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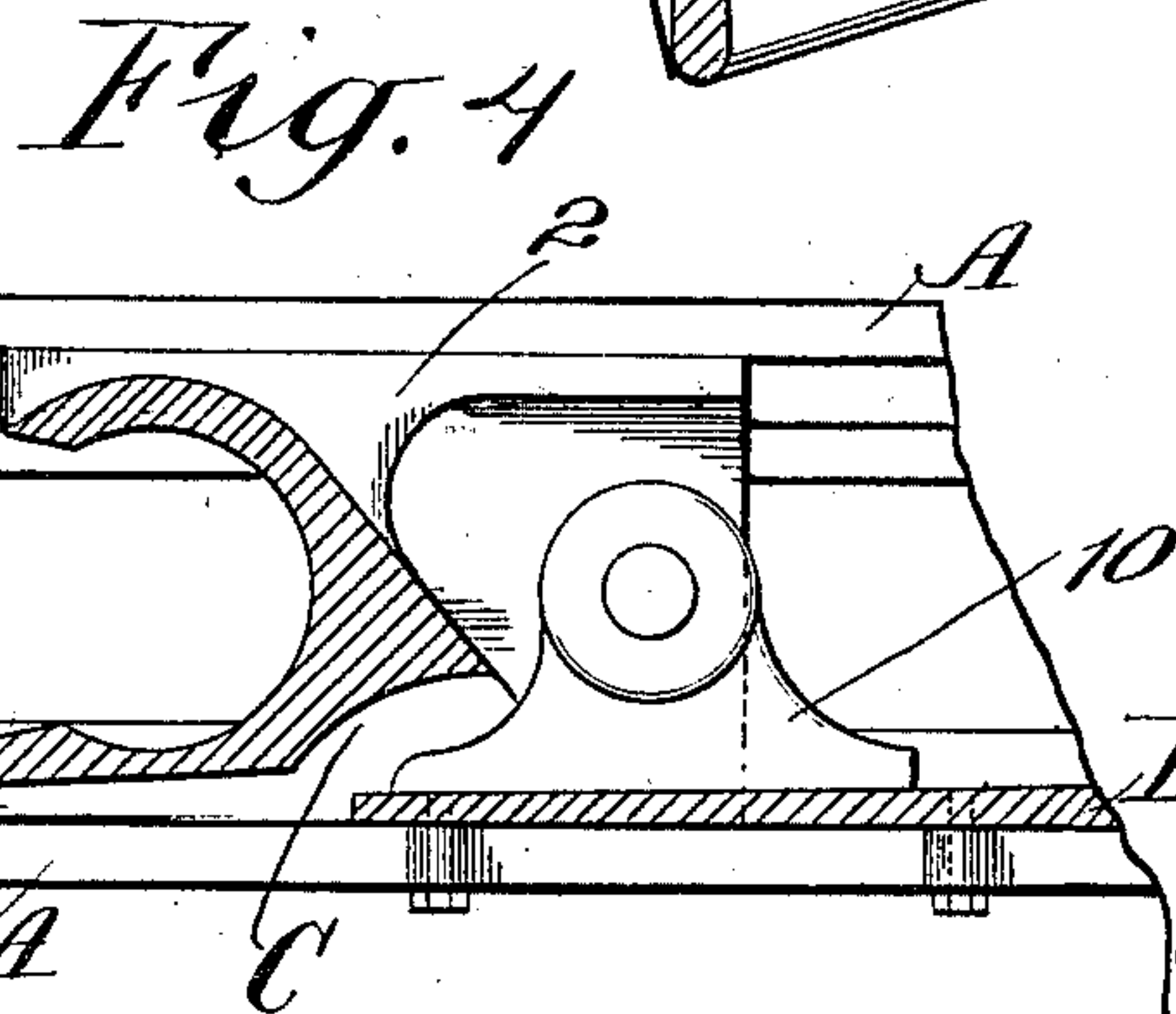
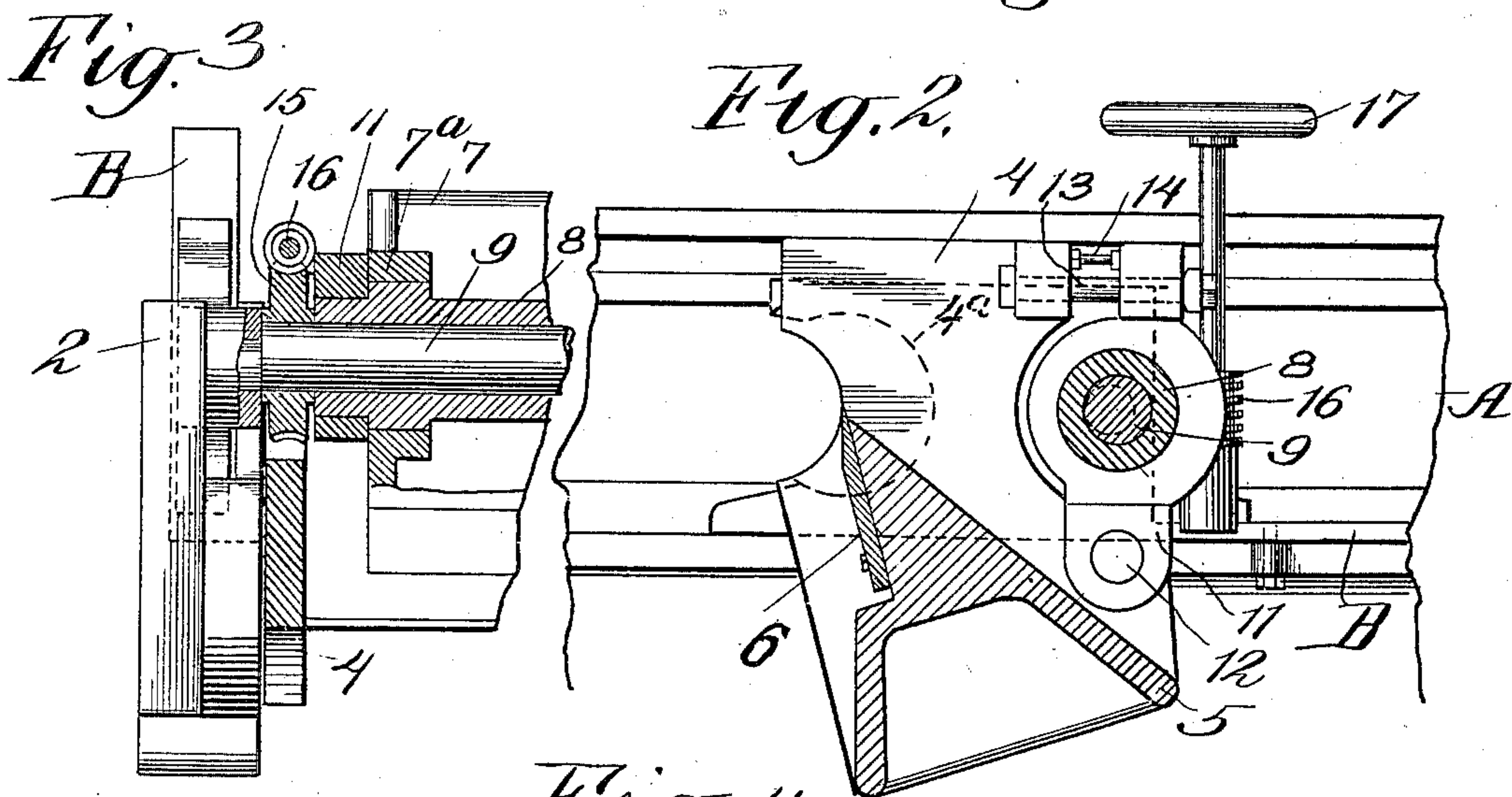
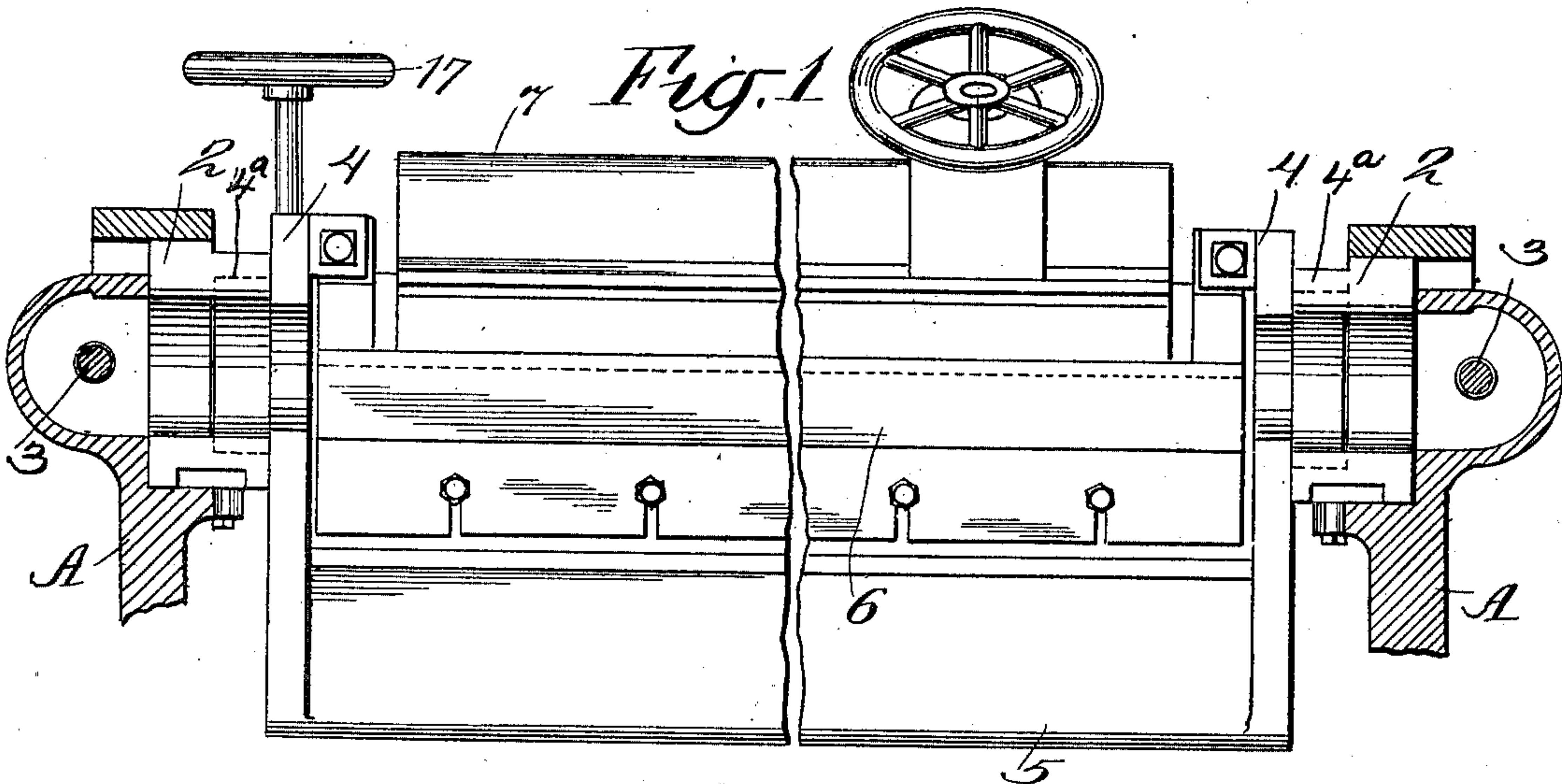
Patented Aug. 5, 1902.

L. G. MERRITT.  
VENEER CUTTING MACHINE.

(Application filed Mar. 11, 1902.)

(No Model.)

2 Sheets—Sheet 1.



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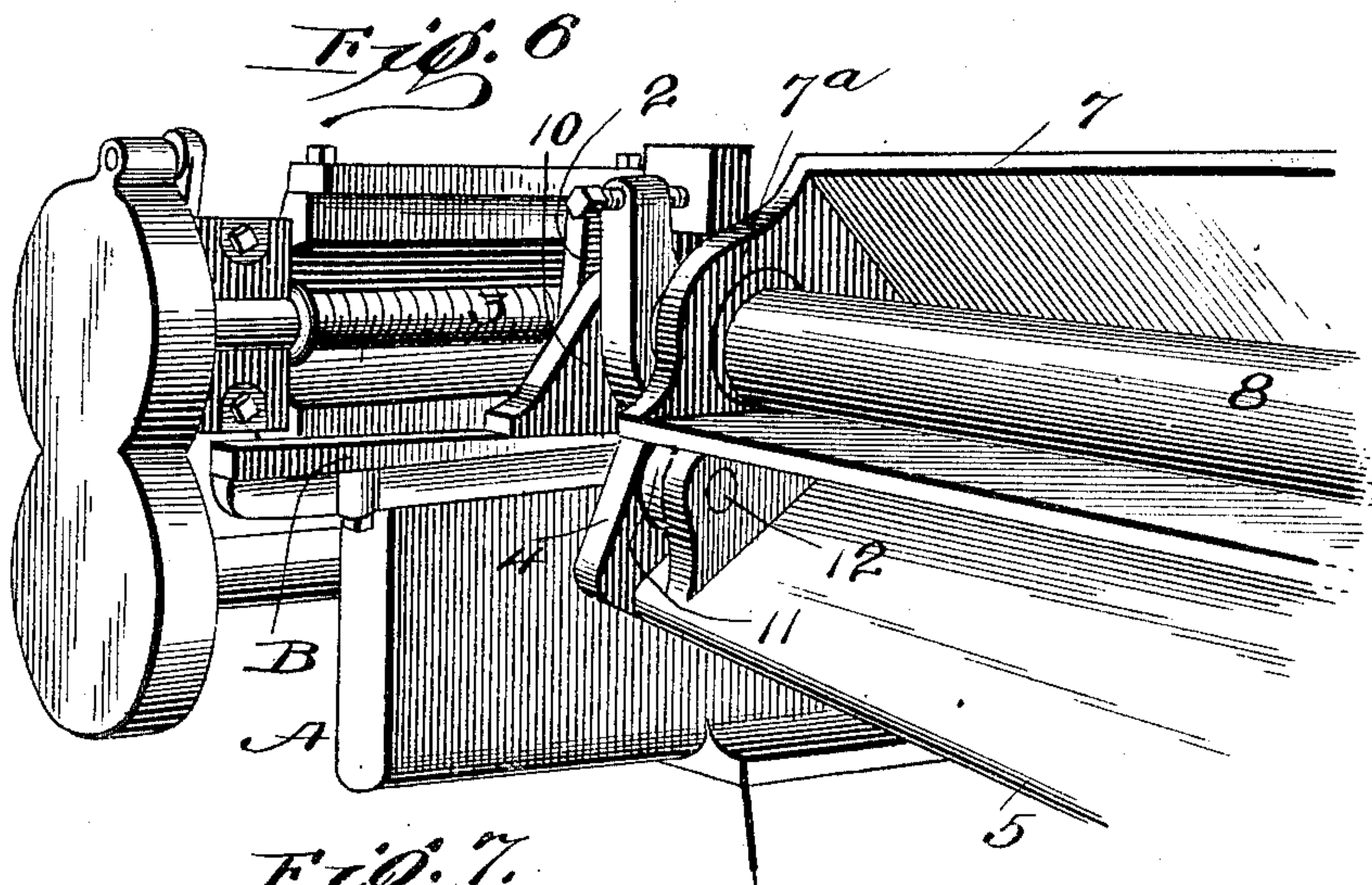
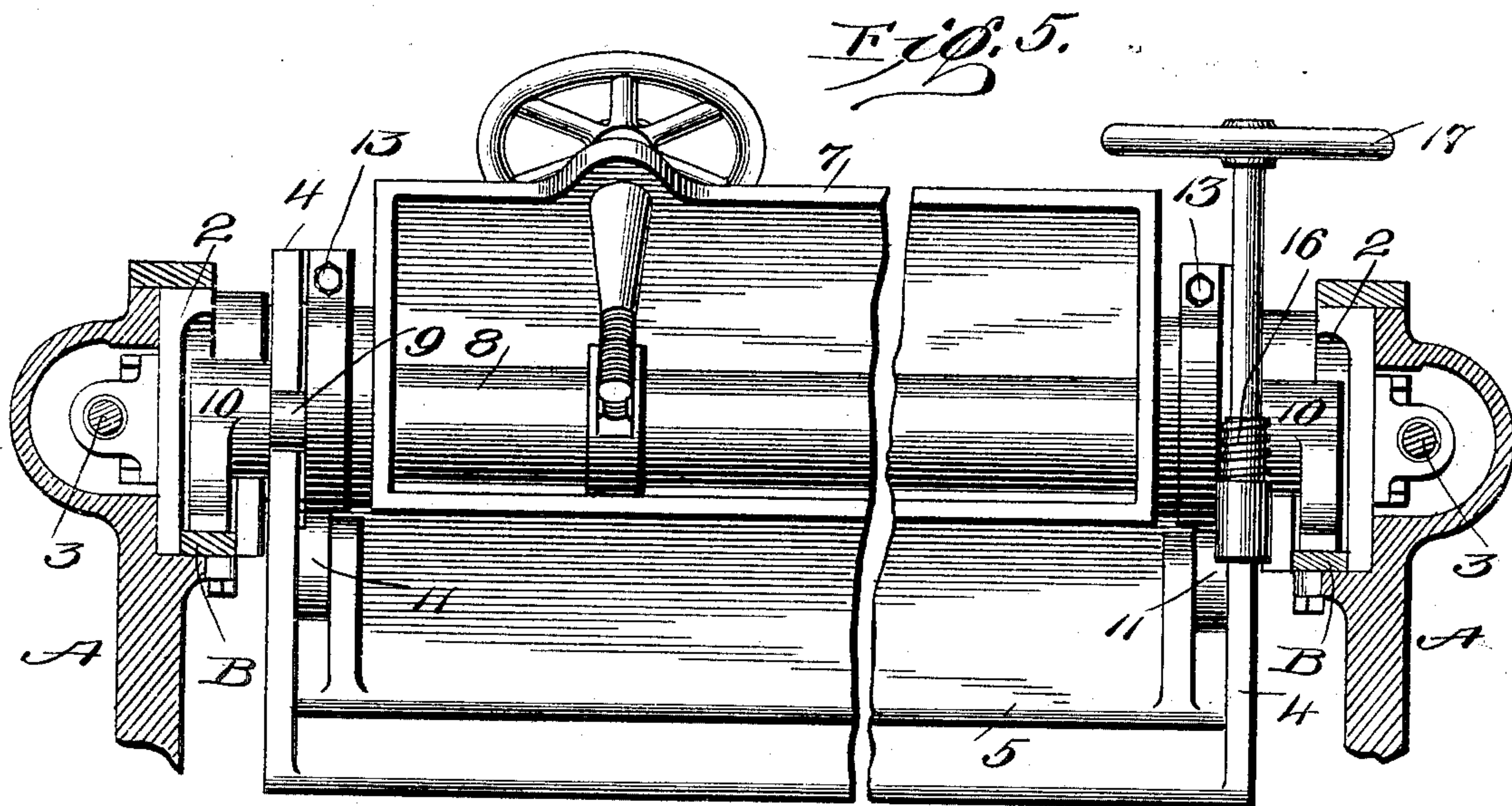
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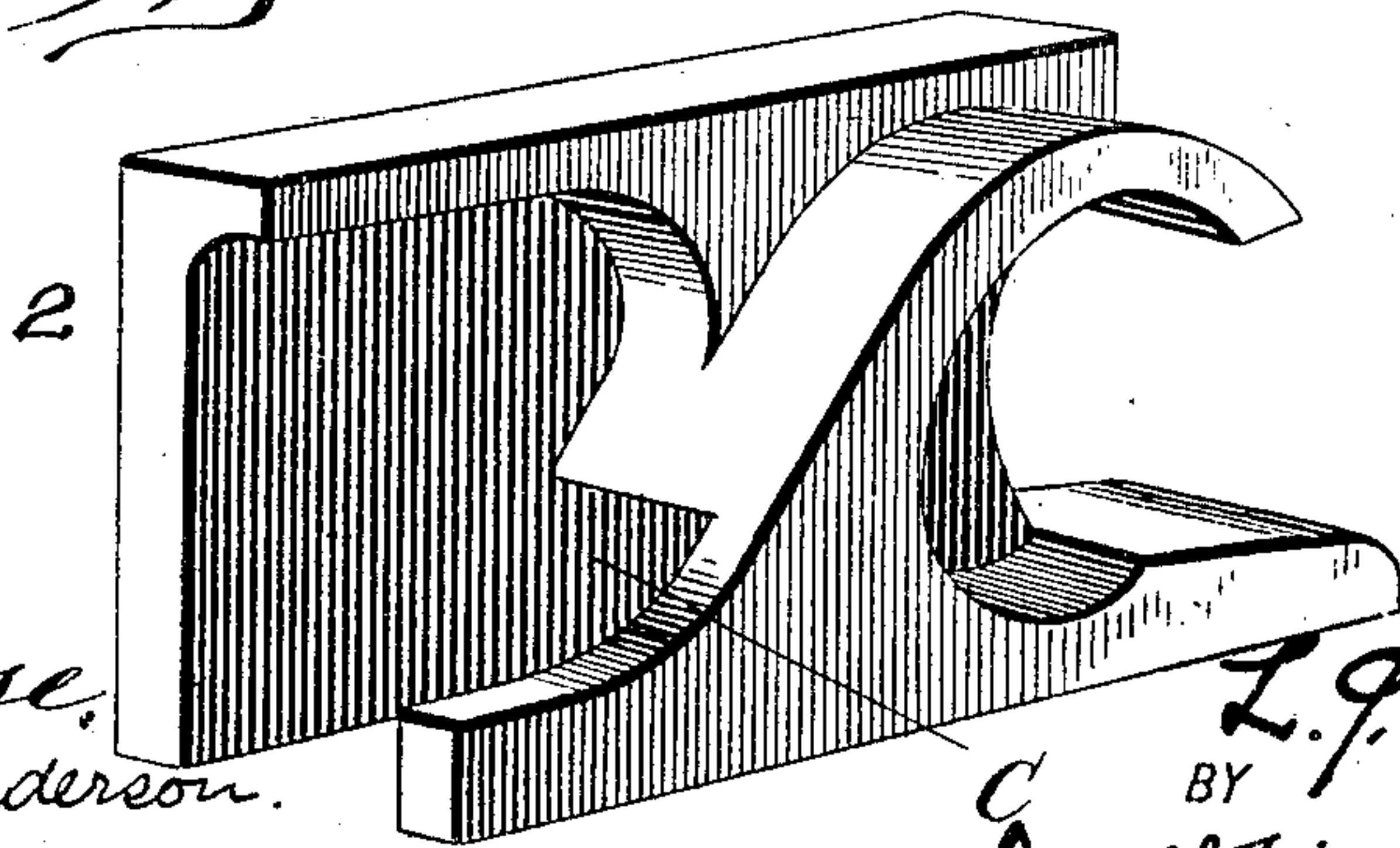
(Application filed Mar. 11, 1902.)

(No Model.)

2 Sheets—Sheet 2.



*Fig. 7.*



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# UNITED STATES PATENT OFFICE.

LOUIS G. MERRITT, OF LOCKPORT, NEW YORK.

## VENEER-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 706,331, dated August 5, 1902.

Application filed March 11, 1902. Serial No. 97,714. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS G. MERRITT, residing at Lockport, in the county of Niagara and State of New York, have invented certain  
5 new and useful Improvements in Veneer-Cutting Machines, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

10 This invention relates to an improvement in veneer-cutting machines, and its object is to provide a new and improved means for regulating automatically the pitch of the knife, so that it will conform with the changing  
15 curvature of the log.

To this end the invention consists in the features of construction, combinations of elements, and arrangements of parts set forth hereinafter and the novel features of which  
20 will be more specifically pointed out in the claims at the end of this specification.

This invention is illustrated in connection with a knife-carriage of general construction similar to that set forth in my application  
25 No. 64,374, filed June 13, 1901, to which reference is made for a full description of such parts as are herein only briefly referred to.

In the accompanying drawings, Figure 1 is a front elevation showing a knife-carriage part  
30 of a pressure-bar, the slide-blocks in which the knife-carriage is pivotally mounted, and a portion of the main ways upon which said slide-blocks travel. Fig. 2 is a section taken transversely of Fig. 1. Fig. 3 is a top plan  
35 view of the construction shown in Fig. 2 with certain of the parts shown in section and the main ways omitted for the sake of clearness. Fig. 4 is a view, partially in elevation and partially in section, showing a portion of one  
40 of the main ways, one of the main sliding blocks, and a bearing-block for supporting what is termed in the application before referred to the "pitch-eccentric." Fig. 5 is a rear view of the parts shown in Fig. 1. Fig.  
45 6 is a perspective showing one end of the machine, the knife-carriage, and the ways therefor. Fig. 7 is a detail perspective of the main slide-block.

Similar reference characters refer to similar  
50 parts throughout the several views.

A designates the main ways in the framework of the machine, in which travel slide-

blocks 2, adapted to be fed therealong by feed-screws 3, cooperating with feed-nuts in connection with the sliding blocks. The  
55 knife-carriage is composed of end plates 4 4, connected by a triangular web 5, to which is attached the knife 6 in any suitable manner. The carriage is pivotally mounted on the slide-blocks by means of large pivots 4<sup>a</sup>, (shown in  
60 dotted lines in Figs. 1 and 2,) all these parts being suitably recessed or cut out to encircle the drive-spindles as the diameter of the log is reduced. The pressure-bar casting 7 is constructed exactly in accordance with the pres-  
65 sure-bar of the previous application, having bearings 7<sup>a</sup>, which are supported upon eccentric portions of a long hollow sleeve 8, through which passes a shaft 9, having eccentric bear-  
70 ings at its end in the blocks 10, most clearly shown in Fig. 4. Mounted upon and to a certain extent supported by the sleeve 8 and through said sleeve by the shaft 9 are arms or  
75 hangers 11, one at each end of the machine, which are pivoted or hinged to webs projecting from the knife-carriage, as at 12. At its upper end each hanger may be locked to the knife-  
80 carriage by means of a bolt 13, passing through the hanger, and a lug on the carriage. Proper adjustment between the hanger and knife-  
85 carriage may be provided through the set-screws 14. It will be readily seen that upon revolving the eccentrically-mounted shaft 9 or "pitch-eccentric," as it may be termed, the  
90 knife-carriage will be swung about its pivots and the inclination of the knife accordingly changed in a direction and to an extent depending upon the direction and the extent of the throw of the eccentric shaft. A means is  
95 provided whereby this change of pitch can be obtained at any point and to any desired extent by means of the worm-wheel 15, keyed to the shaft 9 and meshing with the worm 16, controlled by the hand-wheel 17. By turning this hand-wheel the pitch of the knife will  
be abruptly changed.

The parts thus far described do not materially differ from those shown in the application to which reference has been made. In the construction therein set forth, however,  
100 the ends of the pitch-eccentric are supported by blocks slidable in slots in the main slide-blocks, and the only means of changing the pitch of the knife was through a hand-wheel



such as that described above. In the present construction the slide-blocks 2 are made thick and cut away internally, so as to straddle the eccentric blocks 10, as best shown in Figs. 3 and 7. These eccentric blocks rest directly upon inclined ways or wedges B, which are rigidly secured, as by bolts, to the main ways A or may be cast integral therewith. As the knife feeds into the log the blocks 10 drop at a fixed rate, depending upon the inclination of the wedge or way B, upon which they slide. This pitches the knife into the log as the log gets smaller. The recess or cut-away portion C in the main slide-block permits movement of the eccentric block relative to the slide-block when such movement is desired in adjusting the hangers by means of the bolts 13.

The operation of this invention will be fully understood from the description already given. It will be seen that I provide two means for regulating the pitch of the knife—one a manually-controlled means, by which the pitch of the knife can be abruptly changed, the other an automatic regulation, which is determined by the fixed inclination of the way B and which is not in any way interfered with by the abrupt changing of the pitch at any particular point. Thus the two means are independent of each other, and the automatic regulation is, as it should be always, fixed without the necessity for regulation. It is essential that the rate of changing the pitch of the knife should be the same at all times, because it is the changing curvature of the log as it gets smaller in diameter that requires an automatic change of pitch, and the increment of this changing curvature is always constant. A further advantage arises from the fact that the guide or inclined way is nearly on a level with the pivots of the knife-carriage, whereby the change of pitch caused by such inclined way is tangential and direct.

While I have described this invention and prefer to use and claim it in certain claims in connection with a manual device for changing the pitch of the knife, such as I have shown in the application referred to, it will be evident that the invention is not limited in scope to this particular combination or construction, but is capable of embodiment in a variety of forms.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a rotary veneer-cutting machine, a pivoted knife-carriage, means for automatically changing the pitch of the knife, and independent means whereby the pitch of the knife can be abruptly changed at any desired point without affecting said automatic means.

2. In a rotary veneer-cutting machine, a suitable framework, blocks slidable in ways thereon, a knife-carriage pivotally mounted

on said blocks, blocks connected to said knife-carriage and traveling on fixed ways on the framework of the machine, which ways are inclined to impart through the blocks traveling thereon a change of pitch of the knife at a fixed rate as the knife is fed toward the work.

3. In a rotary veneer-cutting machine, a suitable framework, blocks slidable in ways thereon, a knife-carriage pivotally mounted on said blocks, hangers pivotally connected to said knife-carriage, a shaft passing through said hangers, inclined wedges in connection with said ways, bearing-blocks for supporting the ends of said shaft movable on said wedges and means whereby said slide-blocks and said bearing-blocks may be fed together toward the work, whereby the pitch of the knife will be automatically changed during such feeding movement.

4. In a veneer-cutting machine, in combination, the frame having suitable ways A thereon, the slide-blocks 2 adapted to be fed therealong, the knife-carriage pivotally mounted on said slide-blocks, the hangers pivotally connected to said knife-carriage, the shaft passing through said hangers, the blocks 10 in which said shaft has eccentric bearings at its ends, means for rotating said shaft in order to change the pitch of the knife, the inclined ways or wedges B in connection with the main ways, upon which said bearing-blocks 10 travel, whereby the pitch of the knife is automatically changed while it is being fed toward the work.

5. In combination, the frame having suitable ways thereon, the slide-blocks adapted to be fed therealong, the tool-carriage mounted on said slide-blocks, the pressure-bar casting, the second blocks providing points of support for both the pressure-bar casting and the tool-carriage, said slide-blocks being cut away so as to straddle said second blocks and permit of independent movement thereof substantially as and for the purposes set forth.

6. In a veneer-cutting machine in combination, a frame having suitable ways A thereon, the slide-blocks 2 adapted to be fed therealong, said blocks being cut away as at C, the knife-carriage pivotally mounted on said slide-blocks, the hangers pivotally connected to said knife-carriage, a shaft passing through said hangers, the pressure-bar casting supported by said shaft, the blocks 10 providing bearings for the ends of said shaft, said blocks being located within the cut-away portion of said slide-blocks 2 whereby they may be reciprocated relatively to said slide-blocks substantially as and for the purposes set forth.

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

LOUIS G. MERRITT.

Witnesses:

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L. W. KINGLY.