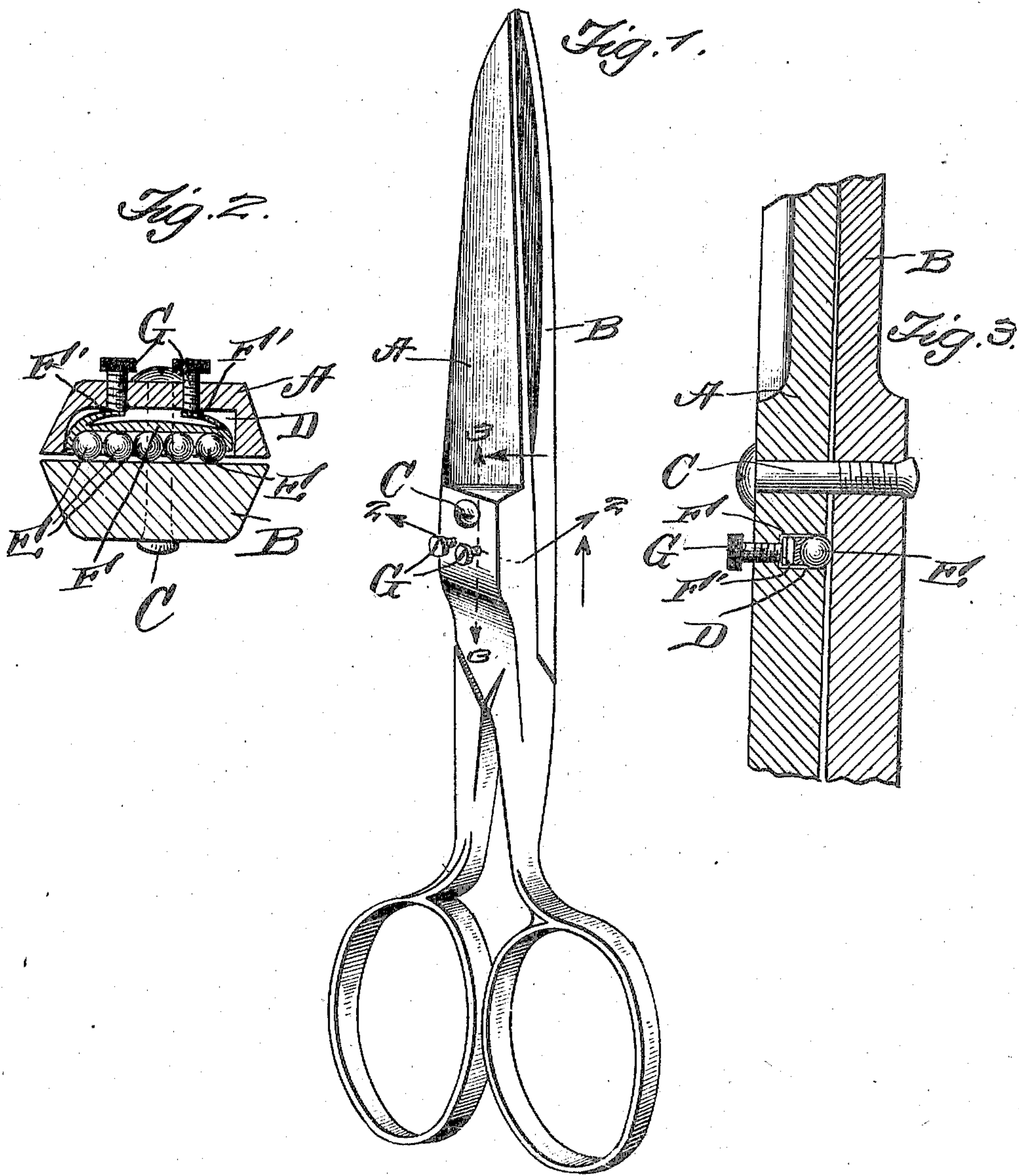


D. A. MICKLESON.  
 BALL BEARING SHEARS.  
 APPLICATION FILED NOV. 13, 1909.

951,539.

Patented Mar. 8, 1910.



Witnesses  
*R. A. Boswell.*  
*W. M. Miller.*

Inventor  
*D. A. Mickleson.*  
*Franklin D. Dough*  
 364  
 Attorney

# UNITED STATES PATENT OFFICE.

DON A. MICKLESON, OF CARBONATE, UTAH.

BALL-BEARING SHEARS.

951,539.

Specification of Letters Patent.

Patented Mar. 8, 1910.

Application filed November 13, 1909. Serial No. 527,881.

*To all whom it may concern:*

Be it known that I, DON A. MICKLESON, a citizen of the United States, residing at Carbonate, in the county of Utah and State of Utah, have invented certain new and useful Improvements in Ball-Bearing Shears; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in shears and the object in view is to produce a simple and efficient device of this nature in which anti-friction balls are disposed intermediate the blades and so arranged that they will cause the cutting edges of the blades to shear at all times and adapted to compensate for wear upon the pivotal pin connecting the blades.

The invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of shears made in accordance with my invention. Fig. 2 is a cross sectional view on line 2—2 of Fig. 1, and Fig. 3 is a cross sectional view on line 3—3 of Fig. 1.

Reference now being had to the details of the drawings by letter, A and B designate the two blades of the shears and C a pivotal pin or screw upon which the blades are mounted. The inner face of the

shank portion of said blade A is recessed out as at D and is adapted to contain a series of anti-friction balls E. A yielding dished plate F is mounted in said recess and is provided with a resilient finger F' at each end, and G designates set screws mounted in threaded apertures leading into said recess and adapted to bear one against each of said resilient fingers for the purpose of holding the dished plate yieldingly against the anti-friction balls to take up all wear caused by the blades turning upon their pivotal pin or screw and at the same time causing the cutting edges of the blades to shear. By means of the set screws, the tension between the same and the plate bearing against the balls may be regulated, as will be readily understood.

What I claim to be new is:—

In combination with a pair of shears, one of the blades being recessed upon its inner face, anti-friction balls mounted in said recess, a plate bearing against said balls, said plate having resilient finger set screws mounted in threaded apertures in one of the blades and bearing against said yielding fingers.

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

DON A. MICKLESON.

Witnesses:

W. S. MECHAM,  
H. C. JOHNSON.