

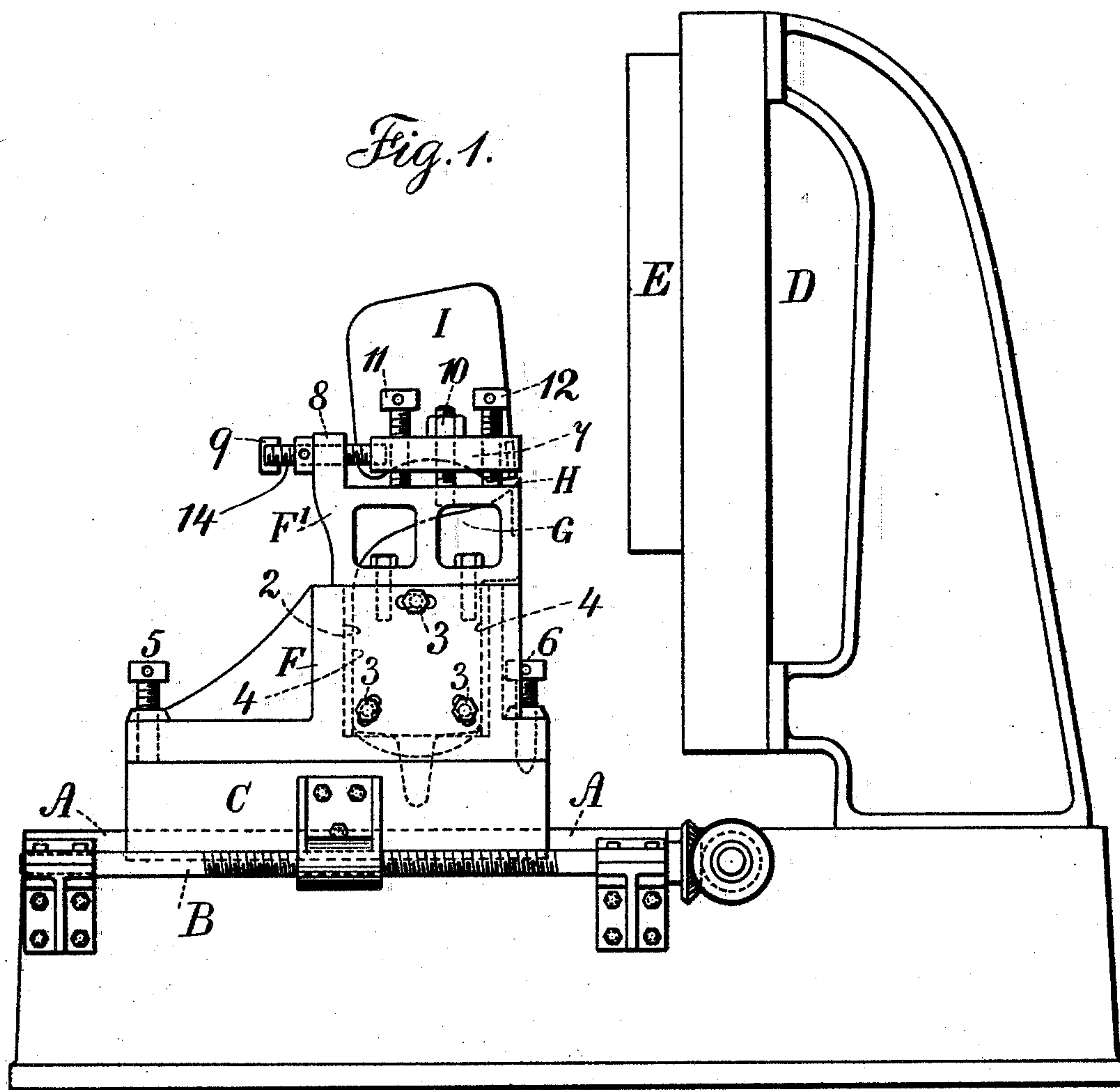
(No Model.)

2 Sheets—Sheet 1.

J. J. HAYES.  
VENEER CUTTING MACHINE.

No. 497,958.

Patented May 23, 1893.



Witnesses:  
J. Staib  
Chas. H. Smith

Inventor:  
John J. Hayes  
per Lemuel W. Terrell  
Atty.

(No Model.)

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Fig. 2.

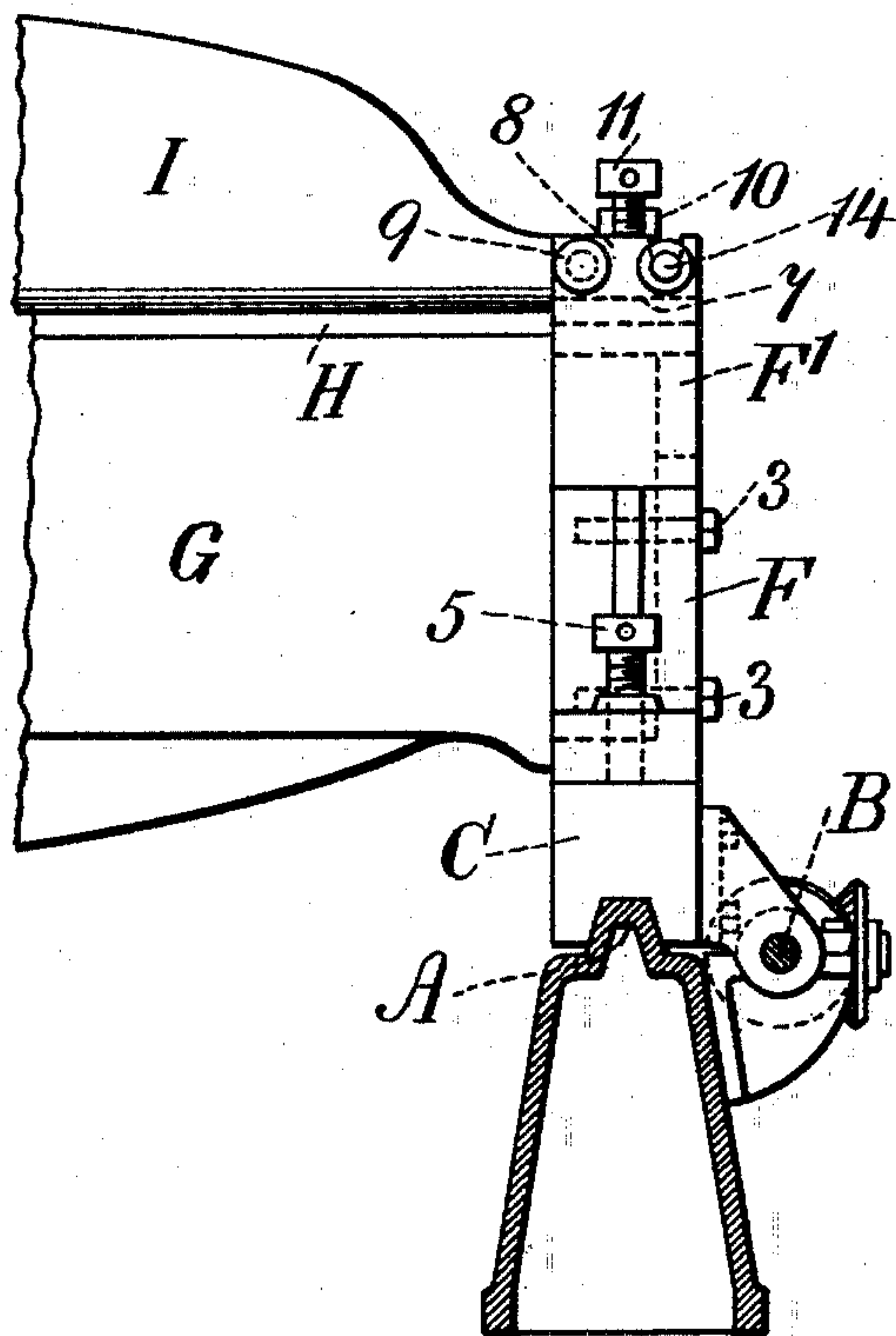


Fig. 3.

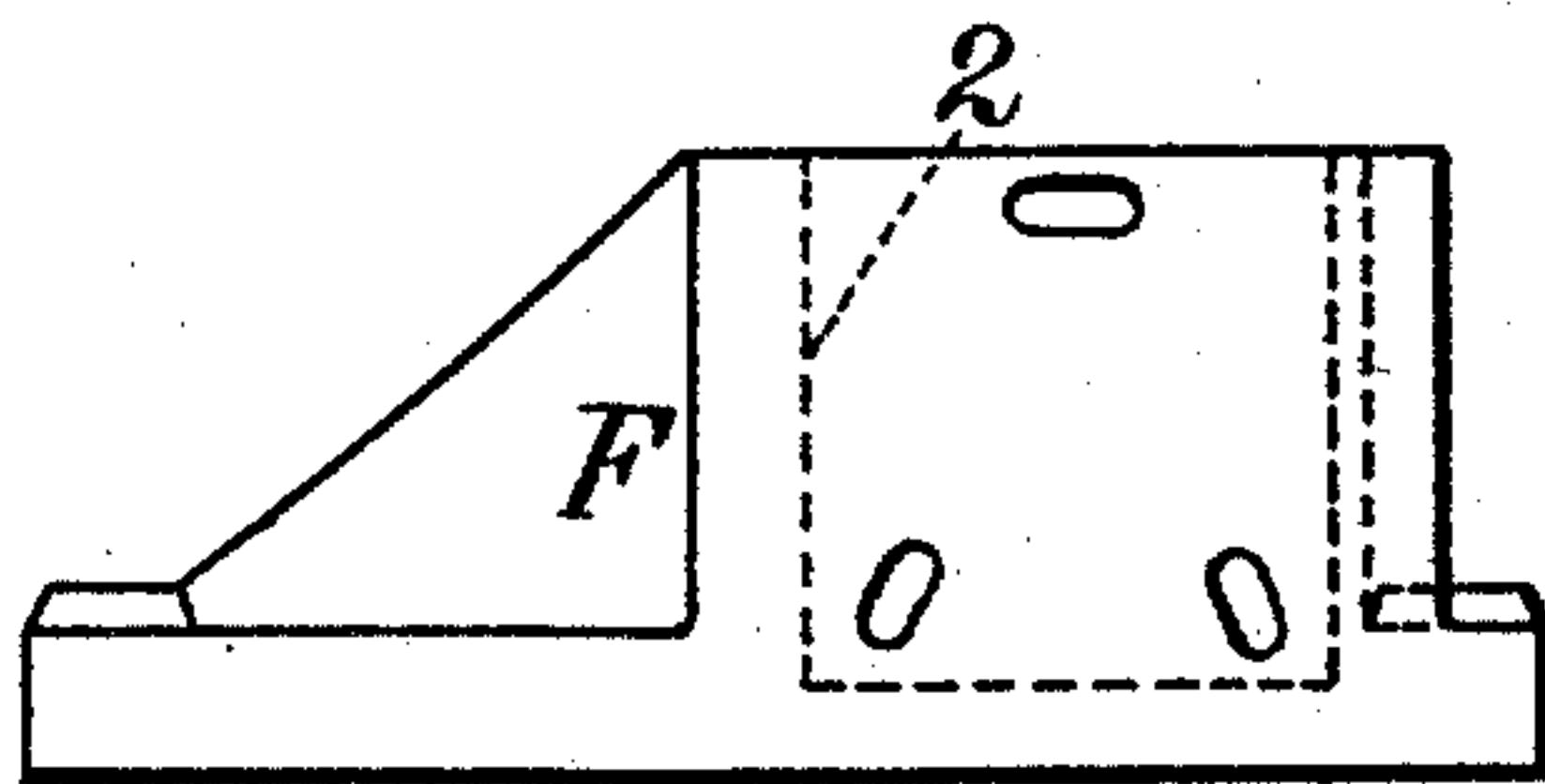
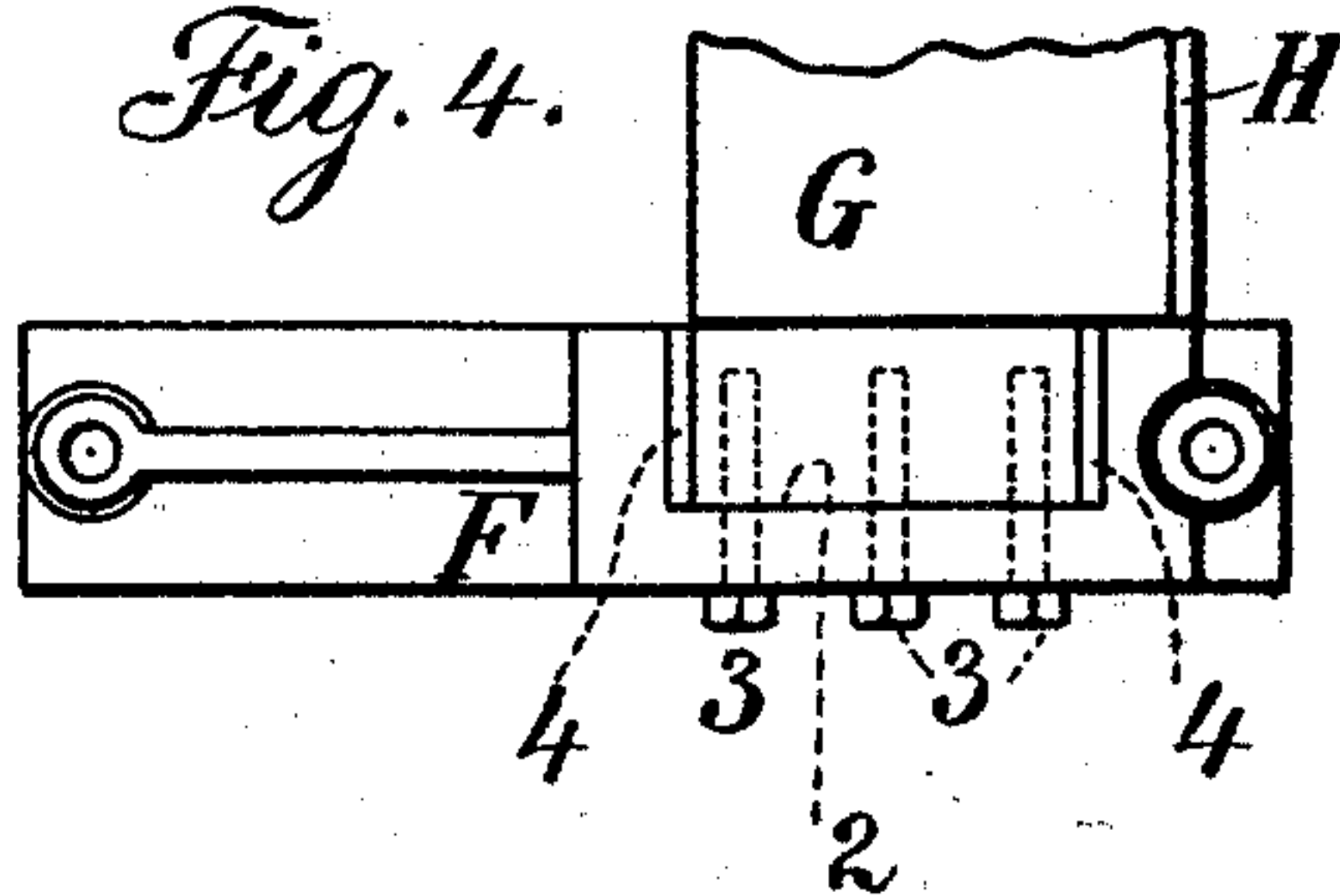


Fig. 4.



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# UNITED STATES PATENT OFFICE.

JOHN J. HAYES, OF FLUSHING, ASSIGNOR TO THE JOHN J. HAYES MACHINE COMPANY, OF BROOKLYN, NEW YORK.

## VENEER-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 497,958, dated May 23, 1893.

Application filed November 7, 1892. Serial No. 451,135. (No model.)

### *To all whom it may concern:*

Be it known that I, JOHN J. HAYES, a citizen of the United States, residing at Flushing, in the county of Queens and State of New York, have invented an Improvement in Veneer-Cutting Machines, of which the following is a specification.

Machines have heretofore been constructed in which the log or block from which the veneers are cut, receives an up and down movement, and the veneer is shaved off by the action of a knife on the down stroke and the movement given to the log is such that the knife operates with a slight shearing cut, the log receiving a slight endwise movement as it is carried downwardly, and the cutter or knife has been held in end frames that support the knife stock, and these end frames and stock have been supported upon slide blocks and moved by feed screws, and the end frames have been adjusted by screws bearing upon the slide blocks as seen in my patent, No. 467,577, granted January 26, 1892. Difficulty has however arisen in the construction of the parts, because the castings have been liable to spring in cooling and in case of necessary repairs or when a different stock has been required, the end frames have necessarily been changed and the expense of so doing augmented. In the present improvements the knife stock is so received into and connected with the end frames as to be separable, thereby allowing for changing the knife and knife stock as may be required from time to time and the splay iron or throat-piece is adjusted in such a manner as to easily vary the thickness of the veneer that is being cut, and the whole of the mechanism connected with the knife is capable of being displaced should the log become separated from the moving head block and fall against the knife, whereby injury to the parts is avoided.

In the drawings, Figure 1 is an end view of the frame and the parts connected therewith. Fig. 2 is a cross section of the bed and an elevation of the knife stock and frame at one end of said knife stock. Fig. 3 is an elevation, and Fig. 4 a plan of one end frame detached.

In veneer cutting machines it has heretofore been usual to provide two slides which are parallel to each other, and one of these slides is represented at A and mounted on each slide is a feed screw B, and these feed screws are geared together so as to revolve in unison, and such feed screws act upon slide blocks, one of which is shown at C, hence these slide blocks and the knife which is carried by the apparatus are moved toward or from the log, and I have represented at D a head block, and at E the log holder, and it is to be understood that this log holder is moved up and down and carries with it the log in the usual manner, and the mechanism for actuating this log holder being well known does not require further description.

Upon each slide block is an end frame F that is represented in the detached views 3 and 4, and these end frames are similar but handed or made the reverse one of the other, and in each frame is a recess 2 for the reception of the end of the knife stock G, the frame itself being made in the form of a three sided box with a bottom upon which the knife stock rests, and there are bolts 3 passing through the end frame into the end of the knife stock and by which the parts are firmly connected, but by the removal of these bolts 3 the knife stock can be separated from the end frames and another knife stock and knife introduced whenever required.

I find it advantageous to make the under side of the knife stock at its ends that bear upon the end frame F at the bottom of the recesses, slightly convex and the width of the knife stock at its ends is less than the width of the recess 2, hence the knife stock can be rolled or moved upon its bearings within the recesses 2, and to allow of this motion the slots for the bolts 3 are sufficiently elongated and by this construction I am enabled to bring the edge of the knife H either vertical or at a greater or less inclination to the surface of the block from which the veneer is being cut, and I make use of wedges or filling plates 4 within the recesses 2 at the front and back of the knife stock at the ends thereof that are within such recesses, whereby the knife stock and



knife are held with the greatest precision and firmness in whatever position the parts may be adjusted.

At the back and front ends of the end frames F there are vertical adjusting screws 5 and 6, such screws pass through the frames and their lower ends rest upon the slide blocks C and the ends of the screws 6 pass into recesses in the top surfaces of the slide blocks C. The object of this construction is two-fold; first, the screws 6 passing into recesses in the slide blocks prevent the end frames from slipping backwardly upon such slide blocks, and, second, the screws 5 resting upon the surfaces of the slide blocks allow for the back ends of the frames F being slightly raised or lowered to adjust the position of the knife H in relation to the log that is being cut without varying the connections between the knife stock and the end frames, and this adjustment by the screws 5 can be performed while the machine is in operation if it becomes necessary, but in case of the log or block becoming disconnected from the log holder E and falling, the knife stock and end frames may be displaced, the pressure of the log causing the screws 6 to slip out of their recesses in the slide blocks, but in practice I have found that the weight of the knifestock and end frames is sufficient to hold the parts firmly while cutting the veneer, because the pressure of the log against the knife is downwardly and serves to hold the parts firmly upon the slide blocks.

The splay iron or throat-piece I extends across above the knife and its face is pressed against the surface of the block that is being cut, hence the distance between the lower end of the splay iron and the cutting edge of the knife regulates the thickness of the veneer that is cut from the log, and it is advantageous for the surface of this splay iron to be inclined backwardly from the log, as represented, in order that the splay iron may only touch the log at a line adjacent to the cutting point. The ends 7 of the splay iron extend over the end frames F, and I find it advantageous to employ the secondary end frames F' in the form of supporting blocks that rest upon the main end frames F and are bolted thereto, and each of these secondary end frames is provided with a vertical flange or lug 8 through which passes the adjusting screw 14 which is provided with a lock nut and the end of the screw 9 presses against the end 7 of the splay iron I; and I make use of a clamping bolt 10 passing through a slot in the end 7 of the splay iron and two adjusting screws 11 and 12 at opposite sides of the clamping bolt 10. It will now be understood that by slackening the nut of the clamping bolt 10 the splay iron can be moved by the screw 9 so that the edge of its face is nearer to or farther from the edge of the knife H to regulate the thickness of the veneer, and by

the screws 11 and 12 the inclination of the face of the splay iron can be varied as desired and the splay iron can be either raised or lowered to regulate the vertical position of the lower edge of the splay iron in relation to the cutting edge of the knife, and after these adjustments have been made the nuts of the clamping bolts 10 are to be set up tightly to hold the splay iron firmly in position for use.

I claim as my invention--

1. The combination with the knife and its stock in a veneer cutter, the slides, feed screws and slide blocks, of end frames formed with recesses for the reception of the ends of the knife stock, and bolts for connecting the end frames and knife stock, substantially as set forth.

2. The combination with the knife and its stock in a veneer cutter, the slides, feed screws and slide blocks, of end frames formed with recesses for the reception of the ends of the knife stock, and bolts for connecting the end frames and knife stock, the recesses in the end frames being larger than the ends of the knife stock, and wedges or plates introduced between the ends of the knife stock and the end frames for holding the knife stock in its proper position in relation to the end frames, substantially as set forth.

3. The combination with the knife and its stock in a veneer cutter, the slides, feed screws and slide blocks, of end frames formed with recesses for the reception of the ends of the knife stock, bolts for connecting the end frames and knife stock, adjusting screws passing through the end frames and resting upon the slide blocks, one of which adjusting screws in each end frame passes into a recess in the slide block, substantially as set forth.

4. The combination with the knife and its stock in a veneer cutter, the slides, feed screws and slide blocks, of end frames formed with recesses for the reception of the ends of the knife stock, bolts for connecting the end frames and knife stock, adjusting screws passing through the end frames and resting upon the slide blocks, one of which adjusting screws in each end frame passes into a recess in the slide block, a splay iron extending across above the knife and having ends that pass over the end frames and adjusting screws and clamping bolts for adjusting the position of the splay iron in relation to the knife and holding the same, substantially as set forth.

5. The combination with the knife and its stock in a veneer cutter, the slides, feed screws and slide blocks, of end frames formed with recesses for the reception of the ends of the knife stock, bolts for connecting the end frames and knife stock, adjusting screws passing through the end frames and resting upon the slide blocks, one of which adjusting screws in each end frame passes into a recess in the slide block, a splay iron extending across



above the knife and having ends that pass  
over the end frames and intermediate auxil-  
iary frames bolted to the top of the end frames  
and provided with flanges or lugs, adjusting  
5 screws passing through such flanges or lugs,  
and clamping and adjusting screws passing  
through the projecting ends of the splay iron  
for adjusting such splay iron and holding the

same to the auxiliary frames, substantially as  
set forth.

Signed by me this 29th day of October,  
1892.

JOHN J. HAYES.

Witnesses:

ALONZO W. FISK, Jr.,

FREDERICK KNOCHER.