

No. 617,283.

Patented Jan. 3, 1899.

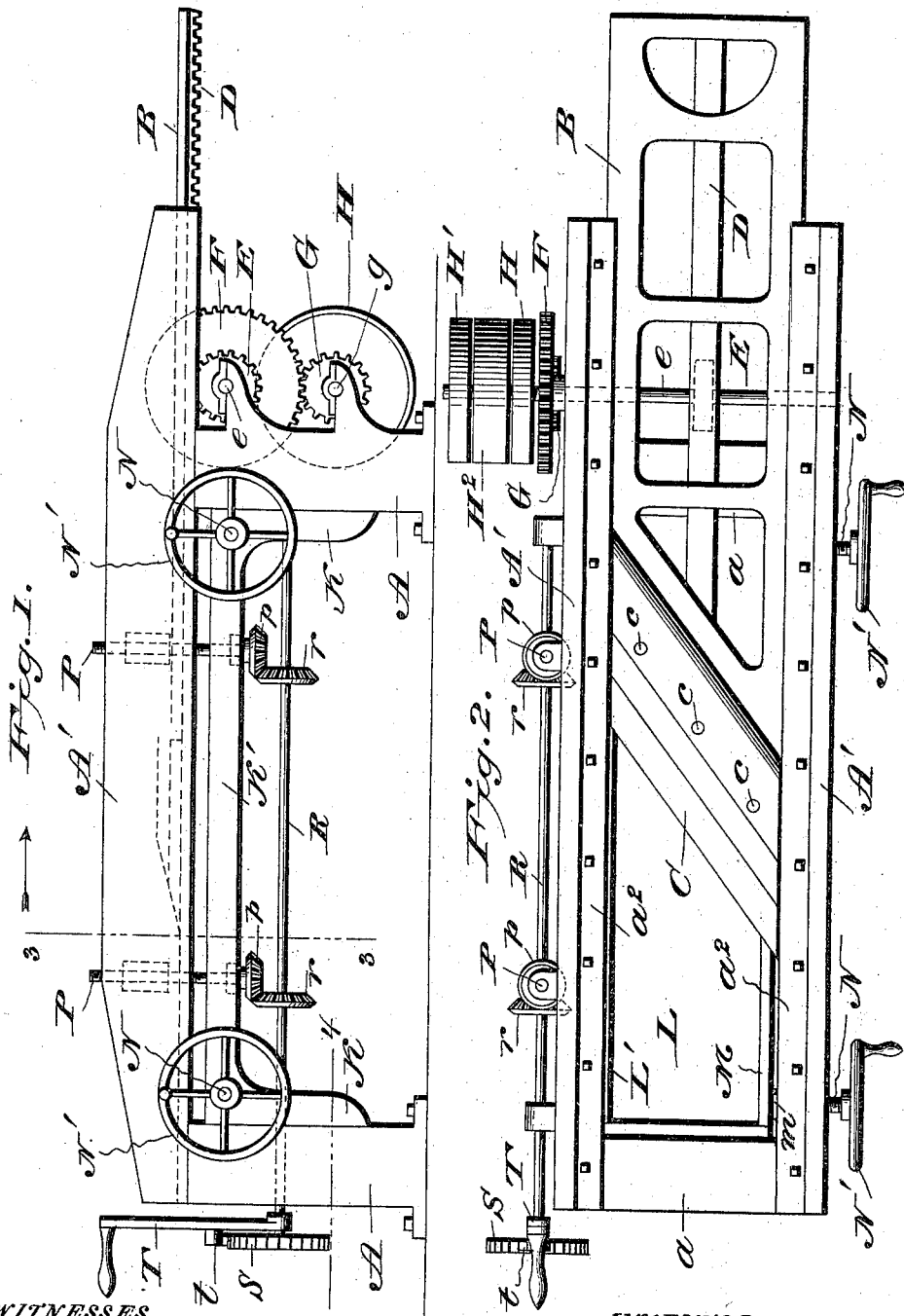
H. DAHLMAN.

MACHINE FOR MAKING PURFLINGS, &c.

(Application filed June 30, 1898.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES

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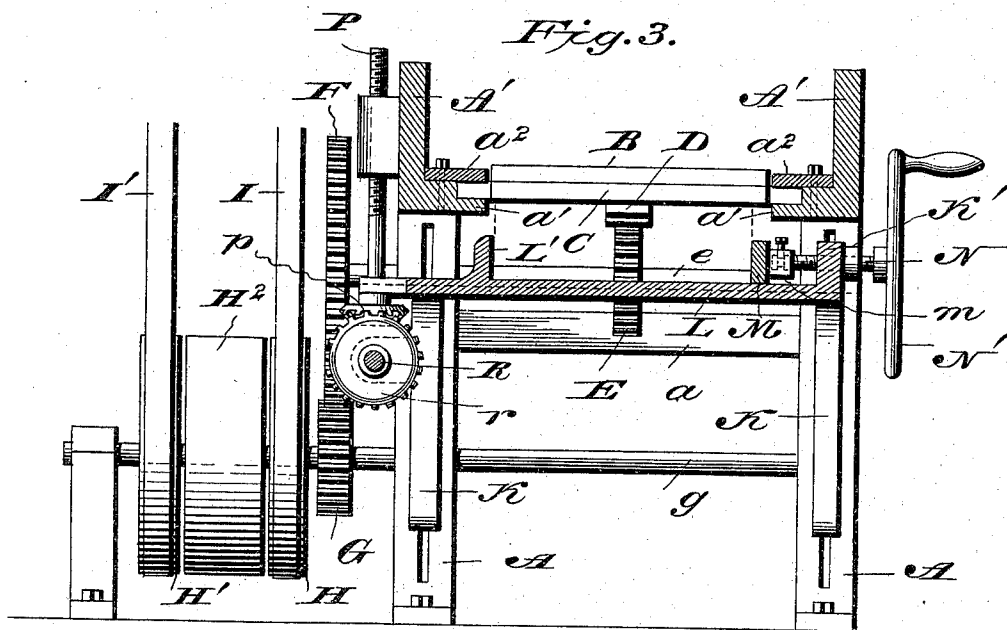


Fig. 4.

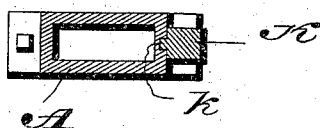
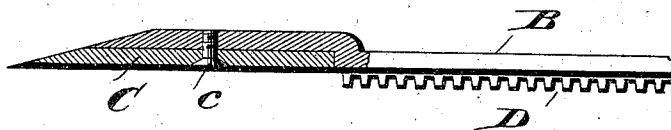


Fig. 5.



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UNITED STATES PATENT OFFICE.

HENRY DAHLMAN, OF MINNEAPOLIS, MINNESOTA.

MACHINE FOR MAKING PURFLINGS, &c.

SPECIFICATION forming part of Letters Patent No. 617,283, dated January 3, 1899.

Application filed June 30, 1898. Serial No. 684,847. (No model.)

To all whom it may concern:

Be it known that I, HENRY DAHLMAN, a citizen of the United States of America, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Machines for Making Purflings, Parquetry, &c.; 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 is an improvement in machines for making purflings, parquetry, and other ornamental veneers of composite strips of different varieties of wood; and the object of my said invention is to provide such a machine by which the wood is first cut into blocks or pieces of the desired width and then after being glued together are again clamped in the machine and cut into strips or veneers of the required thickness to be used as purflings in forming the ornamental borders of musical instruments, as parquetry for floorings, or as veneers for other ornamental purposes.

The invention consists in the particular construction and arrangements of the parts comprising the machine for the above purposes, making provision for rapid and accurate adjustments and positive operation.

In the following specification I have entered into a detail description of my invention, reference being had to the accompanying drawings and to letters of reference thereon, and what I consider to be the novel features of construction are more particularly set forth in the appended claim.

In the drawings, Figure 1 is a side elevation of a machine constructed in accordance with my invention. Fig. 2 is a plan view of the machine. Fig. 3 is a vertical sectional view on the line 3 3 of Fig. 1. Fig. 4 is a transverse sectional view on the line 4 4 of Fig. 1. Fig. 5 is a detail sectional view showing the manner of attaching the knife-blade to its carrying-frame.

In carrying out my invention a rigid supporting-frame is constructed, consisting of the legs A, longitudinal side pieces A', bolted to the upper ends of said legs, and cross-pieces a, connecting each pair of legs to each other, the said frame being firmly se-

cured to a suitable base. The horizontal side pieces A' are provided with inwardly-projecting flanges a', forming ways upon which slide a reciprocating knife-carrying frame B, flat guide-rails a² being bolted upon the flanges to hold the said carriage down upon its ways, presenting longitudinal channels which receive the side edges of the carriage. The carriage or frame B is of open-work to make it as light as possible consistently with the required strength, and the inner end of the same is disposed at an angle, as shown, so that the knife-blade C, which is bolted to said end, will be arranged obliquely and make a shearing cut. In order to rigidly secure the knife-blade to the carriage and have the cutting edge thereof on a plane below the under surface of said carriage, the inner end of the latter is enlarged, as shown in Fig. 5, and recessed transversely to receive the blade C, the edge being beveled on a line with the bevel of said blade. The blade is secured to the carriage by bolts or machine-screws c, which are passed upward through the blade and engage screw-threaded holes in the carriage, the holes in the blade through which said screws pass being countersunk to receive the heads of the screws, so that they will not project and cut into the material being worked upon. On the under side of the carriage is a longitudinal rack D, and in mesh with this rack is a pinion E, keyed to a transverse shaft e, mounted in suitable bearings attached to the supporting-frame, the speed of this pinion being reduced with respect to the driving pulley or pulleys by a train of gearing consisting of a large gear-wheel F on the shaft e, meshing with a pinion G on a transverse shaft g, the latter carrying the drive-pulleys H H' and intermediate loose pulley H². To move the carriage or knife-carrying frame both backward and forward, belts I and I', driven in opposite directions, are adapted to be shifted onto the pulleys H and H', respectively, the said belts being so arranged that when one is slipped onto its driving-pulley, the other will be upon the loose pulley H², or both moved upon the said loose pulley to bring the carriage at rest. Any ordinary or approved belt-shifting mechanism can be applied.

K K designate the end pieces of a vertically-movable frame, which is located within

the supporting-frame A and provides a bed-plate L, having a side piece or clamping-jaw L', which is stationary with respect to the vertically-movable frame and coacts with a movable jaw or longitudinal plate M, the latter being moved to and from the stationary jaw by means of screws N, which engage threaded openings in enlargements or blocks *m* at the ends of said movable jaw. The screws are held in supplemental side pieces K', attached to the vertically-movable frame, and at their outer ends are provided with hand-wheels N', by which they are turned. The frame K slides upon the supporting-legs A, being provided with vertical ribs or feathers *k*, which engage recesses therefor in said supporting-legs, and movement is imparted to this frame through the intervention of certain mechanism hereinafter described. It will be understood that the frame K carries the material or wood to be worked upon and has a movement at right angles to that of the knife in order to feed the material to the knife. This feeding movement is accomplished by vertical screws P P, carried by the frame K and engaging threaded openings in one of the side pieces of the supporting-frame, the screws being turned by a longitudinal shaft R, journaled in bearings in the frame K and geared to said screws by bevel-wheels *r* and *p*. It will be understood that the screws P P have a rotary movement in the frame K and by engaging the female threads in the side piece of the supporting-frame will raise or lower said frame, according to the direction the screws are turned, and by gearing said screws to the horizontal shaft provision is made for operating them simultaneously from one end of the machine. To this end the shaft R is extended beyond the forward end of the machine and has a ratchet-wheel S keyed thereon and with which engages a pawl *t*, carried by a lever T, fulcrumed loosely on the shaft. The ratchet-wheel is, properly speaking, a toothed wheel in order that it may be turned in either direction by swinging the pawl upon its pivot.

From the foregoing the operation of my improved machine will be clear to those skilled in the art to which it relates, for in making up purflings, parquetry, or other veneers the varieties of wood are selected and clamped into the vertically-movable frame K and said frame adjusted with respect to the knife to cut off strips or blocks of the desired width, after which these blocks or strips are glued together, again clamped in the frame K, and

the said frame adjusted so that when the knife is operated it will cut the veneers to the desired thickness. In clamping the material in the vertically-movable frame the said material is placed between the jaws L' and M and the last-mentioned jaw moved by the screws N to firmly clamp or hold said material. The frame can be adjusted to any extent by turning the lever T, and after one strip of veneer or purfling has been removed the said frame can be again adjusted or raised to bring the composite block in position for cutting off another strip, the adjustment of the vertically-movable frame being made when the knife-carrying frame has moved rearward beyond the composite block. The reciprocating movement of the knife-carrying frame is controlled by properly shifting the driving-belts onto and off of the pulleys H and H'. It is obvious the rack could be upon the upper side of the knife-frame.

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

In a machine for the purposes set forth, the combination, of a supporting-frame comprising the legs A having vertical recesses or grooves, and the longitudinal side pieces A' secured to the upper ends of the legs, said side pieces having horizontal grooves in their inner side; lugs secured to the outer side of the side pieces and provided with threaded apertures disposed vertically; a horizontal plate K having depending end pieces with vertical tongues sliding in the grooves of the legs; threaded rods passed upward through apertured lugs on the plate K and engaging the threaded lugs on the side pieces; bevel-pinions secured to the lower ends of the threaded rods and supporting the plate K; a horizontal shaft carried by said plate and having bevel-pinions in mesh with the aforesaid pinions, and clamping-jaws on the plate K; together with a reciprocating knife-carriage sliding between the side pieces, a toothed rack on said carriage, and a shaft having a pinion in mesh with said toothed rack, said shaft also having fixed pulleys and an intermediate loose pulley, substantially as shown and for the purpose set forth.

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

HENRY DAHLMAN.

Witnesses:

C. F. E. PETERSON,
EDWARD OLSEN.