

(No Model.)

A. KIRKS.
RIVET.

No. 384,318.

Patented June 12, 1888.

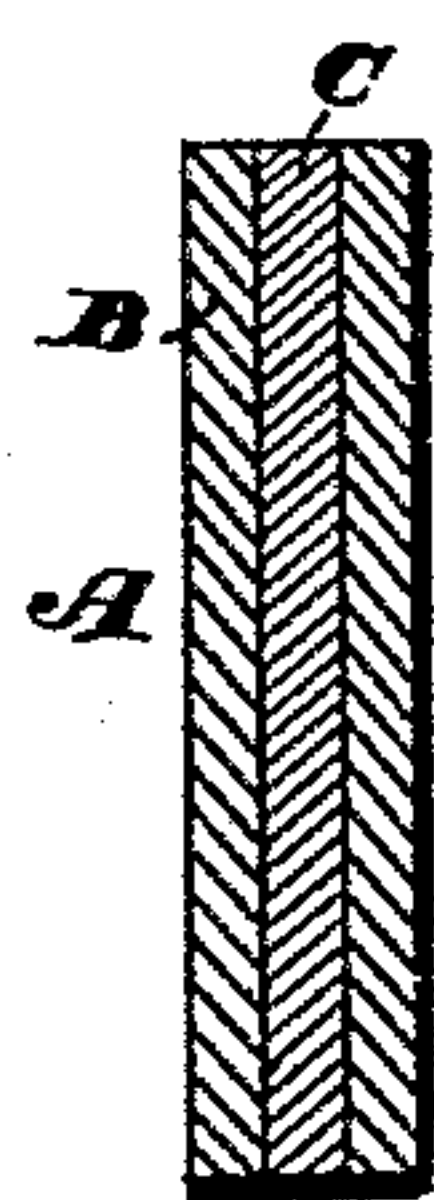
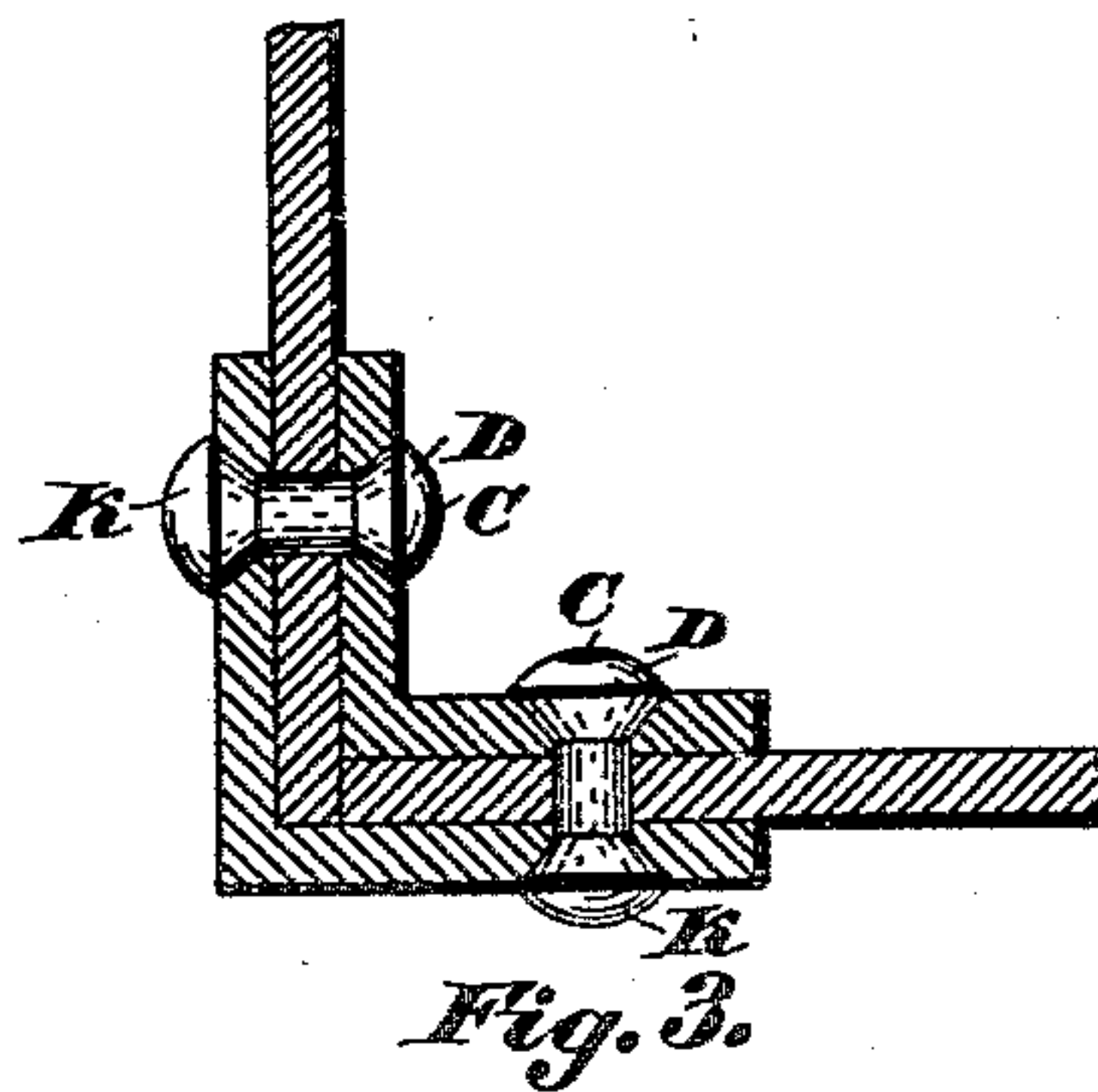
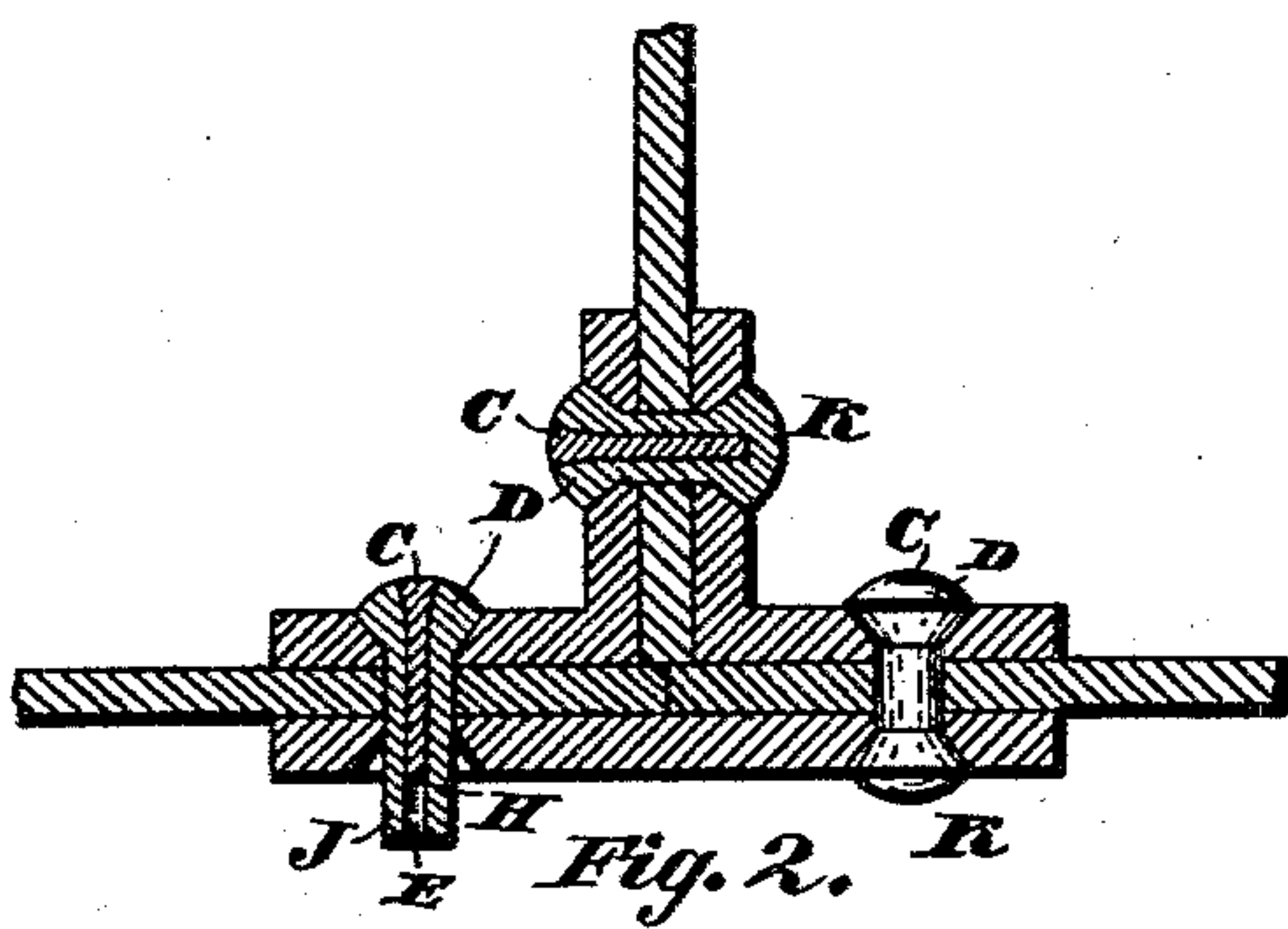
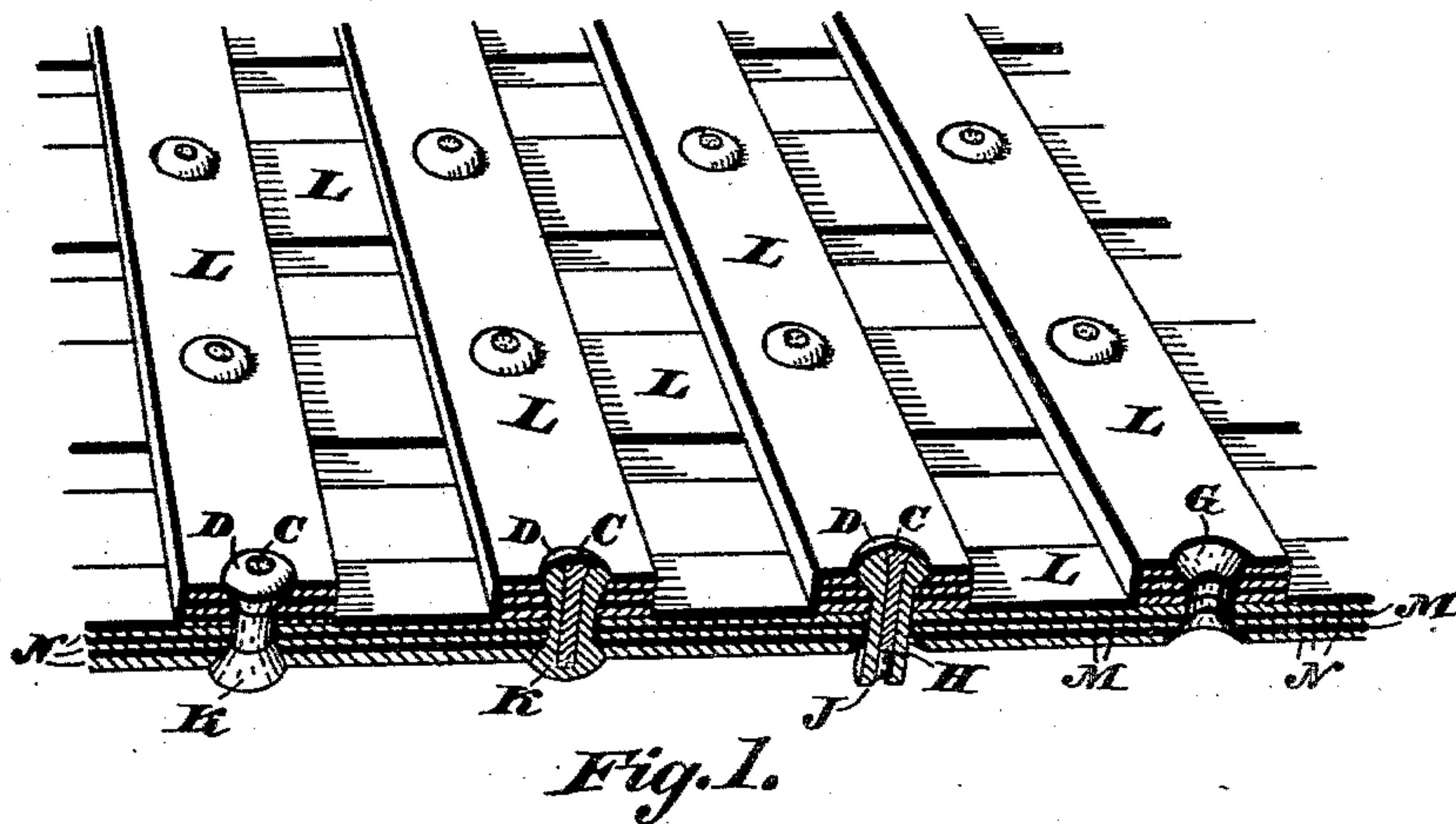


Fig. 4.

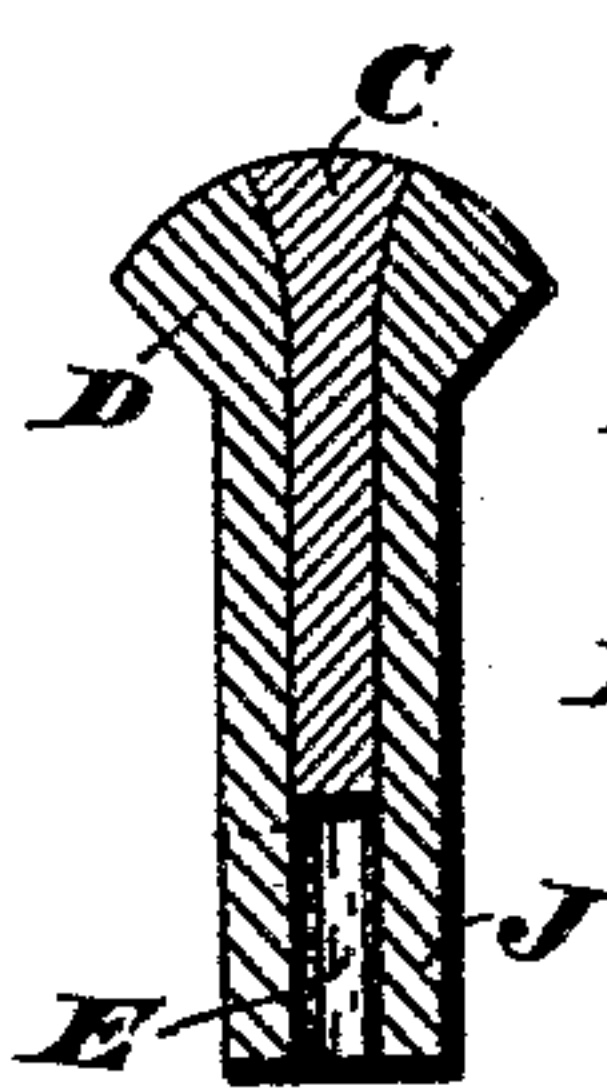


Fig. 5.

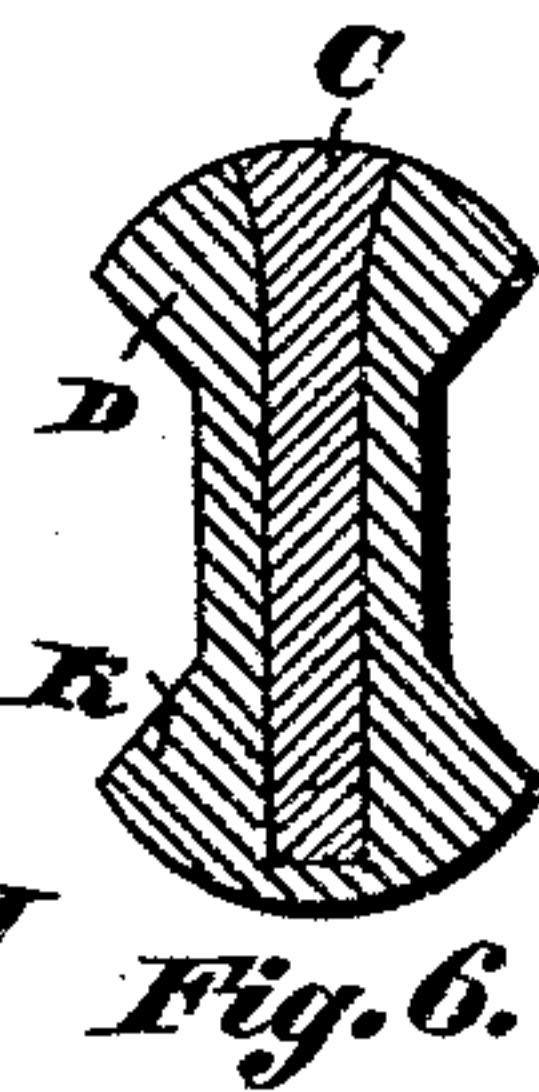


Fig. 6.

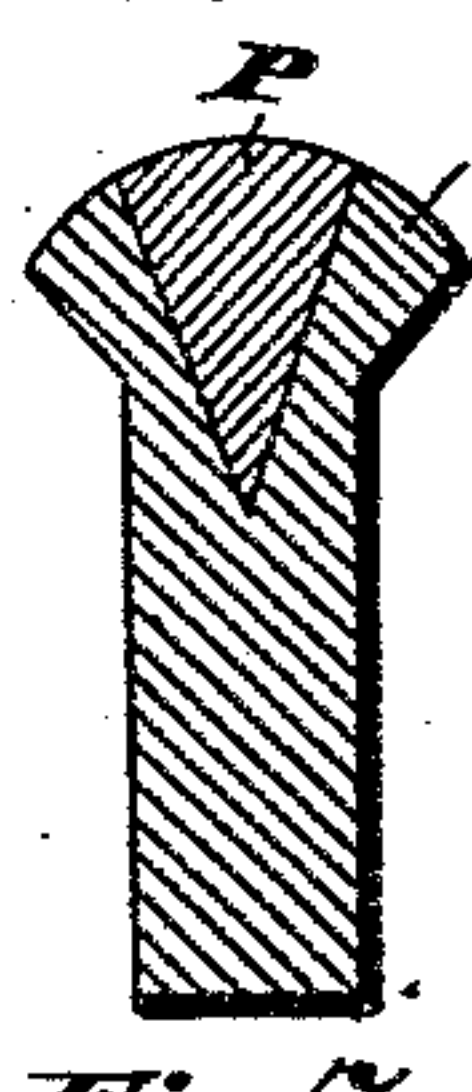


Fig. 7.

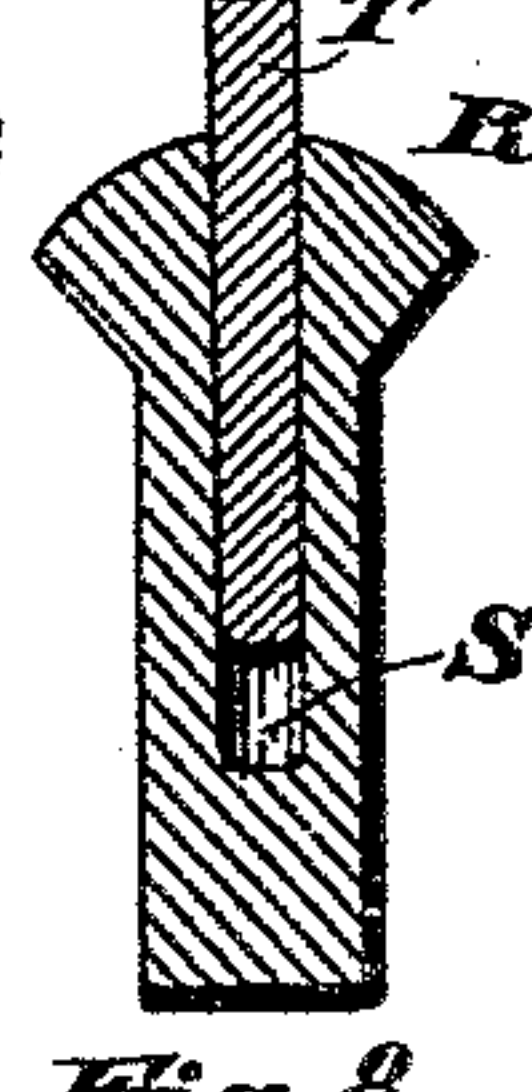


Fig. 8.

WITNESSES:

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ALBERT KIRKS, OF CANTON, OHIO, ASSIGNOR TO THE DIEBOLD SAFE AND LOCK COMPANY, OF SAME PLACE.

RIVET.

SPECIFICATION forming part of Letters Patent No. 384,318, dated June 12, 1888.

Application filed November 29, 1887. Serial No. 256,449. (No model.)

To all whom it may concern:

Be it known that I, ALBERT KIRKS, a citizen of the United States, and a resident of Canton, county of Stark, State of Ohio, have invented a new and useful Improvement in Rivets for Safes and Jails, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to an improvement in the manufacture of burglar-proof safes and jails; and it consists in providing rivets having a hardened-steel center portion and a soft-iron outside portion, constructed as herein-
after described, and set forth in the claims.

Figure 1 is an isometrical view of a portion of lattice-work for jails, illustrating the use of my improved rivet. Fig. 2 is a view, partly sectional, of a portion of jail-work, illustrating a further use of my invention. Fig. 3 is a view, partly sectional, of a corner portion of jail or safe work, showing the rivet in position. Fig. 4 is a vertical sectional view of a portion of the rivet-bar. Fig. 5 is same view of a rivet, showing a portion of the steel center removed. Fig. 6 is same view of a rivet, showing the heads of rivet as formed in the work. Fig. 7 is a sectional view showing a wedge-shaped portion of steel set in the head. Fig. 8 is a sectional view of a soft-iron rivet having a central perforation in which is secured a hardened-steel center.

Similar letters of reference indicate corresponding parts in all of the figures of the drawings.

A represents a bar of metal of any desired diameter. Said bar is composed of a soft-iron portion, B, encircling a steel central portion, C, the proportion of which may be arranged as desired, preferably in third. The rivet-head D may be of any of the usual forms and made in the usual way, after which a portion of the central steel portion is removed, as shown at E, Fig. 5, by drilling, leaving the soft-iron portion E stand, as shown in Fig. 5, after which the rivet is heated and the steel hardened by use of water, or in any of the well-known and approved ways of hardening steel. The rivet is then placed in a countersunk perforation, as shown at G, Fig. 1, the hardened-steel center extending just about through the

parts to be riveted together, as shown at H, Fig. 1, after which the soft-iron end J is riveted down over the end of the steel center, filling the countersink and forming the head as shown at K, placing the head D always at the exposed side, whether it be on the inside or outside of the jail-cell.

The object is to construct a rivet that cannot be drilled out. The jail-bars L having a hardened-steel center, M, as shown at N, Fig. 1, and the rivets a hardened-steel center will prevent the destruction of the structure by the usual methods.

In Fig. 7 is illustrated a modification of my invention, showing a centrally-located wedge-shaped piece of steel, P, welded into the head Q of the rivet and hardened.

Fig. 8 shows a further modification of my invention and illustrates a soft-iron rivet, B, having a central perforation, S, into which a hardened piece of steel, T, is driven, the object of which, as hereinbefore stated, is to prevent the drilling out of the rivets.

Having described the nature and object of my invention, what I claim, and desire to secure, is—

1. A rivet having an outside portion of soft iron, embracing a central portion of hardened steel, a portion of which has been removed before hardening, substantially as described, and for the purpose set forth.

2. A rivet having an outside portion of soft iron, embracing a central portion of steel having one head formed by upsetting the iron and steel, the other formed of the soft iron over the end of the steel, substantially as described, and for the purpose set forth.

3. A rivet having a wedge of steel welded in head thereof and hardened, substantially as described, and for the purpose set forth.

4. A rivet, preferably of soft iron, having a central perforation and hardened-steel pin driven in said perforation, substantially as described, and for the purpose set forth.

In testimony whereof I have hereunto set my hand this 26th day of November, A. D. 1887.

ALBERT KIRKS.

Witnesses:

CHAS. R. MILLER,
W. K. MILLER.