(No Model.) 2 Sheets—Sheet 1.

F. J. BERGQUEST.

WOOD JOINTER.

No. 341,875. Patented May 18, 1886.

Fig. 1.

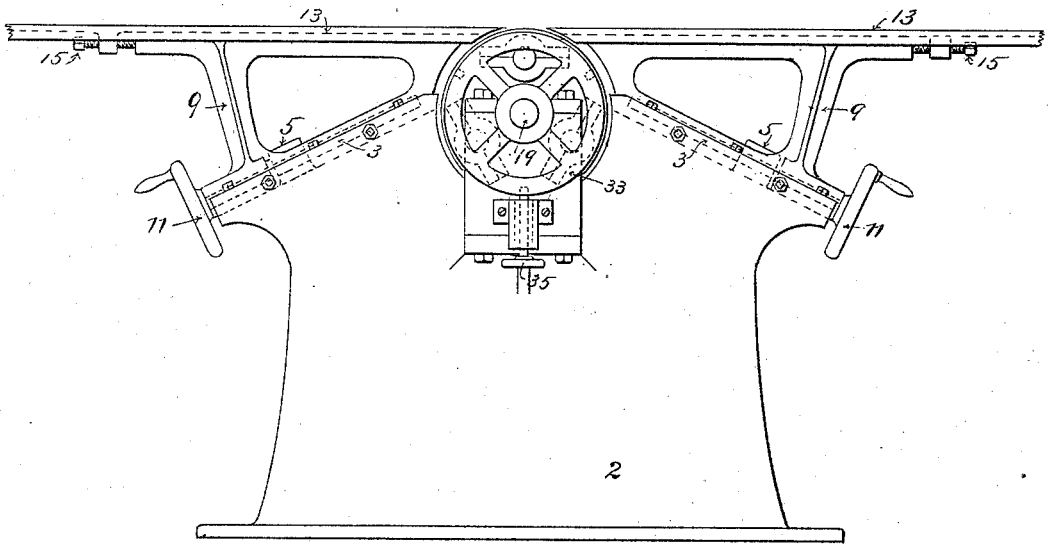
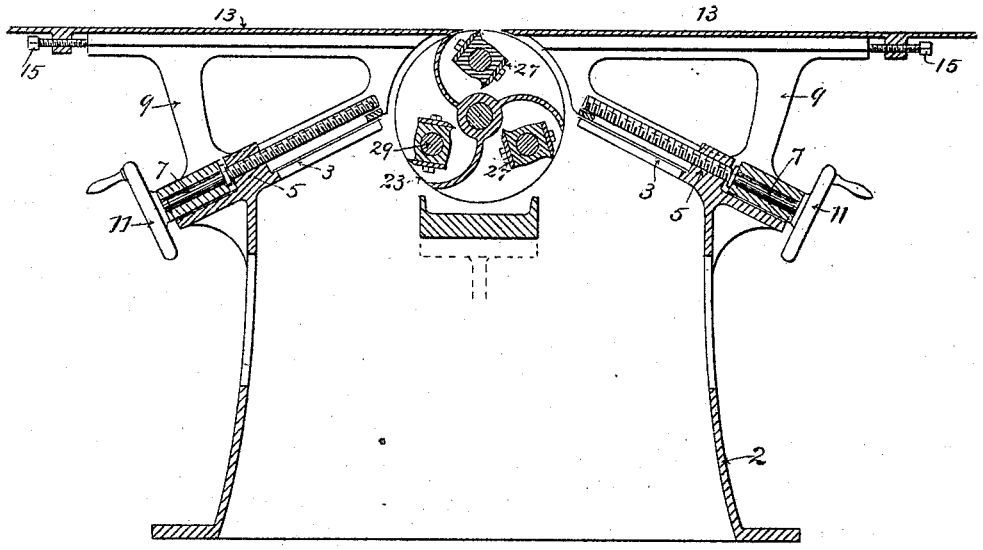


Fig. 2.



Witnesses
R. H. Sanford
Chas L. James.

Inventor
Frank J. Bergquest
By A. C. Paul
Atty

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

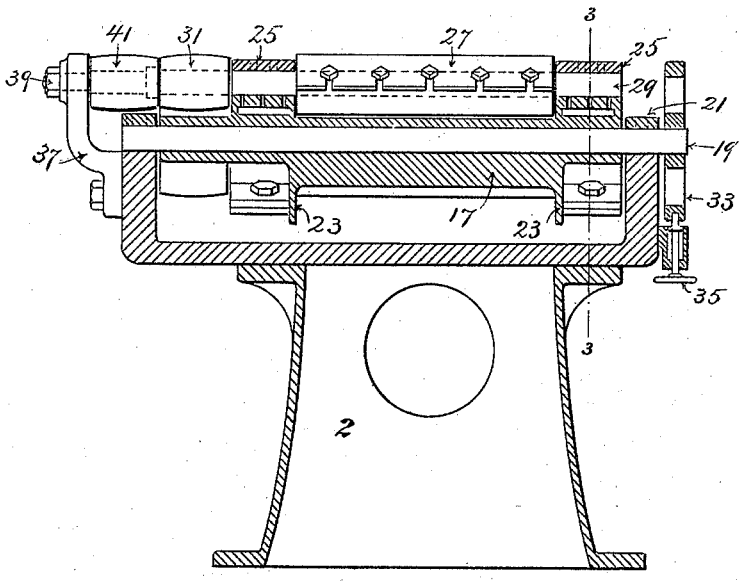
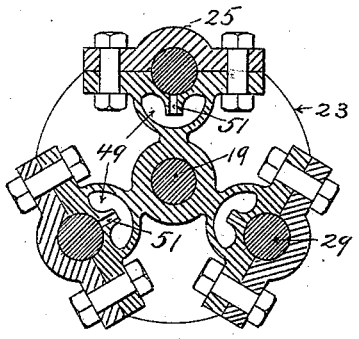


Fig. 4.



Witnesses
R. H. Sanford.
Chas L. James.

Inventor
Frank J. Bergquest.
By R. R. Paul
Atty

UNITED STATES PATENT OFFICE.

FRANK J. BERGQUEST, OF MINNEAPOLIS, MINNESOTA.

WOOD-JOINTER.

SPECIFICATION forming part of Letters Patent No. 341,875, dated May 18, 1886.

Application filed January 4, 1886. Serial No. 187,000. (No model.)

To all whom it may concern:

Be it known that I, FRANK J. BERGQUEST, a citizen of the United States, and a resident of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain Improvements in Wood-Jointers, of which the following is a specification.

My invention relates to improvements in wood-jointing machines; and the invention consists, generally, in a machine having a head or carrier in which are mounted a series of rotating cutters, any one of which may be brought into position for operating upon the material that is passed over the tables of the machines.

The invention consists, further, in the construction and combination hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of a machine embodying my invention. Fig. 2 is a longitudinal vertical section. Fig. 3 is a transverse vertical section; and Fig. 4 is a transverse section of the head on a larger scale, the section being taken on the line 3 3 of Fig. 3.

2 represents the base of the machine, which may be of any preferred construction. This base is provided on each side with inclined ways 3, in which the supports 9 for the table slide. The base is provided with a suitable nut, 5, and the table-supports 9 have adjusting-screws 7, provided with hand-wheels 11. By turning these screws the table-supports are moved up and down in the inclined ways 3.

Upon the supports 9 are mounted in suitable ways the sliding tables 13. Set-screws 15 are provided for each table, by means of which the distance between the ends of the tables and the knives may be regulated. These screws bear against the table-supports, and when it is desired to have access to the carrier for the purpose of removing the knives, or for any other purpose, the tables may be slid back on their ways and the carrier and its knives exposed.

The tables are vertically adjusted by means of the supports moving on the inclined ways, and thereby the depth of cut of the knives may be regulated.

17 represents the cutter-carrier. It is mounted upon a shaft, 19, that is journaled in bearings 21 on the base of the machine. The carrier 17 has at its opposite ends the heads 23, which are provided with suitable boxes, 25. In the boxes 25 the shafts 29 of the revolving cutters 27 are journaled. The carrier is provided with any suitable number of cutters, preferably three. Each shaft 29 has a pulley, 31, by which power is applied to revolve the cutters.

When the machine is in operation, one of the revolving cutters is at the top of the carrier, and its knives operate on the wood to be jointed through the space between the edges of the tables. The cutters are provided with two or more knives, secured to the cutter-heads by suitable bolts. I prefer to provide the carrier with knives of different grades or kinds. One cutter may have knives for a heavy cut, another is preferably provided with knives that will make a fine glue-joint, and another with knives for a medium cut or with molding-knives.

A locking-plate, 33, is preferably provided on the shaft 19 with a spring-bolt, 35, for holding the carrier with either cutter in operating position.

A projection, 37, is bolted to the side of the machine, and extends above the shaft 19. It is provided with a stud, 39, upon which is mounted a loose pulley, 41. This pulley is in line with the pulley on the cutter-shaft that is uppermost, or the one that is in working position. The idler-pulley receives the driving-belt when it is desired to stop the machine, or when the carrier is to be turned to bring another cutter into working position. When this is to be done, the belt is slipped from the pulley on the cutter-shaft onto the pulley 41, the locking-plate is released, and the carrier is rotated to bring either of the other cutters to the top. The carrier is then secured, and the driving-belt is slipped onto the driving-pulley on the cutter-shaft.

The carrier is preferably provided with the curved webs or partitions 43, that extend lengthwise thereof from one head to the other. A separate chamber or compartment is thereby formed for each cutter. The chamber of the uppermost cutter may open into a spout,

through which the shavings pass beneath the machine. A fan may be applied to this spout to draw the shavings, dust, &c., from the chambers in the carrier.

I prefer to provide oil-chambers 49 for each of the boxes 25. These chambers are located between the boxes and the center of the heads 23, so that the chamber of the cutter that is in working position is under its box. A tube, 51, extends from the box and projects into the chamber, as shown. When the carrier is revolved, the oil flows into the part of the chamber that is then below the mouth of the tube, and hence does not escape from the chamber. A suitable wick or cord is placed in the tube 51, to feed the oil to the shaft.

I prefer to form the part of the base in which the carrier is mounted as a yoke extending crosswise of the machine, and having the boxes for the carrier-shaft in its upturned ends, as shown in Fig. 3.

I claim as my invention—

1. The combination, in a machine of the class described, of the rotating carrier 17, the series of revolving cutters 27, journaled therein and provided with the driving-pulleys 31, and the idler 41, mounted on a stud or shaft in a bracket upon the table, and having an elevation equal to the pulley on the cutter-shaft when at its highest point above the table, as and for the purpose set forth.

2. In a machine of the class described, the combination, with the tables and base, of the rotating carrier 17, having heads 23 and the curved webs 43, and the cutters 27, journaled in said heads and provided with the pulleys 31, all substantially as described.

3. In a machine of the class described, and in combination with the tables and base, the rotating carrier 17, the series of revolving cutters mounted therein, the boxes 25 in the carrier-heads, the oil-chambers 49, located between said boxes and the center of the carrier, and the oil-feed tube extending into the chamber, all substantially as described.

In testimony whereof I have hereunto set my hand this 25th day of December, 1885.

FRANK J. BERGQUEST.

In presence of—
CHAS. L. JAMES,
A. C. PAUL.