

(No Model.)

H. C. SWAN.
SCREW CLAMP.

No. 600,389.

Patented Mar. 8, 1898.

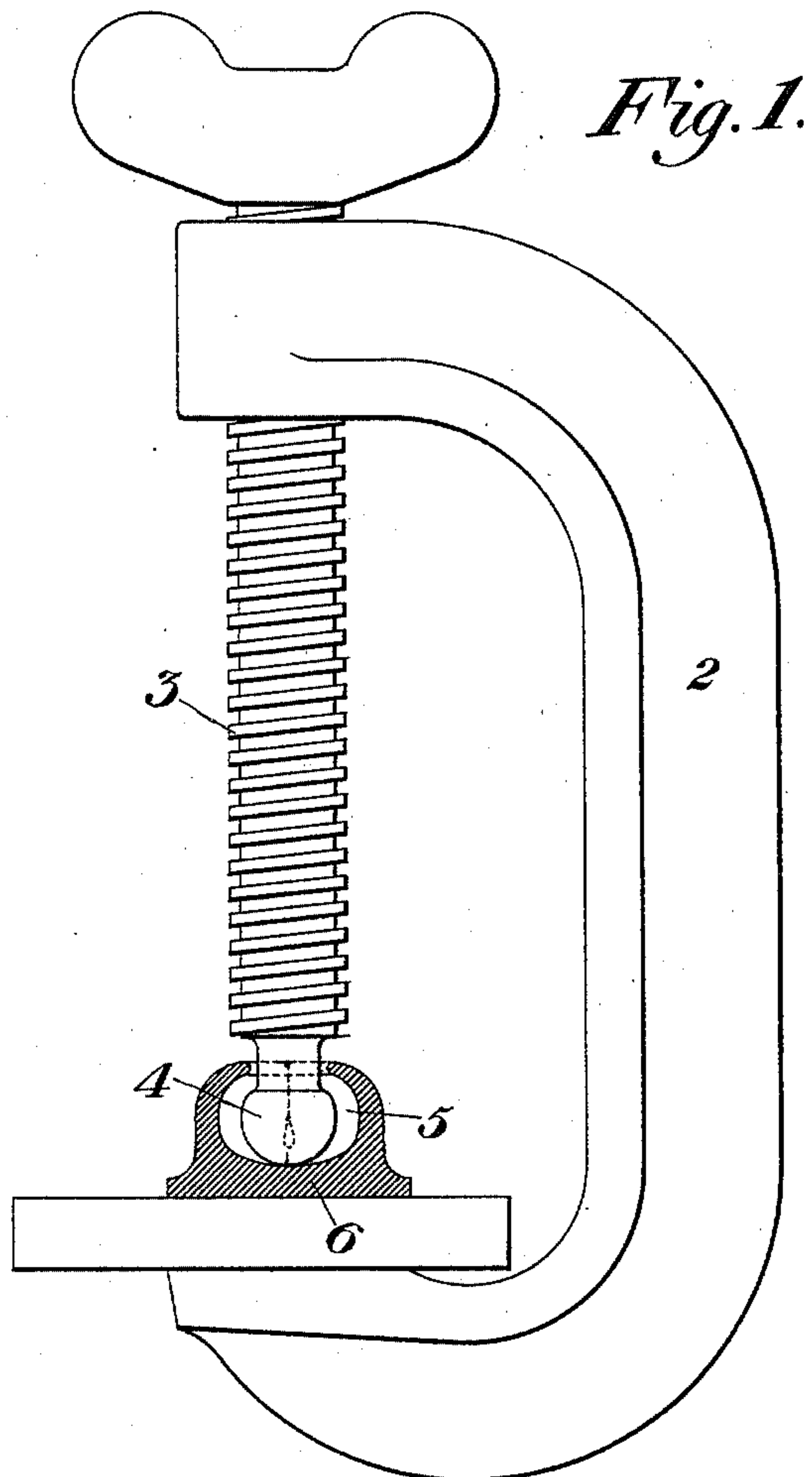
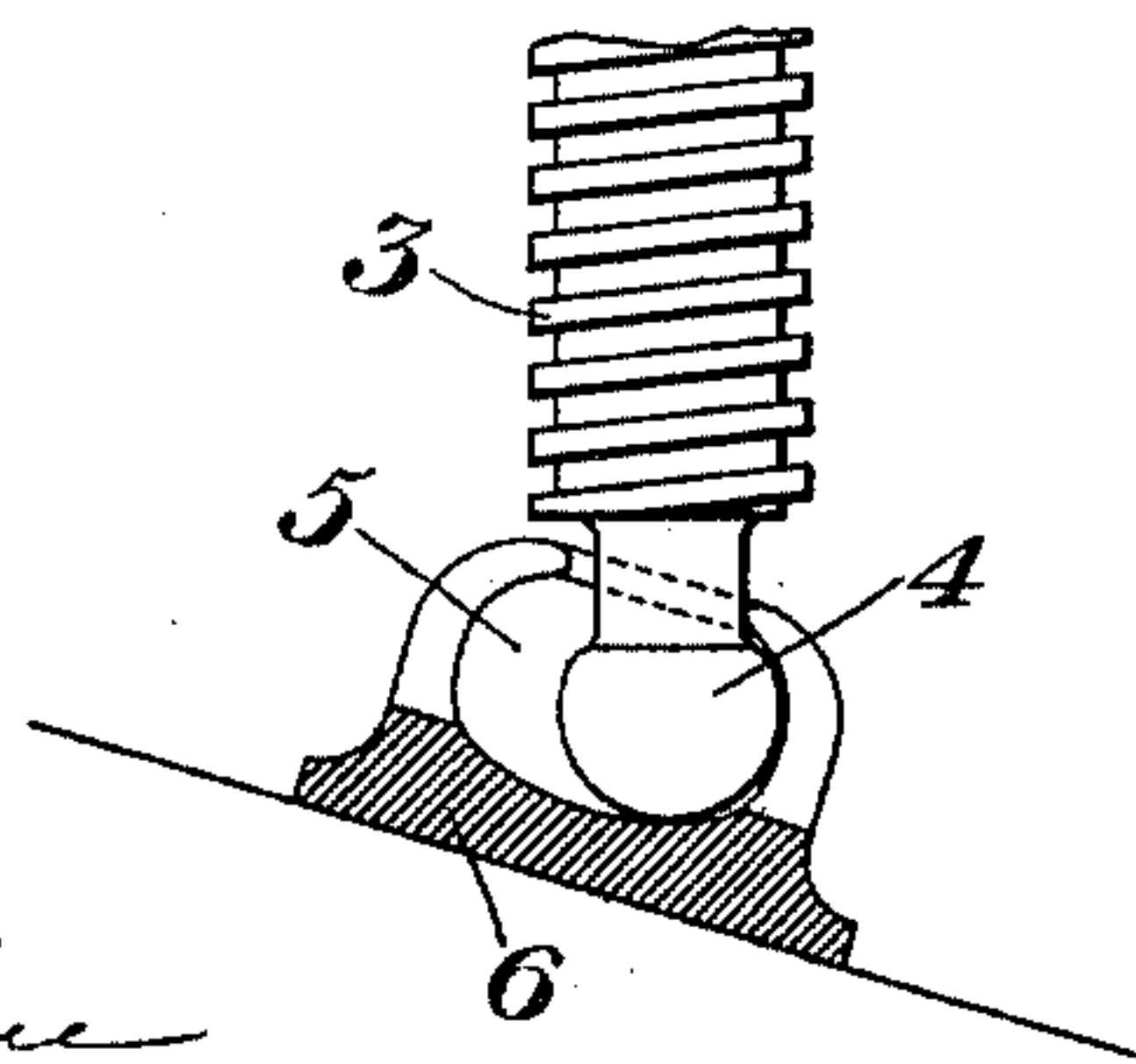


Fig. 2.



WITNESSES

H. M. Corwin
J. T. Corwin

INVENTOR

Henry C. Swan
by his Attorneys
W. Baxendale & Sons

UNITED STATES PATENT OFFICE.

HENRY C. SWAN, OF OSHKOSH, WISCONSIN.

SCREW-CLAMP.

SPECIFICATION forming part of Letters Patent No. 600,389, dated March 8, 1898.

Application filed March 19, 1895. Serial No. 542,320. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. SWAN, of Oshkosh, in the county of Winnebago and State of Wisconsin, have invented a new and useful
5 Improvement in Screw-Clamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

10 Figure 1 is a side elevation, partly in section, of a screw-clamp provided with my improved ball-and-socket-joint connection; and Fig. 2 is a detail view of the lower end of the screw with the button at an angle thereto.

15 My invention relates to the button connections of screw-clamps, and is designed to provide a bearing therein which will allow the end of the thumb-screw to turn freely whether the sides of the article to which it is applied
20 are parallel or at an angle to each other.

In the drawings, 2 represents the clamp, having the thumb-screw 3. This thumb-screw terminates in a spherical portion or ball 4, which is inclosed within the socket 5 of the
25 button 6. The inner portion of the ball-receiving recess in this socket in the button is curved upon the arc of a circle of greater radius than that of the ball 4, so that when the button takes an oblique position, as in Fig. 2,
30 the ball moves laterally and comes in contact with the socket at the same angle as when in the position of Fig. 1.

In putting the parts together the mouth of the socket is made larger than the ball and
35 the flange surrounding it is cut at opposite points, dividing it into two halves. The ball is placed in the socket and the lips are bent

in, securing the ball loosely in place, the stem being much smaller than the mouth of the socket, so as to allow free movement without
40 bringing strain upon the lips or flanges.

The advantages of my improved clamp will be apparent to those skilled in the art, since the same bearing is given whatever the angle of the button. The two parts of the flange
45 are sufficiently strong to prevent their being bent out of shape by any strain upon the ball, and there is no liability to bind, as the socket is larger than the ball and the mouth larger than the stem.
50

I claim—

1. In screw-clamps, a button having a ball-and-socket connection, the recess in the socket being sufficiently larger than the ball to allow lateral play as well as rotation thereof, the
55 mouth of this recess being smaller than the ball, but of sufficient size to allow tilting of the ball.

2. In screw-clamps, a button having a ball-and-socket connection, the inner face of the
60 recess in the socket being curved on an arc having a greater radius than the ball the recess-mouth being smaller than the ball, but large enough to allow tilting of the ball, and the recess being sufficiently larger than the
65 ball to allow lateral play as well as rotation thereof; substantially as described.

In testimony whereof I have hereunto set my hand.

HENRY C. SWAN.

Witnesses:

MARTIN O. SENSENY,
JOHN H. BAEHR.