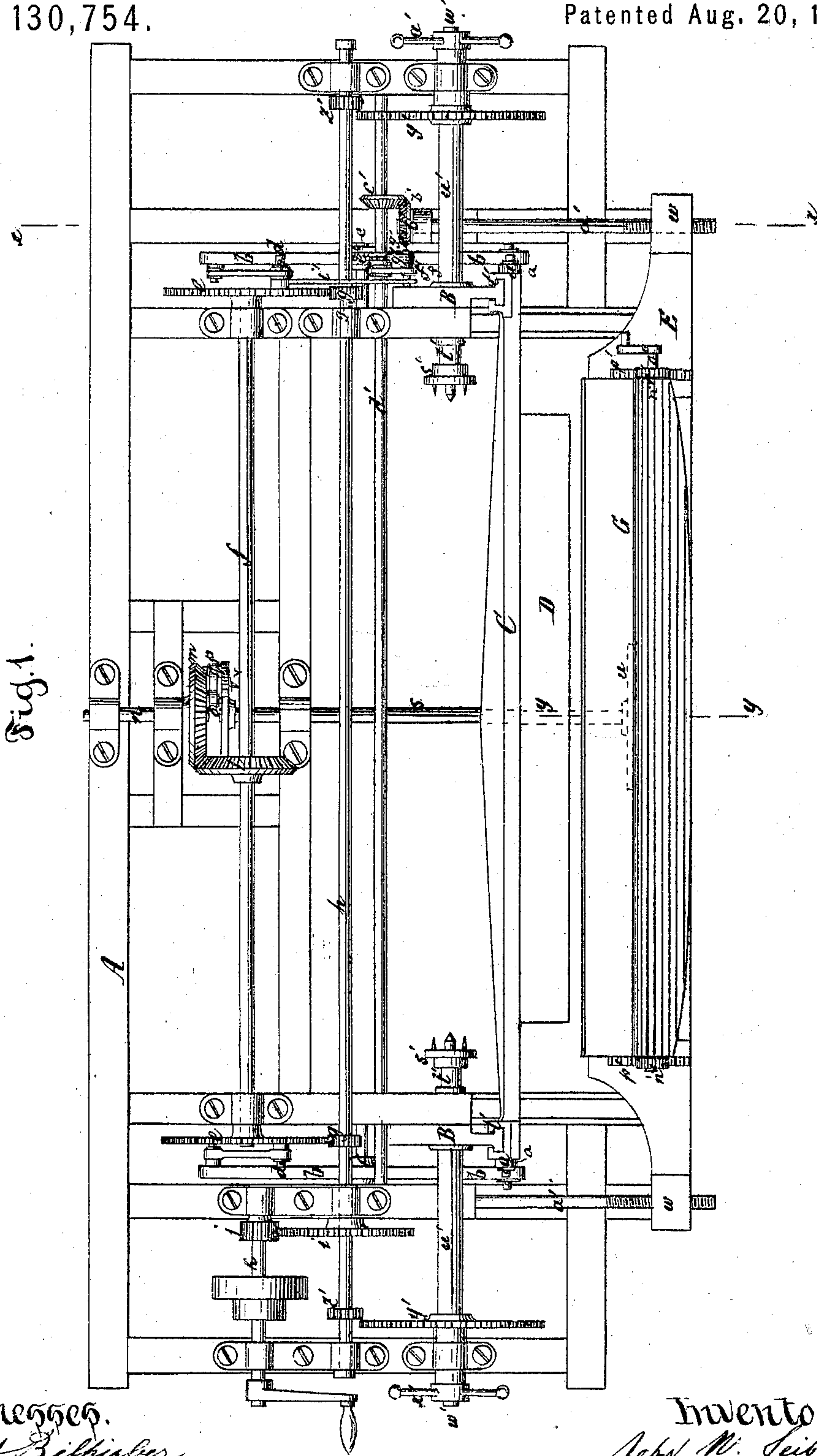


J. N. SEIB.

Improvement in Machines for Cutting Veneers.

No. 130,754.

Patented Aug. 20, 1872.



Witnesses.
Ernst Zilchler.
Chas. W. Haller.

Inventor.
John N. Seib
per
Van Santvoord & Haupt
attys

J. N. SEIB.

Improvement in Machines for Cutting Veneers.
No. 130,754.

Patented Aug. 20, 1872.

Fig. 2.

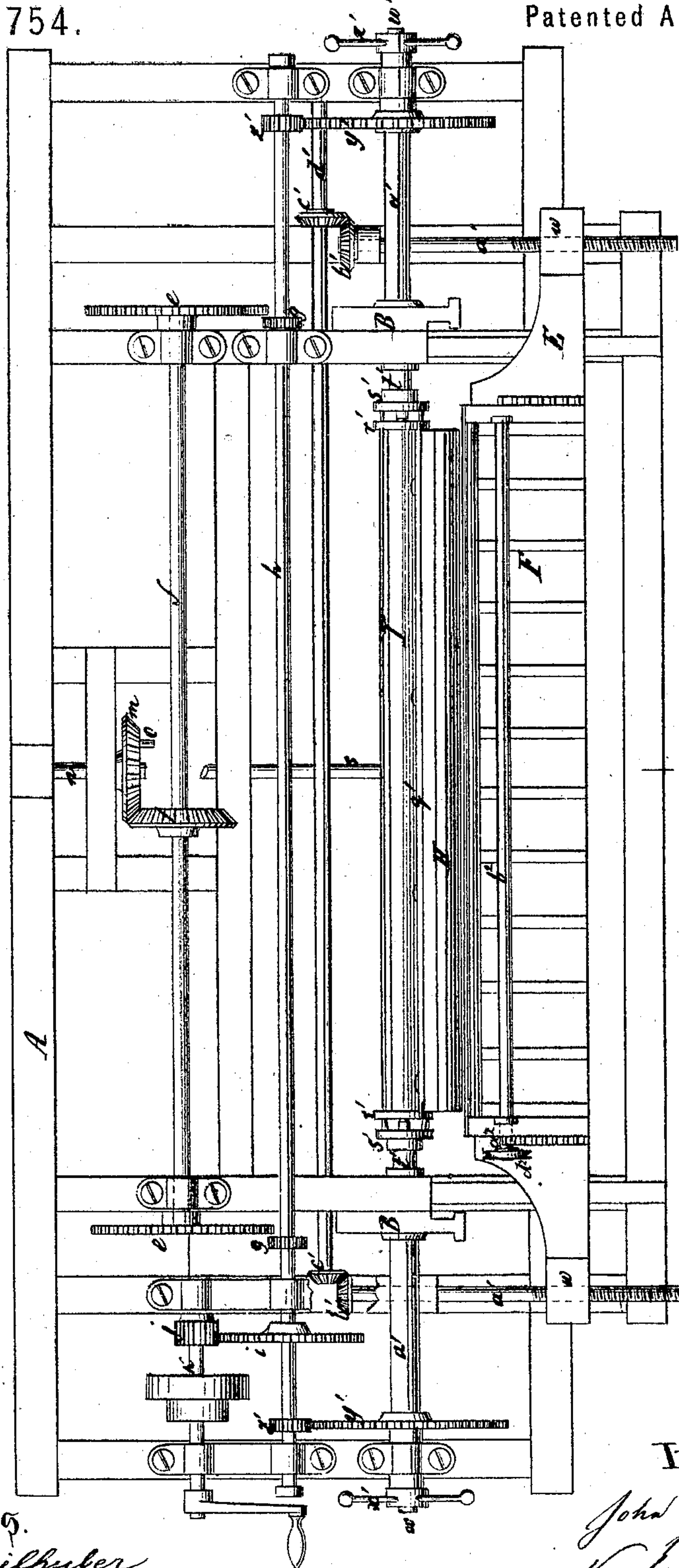
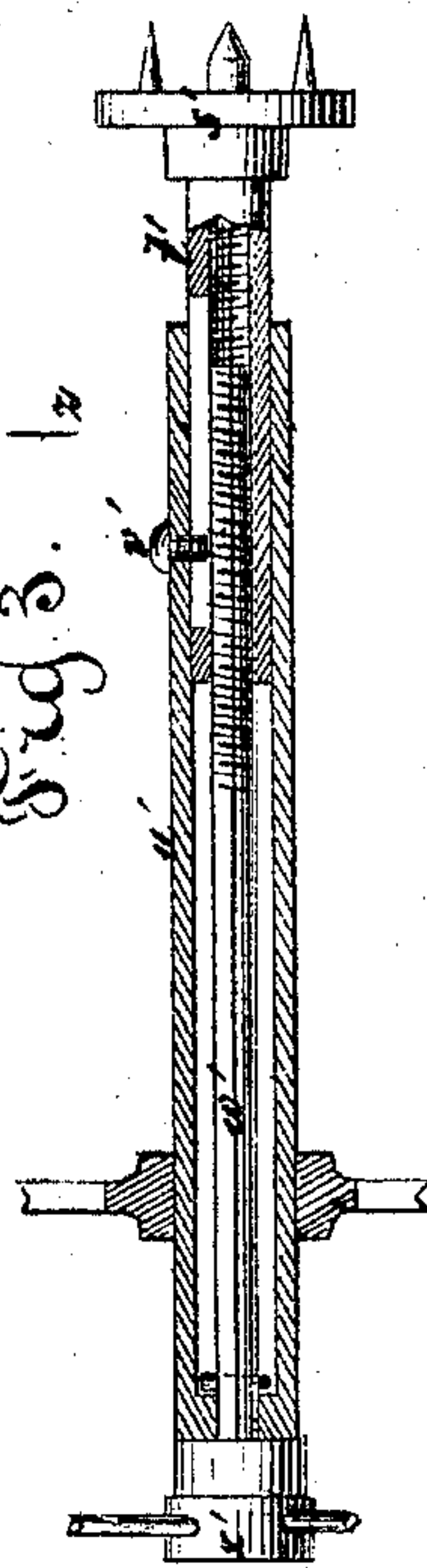


Fig. 3.



Witnesses.
Ernst Bilhuler.
Chas. Wahlen.

Inventor.
John N. Seib
Per Senterwood & Haupt
attys

J. N. SEIB.

Improvement in Machines for Cutting Veneers.

No. 130,754.

Patented Aug. 20, 1872.

Fig. 4.

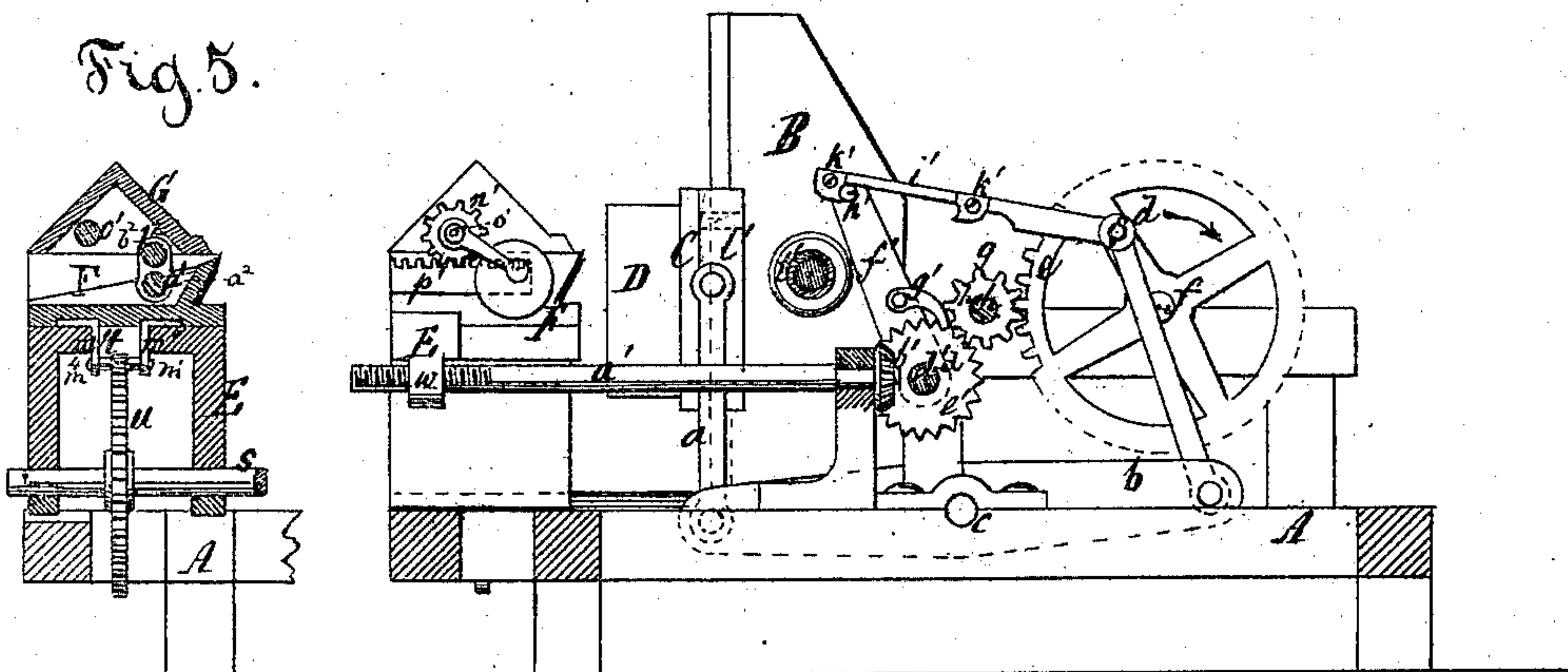


Fig. 5.

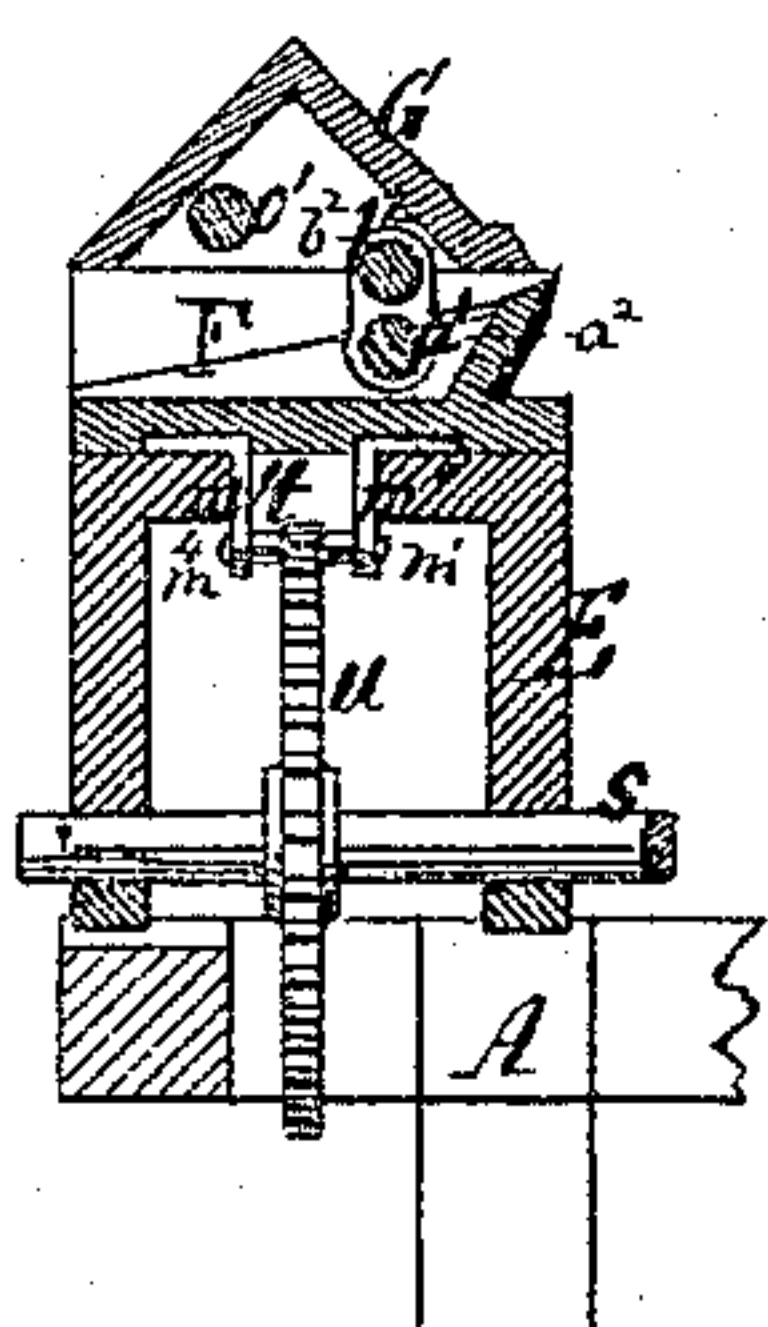


Fig. 6.

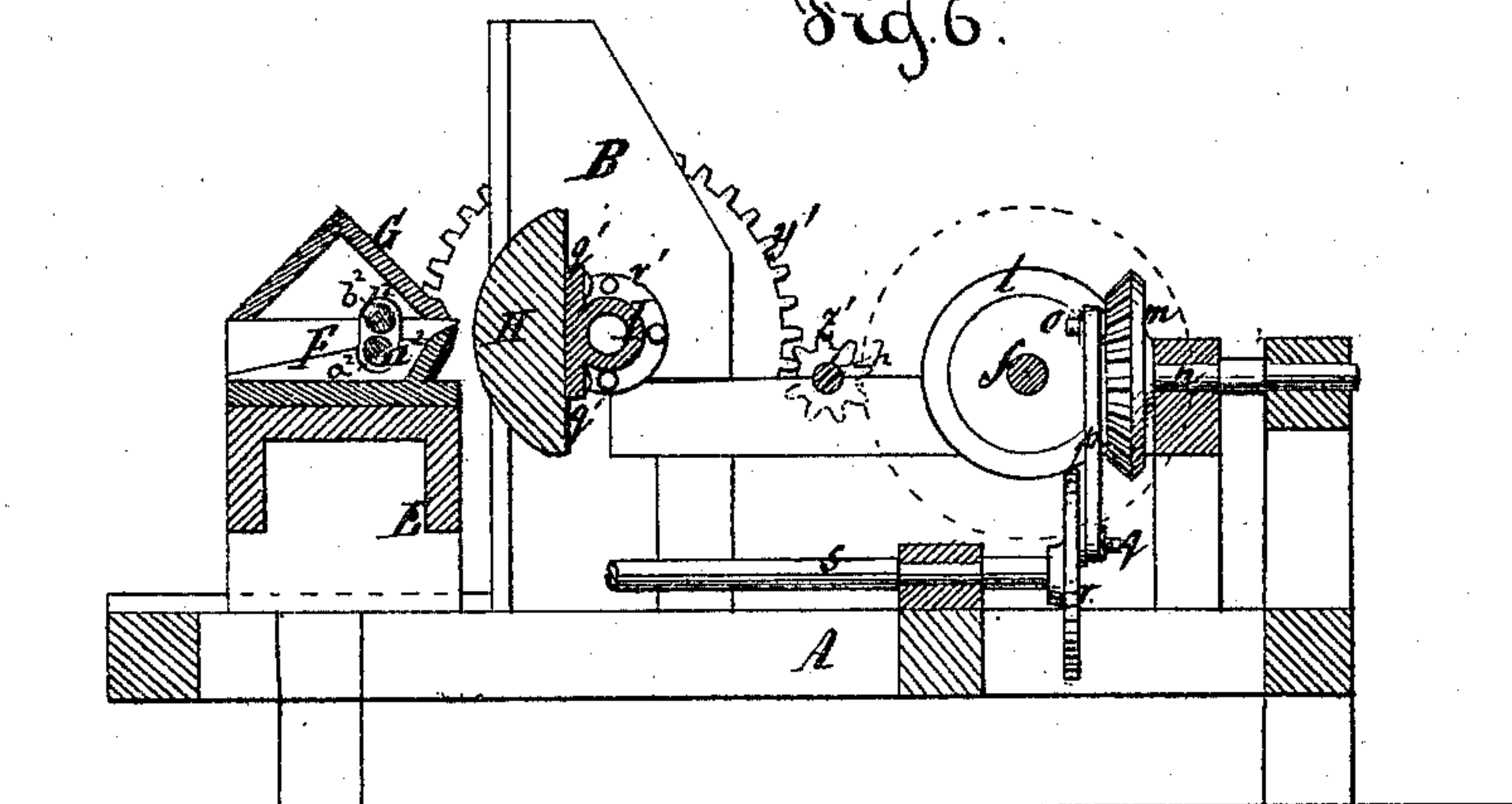
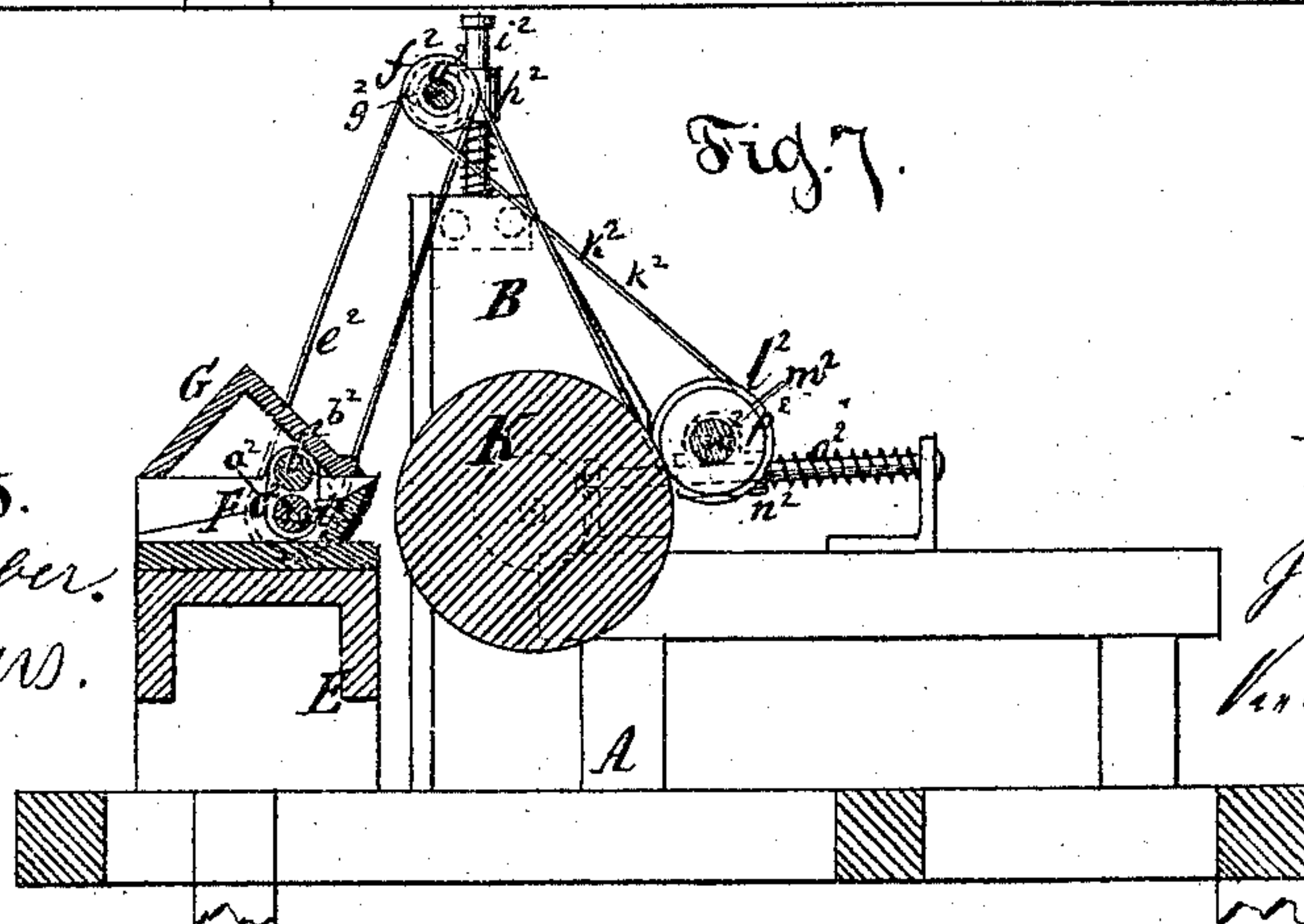


Fig. 7.



Witnesses.
Ernst Bilhuber.
Chas. Wickers.

Inventor.
John M. Seib
per
Van Santvoort & Knapp
attys

UNITED STATES PATENT OFFICE.

JOHN N. SEIB, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR CUTTING VENEERS.

Specification forming part of Letters Patent No. 130,754, dated August 20, 1872.

To all whom it may concern:

Be it known that I, JOHN N. SEIB, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new Improvement in Machines for Cutting Veneers; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a plan or top view of my machine when arranged to cut straight. Fig. 2 is a similar view of the same when arranged to cut veneers from a semi-cylindrical log. Fig. 3 is a longitudinal section of one of the spindles, between which the semi-cylindrical or cylindrical logs are fastened. This view is in a larger scale than the remaining figures. Fig. 4 is a transverse section of my machine, the line $x x$, Fig. 1, indicating the plane of section. Fig. 5 is a similar section of the knife with its cap and support in the plane $y y$, Fig. 1. Fig. 6 is a transverse section of my machine when set for cutting veneers from a semi-cylindrical log, the line $z z$, Fig. 2, indicating the plane of section. Fig. 7 is a similar section of the machine when set for cutting veneers from a cylindrical log.

Similar letters indicate corresponding parts.

This invention relates to a veneer-cutter which is so constructed that it can be readily set for cutting veneers from a flat or straight log, or from one of a semi-cylindrical or of a cylindrical shape; and my invention consists in a certain combination of machinery whereby the above purpose can be effected with ease and facility.

In the drawing, the letter A designates a frame which forms the support for the working parts of my machine. From this frame rise two standards, B B, the edges of which are T-shaped, and form guides for the stay-log C, to which the flat or rectangular log D, Figs. 1 and 4, is secured. Said stay-log connects by rods $a a$ with working-beams $b b$, which swing on pivots c , Fig. 4, and to which an oscillating motion is imparted by connecting them to eccentric wrist-pins d , secured in cog-wheels e , which are mounted on the opposite ends of a shaft, f . These cog-wheels gear into pinions g , mounted on a shaft, h , which can be

made to slide in its bearings so that the pinions g can be thrown in or out of gear with cog-wheels e . On the shaft h is also mounted a cog-wheel, i , which gears in a pinion, j , on the driving-shaft k , and this pinion is made of such a width that it will not be thrown out of gear with the wheel i when the shaft h is made to slide in its bearings. On the shaft f is mounted a bevel-wheel l which gears in a corresponding bevel-wheel, m , mounted on the end of a transverse arbor, n , and in the face of this last-named bevel-wheel is secured an eccentric wrist-pin, o , which connects by a rod, p , with another eccentric wrist-pin, q , secured in the face of a disk, r , (see Figs. 1 and 6,) which is mounted on a transverse shaft, s , the front end of which has its bearings in a carriage, E, which supports the knife-carrier F, (see Fig. 5.) On the under surface of this knife-carrier is secured a toothed rack, t , which gears in a cog-wheel, u , mounted on the shaft s , and as the arbor n revolves, an oscillating motion is imparted to the arbor s , and the knife-carrier receives a transverse reciprocating motion in front of the log, whereby the operation of cutting veneers is materially facilitated. In the disk r are secured two eccentric wrist-pins, one diametrically opposite to the other, so that by changing the rod p from one to the other the motion of the knife-carrier can be reversed and accommodated to the nature of the log to be cut. In the ends of the carriage E are secured two nuts, w , which fit on screw-spindles a^1 and on the inner ends of these screw-spindles are mounted bevel-wheels b^1 , which gear in corresponding bevel-wheels c^1 , mounted on a longitudinal shaft, d^1 , which has its bearings in the main frame A. On this shaft is also mounted a ratchet-wheel, e^1 , and a lever, f^1 , which swings loosely on said shaft, and carries a pawl, g^1 , (see Fig. 4,) that engages with the ratchet-wheel e^1 . In this lever is secured a stud, h^1 , on which rides a rod, i^1 , that is hinged to an eccentric wrist-pin, d , in one of the wheels e , and which carries two tappets, k^1 , which straddle the stud h^1 , and which may be so arranged that they can be set closer together or further apart, for the purpose of increasing or decreasing the motion imparted to the lever f^1 . As the wheel e revolves an oscillating motion is imparted to the lever f^1 , and the shaft d^1 receives an intermittent rotary mo-

tion, which motion is transmitted to the feed-screws a^1 , and thereby the knife is moved toward the log once for every complete stroke or revolution of said log. To allow this feed-motion the shaft s must be made to slide in its bearings in the carriage E.

By referring to Figs. 1 and 4 of the drawing it will be noticed that the stay-log C does not slide directly on the standards B, but it is connected to slides l' , which are provided with holes to receive pins projecting from the stay-log. By this arrangement I am enabled to remove the stay-log C whenever I desire to insert a semi-cylindrical or cylindrical log in place of the rectangular or flat log D.

The knife-carrier F is provided on its under surface with ribs m^1 , which catch in a slot in the carriage E, and serve to retain said knife-carrier in position. Between the ribs m^1 is secured the toothed rack t , (see Fig. 5,) by which a reciprocating motion is imparted to the knife-carrier. On the top of said knife-carrier is fitted a cap, G, the front edge of which is adjusted at the proper distance from the cutting-edge of the knife by means of pinions n^1 which are mounted on a shaft, o^1 , extending through the cap G, and which pinions gear in racks p^1 secured to the sides of the knife-carrier. (See Figs. 1 and 4.) When it is desired to cut veneers from a semi-cylindrical log, H, Figs. 2 and 6, the stay-log C is removed and the stay-log I is inserted. This stay-log is formed of a metal tube provided with longitudinal flanges or ribs q' , for the purpose of attaching it to the log, and with end flanges, r' , which are provided with holes to receive pins which project from the chucks s' . These chucks are also provided with center-points, (see Fig. 3,) which catch in the hole of the tubular stay-log I, and, by the aid of these center-points and pins, a firm connection can be effected between the stay-log and the chucks. These chucks are secured to the ends of the tubular spindles t' , Fig. 3, which slide in tubes w' , being prevented from turning by screws v' , which catch in slots in their sides. The tubes w' have their bearings on one end in boxes secured to the main frame A, and on their opposite ends in the standards B, and through them extend screws w' , which screw into the tubular spindles t' , and are operated by hand-wheels or cranks x' . These screws are prevented from moving in the tubes w' in the direction of their length, (see Fig. 3,) and, by turning them, the chucks s' can be moved closer together or further apart, and consequently, if the stay-log I is brought in line with the spindles t' , and the screws w' are turned in the proper direction, the pins and center-points of the chucks s' can be made to engage with the stay-log, and, by imparting to the tubes w' a rotary motion, the stay-log, together with the log attached to it, is caused to revolve. On the tubes w' are mounted cog-wheels y' , and if the shaft h , Fig. 2, is moved in the proper position, pinions z' , which are mounted on said shaft, are thrown in gear with

cog-wheels y' , and the motion which is imparted to the shaft h from the driving-shaft is transmitted to the tubes w' , and through them to the stay-log and to the log attached thereto.

The knife, the knife-carrier, and the knife-carriage used in cutting veneers from the semi-cylindrical log are the same as previously described. The carriage receives the same feed motion, and, if desired, a reciprocating motion may be imparted to the knife-carrier, or by disconnecting the rod p from the wrist-pin o , this reciprocating motion may be stopped.

In order to cut veneers from a cylindrical log, K, Fig. 7, I provide each end of the log with suitable holes to engage with the center-points and pins of the chucks s' , and then I secure my log directly between said chucks without the use of a stay-log. In this case the reciprocating motion of the knife-carrier is stopped, and, as the knife is gradually fed toward the log, a continuous sheet of wood is cut off from the log. In order to cut this sheet in veneers of convenient width, I extend through the knife-carrier, in the rear of the knife, two shafts, a^2 b^2 , one below the other, (see Fig. 7,) and through the lower shaft a^2 I pass a knife-blade, c^2 , the cutting-edge of which, on passing the upper shaft, extends close to the surface thereof. On the shaft a^2 is mounted a pulley, d^2 , which connects by a belt, e^2 , with a pulley, f^2 , mounted on a shaft, g^2 , which has its bearings on brackets h^2 , sliding on pins i^2 , which rise from the standards B. From the pulley f^2 extends a second belt, k^2 , to a pulley, l^2 , which is mounted on a shaft, m^2 , that has its bearings in brackets n^2 , which slide on horizontal rods o^2 , secured on the main frame A. On the shaft m^2 are also secured two or more friction-disks, p^2 , which are pressed up against the circumference of the log by springs or weights, and, as the log revolves, a rotary motion is imparted to the shafts m^2 , g^2 , and a^2 , and the sheet cut off from the log on passing through between the shafts a^2 b^2 , is cut in veneers or pieces of the required width. The belts e^2 and k^2 are kept taut by springs or weights acting on the brackets h^2 , which support the shaft g^2 . In order to save the cutting-edge of the knife-blade c^2 the shaft b^2 may be covered with leather, India rubber, or other suitable material.

By these means I have produced a machine for cutting veneers which can be readily adjusted for cylindrical, semi-cylindrical, or flat logs, so that the wood can be cut to the best possible advantage with one and the same machine.

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

1. In a machine for cutting veneers the slides l' , chucks s' , and screws w' , in combination with the knife, the knife-carrier, and the feed-carriage, all arranged and operating in respect to the stay-logs C I or K, substantially as described, for cutting veneers from a flat, semi-cylindrical, or cylindrical log, as herein set forth.

2. The stay-log I, provided with longitudinal lips or flanges q' , and with end flaps r' , in combination with chucks s' , secured to tubular spindles t' , fitting in tubes u' , and acted on by screws w' , said tubes u' receiving a revolving motion, substantially as set forth.

3. The knife-blade c^2 , secured in the shaft a^2 , which has its bearings in the cap G, and re-

ceives a revolving motion from a shaft bearing disks, which are held in frictional contact with the cylindrical log, substantially as described.

JOHN N. SEIB.

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.