

J. C. DUNTON.
CUTTER HEAD FOR PLANERS.
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1,075,907.

Patented Oct. 14, 1913.

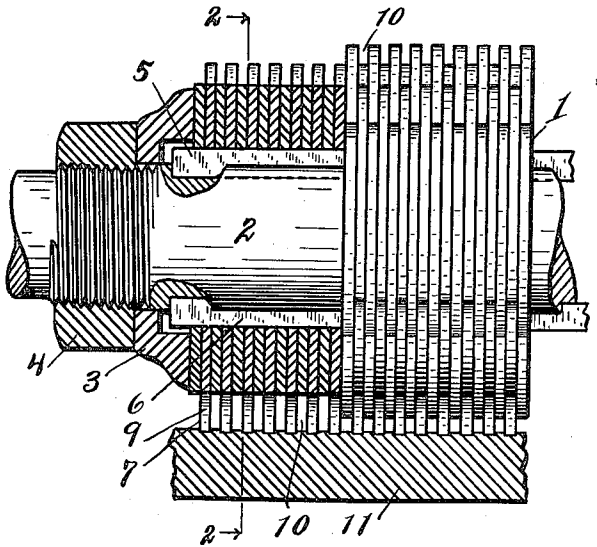


Fig. I.

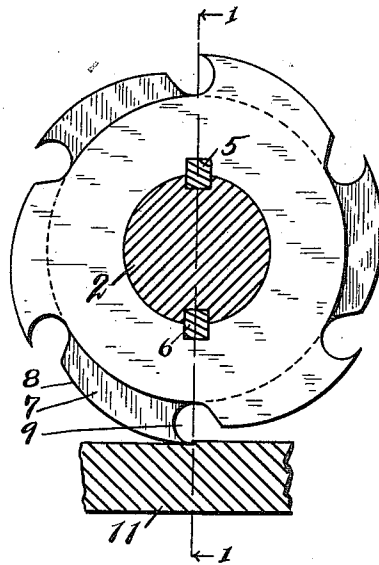


Fig. II.

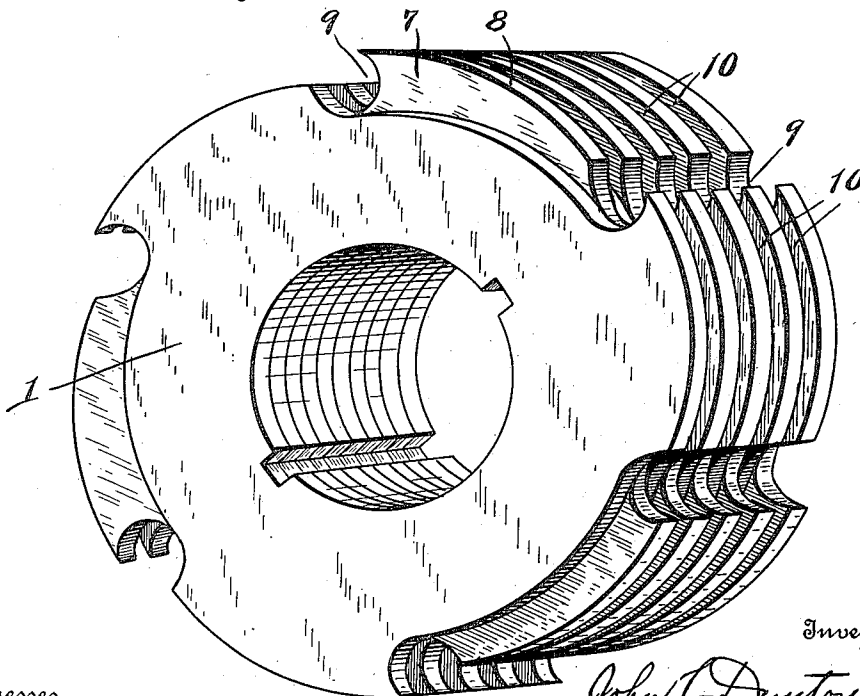


Fig. III.

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JOHN C. DUNTON, OF GRAND RAPIDS, MICHIGAN.

CUTTER-HEAD FOR PLANERS.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN C. DUNTON, a citizen of the United States, residing at Grand Rapids, Michigan, have invented certain new and useful Improvements in Cutter-Heads for Planers, of which the following is a specification.

This invention relates to improvements in cutter heads for planers.

10 The objects of the invention are to provide an efficient cutter head for a planer that will effectively cut down to even height the end-grain of wood blocks arranged for parquetry flooring, and for similar uses.

15 A further object of the invention is to provide a cutter head providing complete clearance for the cutter portions of the head whereby they will readily penetrate and cut the surface to any depth within the reasonable capacity of such a tool at a single operation.

A further object is to provide an improved sectional construction of such device, in which the combined sectional cutting edges may be accurately sharpened in place and an effective planer head be thus produced.

25 Further objects, and objects pertaining to mere details and economies will definitely appear from the description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the 35 claims.

A structure constituting a preferred embodiment of my invention is fully illustrated in the accompanying drawing, forming a part of this specification, in which:

40 Figure I is a detail view, partly in longitudinal section, on line 1-1 of Fig. II, a portion of my improved cutter head acting upon a block or other piece of material. Fig. II is a transverse sectional view, taken 45 on a line corresponding to line 2-2 of Fig. I, showing the details of the toothed disks forming the layers of my improved cutter head. Fig. III is an enlarged detail perspective view of the head as it appears with 50 the mandrel or arbor and keys removed.

In the drawings, the sectional views are taken looking in the direction of the little arrows at the ends of the section lines, and similar numerals of reference refer to similar parts throughout the several views.

55 In the drawing, the cutter head is made

up of substantially identical sections 1 of heavy saw plate, each having three chisel-like cutting teeth 7 which are tapered at the back at 8 and have a throat 9 cut out between the same, the throat portion being substantially one-sixth of the diameter, and the tooth 7 occupying substantially one-sixth of the diameter so that the three cutter edges are disposed exactly equi-distant 65 around the circumference.

Diametrically opposite key ways or notches are cut in each of the cutter head disks 1, and diametrically opposite key ways are cut in the arbor 2 for locking the cutter 70 head sections in place. Keys 5 and 6 engage in the key ways and notches in the disk. It will be observed, therefore, that between each cutter, there is an open space 10-10, and a throat 9 is formed just in advance of the cutting point and when the disks are 75 disposed upon the shaft or arbor 2 and locked in position by the head 3 and lock nut 4, the cutting edges can be ground or otherwise sharpened in a true line longitudinal of its head and that they are spaced 80 from each other. The cutting points of each disk therefore have plenty of clearance and because the back of the cutting edge is tapered, the cutting edge engages the wood 85 or block to be trimmed or planed, with abundance of clearance on all sides, and the next row of cutting edges cut away the intervening ridges. By this means, it will be observed that the cutting edge is able to 90 penetrate the material readily and that the succeeding cutting plate planes off the roughened intervening portions thereby making the planer exceedingly effective.

Because the adjacent cutting edges can 95 be sharpened and dressed in a perfectly true line when in place, the surface cut is perfectly true and by this means a perfectly smooth surface is obtained on end grained blocks, which can then be put into a floor. 100

From this description, it will be observed that the structure can be considerably varied without departing from my invention. The structure does not act like a series of saws, but the entire structure acts like a cutter for 105 a planer, except, owing to the clearance between the separated cutters, the same penetrate and the cutter is very effective for the reason that it readily penetrates the wood to a considerable depth and enables the running of the cutter at a high rate of speed. 110 Because the cutting surface is only one-

half the width of the length and the blades readily clear themselves, a high speed can be maintained, owing to the low resistance to the cutter.

5 While I have designed the cutter head especially for dressing end grain blocks, it is very clear that it will be available for any planing, and especially desirable when the cutter disks are made thin for dressing burl
10 or bird's eye maple or other irregular grains.

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

1. A planing cutter head comprising a
15 series of disks each having radial extensions with forward chisel-like cutting edges and with spacers between such extensions greater than the circumferential dimension of the latter, the disks being so arranged with the
20 cutting extensions of alternate disks in line with each other but opposite the spaces of the alternate disks, so that clearance grooves are formed longitudinally of the periphery of the head and also between the cutting ex-
25 tensions of the alternate series, the chisel edges of all the bits lying in the same peripheral circle.

2. A planing cutter head comprising a

series of disks each having radial extensions with forward chisel-like cutting edges and
30 with spacers between such extensions greater than the circumferential dimension of the latter, the disks being so arranged with the cutting extensions of alternate disks in line
35 with each other, but opposite the spaces of the alternate disks, so that clearance grooves are formed longitudinally of the periphery of the head and also between the cutting ex-
40 tensions of the alternate series, the chisel edges of all the bits lying in the same peripheral circle, a shaft having spline grooves and the disks having notches for a key, the
45 extensions and the notches being so proportioned that when the keys are engaged with the grooves in the shaft and the notches with the disks, the alternate disks must be held with their extensions opposite the
spaces of the alternating disks.

In witness whereof, I have hereunto set my hand and seal in the presence of two
50 witnesses.

JOHN C. DUNTON. [L. s.]

Witnesses:

LACY H. SERGENT,
LYMAN T. GREVE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."