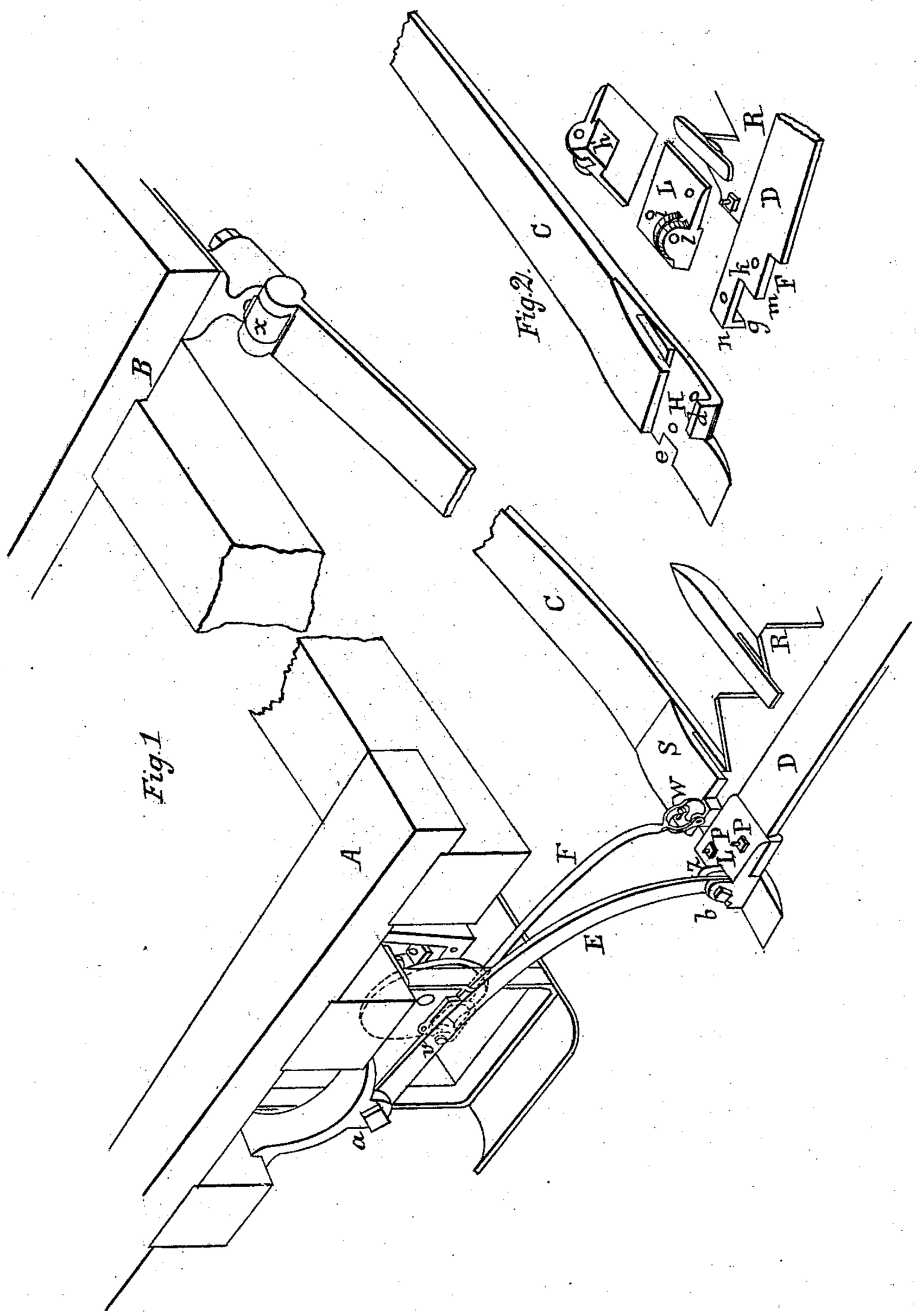
E. BALL.

Mowing Machine.

No. 15,507. Patented Aug. 12, 1856.



UNITED STATES PATENT OFFICE.

EPHRAIM BALL, OF CANTON, OHIO.

IMPROVEMENT IN MOWING-MACHINES.

Specification forming part of Letters Patent No. **15,507**, dated August 12, 1856.

To all whom it may concern:

Be it known that I, EPHRAIM BALL, of Canton, in the county of Stark and State of Ohio, have invented Improvements in Mowing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the principle or character which distinguishes them from all other things before known, and of the usual manner of making, modifying, and using the same, reference being had to the accompanying drawings, of which—

Figure 1 is a linear perspective view of the joints and braces hereinafter set forth; and Fig. 2, a representation of the lock-fastening, hereinafter described and claimed in detached parts.

My invention consists in a mode of connecting the cutter-bar with the braces, so as to secure great steadiness and strength, which I call the "lock-fastening."

A represents the cross-beam in rear of the machine; B, the cross-beam in front of it. The cutter-bar D is connected with the frame B by the braces E C. Both these braces are hinged in order to permit the cutter-bar to be raised. Brace E is connected with the rear of frame A B, and jointed at both ends, *a b*. Brace C connects the cutter-bar with the front beam, B, of the frame to give strength and steadiness against resistances arising from the forward motion of machine. This brace C is hinged on one end, as seen at X, to the front beam, and strongly jointed and bolted at the other end to the cutter-bar in the following manner. Brace C (see Fig. 2) is wrought-iron, with a flange, H, on its outer extremity to receive the cutter-bar. This flange H is so constructed as to prevent any play of joints after the two pieces are bolted together. A part of the flange is removed to form the notch *e*, which is to receive the turned-down or upset portion *g* of the cutter-bar D. The turned-up or upset portion of flange H will fit into the recess *f* of cutter-bar. Thus the two pieces are set together, and the top plate, L, placed over it. This plate L has a projection, *h*, at its bottom, which will fit exactly into recess *n m* of cutter-bar D, and so the lock is complete, and the cutter-bar flange H and plate L are fast by the nuts and bolts *p p*. Plate L has two flanges, Z, to receive the brace E, which is jointed to the flanges by bolt *b* and to the frame by bolt *a*, and thus permits the cutter-bar to be raised when necessary. The brace C has a cast-iron flange, S, which is so arranged as to permit the knives to slide between it and the brace. Between this flange S and lock or plate L slides the connecting-rod F, which moves the knives. This connecting-rod F is jointed at both ends with universal joints *v* and *w* to permit any sidewise or up and downward motion, so as to provide for the various motions of the machine, and to prevent friction from straining of the parts.

I am aware that attempts have been made to joint the cutter to the machine so as to give it play up and down; but by placing the hinge-joint at the joints set forth the improvement and advantages are obvious, as either end of the cutter-bar may be raised and lowered without moving the other end at the same time, and both ends may be raised and lowered at the same time, according to the necessities of the case, so that it may operate upon ridges or embankments, and upon very uneven soil, and also ride over obstructions without injury.

The object of the lock-fastening is to prevent the cutter-bar from working loose in consequence of the immense strain upon this part. Screw-bolts could not keep the parts from wear and shaking in a short time, and with my lock-fastening the office of the screw-bolts is merely to hold the parts of the lock together.

I claim—

The lock-fastening for such cutter-bar, made by the removed and upset portions of the brace and the extremity of the cutter-bar, as set forth.

EPHRAIM BALL.

Witnesses:

T. CAMPBELL,

C. AULTMAN.