

(Model.)

G. H. PRESTON.
WOOD BENDING MACHINE.

No. 254,568.

Patented Mar. 7. 1882.

Fig. 3.

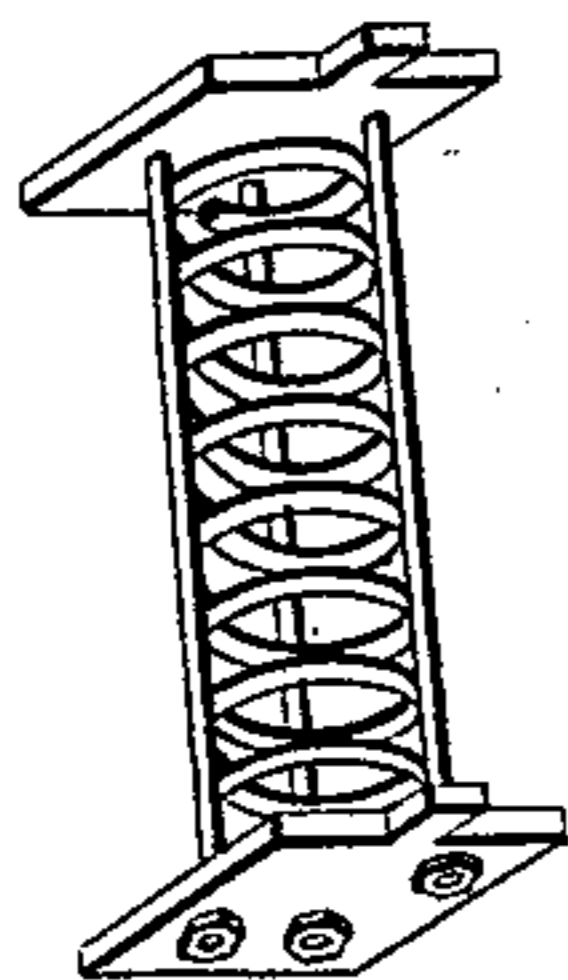
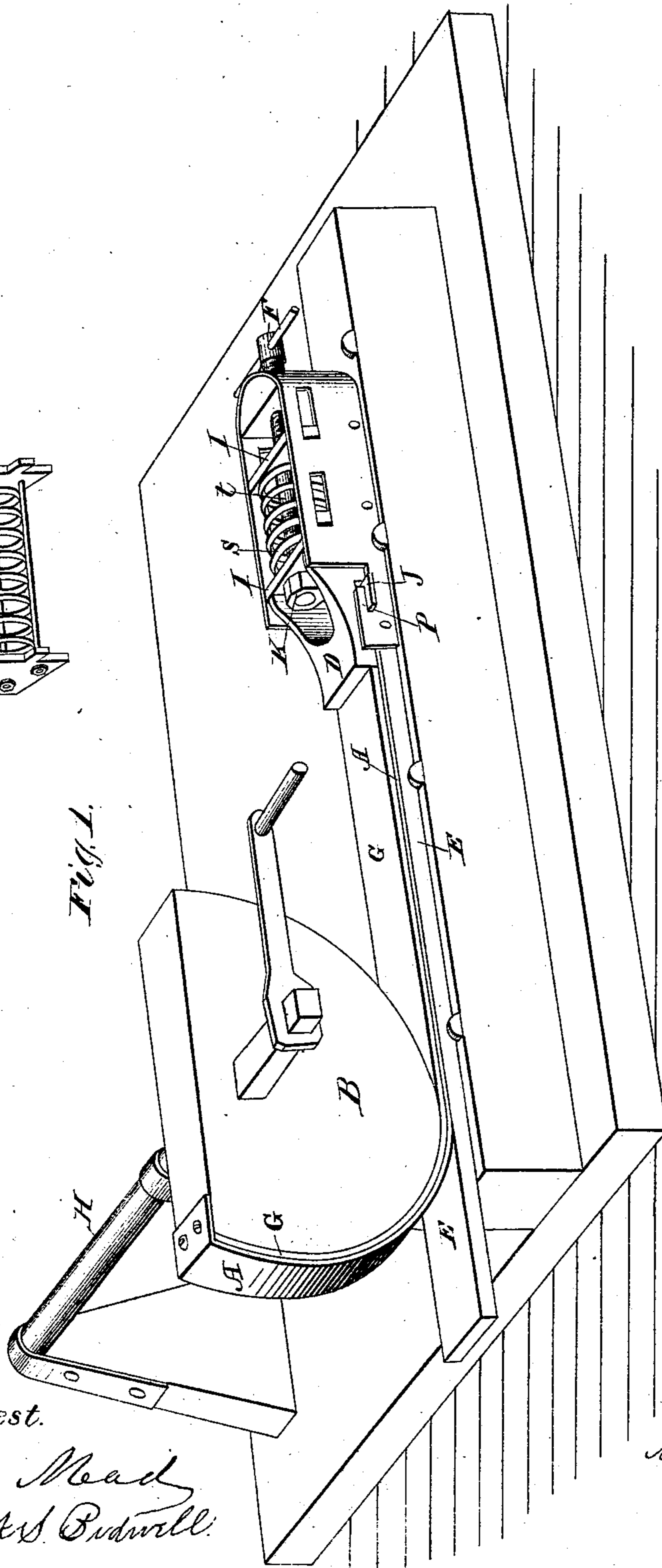


Fig. 1.



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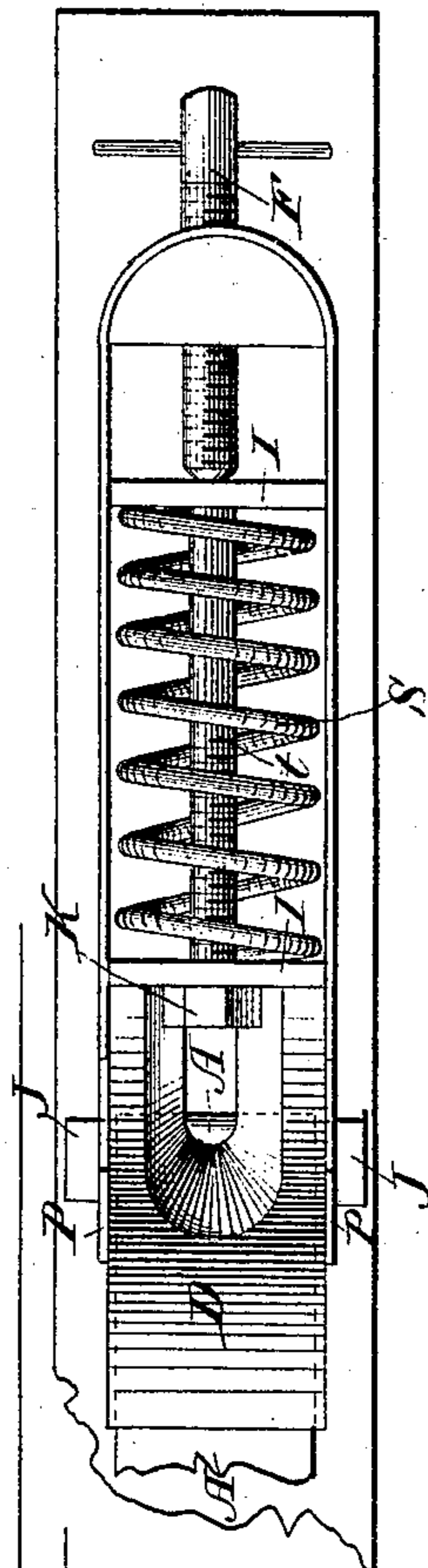


Fig. 2.

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UNITED STATES PATENT OFFICE.

GEORGE H. PRESTON, OF SHORTSVILLE, NEW YORK.

WOOD-BENDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 254,568, dated March 7, 1882.

Application filed November 12, 1881. (Model.)

To all whom it may concern:

Be it known that I, GEO. H. PRESTON, a citizen of the United States, residing at Shortsville, in the county of Ontario and State of New York, have invented a new and useful Improvement in Wood-Bending Machines, of which the following is a specification.

My invention relates to an improved method of producing, holding, and regulating the upset or end-pressure upon the timber while it is being bent. Its object is to bend heavy timber—such as fellies, shafts, poles, &c.—as well as light, bending without splitting, breaking, or buckling the timber.

Figure 1 of the drawings is a perspective view of a bending-machine of the Blanchard style with my improvement applied. Fig. 2 is a view of my improvement or spring-follower as it is applied to the bed or table which forms the bending-lever of the machine. Fig. 3 is a view of the spring-follower with three adjusting-bolts instead of one, as shown in Figs. 1 and 2.

The part marked H of the drawings is the shaft, upon which the form B is placed for operation. The shaft H is usually turned by means of gears, but the cranks C will do to illustrate.

E is the bed, arranged so as to slide endwise backward and forward under the form B. The bar J J in the end of the strap A is made to fit into hooks P P in the bed E.

The follower D is made of wood, and is for the purpose of receiving the pressure from the spring-follower and communicating it squarely against the end of the bending stick. The spring-follower (shown in Fig. 2) is constructed of two heads, I I, the bolt t, the nut K, and the spring S. The heads I I are connected together by the bolt t, running through the spring S. Two or more bolts may be used instead of one for this purpose, as shown in Fig. 3 of the drawings; but as the tension of the spring is controlled by this bolt, and as the tension must be changed when heavier or lighter timber is to be bent, it is more convenient to adjust with but one nut. The spring-follower is arranged upon ways or guides in the bed E, and when the pressure is off is free to move bodily backward and forward upon its guides.

The pressure upon the end of the timber is sometimes produced by means of a cam, sometimes by a wedge, and sometimes by a screw,

all of which are old devices; but the screw is the most efficient, which is shown at F. In other machines the pressure by the screw, cam, or wedge is applied directly to the follower D, which communicates the pressure to the timber to be bent, and is unyielding; but by placing the spring-follower between the pressure and the timber G the timber is allowed to adjust itself endwise sufficiently to make a perfect bend, and neither break nor buckle.

The operation of the machine is as follows: Place the form B (the strap A being attached to it) upon the shaft H, with the strap fastening directly at the bottom. Draw the bed E back so far that the bar J J will engage with the hooks P P. Place the timber G upon the strap A, with one end under the form, and place the follower D in its place against the other end of the timber. Apply a pressure to the spring-follower by turning the screw F sufficiently to loosen the nut K. If the tension of the spring is not right it may now be adjusted by turning the nut K. It may be seen that the screw F will hold the spring to its proper tension while bending; but the bolt t prevents the spring from expanding when the screw is turned back, thereby saving the labor of turning the screw to compress the spring at each operation. When commencing to bend see that the pressure applied by the screw F is sufficient to loosen the nut K. The form may then be turned till the timber is bent without any further attention to the upset.

A flat steel spring with one or more angles in it or a rubber spring may be used instead of the coil-spring.

Having fully described my invention, what I desire to secure by Letters Patent, is—

In combination with a wood-bending machine, a spring-follower constructed with a spring having two compressing heads connected together and adjustable by means of one or more bolts having nuts, whereby said spring may be compressed or relaxed, as desired, and movable upon ways or guides on the bending-lever, said spring-follower also compressible by means of a stationary screw in the end of said bending-lever, all substantially as described.

GEO. H. PRESTON.

Witnesses:

CHAS. EDGERTON,
FRANK S. BIDWELL.