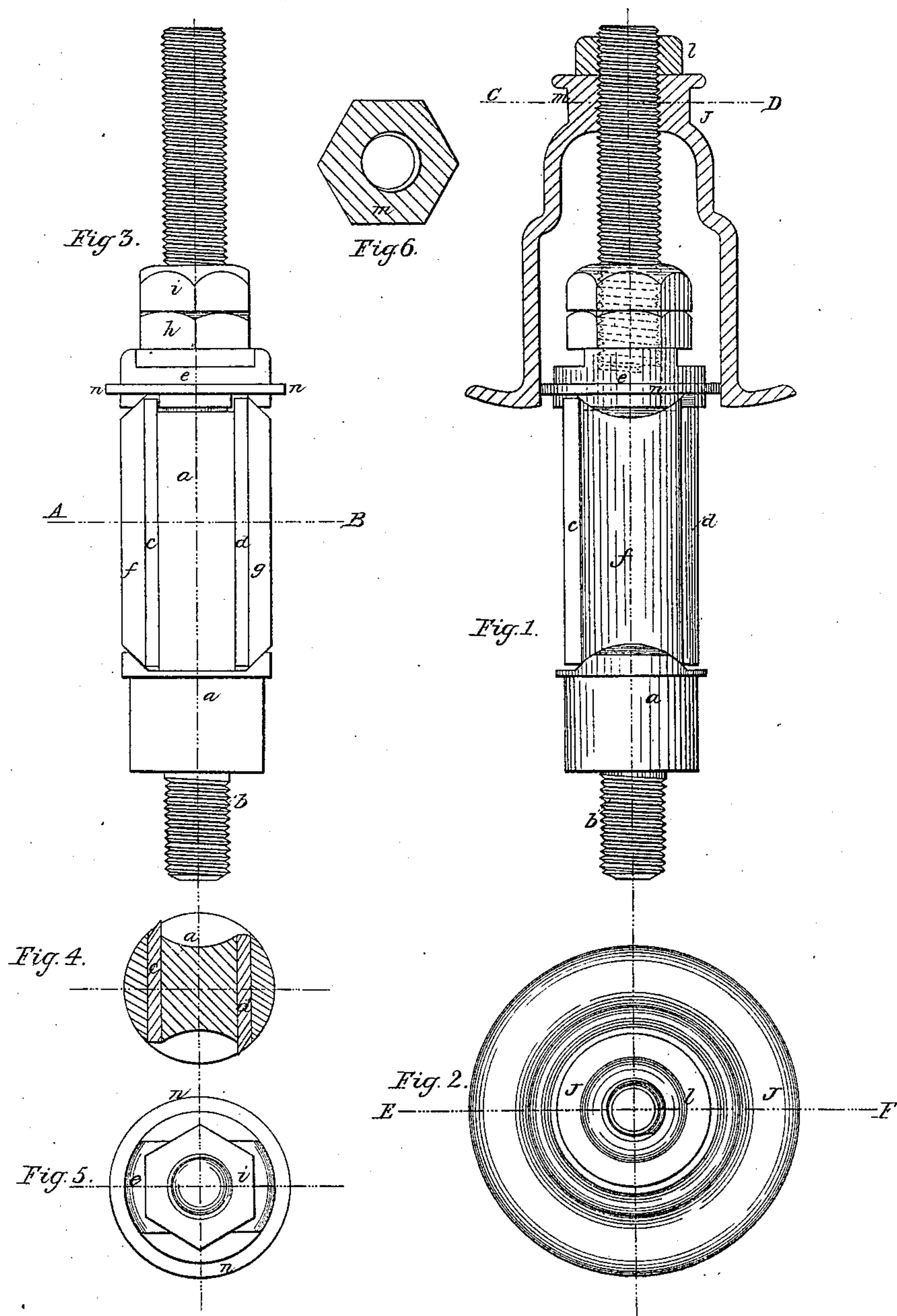


Storer & Bicknell, Cutter Head.

N^o 25,286.

Patented Aug. 30, 1859.



Witnesses.
J. B. Thompson
A. L. Dearborn

Inventors.
Henry D. Storer
James W. Bicknell

UNITED STATES PATENT OFFICE.

HENRY D. STOVER AND J. W. BICKNELL, OF BOSTON, MASSACHUSETTS.

ROTARY PLANING-CUTTER.

Specification of Letters Patent No. 25,286, dated August 30, 1859.

To all whom it may concern:

Be it known that we, HENRY D. STOVER and JAMES W. BICKNELL, both of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Machines for Cutting Irregular Forms and for Similar Purposes; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which drawings—

Figure 1, is a sectional elevation of a cutter head and the guard (J) combined. Fig. 2, is a plan of the same. Fig. 3, is an elevation of the cutter head, the guard (J) having been removed. Fig. 4, is a section of the same at A, B, and Fig. 5, is a plan. Fig. 6, is a section of guard (J) at C, D.

Our improvements consist principally in the application of the guard (J) as we will proceed to describe. The main part of the head (a) has a circular base and the screw (b) by which it may be attached to the arbor of the machine. From the circular base upward as shown in the drawing two sides are flattened to receive the cutting knives (c) and (d) and from near the upper end of the knives upward it is rounded to receive the circular piece (e) the under side of (e) and the upper part of the circular base have corresponding oblique sided grooves of sufficient thickness to receive the ends of the pieces (f) and (g) outside of the cutting knives and which ends are made to correspond to the oblique sides of the grooves so that when the part (e) is forced down the oblique sides of the grooves acting upon the oblique ends of the parts (f) and (g) force them toward the axis of the head and they are so made to clamp the knives throughout their entire length firmly against the flattened sides of the main part, the upper end of which is screwed and furnished with two nuts (h) and (i). (h) is for the purpose of forcing down the part (e) as before described. (i) is a set nut by means of

which (h) is prevented from turning and getting loose.

A guard (J) is screwed to the upper end of (a) in such a manner that its height may be adjusted according to the height of the stuff to be worked. This guard projects outward beyond the edges of the knives, enclosing or covering that part of the head above the stuff to be worked and is for the double purpose of protecting the operators from mutilating their hands as by accident has frequently been done by contact with the cutters and of preventing the stuff from being thrown up or drawn up from the table by the cutters as it is otherwise apt to be under various circumstances. The exterior of (J) is made round and smooth except where the wrench is applied. The flange at (n) serves to keep the guard concentric with the axis of head. The nut (l) is to adjust and bind the guard (J). This is done by turning the guard up or down upon the screw to near the desired position, then turning the nut against the guard and apply the wrench to the hexagonal part (m) of the guard the nut (l) is made round and smooth like the guard so that it may not bruise the hands when they chance to come in contact with it while in motion. The guard (J) may be made some larger than the head so that different knives may be used with each size of guard.

What we claim as our invention and desire to secure by Letters Patent is as follows:

We claim the adjustable revolving guard (J), as constructed and connected, adjustably to the cutter head, carried by, and having all its movements, to effectually protect the operator from mutilation, and to hold down the material receiving shape, essentially in the manner fully set forth.

HENRY D. STOVER.
JAMES W. BICKNELL.

Witnesses:

J. H. THOMPSON,
AXEL DEARBORN.