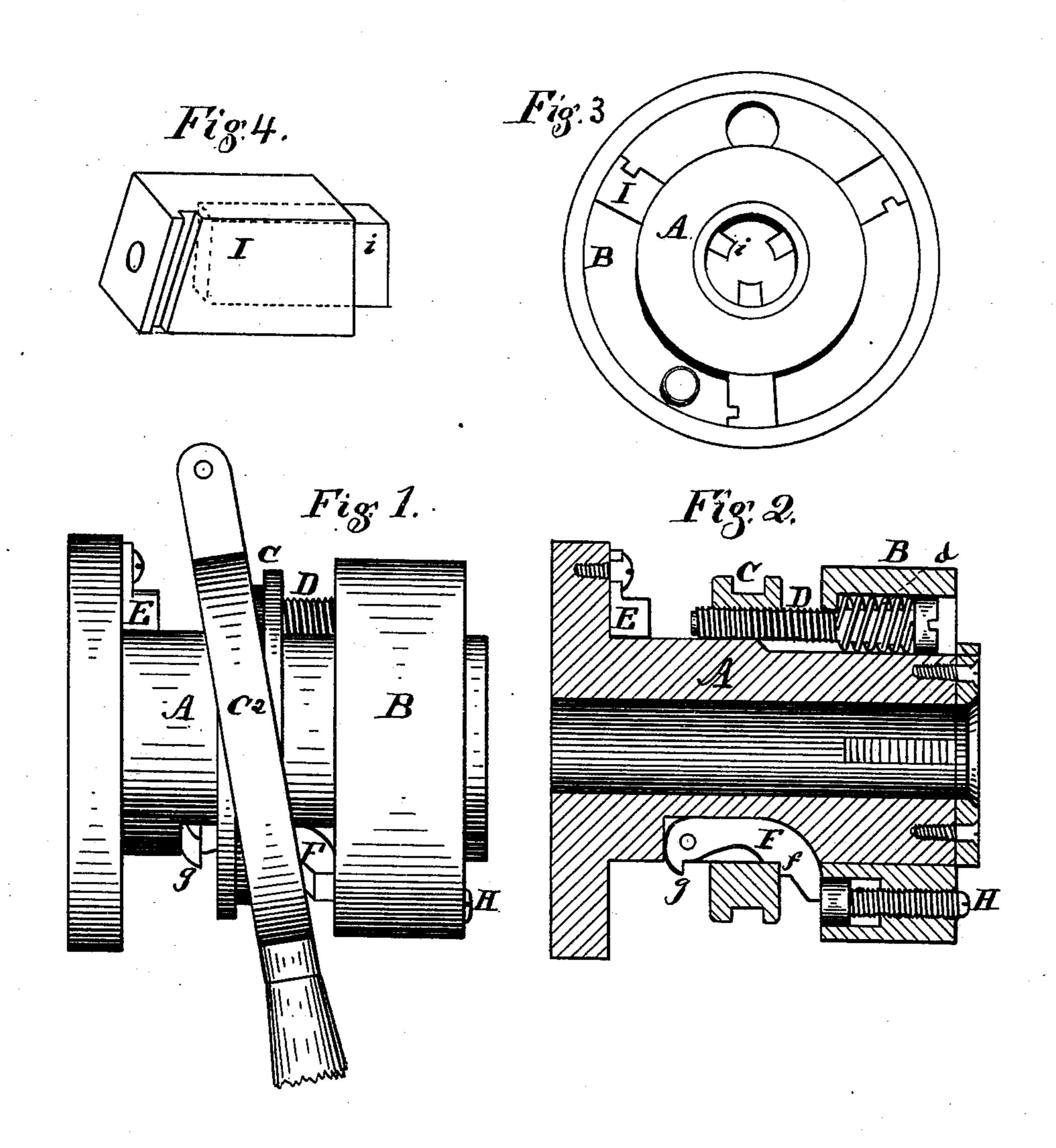
## H. H. MORGAN & W. R. ANDERSON. Bolt-Cutter Head.

No. 214,306.

Patented April 15, 1879.



Attest:
B.S.D. Forest.

O.B. Ollew

Inventors.

Hugh H. Morgan

and

M. R. Anderson

By Geo. W. Tillitts Atty.

## UNITED STATES PATENT OFFICE.

HUGH H. MORGAN, OF CHICAGO, ILLINOIS, AND WILLIAM R. ANDERSON, OF CLEVELAND, OHIO.

## IMPROVEMENT IN BOLT-CUTTER HEADS.

Specification forming part of Letters Patent No. 214,306, dated April 15, 1879; application filed April 29, 1878.

To all whom it may concern:

Be it known that we, Hugh H. Morgan, of Chicago, in the county of Cook and State of Illinois, and William R. Anderson, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Bolt-Cutter Heads, which improvements are fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation, Fig. 2 a longitudinal section, and Fig. 3 an end view, of the cutter-head. Fig. 4 is a detached view of

the case and cutter-die.

This invention relates to expanding boltcutter heads; and consists in certain improvements on patent bolt-cutter heads granted to

H. H. Morgan, October 13, 1874.

In the drawings, A represents a hollow stock, and B the die-ring. C is a grooved ring, which plays on the stock A, and is operated by a ring and lever, C², the ring C² having a lug or pin, which rests in the groove of said ring C. The said die-ring B is coupled to the grooved ring C by a spline-screw, D. The head of said spline-screw D is set in a recess in the ring B, and is provided with a spiral spring, d, surrounding the shank between the head of the screw and the bottom of the recess. This is for relieving the shock upon the screw and the ring in their movements.

E is an adjustable stop attached to the plate of the stock A, and is for the purpose of limiting the throw of the die-ring, to prevent the dies from falling out; but in order to remove the dies the stop may be turned one side, when the die-ring can be thrown back far enough to uncover the slots in the stock. Then the dies may be removed.

F is a dog pivoted in a slot in the stock A, and is for the purpose of locking or holding the die-ring when thrown forward. It has a notch, f, in which the edge of the grooved ring rests when in the position seen in Fig. 2. When, however, the grooved ring is moved backward, it leaves the notch f, and the other side of said ring C strikes a projection, g, on the said dog, which throws it out. The other end being curved, it is moved outward by sliding on the side of the ring B. A screw, H, is placed in the ring B, against the head of which the said dog slides. This adjustment is to prevent too great friction or binding of the dog upon the ring.

I, Figs. 3 and 4, represents a die-case. It consists of a hollow or slotted block for holding the cutter-die *i*, the object of which is, that the dies may be made of straight pieces of steel, and as fast as worn may be sharpened and adjusted for cutting until worn quite short, thus economizing in the construction

and expense of the dies.

Having thus described these improvements, we claim—

The combination of pivoted dog F, having notch f and projection g, with ring C, adapted to engage alternately with said notch and projection, and die-ring B, substantially as set forth.

HUGH H. MORGAN. W. R. ANDERSON.

Witnesses:

WM. C. SCOVEL,
B. FAUCETT,
GEO. W. TIBBITTS,
A. C. HORD.