper position by the bolt b⁴.

Various adjustments of which this machine is capable may be used simultaneously or independently, and considerable change may be made in the construction and relative arrangement of parts without departing from the spirit of my invention.

What I claim as new is—

1. In a sawing-machine, the combination, with the frame, the handle O, pivoted thereon, the saw-blade S, connected to one end of the handle, and guides upon the frame for holding said saw-blade to its work, of the block M, pivoted beneath the inner end of said frame, the base B, the link L, pivoted thereon, a bracing-arm connecting the end of the base with the link, and an extension-link E, adjustably connected at one end to the link L and pivoted at the other end to said block, as set forth.

2. In a sawing-machine, the combination, with the frame and the saw-blade S, moving thereon, of the block M, mounted on a verti-

cal pivot-bolt b² through the frame, extensible link L E, mounted on a horizontal pivot-bolt b' through said block, a base B, connected to the lower end of said link, and an extensible bracing-arm A X, connecting one end of the base with said link, as set forth.

3. In a sawing-machine, the combination, with the frame and the saw-blade moving thereon, of the base B, the link L, pivoted at its lower end thereto and having a block K in its upper end, a transverse bolt b through said block, an extension-link E, whose sides slide upon the link L and have longitudinal slots i engaging the end of said bolt, the frame being connected with the upper end of said extension-link, and the bracing-arm A X, connecting one end of the base with said link, all as and for the purpose set forth.

4. In a sawing-machine, the combination, with the frame and the saw-blade S, moving thereon, of the base B, the link L, pivoted at its lower end thereto, having a number of holes H in its body and having a block K in its upper end, a transverse bolt b through said block, an extension-link E, whose sides slide upon the link L and have longitudinal slots i engaging the ends of said bolt and registering with said holes, the frame being connected with the upper end of said extension-link, the bracing-arm A, pivoted at its lower end to one end of the base, its body being provided with a number of holes H and its upper end being bent outwardly and perforated, and the extension-brace X, its body sliding through said perforated end and its ends being bent at right angles and engaging the holes H in the bracing-arm A and in the link L, as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JACOB B. ELLIS.

Witnesses:

JOHN A. MINGUS,
S. BUTCHER.