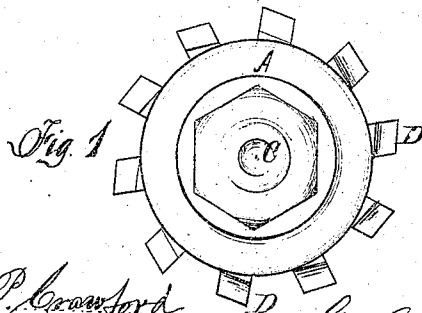


G. E. Somers,

Cutter Head.

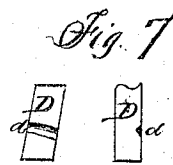
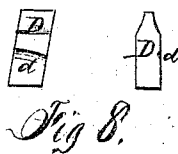
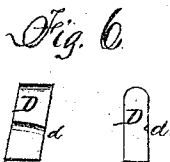
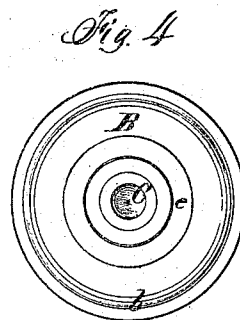
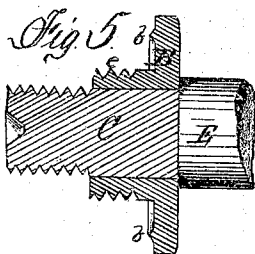
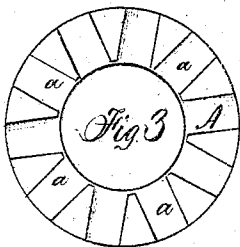
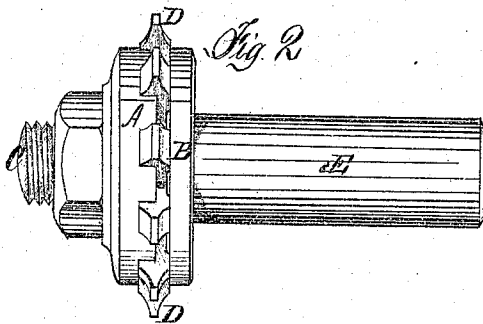
No. 106,291.

Patented Aug. 9, 1870.



Witnessed { *J. P. Crawford*
Edw. C. Quinn

G. E. Somers { *Inventor*
By C. D. Munsie



UNITED STATES PATENT OFFICE

GEORGE E. SOMERS, OF WATERBURY, CONNECTICUT.

IMPROVEMENT IN CUTTER-HEADS.

Specification forming part of Letters Patent No. **106,291**, dated August 9, 1870.

I, GEORGE E. SOMERS, of Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Cutter-Heads for Mechanical Purposes, of which the following is a specification:

Nature and Objects of the Invention.

My invention relates to rotary cutter-heads used for cutting gears, grooves, channels, or plane surfaces; and it consists in a novel arrangement and combination of parts, whereby a very simple and efficient tool is produced, in which the form of the teeth can be changed when desired.

Description of the Drawing.

Figure 1 is a front view of the cutter-head. Fig. 2 is a side view from the right hand of Fig. 1. Fig. 3 is a view of the under side of the cap A. Fig. 4 is a view of inner side of the plate D. Fig. 5 is a sectional view through the center of Fig. 4. Figs. 6, 7, and 8 are views of different forms of the cutter-teeth.

General Description.

The shaft E is turned smaller at one end to form the bolt C, upon which the head is secured.

The plate B is made with a collar, *e*, threaded to receive the cap A, and is formed with an annular projection, *b*, raised above its inner surface. This plate is secured upon the smaller

part, C, of the shaft. The cap A is provided with a series of recesses, *a a*, into which the cutter-teeth D fit, and is threaded to screw down over the collar *e*. Each one of the cutter-teeth D has a groove, *d*, in one side, curved to correspond with the curve of the circular projection *b* on the face of the plate B, so that when the teeth are placed between the plate and the cap A they are held securely in place by the joint action of the projection *d* and the grooves *a*. The edges of the teeth are formed into different shapes, as shown in Figs. 6, 7, and 8, so that by substituting one kind for another the cutter may be used for a variety of purposes.

The end of the bolt C is threaded and fitted with a nut to hold the cap securely in place.

I am aware that cutter-heads made up of a series of teeth and confined by collars are old, and I therefore do not claim, broadly, such a cutter-head; but

I claim—

The cutter-head herein described, consisting of the shaft E, collar B, provided with the flange *b* and screw *e*, and slotted clamping collar-plate A, and cutters D, the whole constructed and operating substantially in the manner described and specified.

GEORGE E. SOMERS.

Witnesses:

ALBERT BURRITT,
CHAS. W. GILLETTE.