

*J. H. Goodell,
Cutting Veneers.*

No 16,308.

Patented Dec. 23, 1856.

Fig. 1.

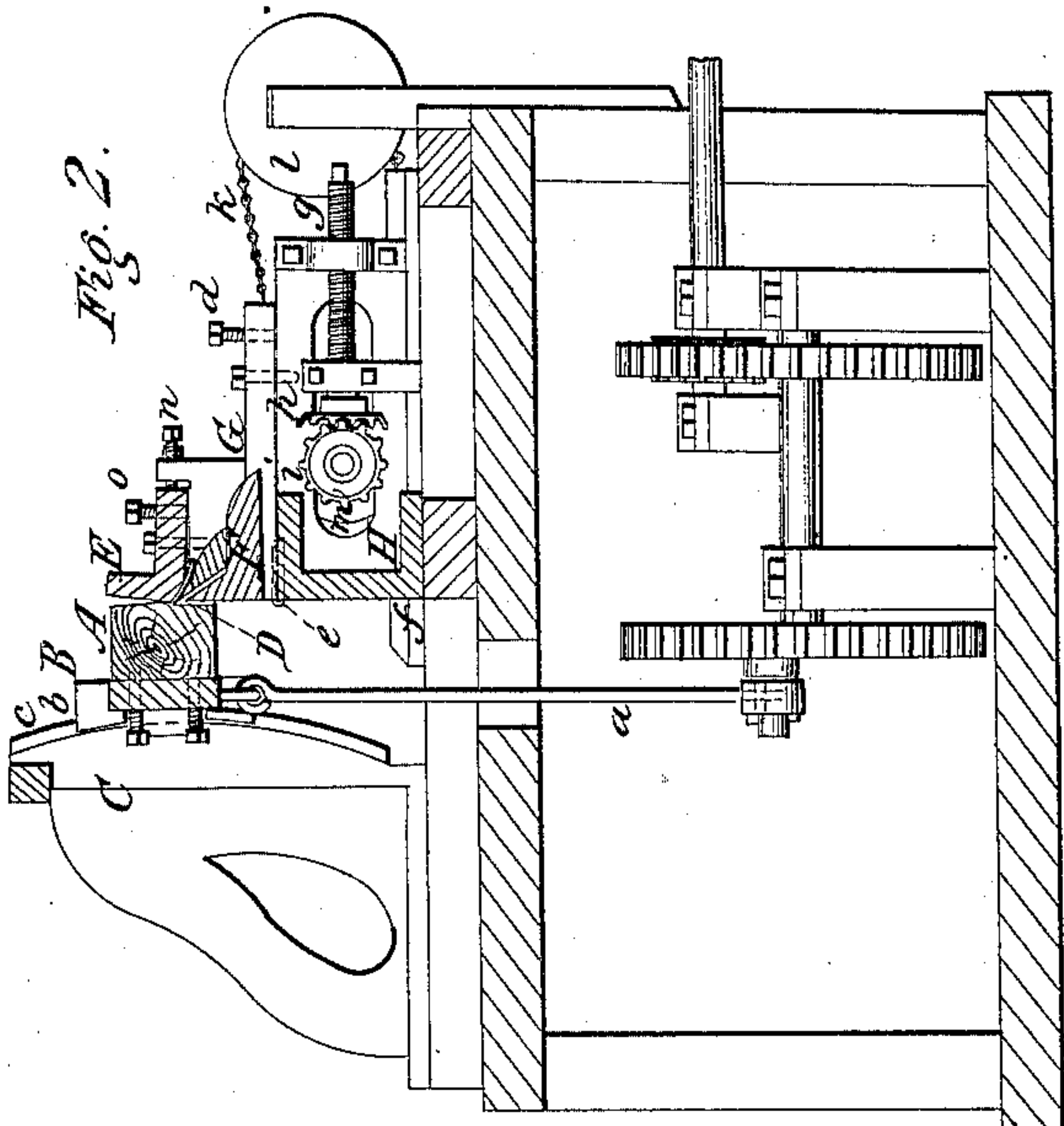
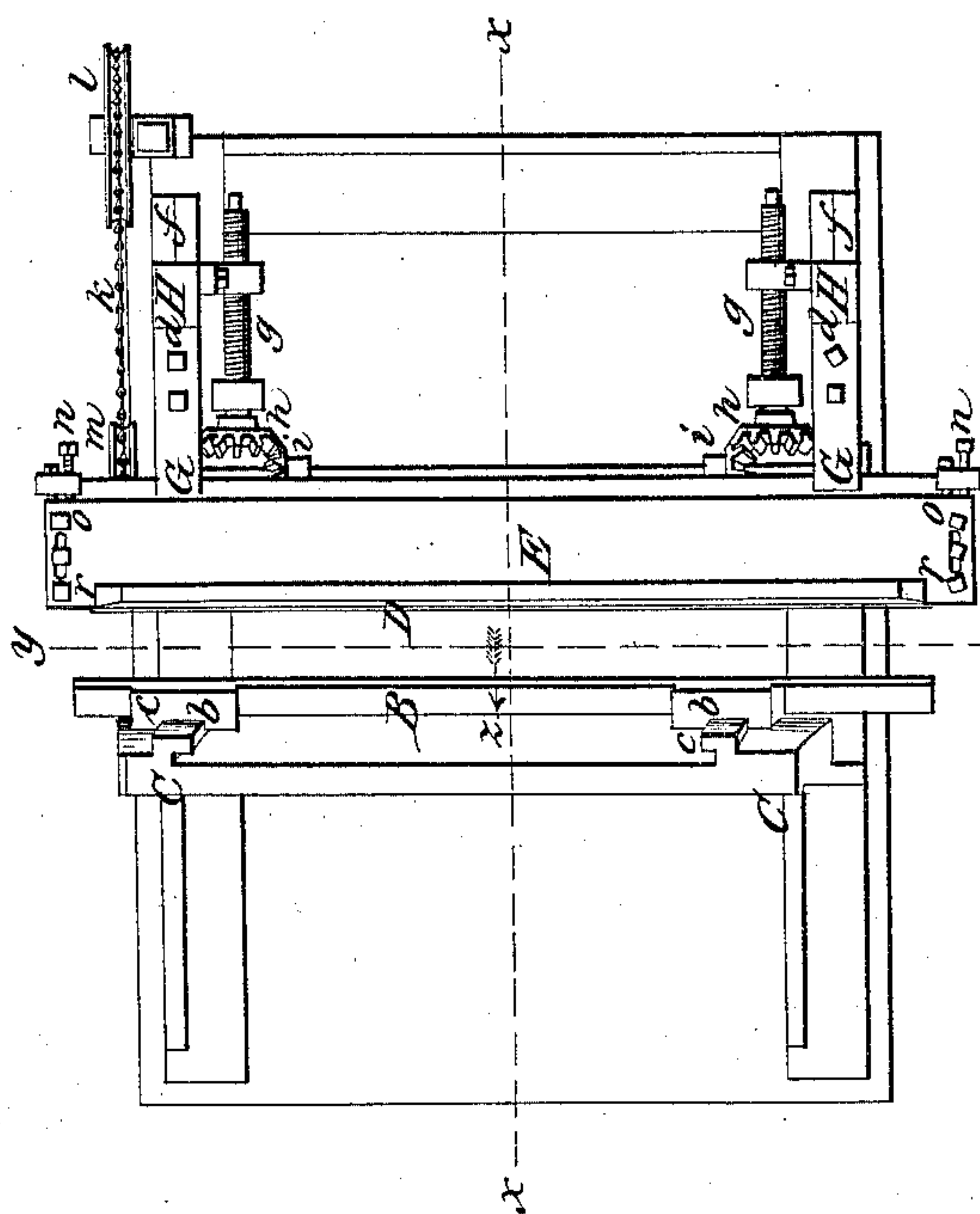


Fig. 4.

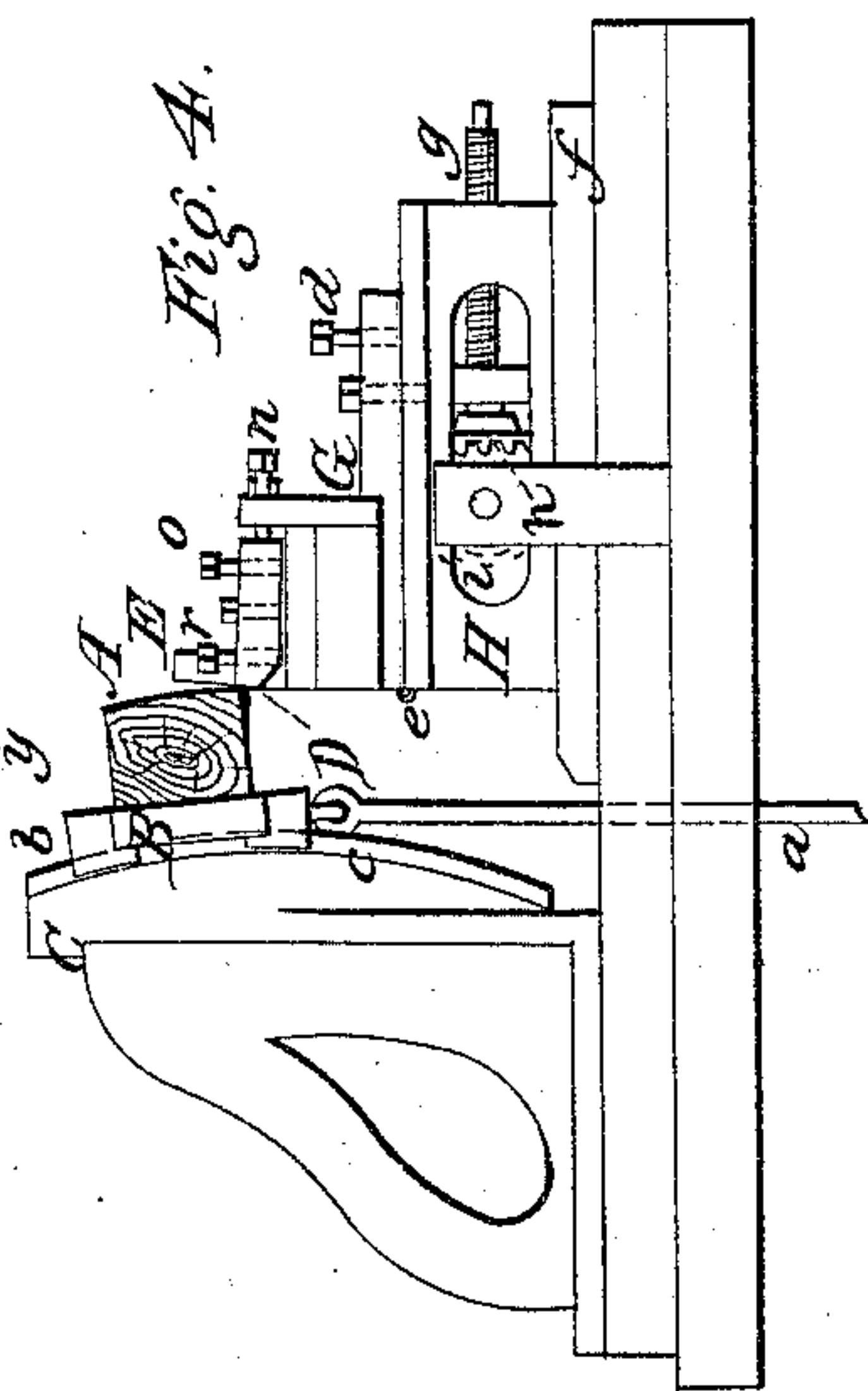
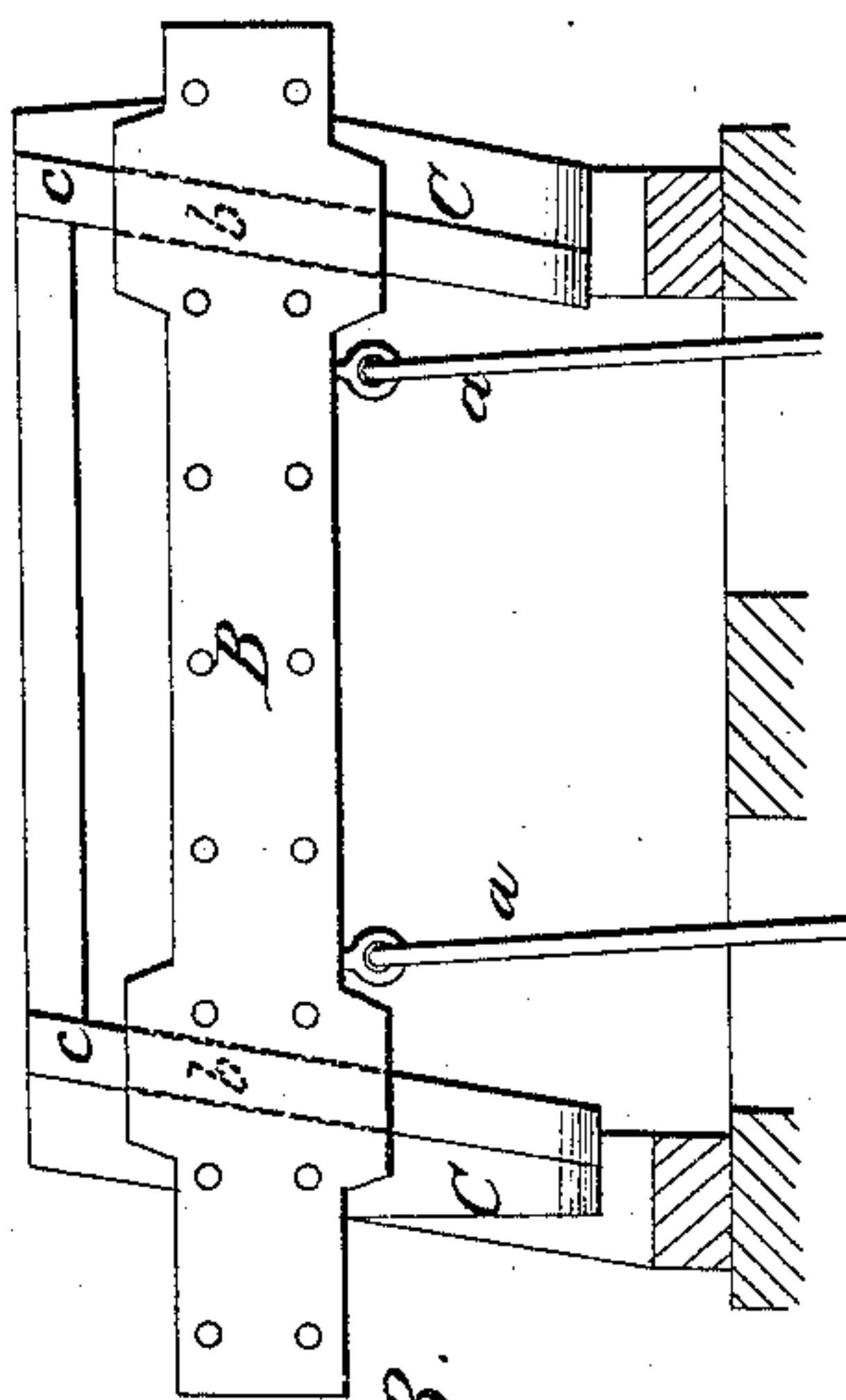


Fig. 3.



UNITED STATES PATENT OFFICE.

JOSEPH H. GOODELL, OF BRIDGEPORT, CONNECTICUT.

MACHINE FOR CUTTING VENEERS FROM THE LOG.

Specification of Letters Patent No. 16,308, dated December 23, 1856.

To all whom it may concern:

Be it known that I, JOSEPH H. GOODELL, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a certain new and useful Improvement in Cutting Veneers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, which forms part of this, and in which—

Figure 1 represents a top view or plan of my improved arrangement of veneer cutting devices; Fig. 2 a vertical section taken as indicated by the line $x x$ in Fig. 1 and showing a log in the process of being cut; Fig. 3 a vertical section taken at right angles to the former figure as indicated by the line $y y$ in Fig. 1 and seen by looking in the direction of arrow z ; and Fig. 4 a side elevation.

In the machine represented in the accompanying drawing, the log (A) is fastened by screws or otherwise to a reciprocating carrying slide (B). This carrying slide or log holder (B) is represented as having a vertical reciprocating action given it by means of pitmen (a) which receive their motion from revolving cranks or wrist pins attached to wheels beneath, but the up and down motion of the log holder may be given in any other suitable manner. Though spoken of as vertical, according to the arrangement shown in the drawing, the reciprocating action of the log holder is not strictly a vertical one but is an up and down movement in a double curvilinear direction or it may be said in one curvilinear direction and one inclined direction without departure however from a horizontal position, by reason of said holder (B) sliding, by grooves (b), in its up and down play, on rails or guiding strips (c) which are part of stationary frames (e), and which strips—fitting the grooves (b) in the back of the holder and the holder prevented from falling forward from said strips by projections overlapping the strips at their back or otherwise—are of a bow form in front, struck from centers some distance in the rear and on a level or thereabout with the cutting edge of a stationary knife (D), and said strips (c) are further curved or set inclined laterally, as clearly seen in Fig. 3; so that the log (A) and its holder (B) will, in the down stroke, which is here shown as the cutting one, travel so as to cause the log to be drawn, downwardly, in a curvilinear

direction against and past the stationary cutting knife (D) in front, with a simultaneous side action or longitudinal movement of the log in relation to the knife and which secures to the log a "drawing cut," without departure of the log in any part of its stroke from a horizontal position. This drawing cut of the log not only eases the operation of cutting the veneer which passes out over the knife and under the knife guard (E), as represented in Fig. 2, but insures a smoother surface to the veneer, and is preferable to giving the knife a drawing stroke, as in other machines operating the knife for various cutting operations, as the knife when stationary may be held steadier, which is important in cutting thin veneers, and is not so liable to work from its proper set in relation to the log and its guard or gage (E), in determining which the greatest particularity has to be observed; also the weight of the descending log serves to insure a steady cut. Other veneer cutting machines only moving the log over against the knife without giving the log the drawing stroke, employing sometimes a stationary and sometimes a traveling knife or cutter, fail to accomplish so perfect an action; and in other machines in which the log is reciprocated in a straight line over the knife instead of gradually meeting the edge of the knife by a gentle curve or sweep (the knife sometimes placed obliquely which gives but an imperfect drawing cut) the veneer is less smooth and is imperfectly formed by reason of the knife digging into the wood or the wood against the knife as the grain presented to the cut varies. But a more curvilinear action of the log against the knife (apart from the simultaneous "drawing" stroke of the log) does not affect the result that is here attained, as the log being, for instance on a holder supported by long radius rods, or formed of a hinged frame, does not give the same close, firm and steady bearing to the log, while being cut, against jerk, spring, or varying strain, that the holder and its guides, as here arranged and operating, do, and which is of such importance in cutting thin veneers and is here provided for, both as regards the cutting stroke proper and the "draw," by one and the same device, while the power working the log is applied in a more positive and direct manner to the log than by the employment of a

hinged frame or log holder as, without the drawing stroke, previously used.

Reference having here been made to other veneer cutting machines, it is only necessary, in that connection, to mention further that, my arrangement is essentially different from what is known as Dresser's patented machine which causes the log to revolve while the cutter is fed up continuously so as to give a scroll cut to the log which produces inequality of bend and thickness in the veneer, produces no similarity of "figure" but produces a veneer of a mixed figure or mark of the wood throughout, and is only applicable, in many instances on that account, to the cutting of veneer for a few certain articles or to the working of such woods as maple and so forth, and by which machine, also, there is much waste of the costly wood from which the veneer is formed, and extra labor requisite, in the necessity which there is for previously "rounding" the log. But in the present arrangement, as also in some others before referred to, there is no previous "rounding" requisite, thus expensive wood and labor are economized, and, in working such woods as rosewood and mahogany, the side of the log presenting the handsomest "figure" may be selected to cut from, during the cutting up of the whole log, which preserves a similarity of figure in all the veneers; also, there is here a parallelism of curve in the veneer cut and an equality of its thickness kept up, which avoids much after dressing and labor.

The knife (D) is, as before observed, stationary, that is while the cut is being made, but is movable to effect the feed each successive double stroke, and its own adjustment, by means of the following devices. The knife, which is set inclining upward, is firmly secured to its holder (F). This holder forms part of a hinged frame (G), adjustable by screws (*d*) up or down in the rear, the hinges (*e*) of said frame being in front and connecting it with the main sliding or feed frame (H) that slides on ways (*f*) to or from the log in a horizontal direction, which combination of hinged frame (G) and sliding frame (H) gives to the knife its proper forward and backward adjustability and its inclined one to suit varying cuts and different descriptions of wood. The feed frame (H) has its horizontal movement given it by means of screws (*g*) operated by bevel gear (*h* and *i*) which is set in motion by a chain or cord (*k*) passing around pulleys (*l, m*); a pull by hand on the chain in one direction, at or immediately

before the commencement of the down stroke of the log, giving to the knife its proper feed forward to cut a veneer of a certain thickness, and a pull on the chain in the opposite direction, on the return stroke of the log, easing the knife from rubbing and being dulled by contact with the log, and so on for each successive up and down travel of the log, the cord or chain being "knotted" or any other suitable means employed for determining regularity in the feed.

The guard and gage (E) above the knife is likewise carried by the hinged frame (G) and is adjustable by screws (*n, o, and r,*) in various directions relatively to the cutting edge of the knife according to the wear of the latter and thickness of veneer required.

I am aware that the same character of double movement of the stuff to be operated on by a fixed knife, namely combining with the curvilinear movement of the stuff a simultaneous lateral action or drawing stroke by means of a hinged frame or table working in connection with fixed guiding strips, is common to stave cutting and other similar machinery; such therefore I do not claim, but—

What I claim herein as my improvement in veneer cutting, and desire to secure by Letters Patent, is—

1. The combination and arrangement shown and described of the reciprocating log carrying slide (B) unsupported by trunnions or axles for its curvilinear play, with the fixed guiding strips (*c*) and stationary knife (D), when said guiding strips serve as the sole guide, to give to the log carrier, operated as specified, its curvilinear movement and simultaneous side action as and for the purposes set forth, and whereby a steadier and more reliable united double bearing is given to the log in its two movements, the log may be secured with facility to the carrier, and the driving power is communicated to the log in a more positive and direct manner for cutting with increased ease and precision thin veneers as herein set forth.

2. Also I claim hinging the knife holding frame (G) to the main knife feeding slide or frame (H) for the easy and double adjustability of the knife as shown and described.

In testimony whereof, I have hereunto subscribed my name.

J. H. GOODELL.

Witnesses:

JOHN S. HOLLINGSHEAD,
A. GREGORY.