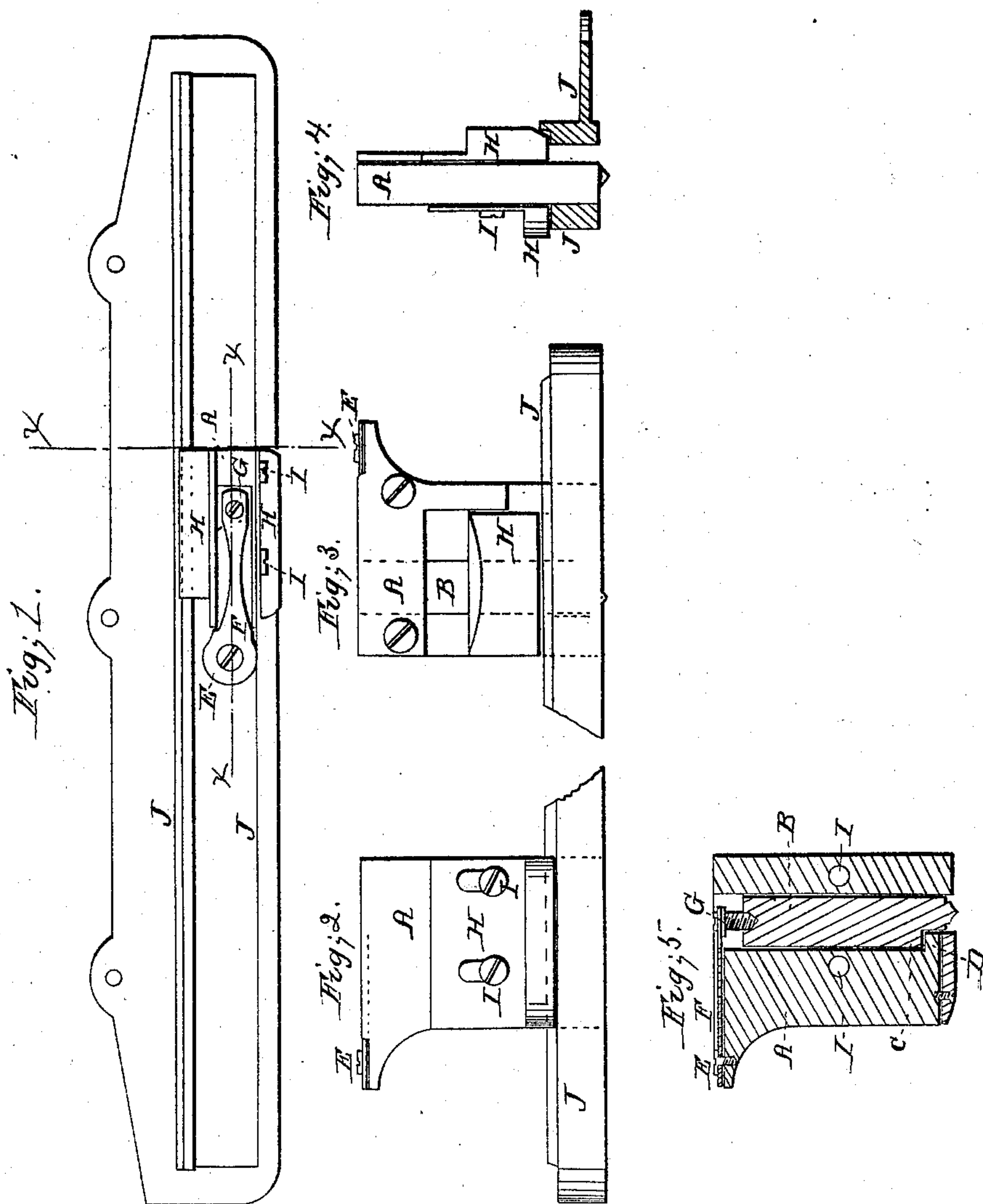


J. Dickinson,
Dressing Millstones.

N^o 33,187.

Patented Sep. 3, 1861.



Witnesses;
R. W. Eichholtz
Charles L. Barrett

Inventor;
J. Dickinson

UNITED STATES PATENT OFFICE.

JOHN DICKINSON, OF BROOKLYN, NEW YORK.

DIAMOND-PROTECTOR FOR DRESSING MILLSTONES.

Specification forming part of Letters Patent No. 33,187, dated September 3, 1861.

To all whom it may concern:

Be it known that I, JOHN DICKINSON, of Brooklyn, Kings county, State of New York, have invented certain new and useful improvements which I have designated as "Dickinson's Self-Adjustable Diamond-Protector for Dressing Millstones;" and I do hereby declare the following to be a full description of the same.

The nature of my invention consists in making the diamond self-adjustable in its pressure upon the stone by means of its combination with a stock or holder and a tension-spring so arranged as to keep the point of the diamond always firmly in contact with the surface of the stone, and at the same time by its arrangement avoid falling into the cavities and thereby break and destroy the point of the diamond; but to describe my invention more particularly I will refer to the accompanying drawings, forming a part of this specification, the same letters of reference wherever they occur referring to like parts.

Figure 1 is a plan view of the protector as used in connection with a parallel rule or guide. Fig. 2 is a right-hand side view of the protector. Fig. 3 is a left-hand side view of the protector. Fig. 4 is a transverse cut section of rule, showing end elevation of the protector through the line $x^2 x^2$, Fig. 1. Fig. 5 is a vertical cut section of the protector through the line $x x$, Fig. 1.

Letter A is the protector stock or diamond-holder, having a square opening vertically through it. In this opening is arranged a metal stem B, having in its lower end the diamond. To prevent the diamond from ever projecting below the face of the protector-stock, so as to fall into cavities in the face of the stone and thus destroy it, a ledge C is formed on the side of the stem B, which, rest-

ing upon a corresponding ledge D in the side of the opening through which it operates, prevents the diamond from coming in contact with any object below a given and fixed point, and thus protects it against the numerous accidents it is subject to when operated by hand to dress millstones. For the purpose of giving to the diamond an elastic and at the same time constant pressure I attach by means of a screw E a spring F to the top of the stock A, so as to cause the opposite end of the spring to rest upon the head of an adjustable set-screw G in the head of the stem B. By this means, and according to the set of the adjustable screw G, a greater or less tension can be given to the spring to force the diamond into the surface of the stone to give it the requisite cut for a grinding-surface.

Letters H are gages attached to the sides of the protector-stock by set-screws I. The object of these is to support the instrument on the parallel guides J when operating it. It will be obvious that these gages are not absolutely necessary for the successful operation of the protector, as it can be used with any ordinary straight edge for scoring the face of the stone.

Having now described my invention and its operation, I will proceed to set forth what I claim and desire to secure by Letters Patent of the United States:

The use of the stem B, made as described, in combination with the protector-stock A and pressure-spring F, made and operating for the purposes and substantially in the manner hereinbefore set forth.

JOHN DICKINSON.

Witnesses:

B. W. EICHHOLTZ,
CHARLES L. BARRITT.