

(No Model.)

C. CORNWELL.

KEY FOR ATTACHING PULLEYS TO SHAFTS.

No. 435,600.

Patented Sept. 2, 1890.

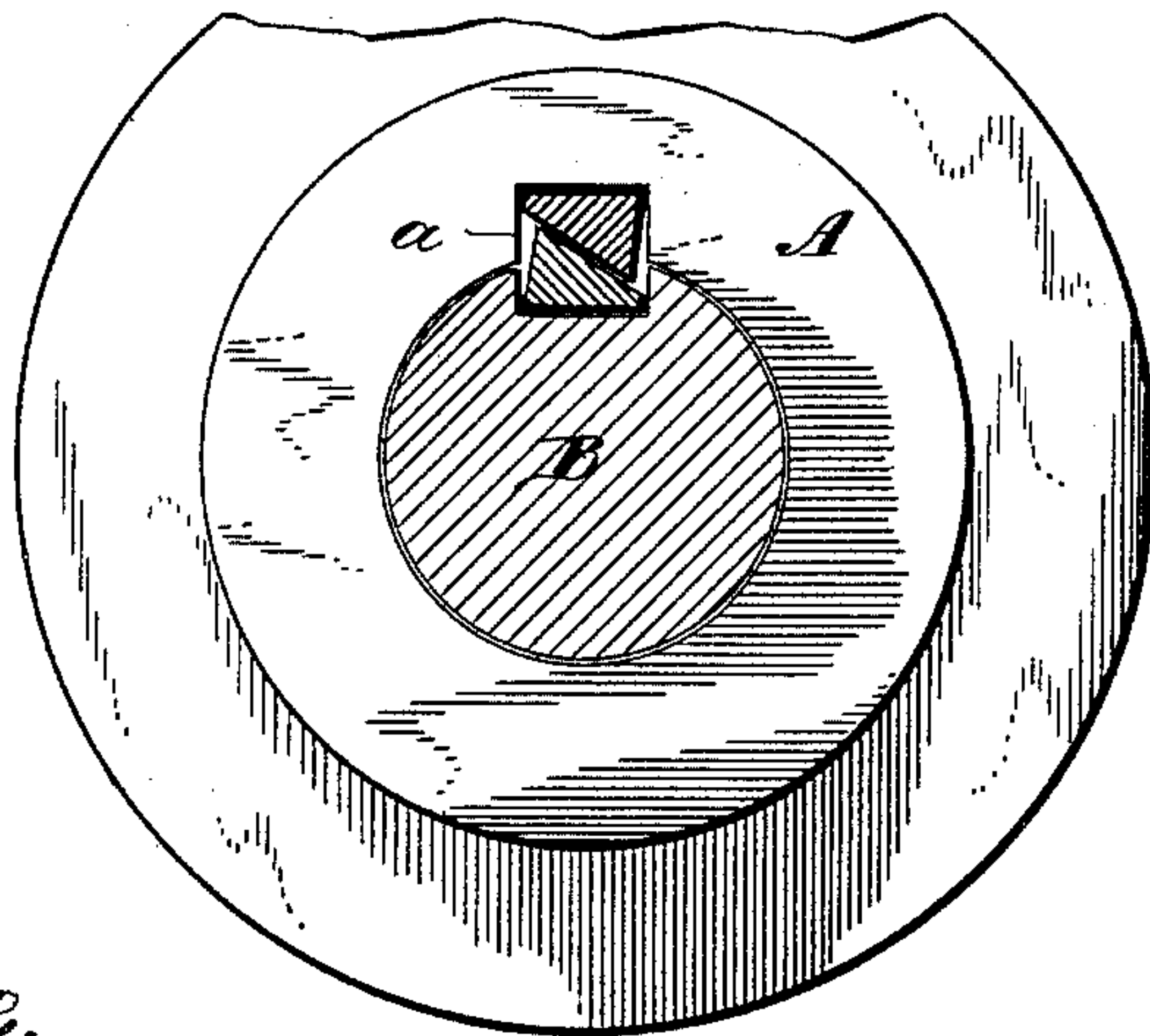


Fig. 1.

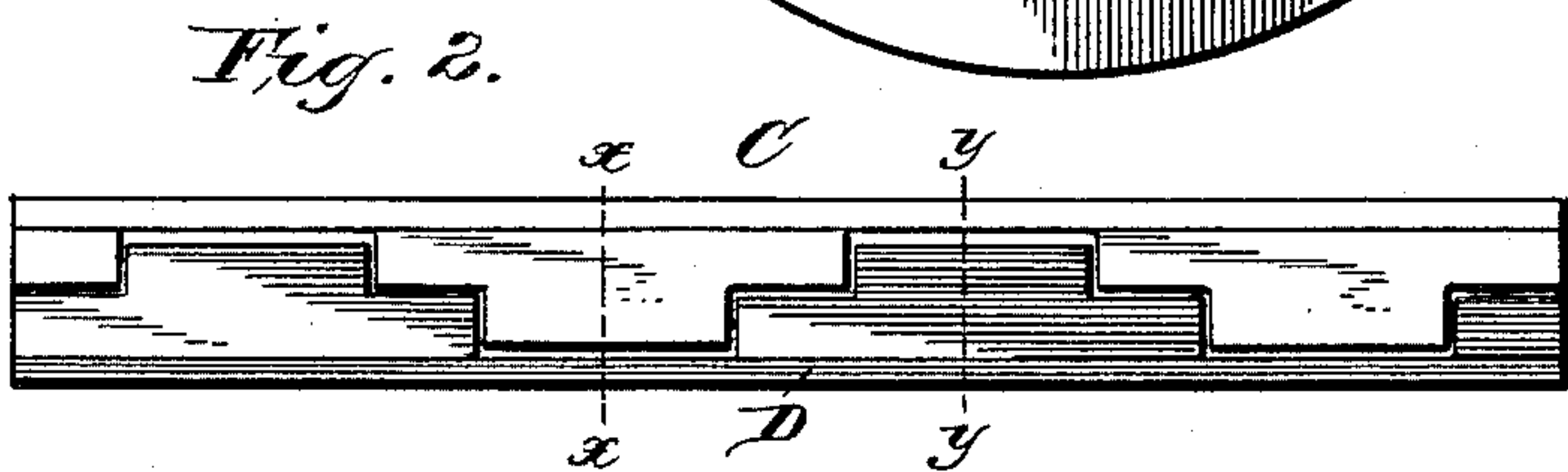


Fig. 2.

Fig. 3.

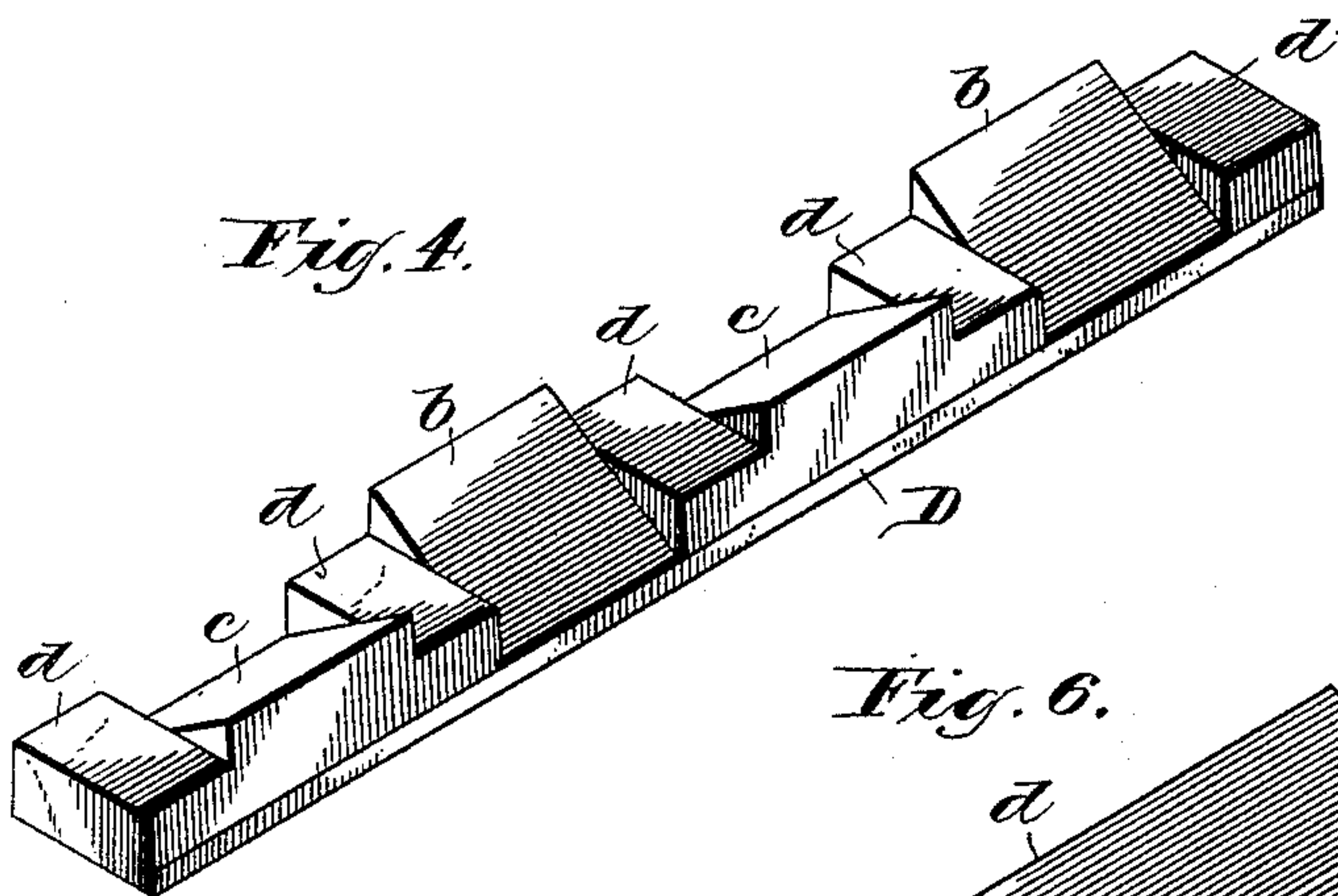
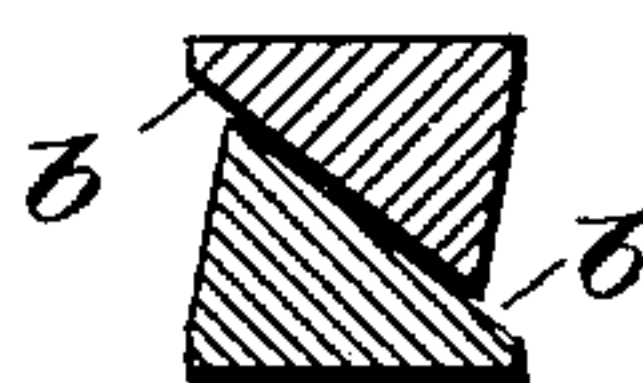


Fig. 4.

Fig. 5.

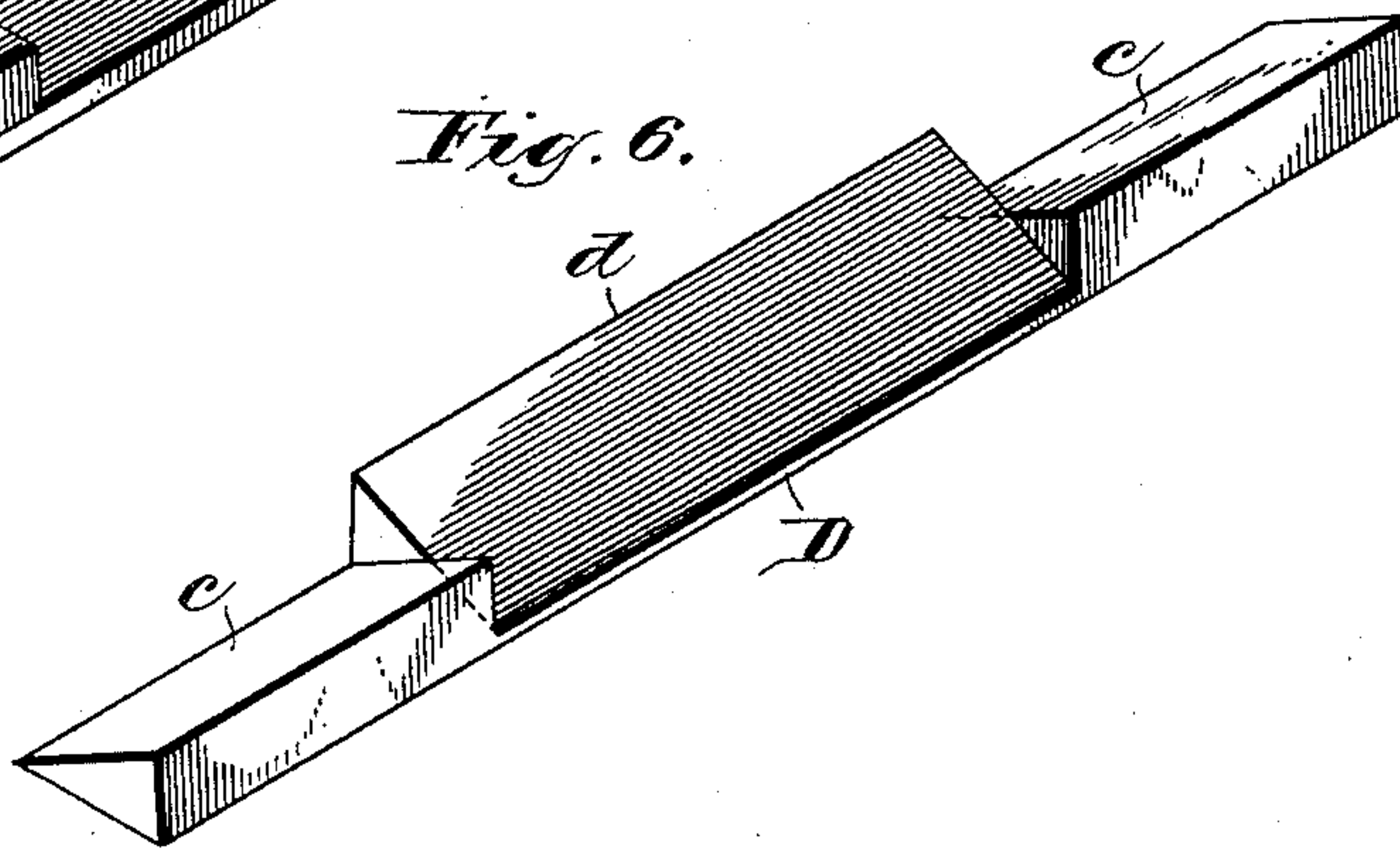
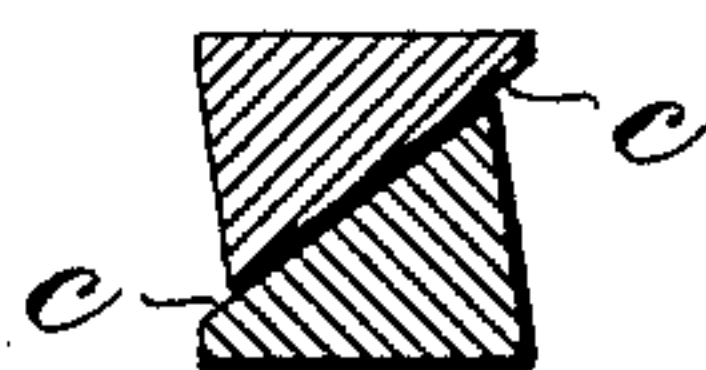


Fig. 6.

Witnesses.
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UNITED STATES PATENT OFFICE.

CLARK CORNWELL, OF YPSILANTI, MICHIGAN.

KEY FOR ATTACHING PULLEYS TO SHAFTS.

SPECIFICATION forming part of Letters Patent No. 435,600, dated September 2, 1890.

Application filed July 18, 1890. Serial No. 359,221. (No model.)

To all whom it may concern:

Be it known that I, CLARK CORNWELL, a citizen of the United States, residing at Ypsilanti, in the county of Washtenaw and State of Michigan, have invented certain new and useful Improvements in Keys for Attaching Pulleys to Shafts, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to keys for attaching pulleys, gears, or couplings to shafts, and it has for its object the improved construction of such keys.

The novelty of my invention will be hereinafter set forth, and specifically pointed out in the claim.

In the accompanying drawings, Figure 1 is an elevation, partly in section, showing the application of my key to a pulley and shaft. Fig. 2 is an enlarged side elevation of my two-part key. Figs. 3 and 5 are sectional views through the dotted lines *x x* and *y y*, respectively, of Fig. 2. Fig. 4 is a perspective of one of the parts of Fig. 2. Fig. 6 is a perspective of one of the parts, representing a modification in the construction.

The same letters of reference are used to indicate identical parts in all the figures.

A may represent any pulley, gear, or coupling, and B the shaft to which it is to be attached. Each is provided with the usual key-seat *a*, into which the key is driven to lock them together.

My improved key, which is substantially rectangular in cross-section, is divided longitudinally into two parts C D, but the division is made upon irregular lines so as to form two or more oppositely-beveled faces on each half of the key.

In Fig. 4, which represents the lower half of the key, there are four beveled faces *b b* and *c c*, of which the planes of *b b* are coincident and the planes of *c c* are coincident; but the planes of the two sets bisect each other, as will be noticed. Between the bevels and at the outer ends are flat portions *d* for a purpose hereinafter explained.

The upper half C of the key is provided with bevels and flat portions corresponding to those on the lower half D, so that when brought together the two parts fit snugly and become interlocked against independent longitudinal motion. The two parts of the key where put together are somewhat narrower than the key-seat, as seen in Fig. 1, and by reason of the double opposing beveled faces the turning of the shaft or pulley in either direction tends to wedge the key apart and cause it to bind more tightly against the upper and lower walls of its seat, and thereby more securely hold the pulley to the shaft. This action will be readily understood by reference to Figs. 3 and 5, where the two sets of opposing bevels are shown. Should the shaft be turning to the right or the pulley to the left, the bevels *b b* would cause the wedging, and should the shaft be turning to the left or the pulley to the right the bevels *c c* would cause the wedging. The flat portions *d*, interposed between the bisecting bevels, are designed to strengthen the key at those points and also at the ends, but may be dispensed with. In Fig. 6 I have shown a form of key omitting them and having only three beveled faces on each half of the key. It is only essential to have two bevels on each half, in order that the wedging action may occur when the shaft or pulley is turned in either direction; but I prefer to have at least three, as shown in Fig. 6, so that the two halves of the key will be interlocked against independent longitudinal movement.

Having thus fully described my invention, I claim—

A longitudinally-divided two-part key, each of whose parts is provided with two or more oppositely-beveled faces, substantially as and for the purpose described.

CLARK CORNWELL.

Witnesses:

FRANK JOSLYN,
WALTER P. BEACH.