Sheet 1 - 2 Sheets.

White & Bostwick,

Drag Saw,

No. 50,292, Patented Oct. 3, 1865.

Fig. 2.

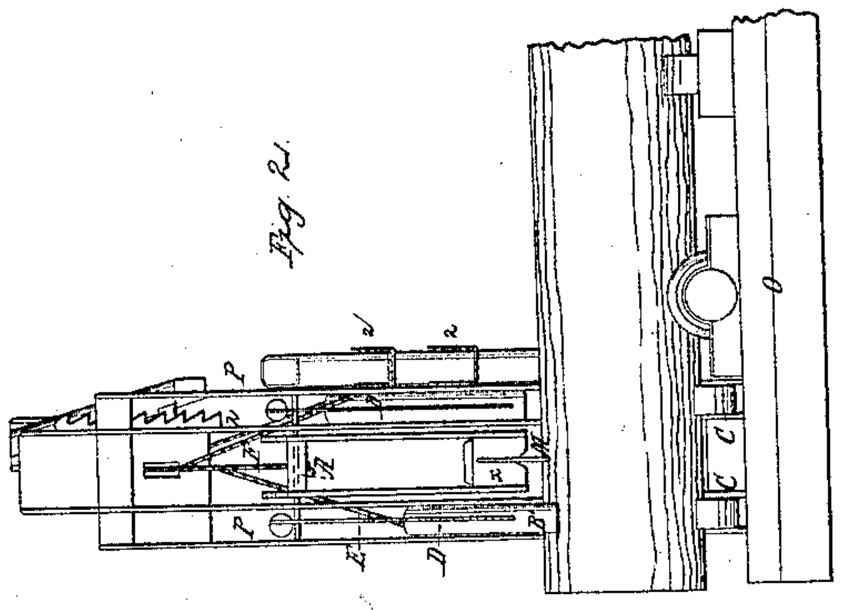
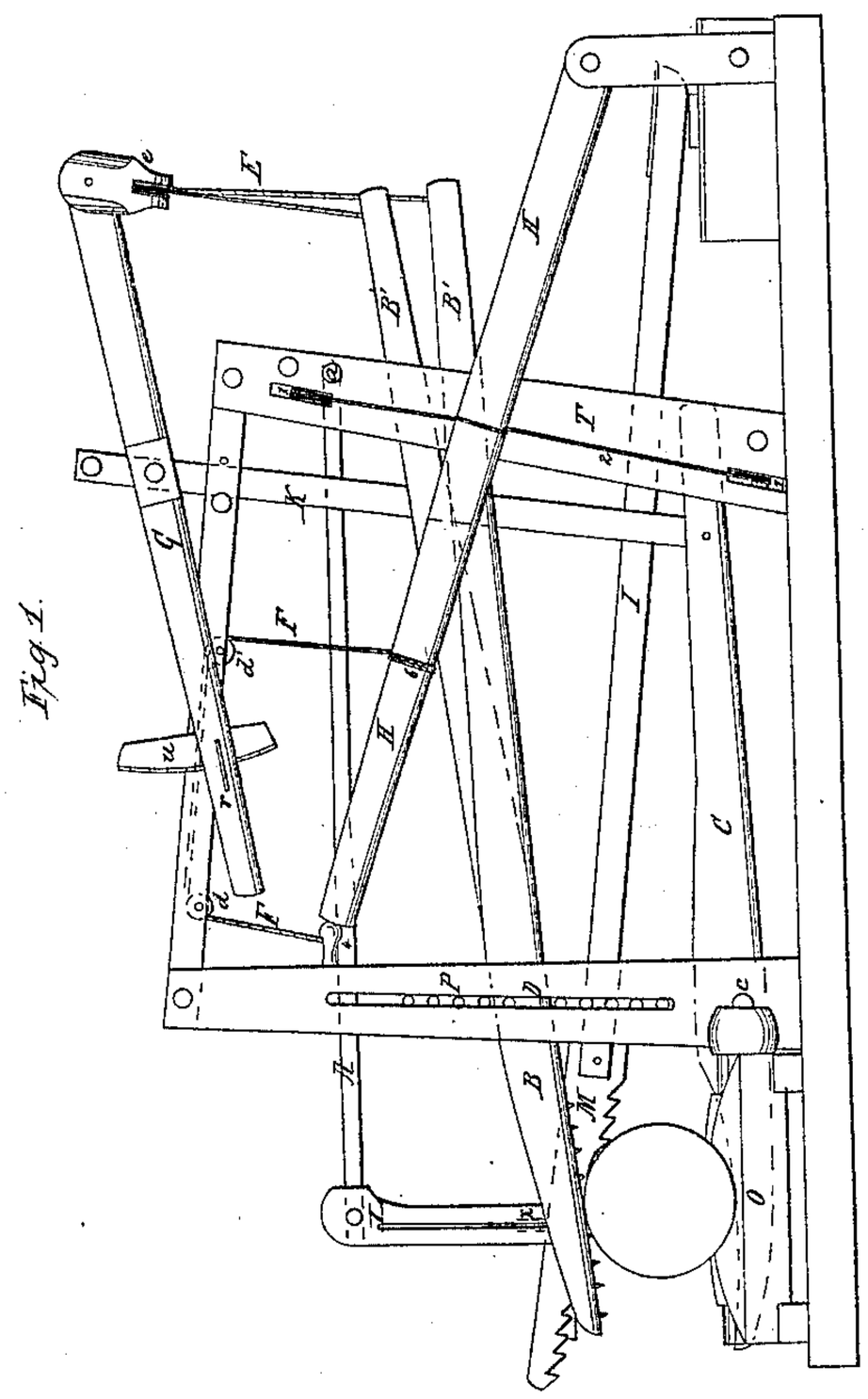


Fig. 1.



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by Atty, Jo. C. Clayton.

Sheet 2 - 2 Sheets.

White & Bostwick,

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Fig. 4.

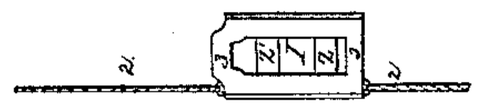
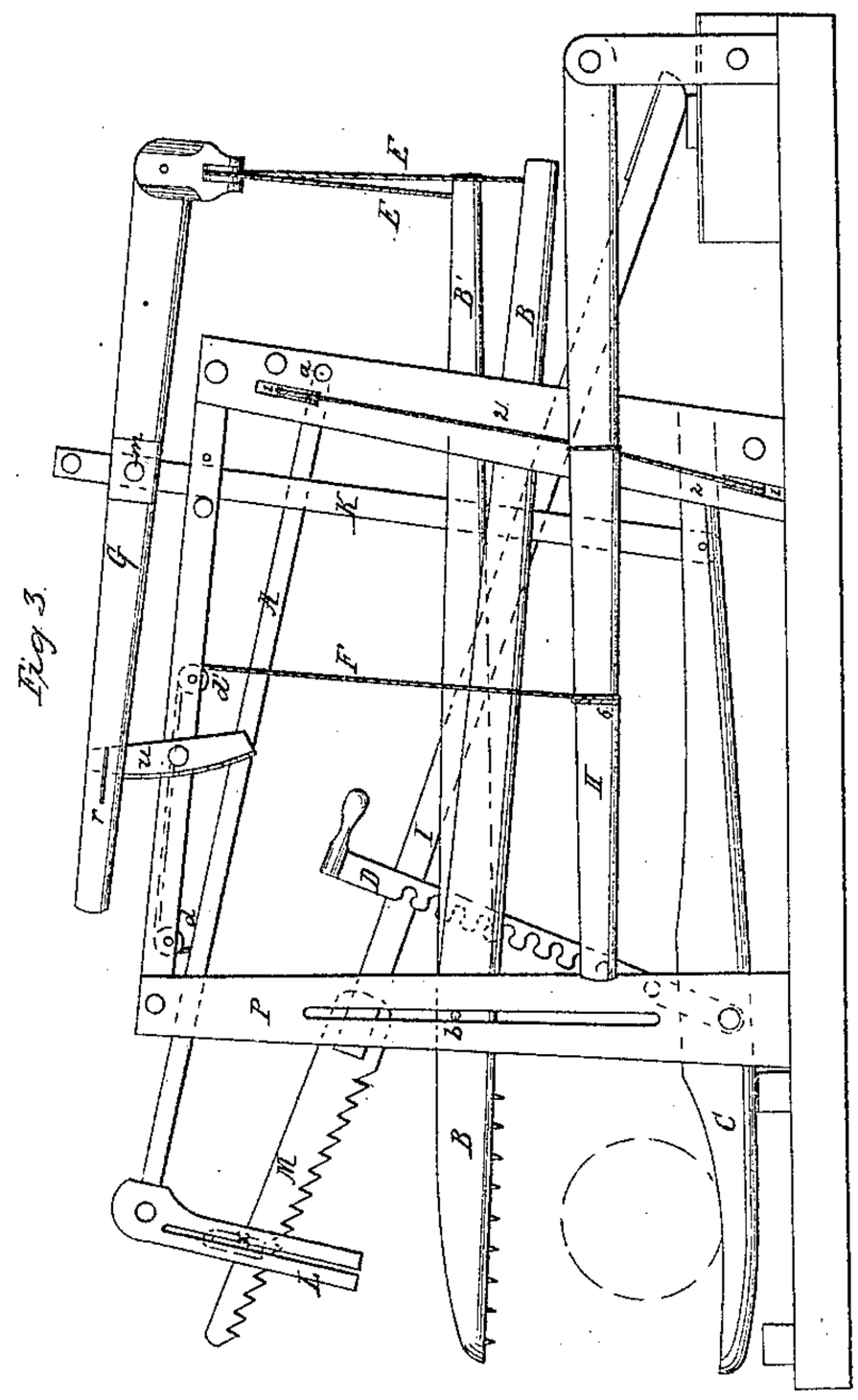


Fig. 3.



Witnesses:
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Inventors:
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by Atty, Jo. C. Clayton.

UNITED STATES PATENT OFFICE.

ORSAMUS A. WHITE AND ISAAC W. BOSTWICK, OF NORWALK, OHIO.

IMPROVEMENT IN SAWING-MACHINES.

Specification forming part of Letters Patent No. **50,292**, dated October 3, 1865.

To all whom it may concern:

Be it known that we, ORSAMUS A. WHITE and ISAAC W. BOSTWICK, of Norwalk, Huron county, in the State of Ohio, have invented certain new and useful Improvements in Sawing-Machines for Cutting Logs, &c.; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, and to the letters of reference thereon marked.

In the drawings, Figure 1 is a side elevation, showing the log engaged or held fast by the holding-levers and the saw in the act of making a cut. Fig. 2 is an end elevation of the same. Fig. 3 shows the holding-levers disengaged and the saw elevated above the log.

Our invention relates more particularly to certain improvements upon our sawing-machine which was patented to us on the 5th of April, 1864, as will appear from the following detailed description.

In the drawings, S represents the floor of the shop where the machine is set; P T, the nearly-vertical standards, disposed in pairs, and constituting the frame-work of our machine; O, the saddle and ways upon which the log to be cut is laid, and is operated in the usual manner; B, the upper, and C the lower, set of holding-levers, which play in the guide-standards P T. There are two sets of these levers, (provided with teeth,) so as to hold the log on both sides of the saw and above and below the log.

D D are the two holding-ratchets, pivoted at their lower ends by the same pivot *c* that pivots the holding-levers C to the guide-standards P. These ratchets D pass through the middle of the levers B and their teeth sit upon the pin *b* of these levers and hold said levers fast upon the log, whether large or small.

K K are vertical connecting-arms working in slots *n* in the top of the frame. The lower ends of these arms are pivoted to the inner ends of the levers C, and their upper ends to the center of the hand-lever G.

G is the hand-lever which works the levers B and C. Its outer end is provided with a pulley, *e*, over which a rope passes and fastens by its two ends to the inner ends of the two levers B B′. This lever G is also provided with a catch, *r*, which catches into the ratchet *u* upon the top of the frame. Depressing the lever G raises the outer ends of the lever C C′ until they strike the bottom of the log, and at the same time depresses the outer ends of levers B B′ until their inner ends strike the top of the log, when the hand-lever G is fastened by the ratchet *u*, thereby holding the log securely until the cut is made.

If it is necessary to hold the log very tightly, (as when the wood is unusually tough,) the ratchets D are forced down upon the pins *b* of levers B B′, thereby making those levers take a tighter hold upon the log. By this arrangement we develop the principle of the compound lever, and so apply it to the two sets of levers B and C as to hold the log with a tighter grasp than we could with simple levers. The pulley *e* at the end of lever G, with its cord E attached to levers B B′, allows these levers to readily adjust themselves to any inequalities of the log. By this arrangement we hold the log, be it short or long, large or small, smooth or knotty, in the most effective manner, the machinery adjusting itself to the inequalities of the timber. When a cut is made, by raising the hand-lever G we cause the lever C to drop from the bottom of the log, and at the same time the levers B B′ are raised off from it, so that the log is passed through between them far enough for another cut.

L is the saw-guide, depending from the outer end of the arm A, which is pivoted at *a* to the standards T. *x* is the sliding metallic guide-plate, which straddles the back of the saw and plays up and down in grooves of the hanging guide L, so as to remove all unnecessary friction from the saw and to allow it readily to rise and fall in making the drawing cut.

H is the operating hand-lever, pivoted at *m*.

F is a cord attached to the arm A at 4, running over the pulleys *d* and *d′*, and is attached to lever H at 6, so that the lever may operate the arm.

M is the saw, and I the saw-arm, the end of which is suitably attached to the driving power.

In Fig. 4 is shown the slide 3, provided with two rollers, *z z′*, between which the saw-arm reciprocates.

2 is a cord secured at the center to the lever H and at the ends to the top and bottom of the slide 3, and passes over and under pulleys 1. It will thus be seen that, in sawing, by raising

lever H the saw is lowered to the log, and at the same time the guide L descends until its lower end comes onto the top of the log. By lifting lever H when the saw is running the roller z' is brought down upon the saw-arm I, regulating the cut of the saw as the tender chooses. The guide-plate x guides the saw until it has entered the log sufficiently to be steadied by the log itself. The lever H then raises the saw-arm I until the back of the saw is up to the top of the slot in the plate x, when the rope F raises the arm A together with the saw until they are both out of the way of the log.

The action of the guide is entirely independent of that of the saw, leaving no weight for friction upon it, and is worked by the same lever that raises and lowers the saw, and is regulated by the distance of the cord F from the fulcrum of the lever H.

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

1. The combination and arrangement of lever G, levers B B′, pulley e, and cord E, operating substantially in the manner and for the purposes specified.

2. The combination and arrangement of the guide-arm A, lever H, pulleys d d', and cord F, operating substantially in the manner and for the purposes specified.

In testimony that we claim the above we have affixed our signatures this 2d day of August, 1865.

ORSAMUS A. WHITE.
ISAAC W. BOSTWICK.

In presence of—
J. A. JONES,
HERMANN REUSS.