

G. V. Griffith.

Mach. for Forming Plow Handles.

N^o 93,710.

Patented Aug. 17, 1869.

Fig: 1.

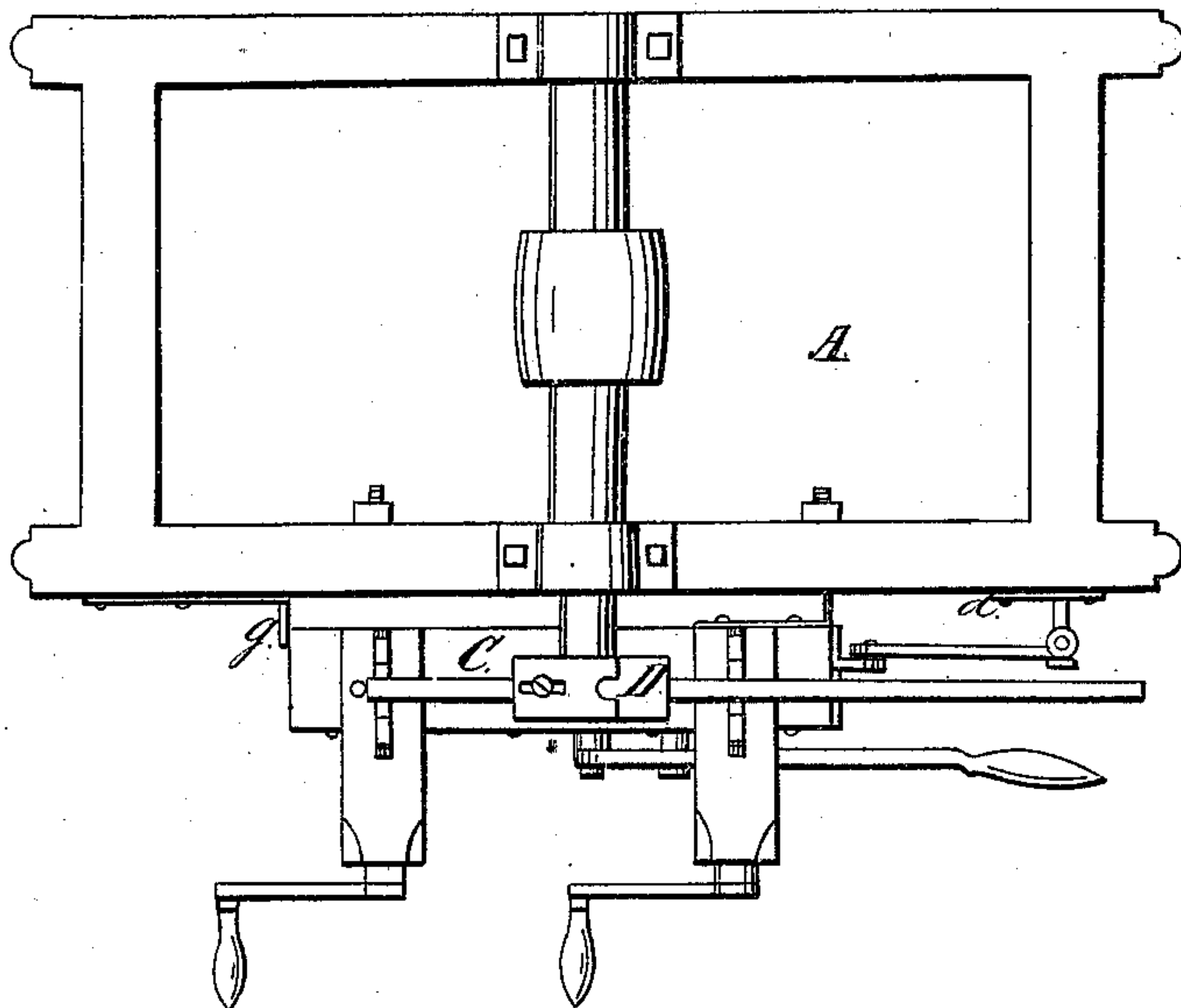


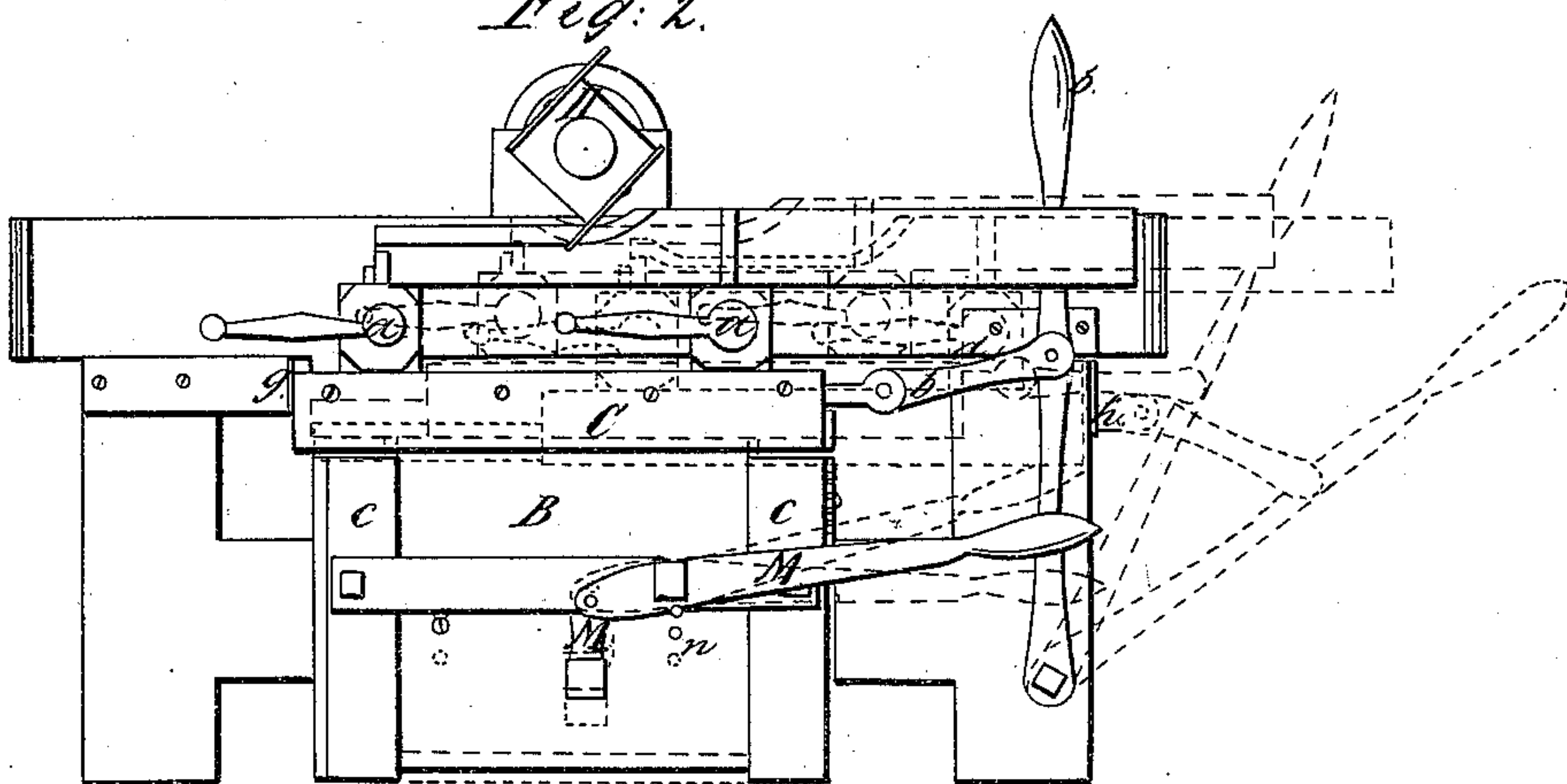
Fig: 4.



Fig: 3.



Fig: 2.



Witnesses.

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GEORGE V. GRIFFITH, OF FORT WAYNE, INDIANA.

Letters Patent No. 93,710, dated August 17, 1869.

IMPROVEMENT IN MACHINE 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, GEORGE V. GRIFFITH, of Fort Wayne, in the county of Allen, and State of Indiana, have invented certain new and useful Improvements in Machinery for Forming Plow-Handles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which like letters refers to like parts in the different figures.

To enable others skilled in the arts to make and use my invention, I will proceed to describe its construction and operation.

Figure 1 represents a plan view.

Figure 2 represents a side elevation.

This invention has for its object to form plow-handles into proper shape previous to bending them; and

It consists in the combination of a horizontal reciprocating frame, on which are placed the clamps that hold the plow-handles, with a vertically-reciprocating frame, in such manner, that by the operation of the latter, the plow-handle may be raised up to or withdrawn from under the cutter-head at any moment, in order to arrest the forming-process at any desired point.

A represents a clamping-apparatus, which is constructed as follows:

a represents a rod, having a right and left-hand screw, which passes through and takes into nuts having a corresponding right and left-hand female screw.

These nuts are so constructed that their upper ends form a vise or clamp, the jaws of which, when the rod *a* is rotated, move parallel to any desired extent.

It is clear, then, that when said jaws are forced together with sufficient force, having between them the handle to be operated upon, they will firmly hold said handle in the desired position, as will be readily understood.

These clamps are so placed that when screwed into close contact, their touching surfaces shall be in the vertical plane passing longitudinally through the centre of the cutters, and when they are screwed up against the sides of the plow-handle, the longitudinal centre of the latter shall be in said plane.

By these means the same amount of material is cut from each side of the plow-handle.

The rear set of jaws is in every respect the same as the front ones, with the exception of being much shorter.

They serve only to hold or steady the handle in place, while the front clamps, being longer, have a wide bearing-surface on the handle, and thus steady it in position, as will be well understood.

The rear clamps, being shorter than the others, the cutters are enabled to pass without interference.

These clamps are secured to a reciprocating holder, which is confined in suitable ways, and are operated by means of lever and connecting-rod *b*, as will be readily understood.

B represents a sliding frame, which is confined in suitable ways, C C, so as to enable it to reciprocate freely.

To the upper edge of this frame B is secured, in ways, as before described, the holder C, in such a manner that said holder reciprocates horizontally while frame B reciprocates vertically.

d represents a stop, which is placed in a position which gauges the cutting of the handle.

g represents a stop, which determines the movement of the holder C in its backward movement.

h represents a stop, which terminates the forward movement of said holder C while the forming is being done.

i represents a stop, which intercepts the forward movement of said holder when the handle has been formed, and as it is brought forward to be removed from the apparatus.

D represents the cutter-head, which is provided with suitably shaped cutters to form the handle.

K K represent stops, which are placed on frame B in such a manner as to intercept the forward movement of said frame by coming in contact with *l*.

Said frame B is operated by a lever and connecting-rod, *m*, said lever being secured to the stationary frame.

n represents a catch which serves as a gauge, as will be more fully explained in the specification hereafter.

Having thus fully described the parts of the machine, I will now proceed to describe its construction and operation.

The blank handle is inserted between the jaws, and is by them securely clamped and centred, as before described, in the position seen in the drawings.

Then the lever *m* is acted upon and forces the wood against the revolving cutters until said lever bears against the catch *n*, where it is allowed to rest, and lever *b* is then acted upon, and forces the holder C forward. In so doing, the handle is cut in the form seen in diagram 3 in the drawings.

The holder C is then reversed and carried back to the point where it started, and lever *m* is again forced downward until the handle is raised up in contact with the knives or cutters, which take another course out.

And then, while the handles are held in contact with the cutters, the holder C is forced again forward until it comes in contact with the stop *d*, which interferes with the forward movement and stops the han-

dle before the cutters have reached the rear end thereof.

Thus the handle is formed as seen in diagram, fig. 4, in the drawings.

Lever *m* is then carried back or drawn upward, which movement lowers the holding-apparatus with the handle, so that it will clear the cutters and the stop *d*, and then the holder *C* is brought forward to clear the cutter-head, and the handle is removed and another inserted in its place.

What I claim as new, and desire to secure by Letters Patent, is—

The vertically-reciprocating frame *B*, combined with the horizontally-reciprocating frame *C*, and constructed and operating substantially in the manner and for the purpose set forth.

GEO. V. GRIFFITH.

Witnesses:

H. F. WILLSON,

FRED. T. ZOLLARS.