

(No Model.)

H. SCHMIDT.
CUTTER HEAD.

No. 547,455.

Patented Oct. 8, 1895.

Fig. 1.

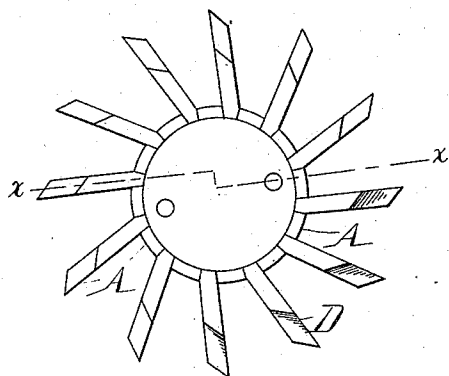


Fig. 3.

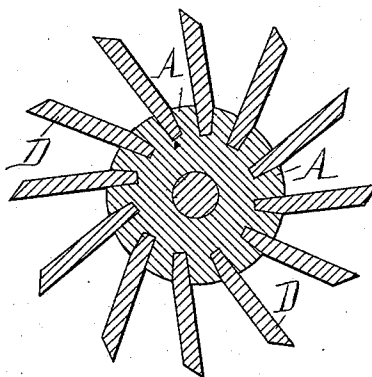


Fig. 2.

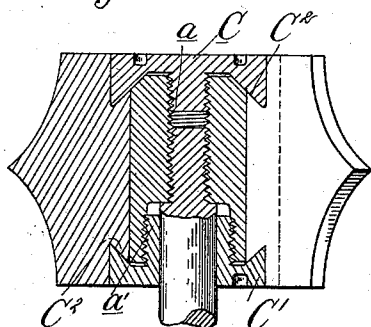


Fig. 5.

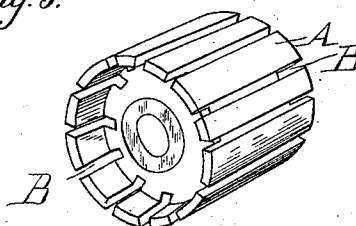
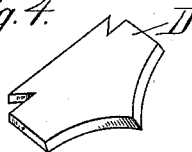


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY SCHMIDT, OF OWOSSO, MICHIGAN.

CUTTER-HEAD.

SPECIFICATION forming part of Letters Patent No. 547,455, dated October 8, 1895.

Application filed October 20, 1894. Serial No. 526,459. (No model.)

To all whom it may concern:

Be it known that I, HENRY SCHMIDT, a citizen of the United States, residing at Owosso, in the county of Shiawassee and State of Michigan, have invented certain new and useful Improvements in Cutter Heads, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in cutter-heads, and is particularly designed as an improvement for the cutter-heads of carver-machines. In this the cutter-head is secured to the end of a revolving spindle, and it is the usual practice to make them integral in one piece by dressing the head to form the knives thereon. Such cutter-heads, for obvious reasons, are of short life, and as a great variety is needed to do different kinds of carving they are a source of constant expense and trouble to keep them in order.

My invention consists in the peculiar construction of such cutter-head, whereby the knives are separately constructed, may be made of the best tempered steel, and firmly secured in such a manner that they may be readily removed for grinding in exchange for other knives of any suitable pattern and fitting interchangeably, all in the manner more fully hereinafter described.

In the drawings, Figure 1 is an end view of a cutter-head, showing my improvement. Fig. 2 is a longitudinal section on line $x x$, Fig. 1; Fig. 3, a cross-section of the cutter-head; Fig. 4, a detached view of one of the knives; Fig. 5, a detached perspective view of the holder separate.

A is the cutter-head proper or holder of cylindrical shape and provided in its face at equal distances apart with longitudinal grooves B, having sockets for the knives. These grooves are open-ended and in cross-section are preferably tapering and inclined at an angle to the radius.

Both ends of the cutter-head are provided with circular recesses adapted to receive the caps C C'. The cap C at the outer end is solid and has a central screw-threaded stem a , which engages into a screw-threaded aper-

ture in the holder for the purpose of securing the cap in place in the recess. The cap C', which is on the spindle side of the cutter-head, is also provided with a screw-threaded stem a' , and is centrally apertured for the end of the spindle to pass through the cap into the cutter-head. The latter is suitably recessed to receive the stem a' of the cap and to be securely screwed onto the screw-thread of the spindle. The inner faces of both of the caps are provided with conical tables C², and the outer face is provided with suitable holes for engaging with a spanner-wrench to screw them in or out.

The knives D are flat steel blades for cutting, which are of the desired form. They are of a length equal to the length of the holder and have shanks to fit the grooves in the holder, and thus portions of the shank which would enter the recesses in the ends of the holder are cut away and form inclined shoulders corresponding to the conical tapers on the inner faces and co-operating therewith to hold the knives firmly in place when the knives are screwed home.

The advantage of my construction is that the means for detachably securing the knives are always concealed within the cutter-head and the whole outside appearance of the cutter-head is precisely the same, or may be made so, as of a solid cutter, and thus the operator has the same freedom of manipulating the work in relation to the cutters, while on the other hand the simple removal of the front cap allows him to remove any or all of the knives for grinding or other purposes, and thus the cutter-head is almost as quickly adjusted to receive knives of other forms as it would take with the old style to exchange the entire cutter.

Instead of providing the caps with screw-threaded stems to engage into the holder, the stems may be on the holder within the recesses and engage into screw-threads in the caps.

What I claim is—

In a cutter head, the combination with a holder having a central bore, a recessed outer end, and radial grooves in its periphery extending from end to end, of a solid cap fitted

in the recess having an inwardly extending
projection at its edge and a central screw
threaded stem integral on its inner face en-
gaging in the bore of the holder, a cap at the
5 inner end of the holder having a central aper-
ture, a spindle passing through the inner cap
and having a threaded engagement with the
head beyond the inner cap, and knives seated

in the grooves engaged and held in place by
the caps, substantially as described. 10

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

HENRY SCHMIDT.

Witnesses:

M. B. O'DOHERTY,
L. J. WHITEMORE.