2 Sheets--Sheet 1.

# E. G. MATTHEWS.

## Improvement in Machines for Forming Plow-Handles.

No. 114,170. Patented April 25, 1871.

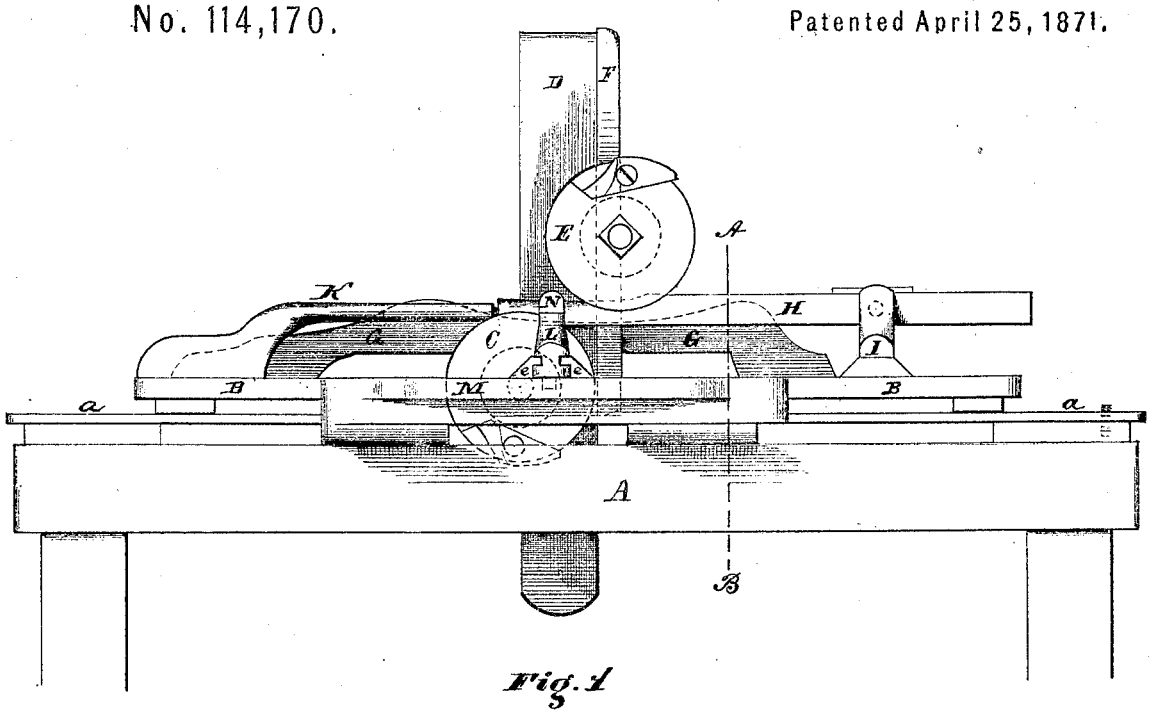


Fig. 1

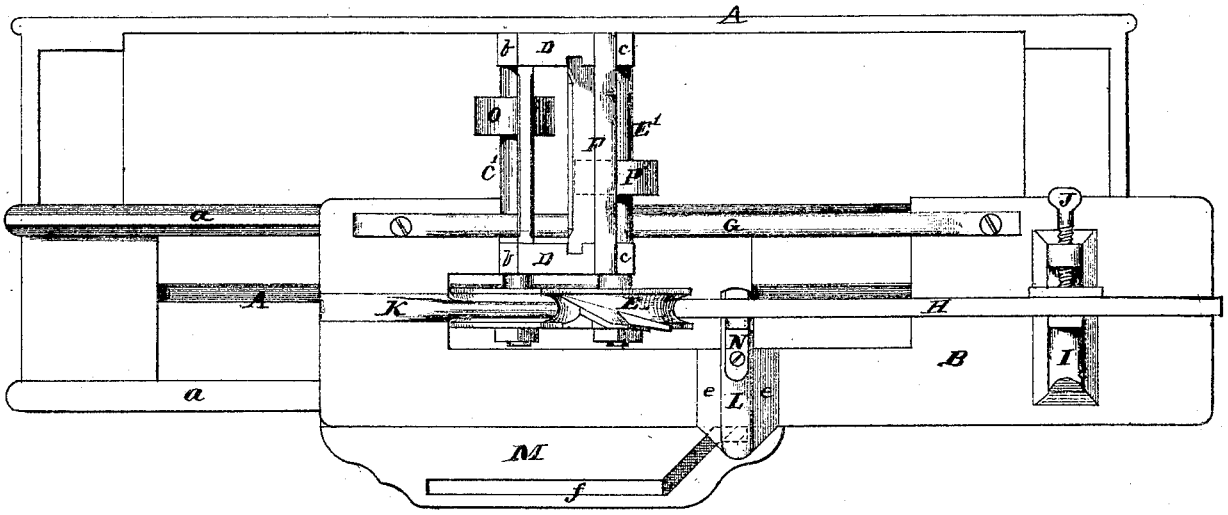


Fig. 2

Witnesses

F. F. Holbrook

Chas. H. Smith

Inventor

E. G. Matthews

# E. G. MATTHEWS.

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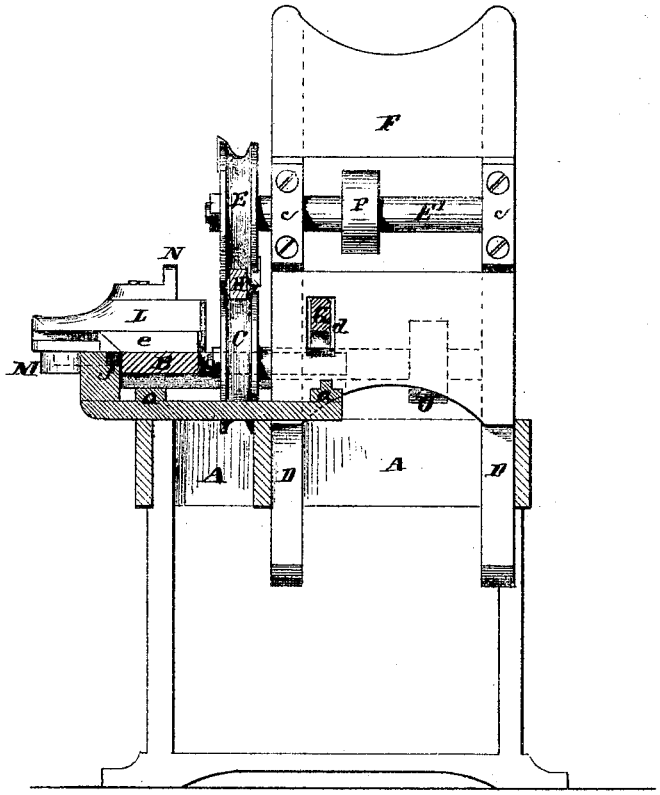


Fig. 3

Witnesses
F. P. Holbrook
Chas. H. Pendleigh

Inventor
E. G. Matthews

# United States Patent Office.

ELBRIDGE G. MATTHEWS, OF OAKHAM, MASSACHUSETTS.

Letters Patent No. 114,170, dated April 25, 1871.

## IMPROVEMENT IN MACHINES FOR FORMING PLOW-HANDLES.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, ELBRIDGE G. MATTHEWS, of Oakham, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Machines for Forming Plow and other Handles; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing which forms a part of this specification, in which—

Figure 1 represents a side view of my improved forming-machine;

Figure 2 represents a plan view of the same; and

Figure 3 represents a transverse section of the same at line A B, fig. 1.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it more in detail.

The nature of my invention consists in certain improvements in machines for forming plow and other handles, as hereinafter described.

In the drawing—

The part marked A represents the main frame.

B, the work-supporting carriage, mounted upon ways *a a*.

C is the lower cutter-head, the arbor C′ of which runs in bearings *b b* upon the rear side of the vertical standard D.

E is the upper cutter-head, the arbor E′ of which runs in bearings *c c* upon the vertical sliding frame F, which frame is arranged to move up and down upon the front side of the vertical standards D, it being raised and depressed by means of an irregular or crooked way, G, secured upon the side of the carriage B.

The irregular way G passes through an opening, *d*, in the vertical frame F, and the weight of the frame rests upon the way G. As the carriage B is moved along, the frame F and cutter-head E are so actuated by the irregular way as to produce the proper and required curvature upon the handle.

H indicates the handle-timber or piece of wood from which the handle is to be formed.

I is a clamp provided with a set-screw, J, for securing the handle-timber H in position.

K is a spindle for holding one end of the handle-timber; it is secured upon the rear end of the carriage B, and is made so as to extend forward between the cutters, and is provided with a point at its end upon which the handle-timber H is centered.

L is a movable gauge to assist in properly adjusting the handle-timber in the machine. It is arranged to work back and forth between guides *e e*, and is operated by a pin or lug at its under side, which works in a guiding-groove, *f*, upon the plate M, at the side of the frame, as indicated. The gauge L is so arranged that when the carriage is drawn forward it moves up into position, and the handle-timber H is properly placed by laying it upon the gauge L, against the stop N; then, when the carriage B is moved back to carry the timber H between the cutters, the gauge is caused by the groove and lug to run back out of the way.

By arranging the cutter-head C and E in the relative positions as shown I am enabled to cut all sides of the handle, as the lower cutter-head C will work above and the upper cutter-head E will work below a horizontal plane passing through the axis of the handle-timber H.

The stop-piece N upon the gauge L may be made adjustable so as to properly receive different sizes of handle-timber H.

The cutter-heads are driven by means of belts extending from the pulleys O and P to some suitably-arranged pulleys at the rear of the machine.

The operation of my improved forming-machine is as follows:

The carriage B is drawn forward and the handle-timber is placed in position by laying one end in the clamp I and the other against the stop N on the gauge L. It is then driven onto the point of the spindle K and also secured by the screw J. The carriage is then run back so as to pass the timber between the cutters, which plane off the surplus wood and round the handles to the proper form, while the irregular way G guides the upper cutter-head in such a manner as to produce proper curvature and shape.

I do not wish to be understood as claiming anything shown or described in the patent granted to William Van Anden, August 7, 1855, and which patent, together with the invention covered thereby, I hereby disclaim.

Having described my improved machine for forming plow and other handles,

What I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. The combination, with the sliding frame F and work-supporting carriage B, of the irregular way G, substantially as and for the purposes set forth.

2. The combination, with the carriage B, of the gauge L and groove *f*, substantially as and for the purposes set forth.

3. The combination, with the grooved cutter-heads C E arranged in relation to each other, as shown and described, of the work-supporting spindle K, substantially as and for the purposes set forth.

E. G. MATTHEWS.

Witnesses:

F. F. HOLBROOK,

CHAS. H. BURLEIGH.