(No Model.)

G. W. REAM.

PLANER FOR PLOW BEAMS.

No. 492,338. Patented Feb. 21, 1893.

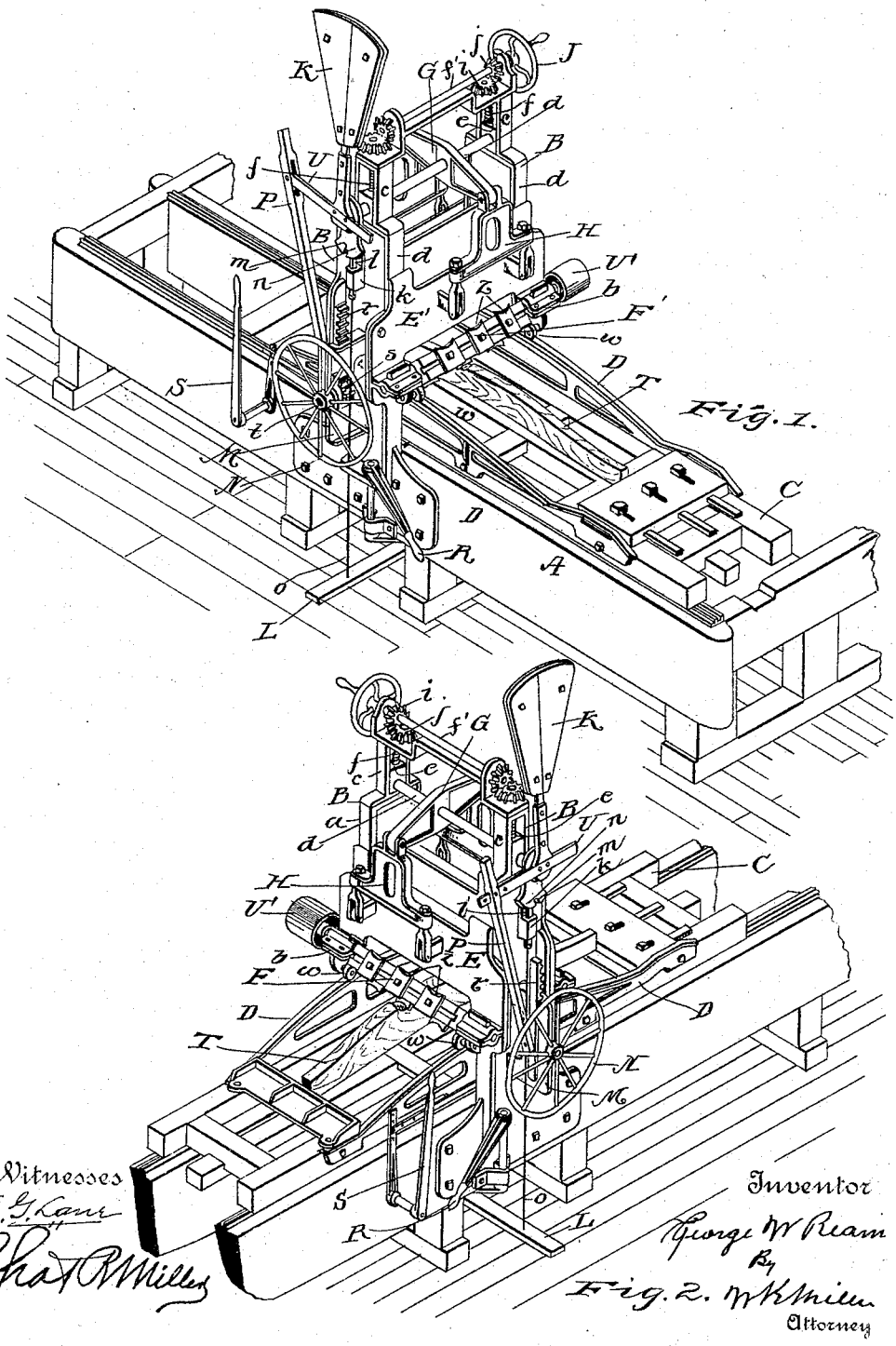

Fig. 1.

Fig. 2.

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PLANER FOR PLOW-BEAMS.

SPECIFICATION forming part of Letters Patent No. 492,338, dated February 21, 1893.

Application filed June 27, 1892. Serial No. 438,185. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. REAM, a citizen of the United States, and a resident of Canton, county of Stark, State of Ohio, have invented a new and useful Improvement in Planers for Plow-Beams, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to an improvement in planing machines and particularly to machines adapted for planing plow beams and consists of certain features of construction and combination of parts as will be hereinafter described and pointed out in the claims.

Figure 1 of the accompanying drawings is a view in perspective of a planer illustrating my invention, taken from the right hand end of the machine, and: Fig. 2 a similar view from the left hand.

Referring to the drawings similar letters will indicate corresponding parts.

A represents the bed to which is secured an upright frame B, and C the table which moves longitudinally on the bed to which is secured the pattern guides D. On the opposite edges of the upright frame is provided slides *a* on which is placed cross heads E and E′ adapted for vertical movement on the slides *a*, at the lower end portion of the cross heads is provided journal boxes *b* in which is supported the journals of the cutter heads F and F′. At the upper portion of the upright frames, is provided a slide *c* in which is provided a journal box for the rock shaft *d*, and a threaded aperture *e* to correspond with the thread on the screw *f* by which the slides *c* may be raised or lowered for the purpose hereinafter explained. On the shaft *d* is supported a working beam G, having at each of its ends a link connection H, with the cross heads E and E′; to raise the cross head and cutters simultaneously the crank wheel J is turned to rotate the shaft *f′* and gear wheels *i j* to turn the screws *f* in the slides *c*. On the front end of the shaft *d*, is mounted vertically above the shaft, a weight K to rotate about said shaft as hereinafter explained. There is also provided on the front upright B, and loosely mounted on the shaft *d* a slide *k* that carries a spring bolt *l* the upper end of which engages a notch *m* in a segment *n* depending from and rigidly secured to the weight K. Said slide is held against rotation with the shaft by a rib projecting from the frame into a groove in the back of the slide. To operate the spring bolt a wire *o* is connected to the lower end of the bolt and extended to and connected with a foot lever L. There is also provided on, and projected from said front upright B, a bracket M, having therein a groove or race way in which is placed a rack *r*, that engages the teeth of a pinion *s*, that is mounted on the shaft *t* journaled in the bracket M and on the end of said shaft is mounted a hand wheel N. An arm U is projected at right angles with a line drawn vertically through the weight K, the outer end of which is connected with the rack *r* by a link P, thus forming a connection between the weight K and the hand wheel N.

It will be noticed that by the construction mentioned in the beforegoing paragraph, that by the use of the hand wheel N, the operator may raise or lower either of the cutter heads, the pinion *s* engaging the rack *r* the link P, connecting the rack to the arm U, which is connected with the shaft *d*, thus by rotating the hand wheel, the connections will rock the shaft *d*, to raise and depress the ends of the working beam to which the cutter heads are connected by the links H. As before stated the cutter heads may be raised vertically by the use of the hand wheel J, through its geared connections with the screws *f* and slides *e*.

The levers R and S represent the usual starting and reverse lever common to table planers.

The cutter head F is of the form shown and may be adapted to carry two or more series of cutters as *z* of a form that will cut the beam to the desired shape, the heads are driven by the pulleys U′ in opposite direction to each other, below the journal boxes, and secured thereto is provided rollers *w* that travel upon the guide pattern D.

In operation one or more plow beam blanks are secured to the table between the guides D, as shown see Fig. 1, the arch portion up, the hand wheel N is turned over to the right

which movement will tip the front end of the working beam down, thus lowering the cross-head E′, and cutter head F′ until the rollers *w* rest upon the guide D. The operator will so hold or turn the hand wheel until the weight K has been moved past the vertical line, after which the weight will hold the rollers *w* down on the pattern, the cutter head F′, following and finishing the front upper portion of the beam, after which the movement of the table C is reversed, and the beam carried under the cutters to the position shown in Fig. 2, when the hand wheel is turned to the left to throw the weight K to the left of a vertical line through the center of the weight, in which position the weight will hold the rollers *w* down upon the pattern, the cutters following down and finishing the rear portion of the beam.

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

1. The combination with bed D, table C, and upright frame B, of the cross heads E and E′, cutter heads F and F′, journaled to said cross head, rock shaft *d* walking beam G, the ends of which have a link connection with the cross head, a weight K, and means for rocking said beam and weight to raise and lower the cutter heads, substantially as described and for the purpose set forth.

2. The combination with the bed D, table C, and upright frame B of a hand wheel having a geared engagement with a rack having a link connection with a rock shaft supporting a walking beam, the two ends of which have a link connection with cross heads E and E′ which support cutter heads F and F′ guides D, and the weight K, by which the cutters are held to the guide, substantially as described and for the purpose set forth.

3. The combination in a planing machine for plow beams, of a guide pattern to conform to the desired form of beam, the cutter heads F and F′, a working beam to which the cutter heads are suspended, the weight K to hold the cutter heads to the pattern, the swinging segment *n* locking bolt *l* and pedal L, substantially as described and for the purpose set forth.

In testimony whereof I have hereunto set my hand this 25th day of June, A. D. 1892.

GEORGE W. REAM.

Witnesses:
JOS. H. MILLER,
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