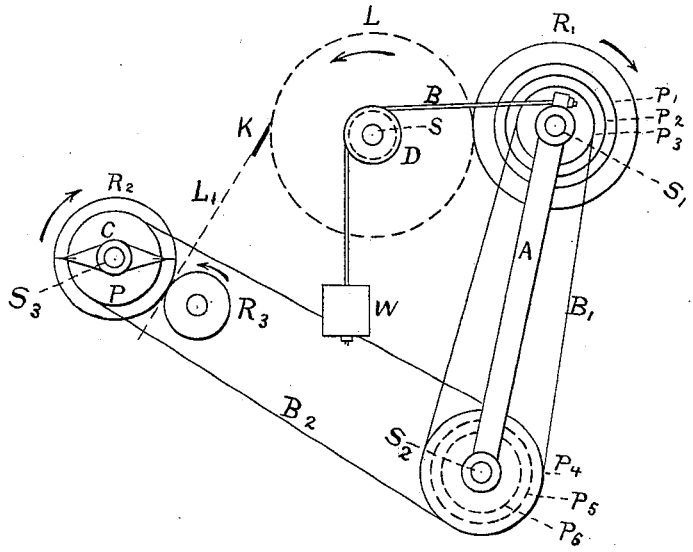
No Model.)

R. H. THOMPSON.

VENEER CUTTING MACHINE.

No. 262,258. Patented Aug. 8, 1882.



WITNESSES:

Harry Snydam

Chas H Hallock

INVENTOR

Robert H. Thompson

BY Hubert A. Banning

ATTORNEY

UNITED STATES PATENT OFFICE.

ROBERT H. THOMPSON, OF BROOKLYN, NEW YORK.

VENEER-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 262,258, dated August 8, 1882.

Application filed February 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, ROBERT H. THOMPSON, of the city of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful improvement in machinery for cutting veneer lengthwise of the grain, and a means of obtaining a power for operating such machinery variable in proportion to the size of the log from which the veneer is cut, of which the following is a specification, reference being had to the accompanying drawing.

Heretofore veneer has been cut lengthwise of the grain by a series of knives fixed upon a roller rotated by frictional contact with the log, or by a knife fixed upon a shaft and run by means of a pulley belted to a second pulley, which in turn is connected with a friction disk or disks bearing upon the log; but such mechanism contained no provision for changing the size of the cut unless the knives be changed, in which case it would be necessary to effect a change of the knives as often as a different-sized veneer was desired.

The object of my invention is to provide a means of obtaining a power by which mechanism may be operated so as to cut veneer in any desired uniform sizes as it comes from a machine which shaves it off the log, and also mechanism operated by such power which will cut the veneer lengthwise of the grain and in any desired uniform sizes.

The drawing represents the manner in which I obtain a variable power which will always be in proportion to the size of the log from which the veneer is cut, and mechanism for cutting the same lengthwise of the grain.

Heretofore machines employed for cutting veneer have been so constructed as only to shave the veneer from the log as it revolves on its shaft and comes in contact with the knife or knives, and it is of course cut into sheets, and may also be cut crosswise of the grain, by means of stationary knives, at certain distances apart, with which the log comes in contact in its revolutions; and so far as I am aware no mechanism has ever been employed for cutting the veneer lengthwise of the grain as it comes from the machine, except such mechanism as would only cut the veneer in certain sizes, which could not be changed without taking the knives out and changing their position, so as to cut veneer of another size. The difficulty heretofore attending the employment of machinery for cutting the veneer lengthwise of the grain and in any desired uniform sizes has been the inevitable irregularity of the speed at which the veneer travels from the log, due to the constantly-decreasing size of the log with each revolution, and the consequent want of a proper variable power for operating mechanism with which to cut lengthwise of the grain in any desired uniform sizes without changing the position of the knives by which the veneer is cut lengthwise of the grain.

My invention consists in obtaining a variable power in connection with mechanism arranged with suitable knives to cut off the veneer in any desired uniform lengths without changing the knives; and in order to accomplish this object I employ a friction roller or rollers bearing against the log when it is placed in the cutting-machine, and by which the friction roller or rollers will be moved by the log in its revolutions at a speed exactly in proportion to the rate at which the veneer passes from the machine, and by means of pulleys driven by belts connecting with the shaft of the friction-roller the power is transmitted to a device for cutting it lengthwise of the grain and in the desired uniform sizes.

In the drawing, L represents a log to be cut into veneer, which is placed upon and secured to its shaft in any ordinary veneer-cutting machine. The veneer L′ is cut from the log L by a knife, K, and passes between the rotary cutter C and the roller R^3.

R′ represents a friction-roller, of suitable material and surface, mounted upon a shaft, S′, and supported by arms A, between which it is free to turn. The friction-roller R′ is drawn against the log L by a band or cord, B, which passes over and is wrapped one or more times around a pulley, D, which is made to turn with the log. To this band B a weight, W, is attached for the purpose of sustaining the friction-roller R′ against the log L. When the log is set in motion the roller R′ will be revolved with it, the direction of motion being represented by the arrows. A cone-pulley having steps P' P^2 P^3 is made to turn with the friction-roller R′, and is connected by the belt B′

with another cone-pulley upon the shaft S^2, and which also has steps P^4 P^5 P^6. The desired sizes of the veneer may be obtained by regulating the speed at which the cutting-knife is to be driven, which is done by changing the belts from one step to another on the cone-pulleys. Instead, however, of cone-pulleys, cone-drums may be used, which answer precisely the same purpose. The motion being imparted to the cone-pulley on shaft S^2 by the belts connecting with the cone-pulley on shaft S′, it is then transmitted by belts B^2 or other suitable means to a cutter, C, on the shaft S^3, which, in its revolutions, will cut the veneer as it passes between the pulley P and the roller R^3. This roller R^3 may be made of the hearts of the logs, and revolved by a roller, R^2, upon the shaft S^3, which revolves the cutter C, or by other suitable means. When it is desired to mount a new log upon the shaft of the cutting-machine the friction-roller R′ is drawn back flat upon the ground or floor, so as to be out of the way. When the log is mounted the friction-roller may be drawn up against it and sustained in that position by the weight W.

I do not confine myself to passing the cord B over or around the wheel D; but I prefer this method because a much smaller weight can be used to sustain the friction-roller against the log, and this is a great advantage, for in putting a log into the machine it is necessary to lay the friction-roller back out of the way, and this is facilitated by having a small instead of a large weight attached to the cord B. Instead, however, of the weight W, a spring may be used, which will answer the same purpose.

The cutter which I have shown is an ordinary rotary cutter with two blades; but the driving mechanism may be applied to any form of cutter.

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

1. Mechanism for cutting veneer lengthwise of the grain, consisting of a friction-roller held in contact with the log, so as to be rotated thereby, cone pulleys or drums connected therewith, and a shaft or other equivalent mechanism which operates the knife or knives for cutting the veneer lengthwise of the grain, which knife or knives may be made to cut any desired uniform sizes simply by changing the position on the cone pulleys or drums of the belts or other means by which the power is transmitted from the friction-roller and to the shaft for operating the cutting knife or knives, substantially as described.

2. In a veneer-cutting machine, the combination of the friction-roller R′, moved by the log, with the cone-pulley having steps P′ P^2 P^3, belt B′, connecting with the cone-pulley having steps P^4 P^5 P^6, and the roller R^2, turning the knife for cutting the veneer lengthwise of the grain, and the roller R^3, substantially as described.

ROBERT H. THOMPSON.

Witnesses:
HARRY SUYDAM,
CHAS. H. HALLOCK.