4 Sheets—Sheet 1.

(No Model.)

E. L. GAYLORD.

MACHINE FOR PLANING THE BEVELED ENDS OF MOLDINGS.

No. 286,421. Patented Oct. 9, 1883.

Fig. 1

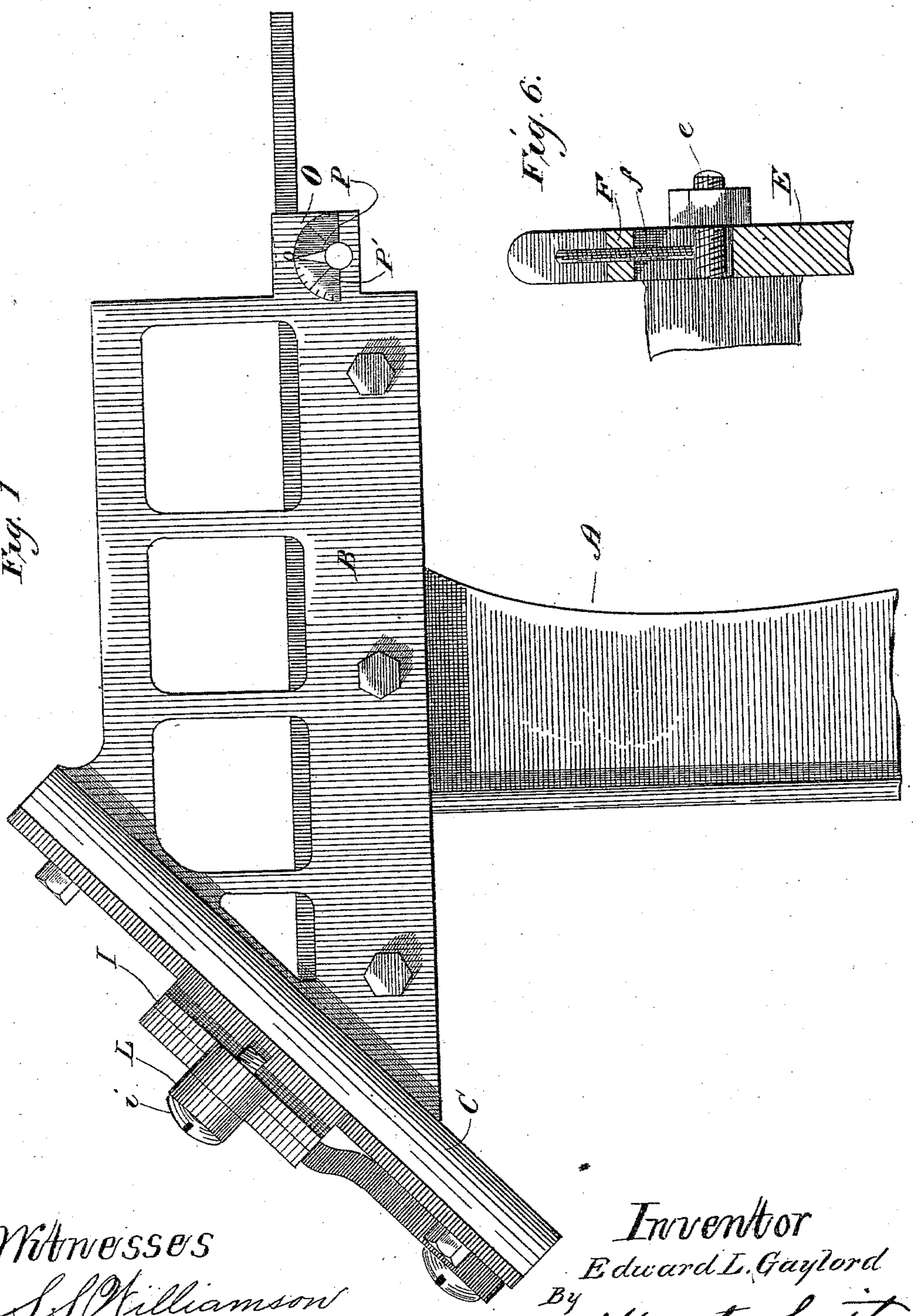

Fig. 6.

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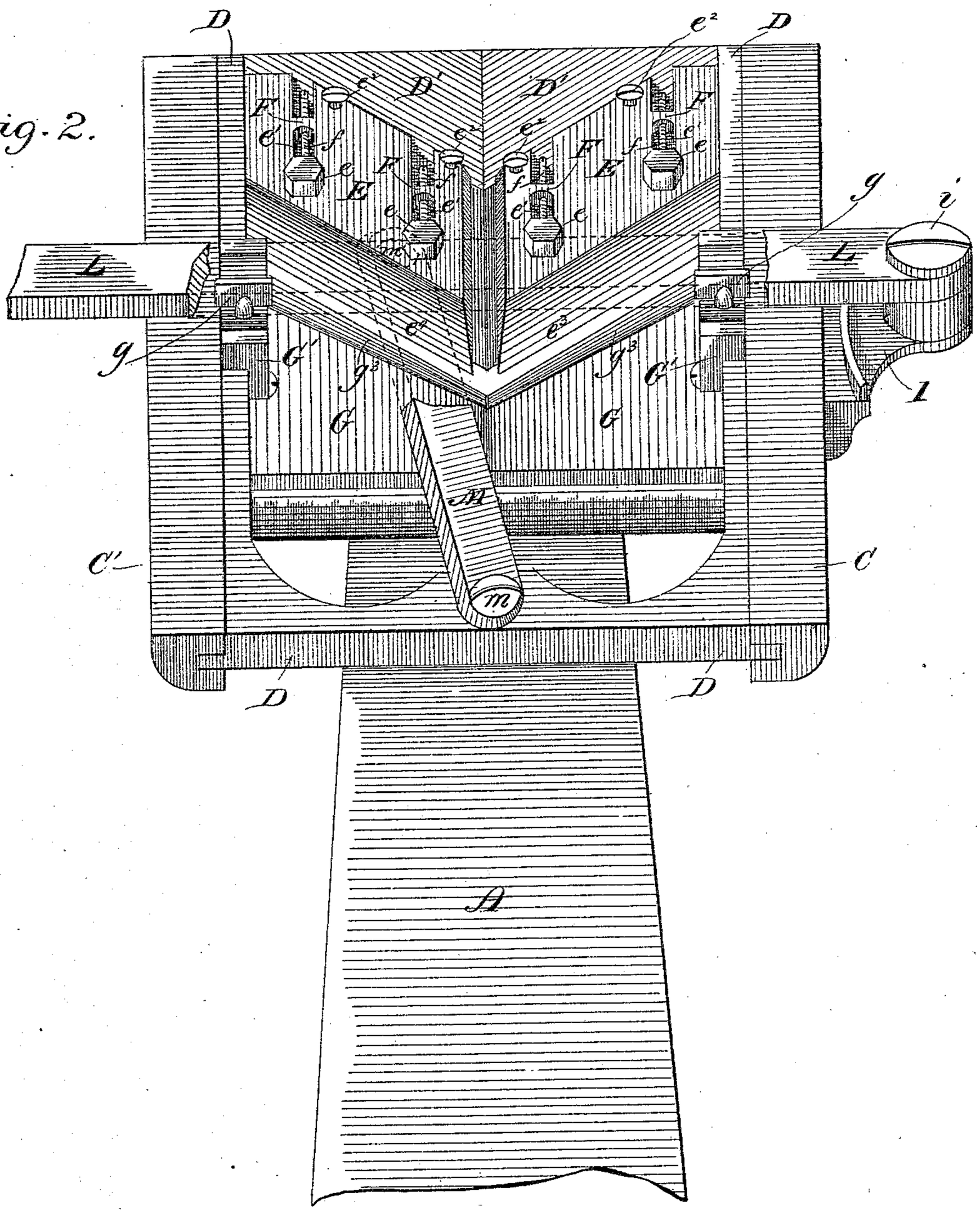
Fig. 2.



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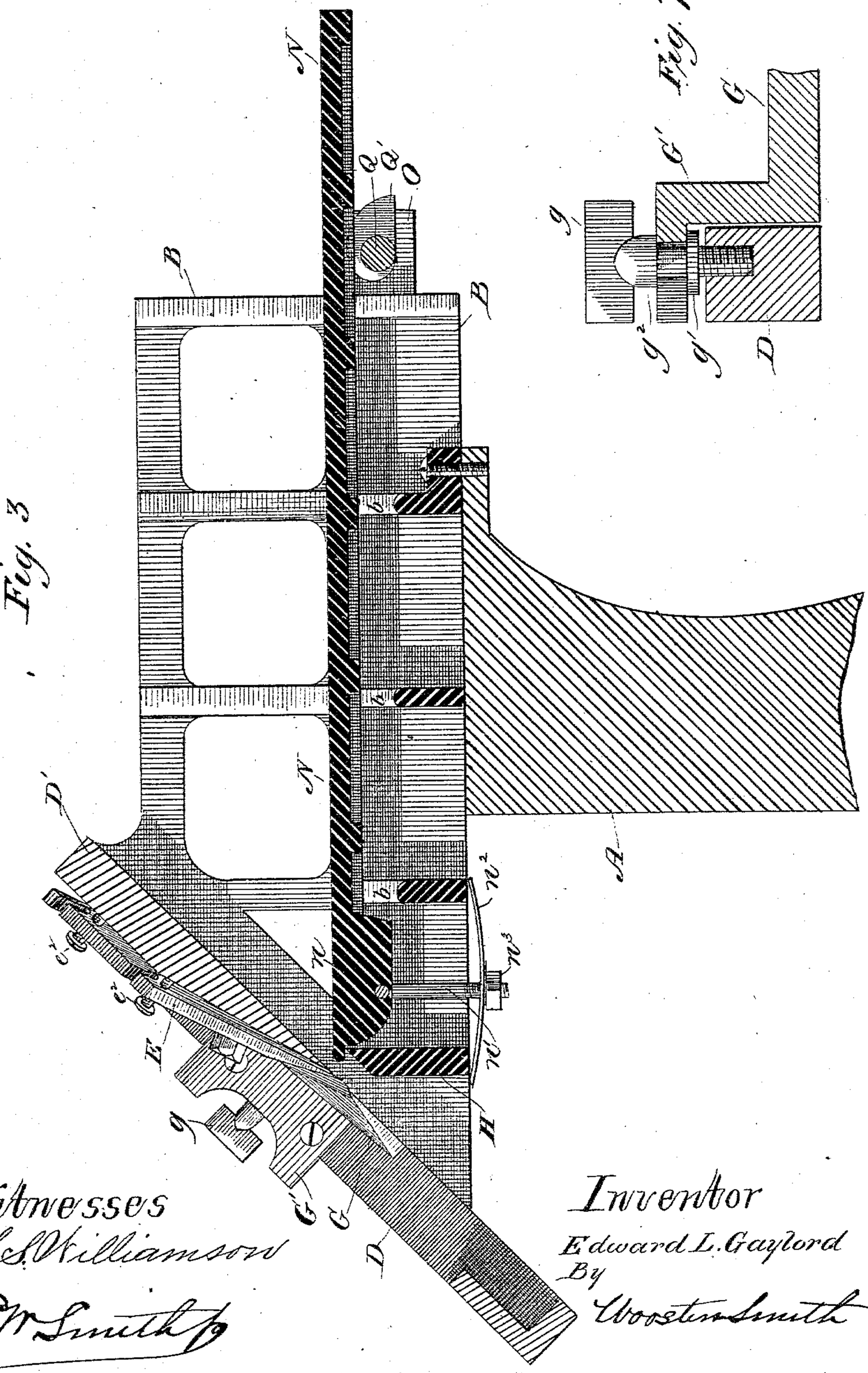

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Fig. 4.

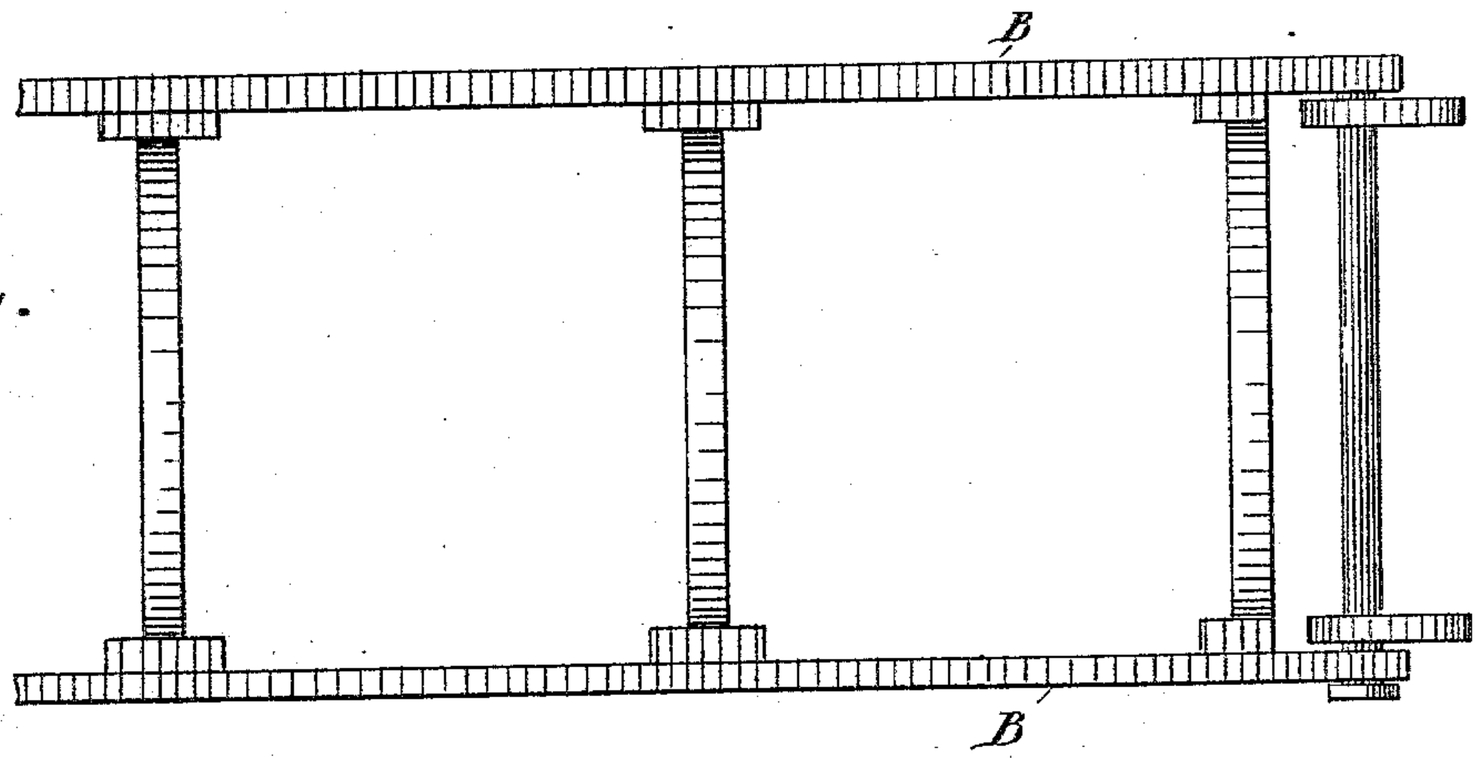
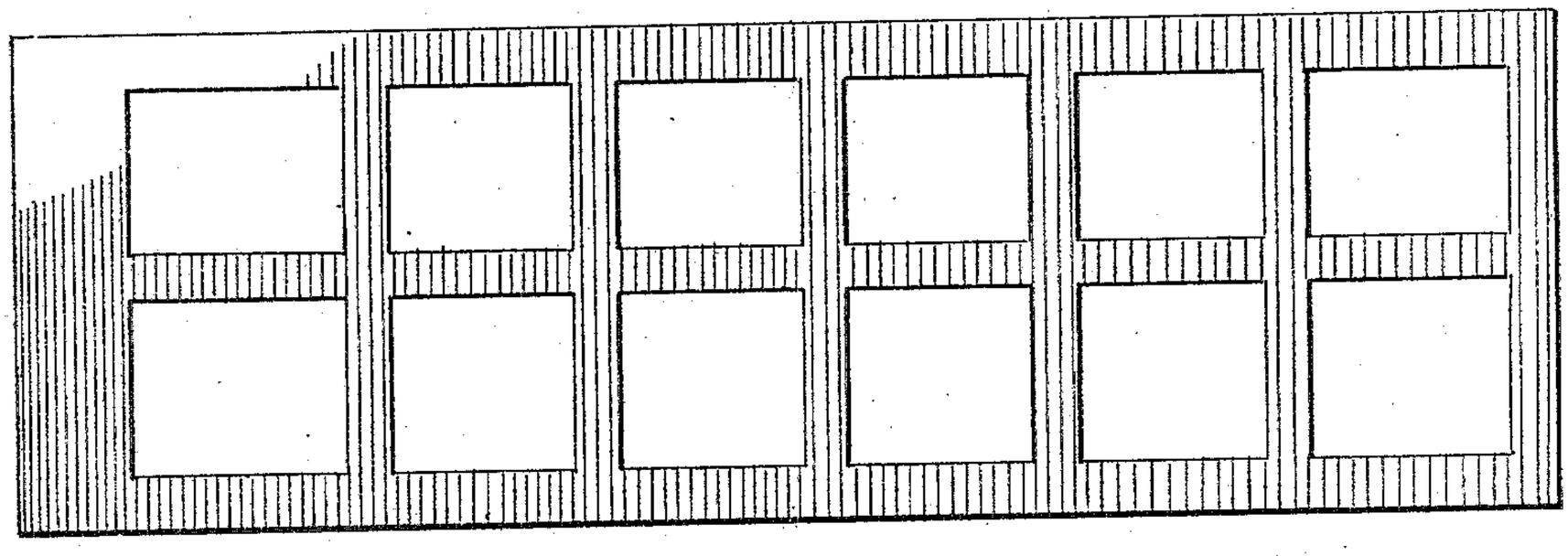


Fig. 5.



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UNITED STATES PATENT OFFICE.

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MACHINE FOR PLANING THE BEVELED ENDS OF MOLDINGS.

SPECIFICATION forming part of Letters Patent No. 286,421, dated October 9, 1883.

Application filed July 5, 1883. (No model.)

To all whom it may concern:

Be it known that I, EDWARD L. GAYLORD, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Planers for Moldings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in machines for planing picture and other moldings, and has for its object to provide such a machine which shall be cheaper of construction, ready of operation, positive in all its movements, and which shall do a better class of work than has heretofore been done by planing-machines of this character; and to these ends my invention consists in certain details of construction and combination of elements hereinafter fully described, and then specifically designated by the claims.

In order that those skilled in the art to which my invention appertains may more fully understand its construction and operation, I will proceed to describe the same in detail, referring by letter to the accompanying drawings, which form a part of this specification, in which—

Figure 1 is a side elevation of my improved planer with the lower portion of the stand broken away; Fig. 2, a front view, a portion of the operating-lever and connecting-rod being broken away to show more clearly the operative parts of the machine; Fig. 3, a central vertical longitudinal section, showing the relative position of the several parts. Figs. 4 and 5 are detail views of the frame and platform, respectively; Fig. 6, a detail sectional view of the means for adjusting the knives, and Fig. 7 a similar view of means for adjusting the gage-plate.

Similar letters of reference indicate like parts throughout the several views of the drawings.

A is the stand, and B the frame, bolted or otherwise secured thereto. On the forward end of frame B are cast or otherwise secured guideways C C′, in which the carrier D fits and slides.

D′ is a beveled guide-block, cast integral with the carrier and across the top thereof, and to this block are bolted knives E by means of bolts *e*, passing through elongated slots *e′* in said knives. The knives are cut away, so as to form bridges F, through which latter are passed set-screws *f* against the bolts *e*. By unloosing these bolts and screws the knives will drop by gravity, and may be adjusted and secured at any desired elevation, and this of course will effect the depth of cut; but it is especially adapted to compensate for the wear on the cutting-edges of the knives; also, this arrangement is found to be especially advantageous when the knives are removed for the purpose of grinding, it being only necessary to unloose the bolts *e* without disturbing the set-screws *f*, and when the knives are replaced they are of course in the same position as before.

Near the upper edges of knives E are adjusting-screws e^2, which pass through the rear end of said knives and bear against the block D′, the object of which is to raise or lower the cutting-edges e^3 e^4 of said knives, causing them to take more or less hold on the material operated on. The cutting-edges of the knives E are oblique or diagonal, for the purpose of making a draw-cut, which insures a smooth finish, and is especially advantageous in molding-cutting.

Fitting snugly between the sides of the carrier D is a gage-plate, G, having brackets G′, extending up and at right angles over the sides of said carrier D, as seen at Figs. 2 and 7. Through these brackets pass thumb-screws *g*, having collars *g′*, clearly shown at Fig. 7. These collars, in connection with shoulders g^2, retain the brackets G′, so that when the said screws *g* are raised or lowered the brackets will be raised or lowered, as the case may be, and the gage-plate, being secured to said brackets, will have a corresponding movement. The gage-plate G is beveled at g^3, and is placed just near enough to the edges e^3 of knives E to allow shavings to pass between. Now it will be readily understood that by raising or lowering said plate G by means of thumb-screws *g* a thicker or thinner slice will be taken from the molding.

Cast with or secured to the guideway C is an outwardly-projecting bracket, I, to which is pivoted, by means of screw *i*, the operating-

lever L, partly broken away and in dotted lines, as seen at Fig. 2.

To the lower edge of the carrier D is pivoted one end of a connecting-rod, M, by screw *m*. This rod passes upward, and is pivoted to the operating-lever L at *m'*. (Shown in dotted lines at Fig. 2.)

Just back of the plane in which the cutting-edges e^3 e^4 of knives E move is a cross-bar, H, having its upper edge beveled, as seen in Fig. 3. On this edge rests the forward end of the platform N. This platform is cast open, as shown at Fig. 5, and has a lug, *n*, having a hole in which hooks the bent end of rod *n'*, the lower end of which passes through a spring-button, n^2, and is retained by a nut, n^3. The ends of said spring-button are turned under bar H and one of the bars *b*. From the rear end of frame B project lugs O, which form bearings for cam-shaft Q, on which are secured cams Q'. On these cams rests the rear end of the platform N.

To one end of cam-shaft Q is secured pointer P, Fig. 1, which moves around graduated quadrant P'. It will be seen that by turning the pointer P the cams Q' will cause the rear end of the platform to rise or fall, as the case may be, the object of which will presently be explained.

The operation of my invention is as follows: The molding to be planed is placed on the platform N. If the end of said molding is beveled to the desired pitch, the pointer is allowed to remain at zero, and the platform will accordingly be perfectly level. If it is desired to slice off from the top or bottom of the molding, the rear end of the platform is raised or lowered by moving the pointer to the left or right, thereby throwing the top or bottom of the molding, when it abuts against the gage-plate farther beyond the field of operation of the knives. The latter are operated by moving the lever L, attached to the carrier D, up and down.

Having fully described my invention, what I claim as new and useful is—

1. In a machine for planing the beveled ends of moldings and the like, the cutting-knives attached to the carrier, as described, in combination with means for raising and lowering the same, means for varying their pitch, and the gage-plate, and means for adjusting the same in a plane at an angle to the line of movement of the cutting-knives, substantially as set forth.

2. In a machine for planing the beveled ends of moldings and the like, the cutting-knives E, attached to the reciprocating carrier by bolts *e*, passed through slots *e'*, in combination with set-screws *f* and adjusting-screws e^2, substantially as described.

3. In a machine for planing the beveled ends of moldings and the like, the platform N, supported at its forward end by the cross-bar H, and held thereon against displacement by spring-acting rod *n'*, in combination with the cam-shaft Q, carrying cams Q', and pointer P, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD L. GAYLORD.

Witnesses:
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W. T. HAVILAND.