

J. F. LIGHT.
SHAFT COUPLING.

No. 78,529.

Patented June 2, 1868.

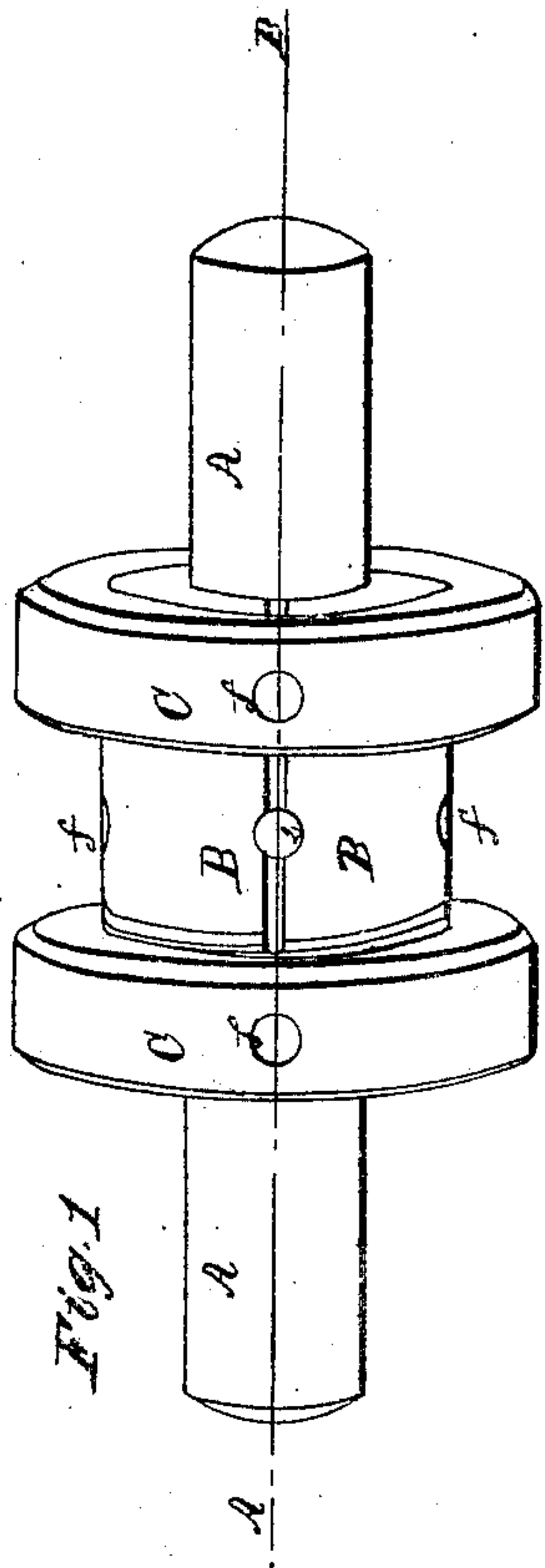


Fig. 2.

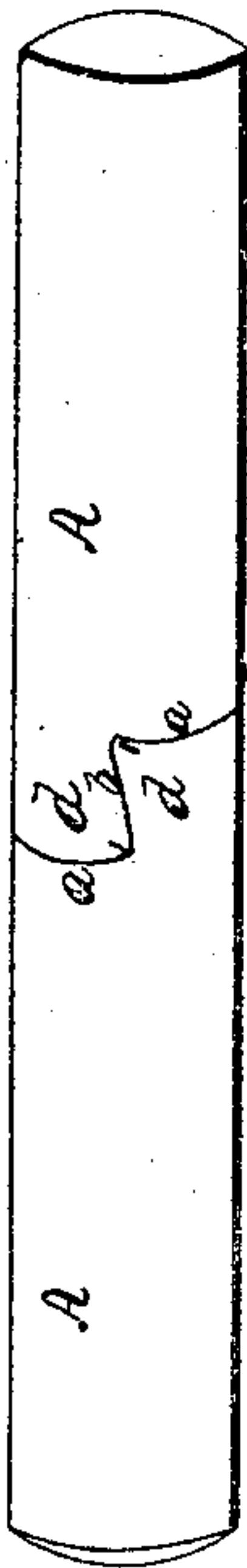
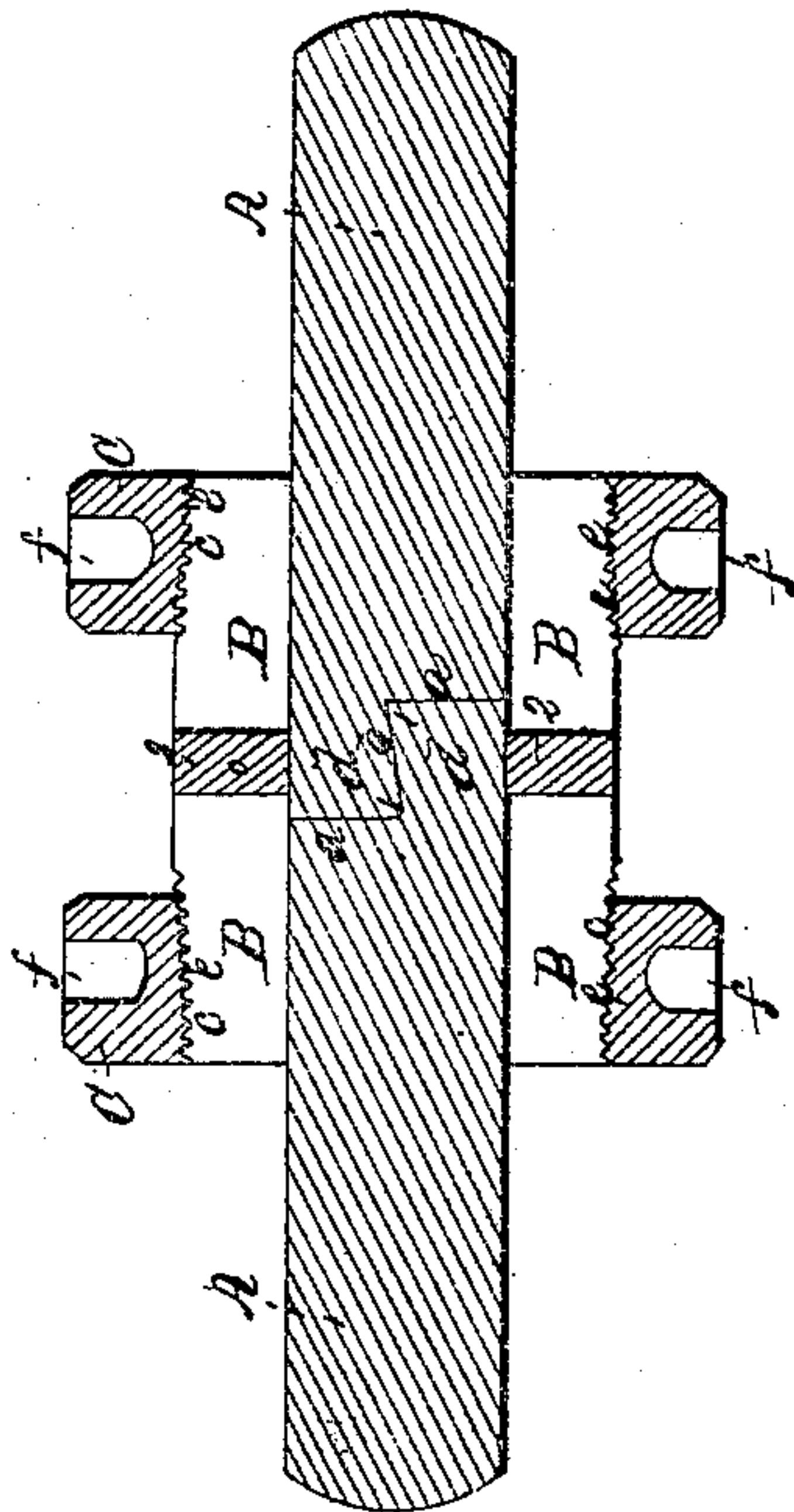


Fig. 3.



Witnesses.

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JOSEPH F. LIGHT, OF WORCESTER, MASSACHUSETTS.

Letters Patent No. 78,529, dated June 2, 1868.

IMPROVEMENT IN SHAFT-COUPLING.

The Schedule referred to in these Letters Patent and making part of the same.

KNOW ALL MEN BY THESE PRESENTS:

That I, JOSEPH F. LIGHT, of the city and county of Worcester, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Shaft-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a perspective view of my improved shaft-coupling, as it appears in use.

Figure 2 represents the ends of two shafts, with the clasp-device removed, showing the mode in which the ends of the shafts are locked or fitted together; and

Figure 3 represents a longitudinal section on line A B, fig. 1.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it more in detail.

In the drawings, the ends of the shafts to be coupled are lettered A A.

The end of each shaft to be coupled is milled or cut away, as shown at *a a b*, whereby the ends, when placed together as shown in the drawings, lock together in such a manner that the ends 1 1 cannot be drawn longitudinally so long as the projections *d d* of the ends of the shafts are held together, as shown in figs. 2 and 3 of the drawings.

B B are two clasps, having screw-threads *c* cut upon their tapering ends, to fit the screw-threads *e*, in the clamping-nuts C.

The clamping-pieces B B and nuts C C may be provided with holes, *f*, for the reception of holding-forks or irons, by which the clamping-pieces B B can be held while the nuts C C are being screwed up.

It will be observed that the holding-nuts C C are made tapering, to correspond with the tapering ends of the holding-pieces B B, whereby, when the holding-nuts C C are screwed up, they gradually compress or clasp the holding-pieces B B securely upon the shafts A A, thereby coupling the ends of said shafts in a very simple yet strong and effectual manner.

To prevent the clamping-pieces B B from being moved out of their relative positions when the nuts C C are applied, curved or other shaped pins, 2 2, are fastened to the edges of one of the clasps, while corresponding grooves or recesses are cut in the edges of the other clasp, to receive said pins, whereby both of the holding or clamping-pieces, B B, are held or retained in their proper and relative positions to receive the nuts C C.

Instead of fastening both of the pins 2 2 to one of the clasps B, one of the pins may be fastened to the edge of one clasp, and the other to the edge of the opposite clasp, or only one pin may be used.

It may be remarked in this connection that the clasps B B are cast so that they can be finished up as one piece; that is, the hole bored or rimmed out for the ends of the shafts, and the threads, *c*, cut upon their ends, and the steady-pins 2 2 inserted, and then separated, which can be easily done provided sheet-iron strips are placed in the core-boxes in such a manner that when the metal is poured to form the clasps B B, it will be separated by the sheet-iron strips in the proper places where they are to be divided.

The cast metal unites sufficiently with the wrought metal to hold together while the clasps are being finished up, but not so closely as to prevent an easy separation of the cast from the wrought metal, when a hammer and cold-chisel are employed for that purpose.

The steady-pins 2 2 may be so inserted that more than half of the pin will be in the edge of one clasp, thereby obviating the necessity of any other fastening to hold the guide-pin in place.

If preferred in any case, a spline can be used in combination with the ends of the shafts A A and the clamping and holding-pieces B B.

It will be observed that my improved coupling is not only simple, but very firm.

The peculiar locking of the ends of the shafts prevents all longitudinal and lateral motion to one piece of the shaft independent of the other section, and that, too, without the use of stay-pins.

If preferred, one or both of the holding-nuts may be cast with shells or cases to project in over the clamping-pieces, so as to give an even and more uniform appearance to the coupling when in use.

Having described my improvements in shaft-couplings, what I claim as new, and of my invention, and desire to secure by Letters Patent, is—

1. The combination of the ends of the shafts, when shaped or cut away and applied to each other, substantially as shown in figs. 2 and 3 of the drawings, so as to prevent the independent longitudinal movement of the one shaft with respect to the other, with holding-nuts for encircling and coupling said shafts in the manner herein shown and specified.

2. The combination, with the clasps B B, of the guide-pieces or pins 2-2, or either, substantially as and for the purposes set forth.

JOSEPH F. LIGHT.

Witnesses:

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