

No. 684,151.

Patented Oct. 8, 1901.

C. H. WEST.
CUTTER HEAD.

(Application filed Apr. 16, 1901.)

(No Model.)

FIG. 2.

WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES HENRY WEST, OF ESTABUTCHIE, MISSISSIPPI.

CUTTER-HEAD.

SPECIFICATION forming part of Letters Patent No. 684,151, dated October 8, 1901.

Application filed April 16, 1901. Serial No. 56,097. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HENRY WEST, a citizen of the United States, and a resident of Estabutchie, in the county of Jones and State of Mississippi, have invented a new and Improved Cutter-Head, of which the following is a full, clear, and exact description.

This invention relates to a cutter-head designed especially for cutting flooring to form the tongue on the edge thereof.

The object of the invention is to provide an arrangement by which the cutters or bits will be held securely and in position properly to form the tongue without involving the danger of splitting and tearing the wood.

This specification is a specific description of one form of the invention, while the claims are definitions of the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a vertical section of the invention. Fig. 2 is a bottom plan view thereof. Fig. 3 is a fragmentary perspective view showing the head and the key, and Fig. 4 is a view showing the same parts and their relation to the bit-carrier.

a indicates the shaft on which the head *b* is mounted. The bits are held by a carrier, which is preferably made up of two disks *c*, secured rigidly together and fastened to the head *b* by screws *d* passing through the disks or plates *c* and into the head.

e indicates the cutters or bits, which are formed with shanks *e'*, these shanks being seated in cavities *c'*, formed in the carrier. The bits *e* are held in place by keys *f*, fitted in cavities *c''*, formed in the carrier and constituting, respectively, continuations of the cavities *c'*. The edge walls of the cavities *c'* and *c''* are double beveled, as shown in Figs. 1 and 4, and the engaging edges of the shanks *e'* and keys *f* are grooved so as to fit securely in connection with the edges of the cavities. Each shank *e'* has a depression *e''* therein, and in these depressions, respectively, fit the tongues or projections *f'* of the keys *f*. The keys *f* serve to hold the cutters in place, and the keys are themselves held in position by bolts *g*, which are engaged in recesses *f''*,

formed in the keys (see Figs. 3 and 4) and which pass through the carrier. The bolts thus arranged hold the keys rigidly in place, and the cutters or bits are prevented from displacement by these means.

As mentioned above, I prefer to form the carrier out of two disk-like plates fastened together, and when this construction is employed the cavities *c'* and *c''* are formed alternately, one in each plate. Referring to Fig. 4, it will be seen that one of the plates *c*, in which the cavities *c'* and *c''* are there shown as formed, lies directly against the other plate, and this other plate forms a side wall for the cavities. The shanks *e'* of the bits and the keys *f* lie in these cavities and against the other plate *c*, and by this arrangement the parts *e* and *f* are held firmly in position. The plates *c* are formed with tangentially peripheral sections intermediate the bits *e*, such tangentially peripheral sections culminating in shoulders, (indicated at *h* in the drawings,) these shoulders lying directly against the cutters, at the backs thereof, and serving to brace and securely hold the same. Each cutter *e* comprises an edge *e''* and a grooved portion *e'''*, as best shown in Fig. 3. According to the arrangement here shown the cutters are arranged in two peripheral lines, with the grooves *e'''* inward. Fig. 1 shows the position of the cutters with reference to the work, which is indicated at the point *i* in Fig. 1. The cutters work on opposite sides of the tongue, the edges *e''* forming the perpendicular surfaces of the edges of the plank and the grooved portion *e'''* forming the tongue. By means of this construction I am enabled to place upon the cutter-head a far greater number of bits than have ever been employed, and this increased number of bits enables me to cut the planks evenly and smoothly. The cutter-head may be revolved at any desired speed, and owing to the rapidity with which the bits follow each other no detrimental results follow the operation of the device.

While I have here shown the bit-carrier made up of two separate plates, it will be clear that the carrier may be formed integral and that the cavities *c'* and *c''* may be formed in the side walls of the carrier, at each side thereof, the sole essentiality being the two

sets of bits, the members of each set of which are arranged in peripheral alinement and the two sets working together on each side of the tongue of the plank to jointly form said
5 tongue. With the construction which I have described all of the parts are capable of easy access, and the various elements of the cutter-head may be taken apart for repair or adjustment with very little trouble.

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

1. A cutter-head of general circular contour formed with seats in its side face adjacent to and communicating with its periphery, the peripheral edges of the cutter-head intermediate the seats being disposed tangentially or spirally and culminating in shoulders terminating at the seats, and bits secured in the seats against the shoulders. 20

2. A cutter-head having seats formed in its side faces and communicating with its periphery, bits having shanks projected into said seats, keys fitted in the seats and having interlocking engagement with the shanks, and
25 fastening devices lying inward of the periphery of the cutter-head and secured to the head within the said seats and engaged with the keys at the outer edges thereof.

In testimony whereof I have signed my
30 name to this specification in the presence of two subscribing witnesses.

CHARLES HENRY WEST.

Witnesses:

AMOS JORDAN,
J. L. WALKER.