

UNITED STATES PATENT OFFICE.

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VENEER-SAW.

SPECIFICATION forming part of Letters Patent No. 480,428, dated August 9, 1892.

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To all whom it may concern:

Be it known that I, ANDREW E. HOFFMAN, a citizen of the United States, residing at Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Veneer-Saws, of which the following is a full, clear, and exact description, that will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation; Fig. 2, a transverse section on line 2, Fig. 1; Fig. 3, a view in perspective of a dowel-pin or key, and Fig. 4 a broken-away detail.

This invention relates to improvements in that class of circular saws that are used in the production of very thin lumber, such as veneers and the like. The present method of mounting and supporting makes it impractical to remove the segments for the purpose of dressing. In sawing veneers the saw must be absolutely in line and a perfect balance maintained in every respect or the saw will lead and the product be ruined.

The cutting-edge of a veneer-saw is necessarily of a much thinner gage than is ordinarily used and requires more careful handling.

The object, therefore, of this improvement is to provide an arrangement to obviate some or all of the objections attending the operating of this class of mechanism.

Referring to the drawings, A represents the saw, which consists of a number of segment-plates a , secured at their inner edges to the ring or collar C by means of the screws a' . That portion of the ring C overlapped by the inner edge of the saw is cut away or recessed to a depth corresponding to the thickness of the saw-plate, as at a^2 , so that the line or log side a^3 presents a straight face.

It will be observed that the ring C, to which the saw-plates are secured, is divided on the line a^4 into two semicircular or equal parts. This line of separation corresponds, as shown, to the meeting edges of the companion sectional saw-plates, which feature provides for the removal of the saw and ring from its mounting in two or more parts. A disk-wheel or solid collar D is rigidly mounted on the driving shaft or arbor E. This disk presents

a straight face on the line or log side and a spherical surface b on the opposite side, as shown in Fig. 2. This disk is cut away or recessed some distance inwardly from its periphery to provide the annular shoulder b' , forming a bearing for the meeting inner edge of the sectional saw-holding ring.

The periphery or edge of the disk D is beveled or cut away on the line b^2 , Fig. 2, which is at an oblique angle with reference to the axis of rotation. This forms an annular V-point d , which fits into the corresponding groove or recess d' in the back of the saw-ring, as shown in Fig. 2. This form of construction provides a large bearing for the joining or meeting surfaces of the sectional ring and the supporting-disk, and by reason of the V-point and corresponding groove these parts always draw or wedge together on a true line and keep the saw in proper balance no matter how often the same, with its attaching-ring, may be removed, replaced, or changed. It will of course be understood that the meeting or bearing surface of the saw-collar and supporting-disk must be dressed and fitted to a nicety.

The saw-collar is removably secured to its supporting disk by means of a number of screws d^2 . A number of double dovetail pins F, Fig. 3, may also be used to more firmly lock the meeting ends of the sectional saw-ring and the disk-wheel together, as shown in Fig. 1.

The meeting or joining ends of the sections comprising the saw-carrying ring are each provided with the common recess g , into which fits the dovetail end g' of the locking pin or key. The head end of this pin or pins is provided with the elongated slot g^2 , through which the set-screw g^3 is inserted and seated in the disk-wheel. In this manner the pins or keys are adjustably locked in place.

The ordinary construction of a veneer-saw consists generally in fastening the series of segment-plates to the rim of a suitable wheel rigidly mounted on its shaft. The saw is then usually dressed in its working position and of course remains idle during the operation, thus losing much valuable time.

The saw is often located where there is not sufficient light to see how to properly dress the same. Now under the arrangement herein set forth the saw-holding collar may be

divided into any required number of sections, two or more, (two being used by way of illustration,) in accordance with the weight of the mounting and diameter of the saw. The sectional ring to which the saw-plates are secured forms an intermediate element between the saw and the disk on the driving-shaft. Therefore the saw-ring can be quickly and conveniently removed in sections, each section having a number of saw-plates attached, and taken to the filing-room to be properly dressed. The saw removed is then replaced by a newly-sharpened one and but little time is lost. The saw-ring sections are of course interchangeable, and any one can be substituted for another. In the process of dressing it will not be necessary, ordinarily, to remove the saw-plates from the different ring-sections. There being no wear on the joining surfaces of the saw-ring and disk-wheel, the parts being once in line and properly balanced will remain so. It is also often necessary in sawing veneers to use saws of different thicknesses having a greater or less set, in accordance with the requirements of the different kinds of wood.

In sawing—especially oak—great care must be taken to prevent the saw-filings from coming in contact with the veneer, as it leaves a stain or discolors the wood, damaging and lessening its value. By having the filing done in a separate room the particles of steel cannot come in contact with the wood.

There are many other advantages in the peculiar construction and arrangement that will be so apparent to those skilled in the art that they need not be herein set forth.

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

1. In a veneer-saw, the combination of a saw consisting of a number of segment-plates,

a ring or collar divided into a number of segmental sections, a number of the saw-plates removably attached to each ring-section, said ring-sections being cut away on the face side to a depth corresponding to the thickness of the saw-plates, and the fastening-screws securing said plates to said ring, whereby the saw may be separated into as many parts as there are ring-sections without detaching the segmental plates, substantially as set forth.

2. In a veneer-saw, the combination of a saw consisting of a number of segment-plates, a supporting-ring provided with a groove or recess and divided into a number of segmental sections, a number of the saw-plates being removably attached to each ring-section, and a solid disk-collar having a beveled edge adapted to engage with said groove or recess in the supporting-ring, and the driving-shaft upon which said disk-collar is rigidly mounted, substantially as set forth.

3. In a veneer-saw, the combination of a saw-ring constructed in two or more sections and cut away on its rear side to form a V-groove and a disk-wheel correspondingly cut away on its meeting surface to provide a shoulder-bearing for said ring-sections and having its edge beveled to form a V-point to fit into said groove, substantially as set forth.

4. In a veneer-saw, the combination of the saw-ring constructed in sections and provided in its meeting ends with dovetailed recesses, the disk-wheel, the double dovetail pins or keys set into said disk and adapted to engage with said recesses, and the fastening-screws inserted through said ring-sections into said disk, substantially as set forth.

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Witnesses:

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