

L. PENTZ.
King-Bolt.

No. 161,150.

Patented March 23, 1875.

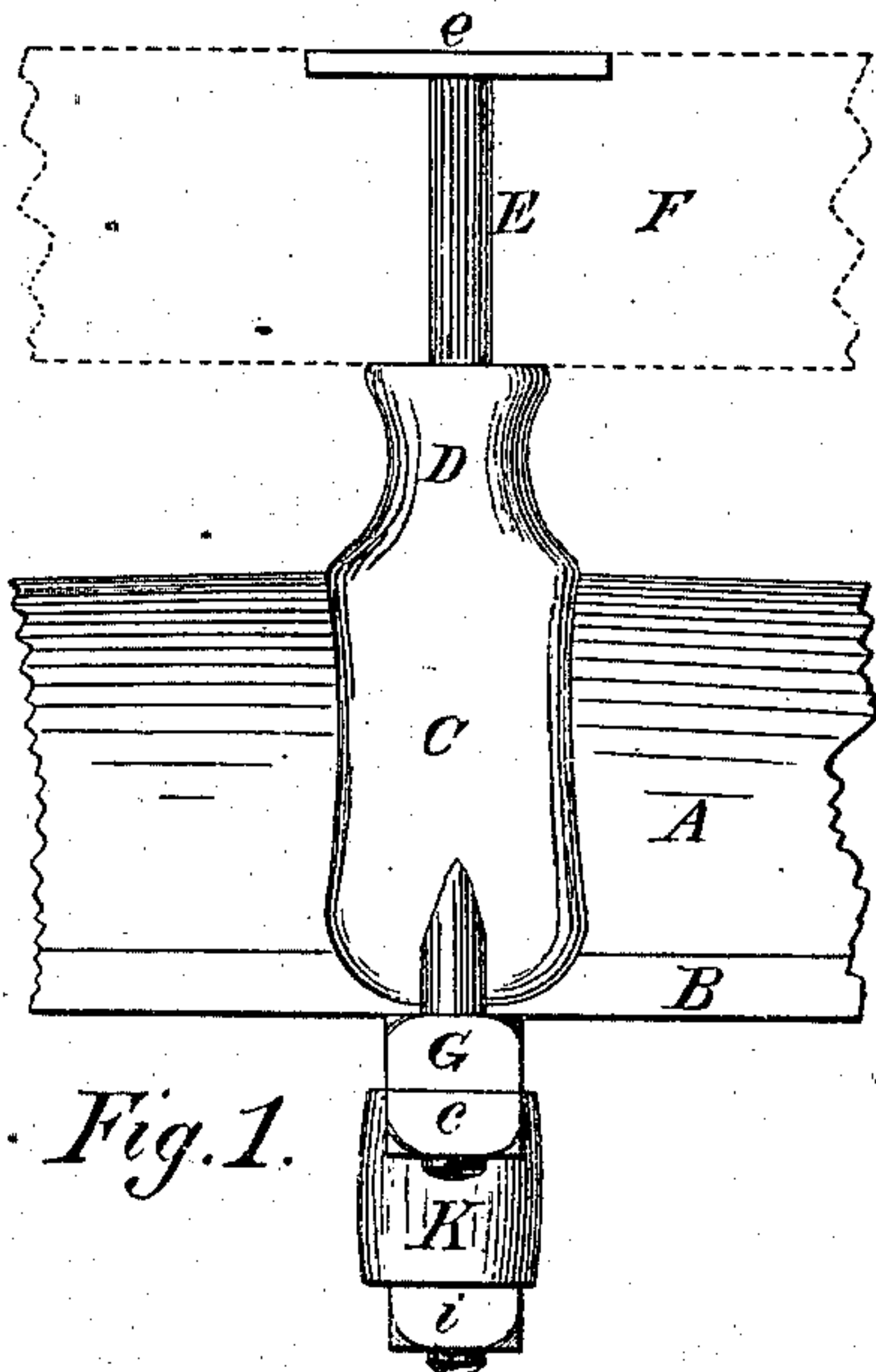


Fig. 1.

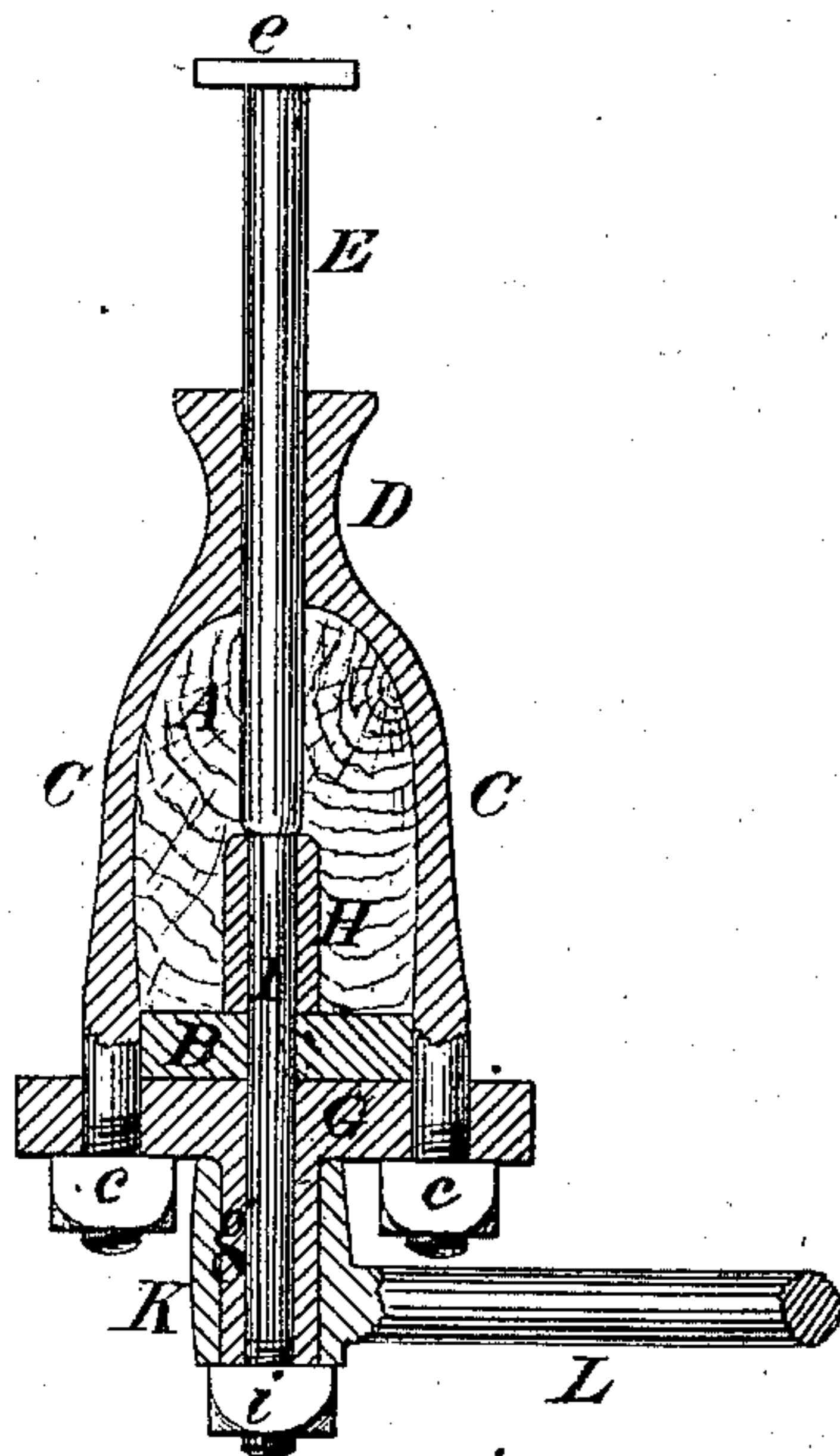


Fig. 3.

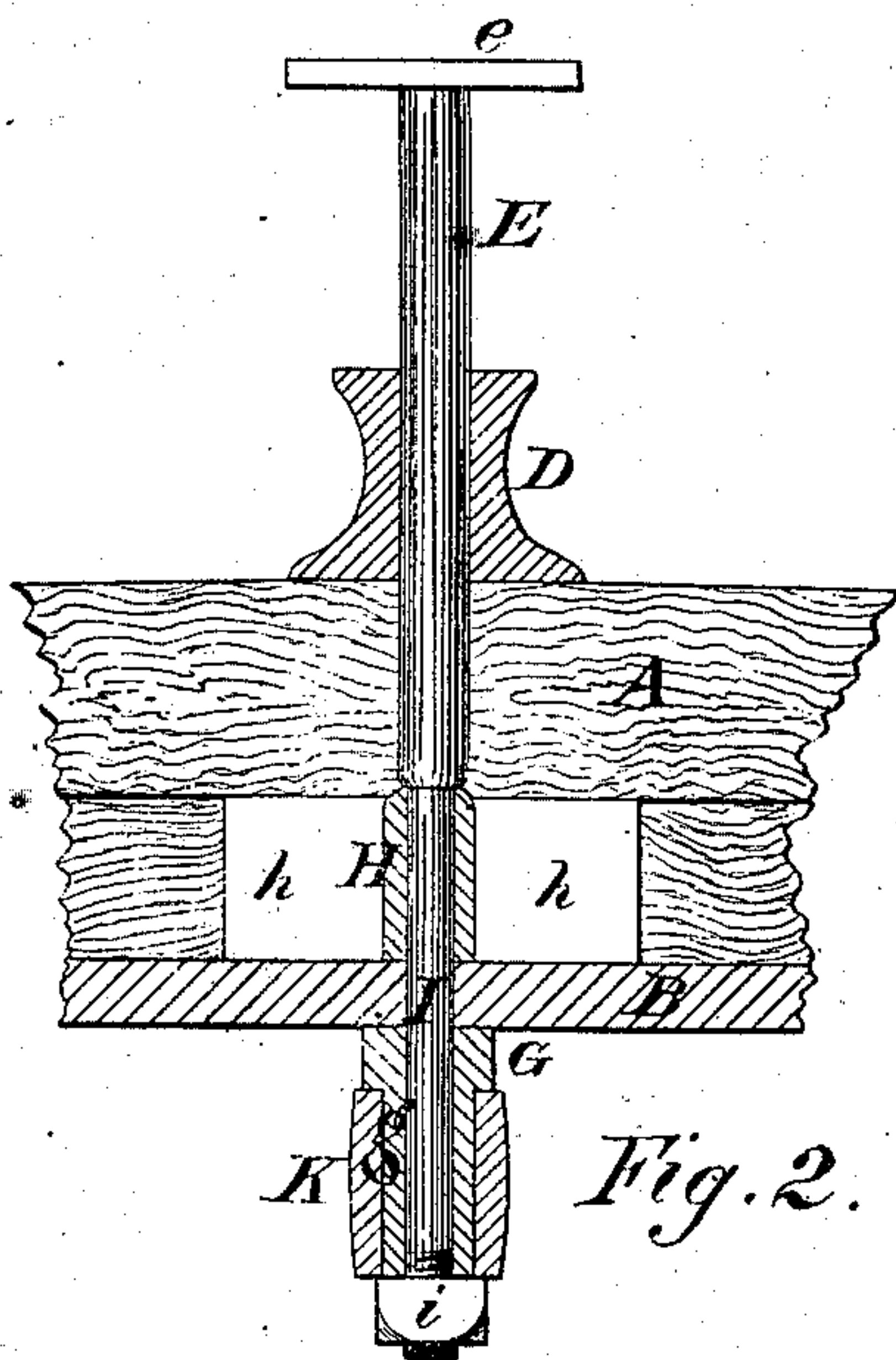


Fig. 2.

Robt. Zahner } Witnesses
Ruth H. Abbott }

Levi Pentz, Inventor
by J. J. Abbott, Attorney.

UNITED STATES PATENT OFFICE.

LEVI PENTZ, OF CANTON, OHIO, ASSIGNOR TO HIMSELF AND HENRY W. WERTS, OF SAME PLACE.

IMPROVEMENT IN KING-BOLTS.

Specification forming part of Letters Patent No. **161,150**, dated March 23, 1875; application filed January 29, 1875.

To all whom it may concern:

Be it known that I, LEVI PENTZ, of Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in King-Bolt and Carriage-Axle Connection; and that the following is a full, clear, and exact specification thereof, which will enable others skilled in the art to make and use the said invention.

My invention relates to an improved connection for the carriage king-bolt and carriage-axle, by means of which the cutting of a large hole in the axle for the king-bolt is avoided, thus retaining the axle strength, and the king-bolt is protected from any undue transverse strain or wear, thus obviating the danger of its becoming bent or worn, and allowing the free turning of the front axle on the king-bolt under all circumstances.

In the accompanying drawing, Figure 1 is an elevation of the central portion of a front carriage-axle, showing my king-bolt connection. Figs. 2 and 3 are longitudinal and cross sections of the same taken through the king-bolt.

A is the axle-bed, B the axle, and E I the king-bolt, all of ordinary forms. The thimble-clip D C, which forms one part of my connection, consists of an ordinary clip, C, on the upper part of which is formed the neck or thimble D, having a central hole of the proper size to receive the larger portion E of the king-bolt. The thimble-bar G g, which is the other part of my connection, consists of the cross-bar G, on which is formed the thimble g, having a central hole to receive the smaller portion I of the king-bolt. The ends of the clip C pass through the ends of the cross-bar G, and are secured by nuts c c, thus securing the clip and bar rigidly on the axle A B, as shown. A thimble, H, having wings or flanges h h, is secured in the axle-bed A, and forms part of the king-bolt socket, and the bridle-piece L or back-brace to the circle is made with an enlarged head, K, which is drilled to receive the thimble g on the cross-bar G, the bridle being secured on said thimble by the nut i on the lower end of the king-bolt.

The several parts being united, as shown, it is seen that the draft on the king-bolt is received on the larger portion E, which is well braced in the thimble D of the clip, and that the strain on the bridle L is taken up by the thimble g on the cross-bar of the clip, instead of being thrown on the king-bolt, as is usually done, so that the part I of the king-bolt which runs through the axle can be made very small.

The thimble H with lips h is designed especially to be used in axles stiffened vertically by steel center plate ribs fitted in center grooves in the axle-bed A, and can be omitted in other constructions, if desired.

The thimble-clip and thimble cross-bar herein shown are designed to be used together, as represented, but either part can be used with the other part, made in the common form of clip or cross-bar, although with less perfect results than are obtained by the use of both parts, as shown.

I am aware that a thimble-clip and tapered king-bolt are shown in Letters Patent No. 86,150, granted to Lewis Grim, January 26, 1869, and that a thimble-bar is shown in Letters Patent No. 136,255, granted to J. L. H. Mozier, February 25, 1873, and I disclaim each of said specified constructions.

What I claim herein as my invention is—

1. The combination of the king-bolt E I, made with the small lower part I, thimble-clip bar G g, and bridle L K, substantially as and for the purpose set forth.

2. The combination of the thimble-clip C D, axle A B, thimble-bar G g, bridle L K, and king-bolt E I, substantially as and for the purpose set forth.

3. The combination of the thimble-clip C D, thimble H with flanges h h, axle A B, thimble-bar G g, and king-bolt E I, substantially as and for the purpose set forth.

LEVI PENTZ.

Witnesses:

JOB ABBOTT,
WM. L. LEMMON.