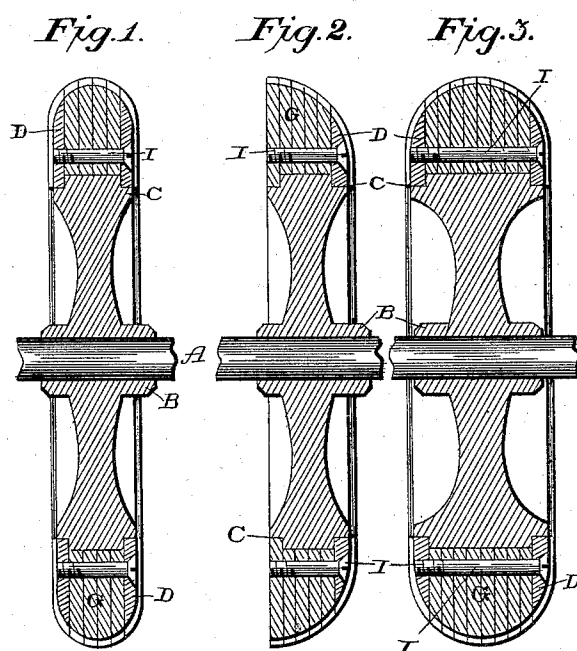


(No Model.)

F. H. NIERMANN.  
REVOLVING WOOD WORKING RASP.

No. 474,680.

Patented May 10, 1892.



Witnesses:

E. P. Ellis,

J. M. Necht

Inventor.

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per  
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Attys.

# UNITED STATES PATENT OFFICE.

FRANZ H. NIERMANN, OF JEFFERSON CITY, MISSOURI.

## REVOLVING WOOD-WORKING RASP.

SPECIFICATION forming part of Letters Patent No. 474,680, dated May 10, 1892.

Application filed March 23, 1891. Serial No. 386,125. (No model.)

*To all whom it may concern:*

Be it known that I, FRANZ H. NIERMANN, of Jefferson City, in the county of Cole and State of Missouri, have invented certain new and useful Improvements in Revolving Wood-Working Rasps; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in revolving wood-working rasps; and it consists in a number of plates of the same or different sizes, which are fastened in any suitable manner to a revolving shaft and which plates are provided with teeth upon their outer edges, as will be more fully described hereinafter.

The object of my invention is to provide a tool which will rapidly cut away the surface of wood and form therein grooves or channels of any required length, depth, or shape.

Figures 1, 2, and 3 represent vertical sections of rasps of different shapes and constructions, and which embody my invention.

A represents a revolving shaft of any suitable description and to which the rasp or tool is secured. Either a hub B, such as shown in Figs. 1, 2, and 3 may be used, or the plates may be made solid and secured directly to the shaft by means of any suitable devices, as may be preferred. If a hub B is to be used, shoulders C will be formed upon it so as to form bearings for the two outside circular plates, which are made of greater thickness than any of the others, because the teeth are to be cut in their outer sides as well as in their outer edges. The plates G, placed between the outer plates D, will be of any desired number, thickness, and width, according to the shape of the channel or groove which is to be cut, and each one of the plates will have its outer edge formed into cutting-teeth. As shown in the different figures, the outer edges of the plates will be given any desired shape, and these plates are secured together by means of screws I, which are passed through them. Each plate having its edge formed into cutting-teeth, a tool

is formed which, when made rapidly to revolve, will cut the surface of the wood with great rapidity and form therein grooves or channels of any desired shape.

This tool is especially adapted for cutting curved surfaces and for cutting away the wood in forming saddle-trees and other such articles, as the wood can be held in the hand and made to bear directly against the rasp with perfect safety to the operator.

Having thus described my invention, I claim—

1. In a revolving rasp, a hub, peripheral shoulders C, formed on opposite sides of the hub, a series of toothed plates which are adapted to fit around the hub, clamping-plates D, which fit around the said shoulders, and clamping-screws which extend through all the said plates, the parts being combined substantially as shown and described.

2. In a revolving rasp, a hub, peripheral right-angled shoulders C, formed on opposite sides of said hub, toothed plates G, having openings of sufficient diameter to fit around the said hub, clamping-plates D, having openings of less diameter than plates G and which are adapted to fit around the shoulders C, and clamping-screws which extend through the plates G and which connect the plates D, whereby all of the said plates are secured to the hub, the parts being combined substantially as shown and described.

3. In a revolving rasp, a circular hub the periphery of which is parallel with the axial line of the hub, the edges of the periphery being cut inward to form shoulders C, plates G and D, and clamping-screws, the parts being combined substantially as shown and described.

4. In a revolving rasp, a hub, and toothed plates secured to the periphery of the hub, the combined width of the said plates being the same as the greatest width of the hub, the parts being combined substantially as shown and described.

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

FRANZ H. NIERMANN.

Witnesses:

WM. VAN RYAN,  
JOHN T. HENRY.