

No. 809,136.

PATENTED JAN. 2, 1906.

J. J. RUSSELL.
VENEER CUTTING MACHINE.
APPLICATION FILED MAR. 28, 1904.

Fig. 1.

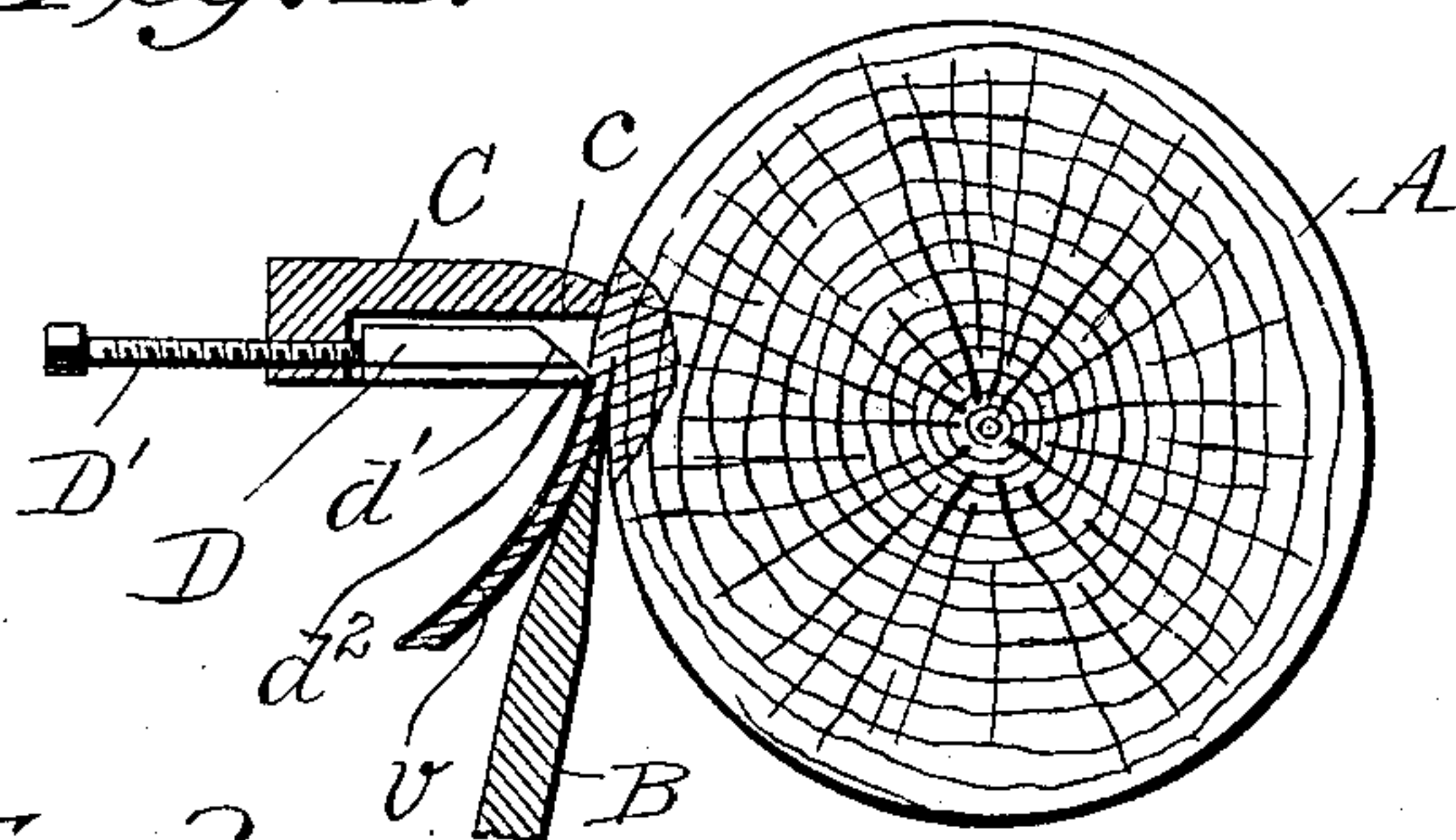


Fig. 2.

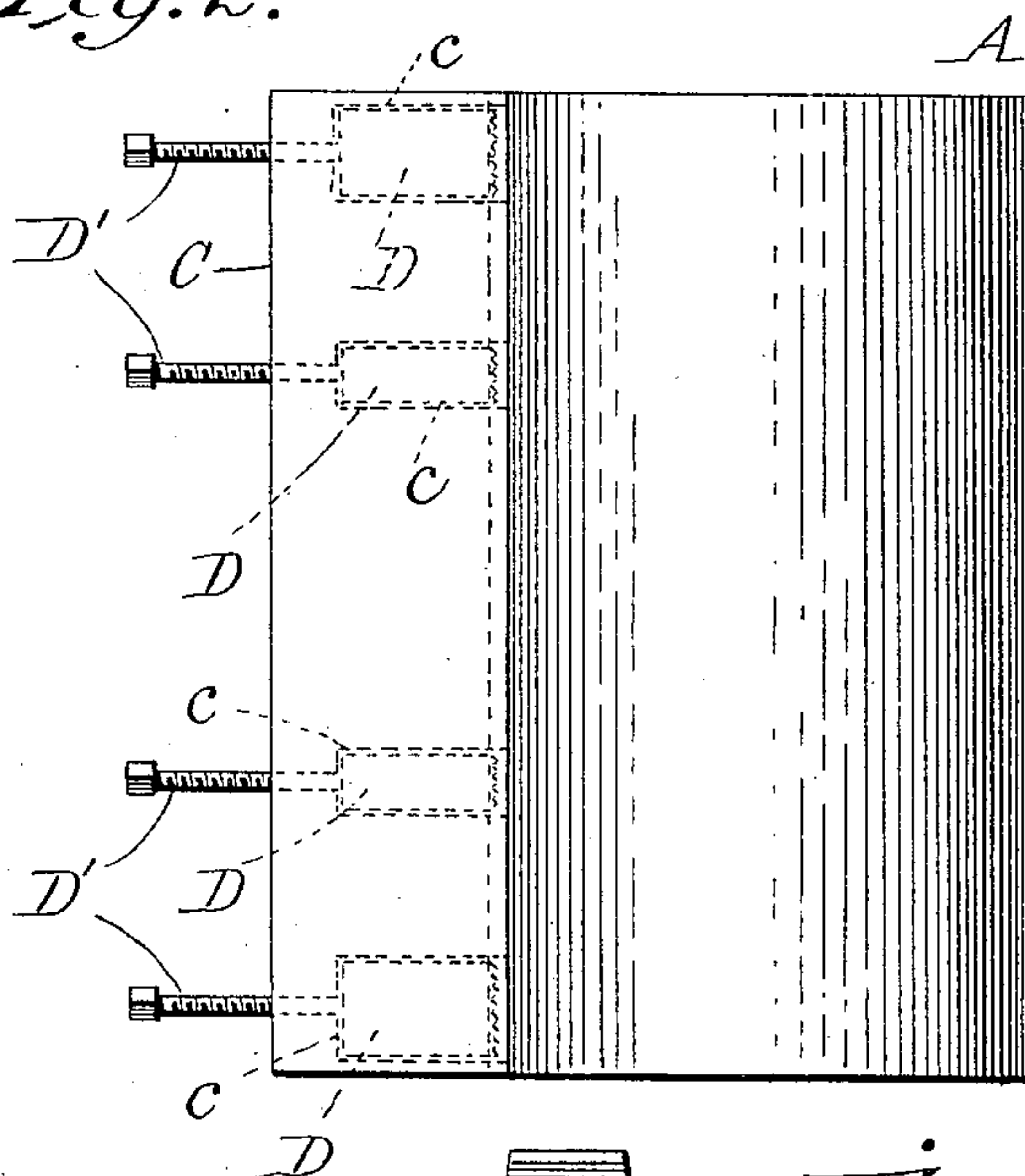


Fig. 3.

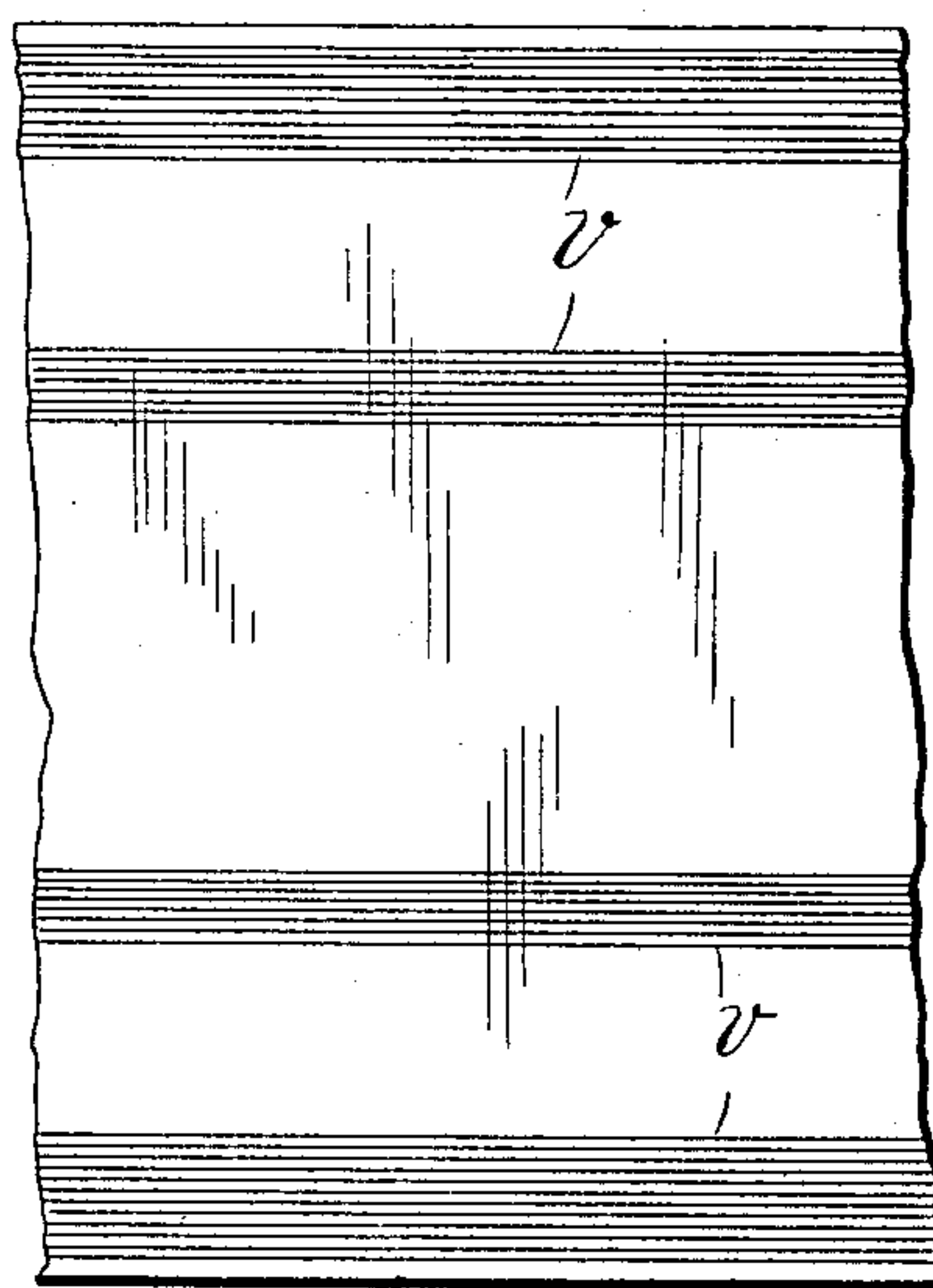


Fig. 4.

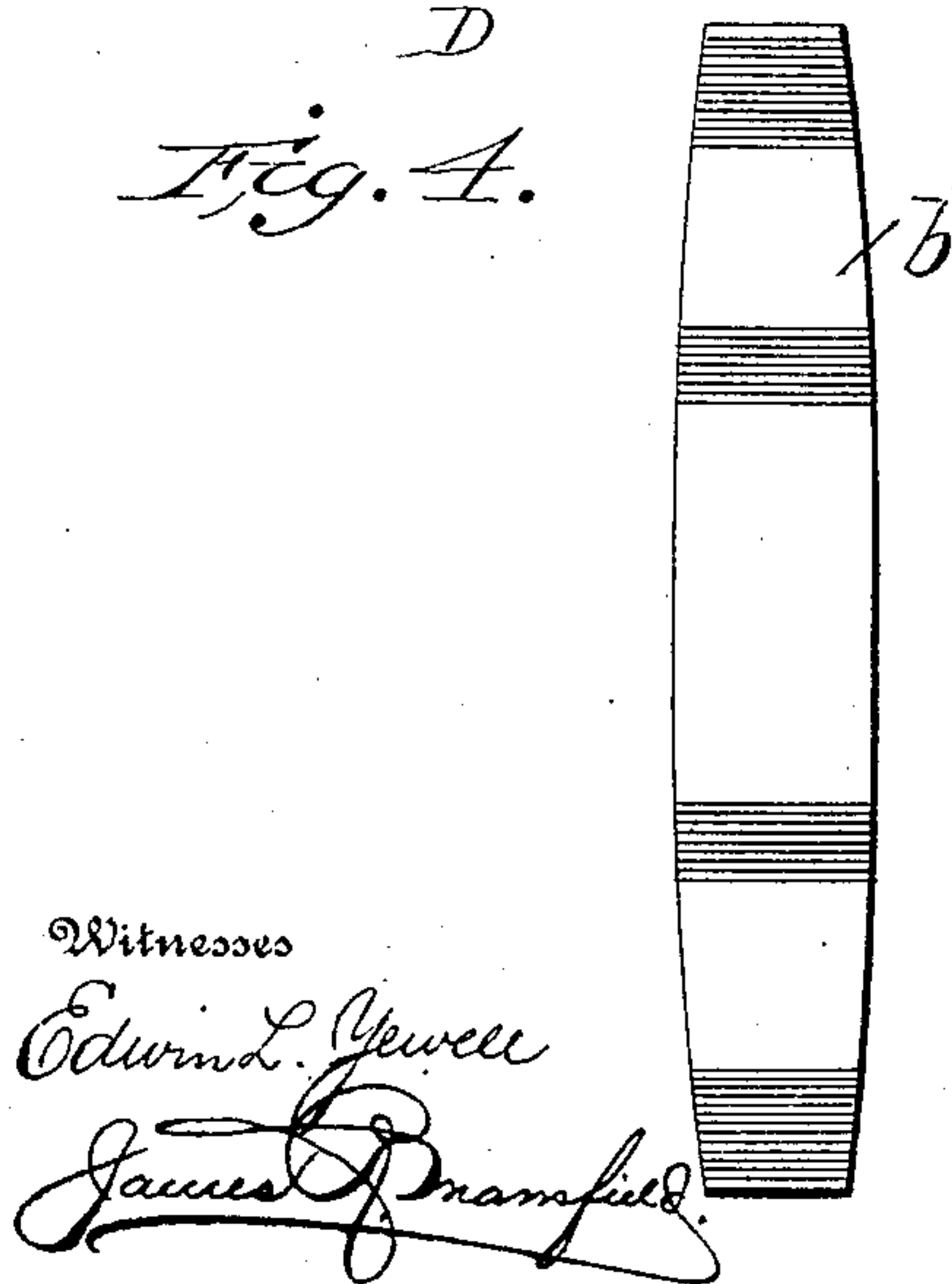


Fig. 5.

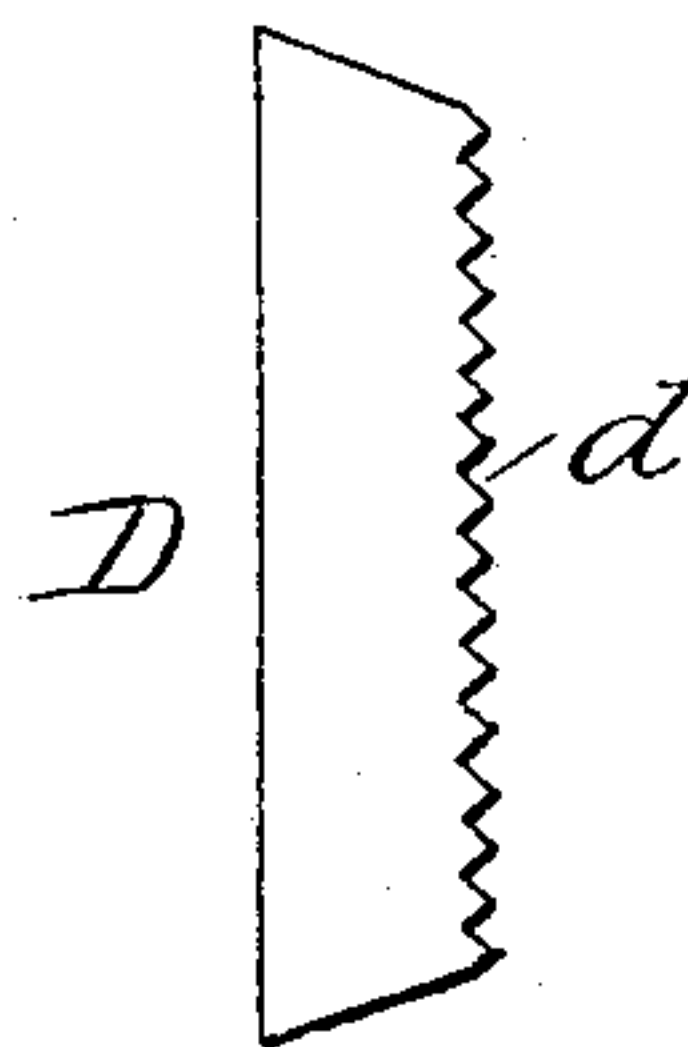
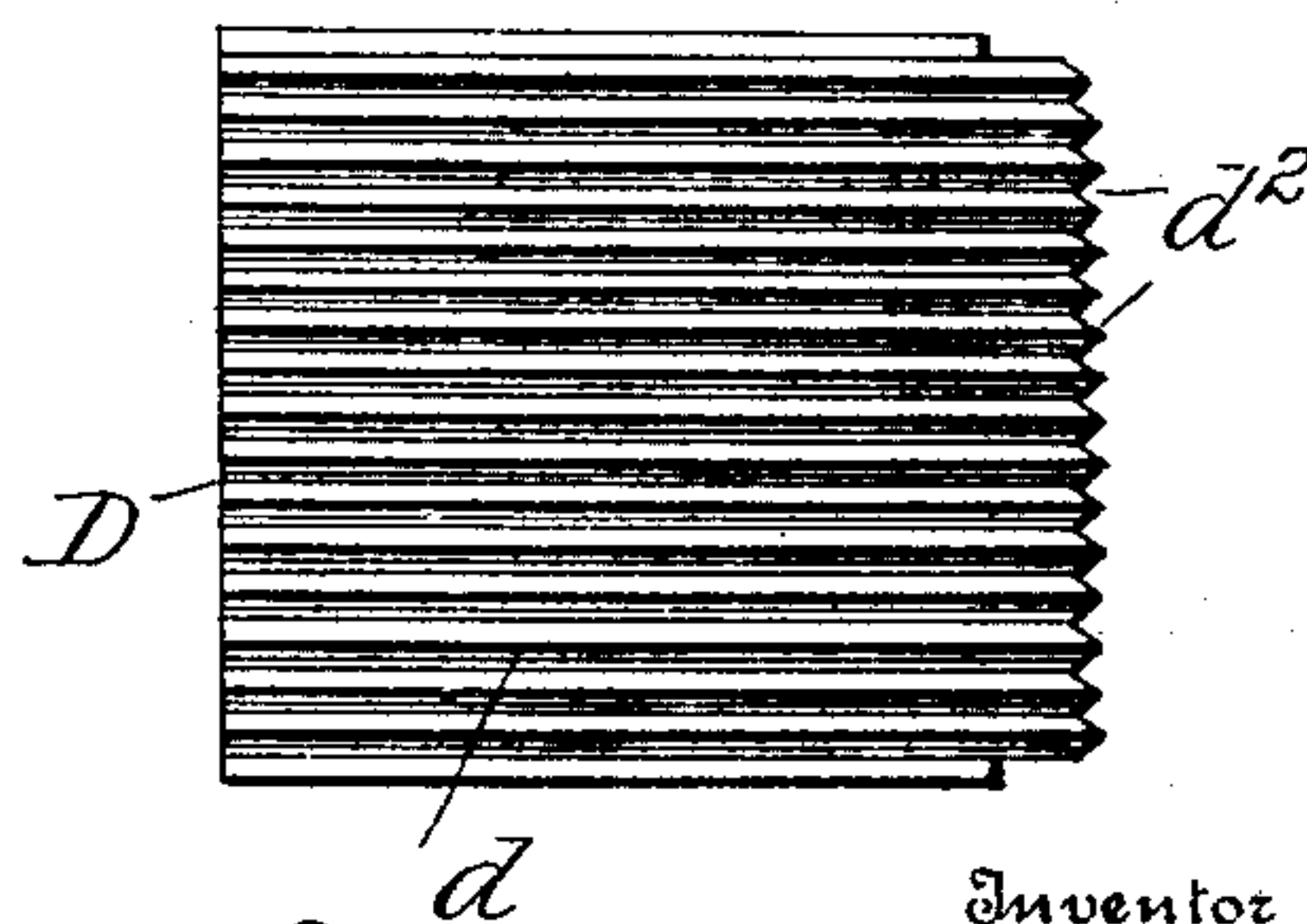


Fig. 6.



Witnesses

Edwin L. Jewell
James P. Bramfield

Inventor

James J. Russell

By

W. H. Russell & Son
Attorneys

UNITED STATES PATENT OFFICE.

JAMES J. RUSSELL, OF MILWAUKEE, WISCONSIN.

VENEER-CUTTING MACHINE.

No. 809,136.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed March 28, 1904. Serial No. 200,405.

To all whom it may concern:

Be it known that I, JAMES J. RUSSELL, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Veneer-Cutting Machines; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

The present invention is an improvement in machines for cutting veneer staves for barrels and like wooden vessels. Its object is to produce veneer staves from hard wood and fine-grained soft wood with roughened surfaces at the points where the hoops engage them, so that the hoops will hold securely without slipping, thus enabling hard woods to be used in the manufacture of barrels.

It is impractical at the present time to use hard woods or Southern gum wood successfully for veneer staves, because the surface of the veneer is sleek and smooth and being so the hoops cannot grip the staves sufficiently to maintain a tight hold thereon. This difficulty does not arise with soft woods, except Southern gum, which is very sleek, nor with sawed woods; but soft woods suitable for cheap barrel making are almost entirely exhausted, except gum, and the loss of wood caused by the saw-kerfs and the extra cost of sawing renders sawed-stave barrels too costly.

While the invention is particularly designed for use in hard and gum woods, as stated, it can of course be used on soft-wood staves also, if desired, and I do not limit myself to any particular wood.

By my invention I am enabled to produce perfectly satisfactory barrels from hardwood veneer and veneer made from gum wood by roughening the outer surface of the staves transversely at the points where the hoops will come, leaving the other part smooth, thus producing a more satisfactory barrel.

A further feature of the invention is to roughen the stave material at the desired points prior to its being cut from the veneer strips and simultaneously with the production of the veneer sheets, as will be hereinafter explained, so that no time is wasted in roughening the staves, no extra machinery is required for so doing, and I score or roughen the veneer sheet longitudinally at the desired points as the sheet is cut from the log

and afterward cut such sheet transversely into staves, the resultant staves being roughened transversely at the ends and quarters where the hoops come and the width of the hoops.

In carrying out my invention I attach to an ordinary veneer-cutting machine, and preferably to the presser-bar thereof in advance of the cutting-knife, a set of roughing or scoring tools for the end-hoop scores and for the quarter-hoop scores, such tools being adapted to scratch and roughen the outer surface of the log or stock, so that the resultant veneer sheet is scratched or roughened at the desired points.

I am aware that cutting-tools have been used in veneer-machines to divide the veneer sheet into longitudinal strips, also that tools have been attached to veneer-machines to croze and chamfer the edges of the veneer for staves. I am also aware that indenting or scoring tools have been attached to veneer-machines for the purpose of scoring the veneer, so that it can afterward be easily bent at the scores into desired forms. None of these devices, however, operate as or accomplish the purposes of my invention, as I do not cut the stave nor indent it, so as to weaken it, but I simply roughen its surface, producing a decidedly useful and novel result and making it practically feasible to manufacture veneer-stave barrels out of hard and slippery woods.

In the accompanying drawings I have illustrated the means and mode of manufacturing these improved veneer staves and will now proceed to describe the same in detail.

Figure 1 is a detail sectional elevation of parts of one of the roughing-tools, a veneer-cutting machine equipped with my improvement. Fig. 2 is a reduced plan view of Fig. 1. Fig. 3 is a detail plan of a veneer sheet produced by such machine, and Fig. 4 is a view of a stave cut from such sheet. Figs. 5 and 6 are detail bottom and end views.

Any suitable make of veneer-machine may be used in which sections of wood logs A are mounted on axial supports and rotated against a cutter or knife B, which slices a thin sheet or layer V therefrom. These machines are usually provided with a presser-bar C adjacent to the knife, against which bar the log is pressed and held firmly while being cut. I have simply indicated the ordinary relative positions of the log, knife, and presser-bar of

such machines in the drawings, as the particular construction thereof or of the veneer-machine as a whole forms no part of the present invention.

5 At suitable points adjacent to the knife I locate the roughing or scratching tools D, four being ordinarily used by me, located at such distances apart that they will roughen the surface of the veneer at the four points
10 where the hoops will come when the strip is cut into staves. Preferably these tools are constructed as in Figs. 5 and 6 and consist of a steel plate having its lower face longitudinally grooved with parallel V-grooves, as
15 at d , and the inner end of the tool is beveled, as at d' , at right angles to grooves d , so that the intersecting bevels and grooves form a series of triangular teeth d^2 , which scratch the surface of the log and the veneer cut
20 therefrom. These tools must be held in contact with the log with their bevel ends d' inclining in the direction of rotation of the log, so that the points d^2 do not plow into or shave the surface of the log, as I do not wish to cut
25 material therefrom, but merely to roughen its surface.

Preferably the tools D are attached to the presser-bar C and may be supported in grooves c in the under side thereof, as indicated in Figs. 1 and 2, and may be adjusted
30 inwardly by tap-bolts D' . When properly set and adjusted, these tools will roughen the surface of the veneer along four parallel lines, as indicated at v in the drawings. The roughened veneer strips may be cut into staves b
35 and jointed by the machine shown in patent to Kerr, No. 524,982, of August 21, 1894, and the resultant staves cut from the veneer will be roughened at the ends and quarters, as indicated in Fig. 4, against which portions the
40 hoops come when the staves are assembled into barrels, and the inner surfaces of the

hoops will embed themselves in the indentations in the rough surfaces of the staves and be held securely in place.

45 By this means and method I can produce from hard wood veneer staves which will be as easily and as securely fastened by the ordinary hoops as the soft or sawed staves can be and are of greater durability, owing to the
50 greater strength of the hard woods.

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

1. In combination with the knife and
55 presser-bar of a veneer-cutting machine, said presser-bar having a series of transversely-arranged slots in its under side, of a set of roughing-tools in said slots, each tool having longitudinal grooves on its under side and
60 beveled at right angles to said grooves on its inner end, whereby a series of roughing or scoring points are formed on the inner end of said tool, said tools being arranged to score
65 or roughen the veneer sheet as it is cut from the log, substantially as described.

2. In a stave-veneer-cutting machine the combination of the presser-bar having a series of transverse slots in its under side, a set of adjustable roughing-tools slidably fitted in
70 said slots, and bolts tapped through the outer edge of the presser-bar for adjusting said roughing-tools toward the inner edge of the bar; with a cutting-knife arranged below the
75 cutter-bar, with its cutting edge approximately opposite the working edges of the cutting-tools, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JAMES J. RUSSELL.

In presence of—

C. T. McELROY,
C. T. REYNOLDS.