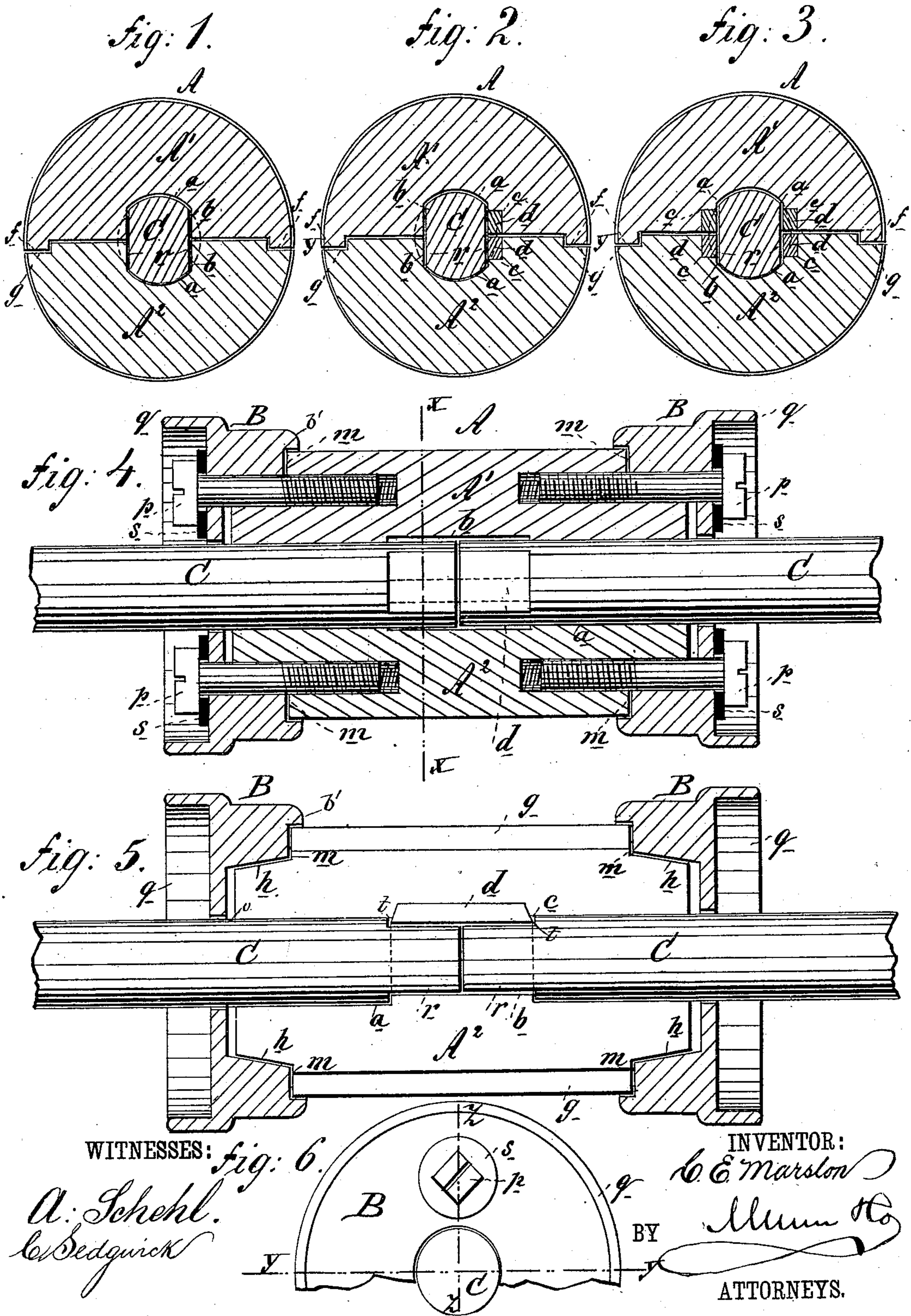


(No Model.)

C. E. MARSTON.  
Shaft Coupling.

No. 238,602.

Patented March 8, 1881.





# UNITED STATES PATENT OFFICE.

CHARLES E. MARSTON, OF DOVER, NEW HAMPSHIRE.

## SHAFT-COUPLING.

SPECIFICATION forming part of Letters Patent No. 238,602, dated March 8, 1881.

Application filed December 20, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES E. MARSTON, of Dover, in the county of Strafford and State of New Hampshire, have invented a new and Improved Shaft-Coupling, of which the following is a full, clear, and exact description.

The object of this invention is to provide a more simple and secure device for coupling line-shafting.

The invention consists of two semi-cylindrical blocks longitudinally grooved in their flat faces, and having midway of their grooves rectangular or flat seats that serve to hold the correspondingly flattened and shouldered ends of the coupled shafts; and it consists, further, in combination with the blocks, of interiorly-tapering locking-rings that fit over the correspondingly-tapering ends of the blocks to hold the latter together, and are held and adjusted in place by screws or other suitable device. The coupling may be provided with a key or keys, or may be applied without one.

Figure 1 is a cross-sectional elevation of the coupling without a key in position on line  $xx$ , Fig. 4. Fig. 2 is a cross-sectional elevation on line  $xx$ , Fig. 4, of the coupling in position with two keys. Fig. 3 is a cross-sectional elevation on line  $xx$ , Fig. 4, of the coupling in position with four keys. Fig. 4 is a longitudinal sectional elevation of the coupling with one key in position on line  $zz$ , Fig. 6. Fig. 5 is a longitudinal sectional elevation of the coupling in position on line  $yy$ , Figs. 2 and 6. Fig. 6 is an end elevation of the same.

Similar letters of reference indicate corresponding parts.

In the drawings,  $A' A^2$  represent respectively the two semi-cylindrical blocks forming the body of the coupling A. Each block  $A' A^2$  has a central longitudinal semicircular groove,  $a$ , formed in its flat face, about midway the length of which is a rectangular seat,  $b$ , raised above the general level of the groove  $a$ , so as to gripe the corresponding flattened and shouldered ends of the shafts C and prevent said shafts C from turning and boring the coupling A. These seats  $b$  may be an integral part of the said coupling A, or be inserted in corresponding recesses made therein, and said seats  $b$  may have one or more keyways,  $c$ , cut in their edges to hold a key or keys,  $d$ , as shown or indicated in Figs. 2, 3, 4,

and 5, respectively, to assist in more firmly securing the shafts C, or may be without keyway or key, as shown in Fig. 1. The block  $A'$  is also provided along the edges of its flat face with ribs  $f$ , that are designed to fit into corresponding grooves or depressions  $g$  along the edges of the block  $A^2$ , whereby the said blocks  $A' A^2$  are prevented, when applied as a coupling, from moving apart laterally or twisting on the plane of their flat faces. On the outside the end of each block  $A' A^2$  is turned down to a taper, as shown at  $h$ , thereby forming, at a short distance from the ends, the shoulders  $m$ , against which the locking-rings B may be set when in position. The locking-rings B have an annular lip,  $b'$ , on the inner edge to hold the sections together, are beveled interiorly, as shown at  $n$ , to correspond with the end bevels,  $h$ , of the blocks  $A' A^2$ , are centrally bored, as shown at  $o$ , for the passage of the shafts C through them, and are held in place on the ends of the coupling A by means of screw-bolts  $p p$ , that enter through them into the blocks  $A' A^2$ , as shown in Figs. 4 and 6. Around the peripheries of the rings B are flanges  $q$ , projecting above the heads of the screw-bolts  $p p$ , and serving to protect them. On the shanks, and beneath the heads of said bolts  $p p$ , are cushions or washers  $s$ , of leather or other elastic substance, to prevent said bolts  $p p$  from working loose because of any jarring that may be communicated through the shaft C.

This coupling is strong and of cheap construction, can be easily fitted in place, and can be used as well as a pulley.

In order to apply this coupling A the ends of the shafts C must be flattened on opposite faces, as shown at  $r$ , and butted together; then the blocks  $A' A^2$  are applied in the manner indicated, so that the flattened ends of the shafts C shall be between the seats  $b$  and the shoulders  $t$  of the shafts C, abutting against the ends of the seats  $b$ ; then the rings B are fitted on the ends of the blocks  $A' A^2$ , and secured in place by the bolts  $p p$ , which may be screwed up as tightly as may be desired.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a shaft-coupling, the combination, with sections  $A' A^2$ , having the shoulders  $m$ , of the end rings, B B, fitting up to said shoulders

and having a lip that overlaps them, as described.

2. In a shaft-coupling, the combination, with the grooved blocks  $A'$   $A^2$ , provided with seats  
5  $b$ , having keyway  $c$ , of the key  $d$ , substantially as and for the purpose described.

3. The combination, with the interiorly-grooved coupling  $A$ , provided with seats  $b$ , of

the shafts  $C$ , having flattened ends  $r$ , substantially as herein shown and described, whereby  $1c$  said shafts are prevented from turning in the coupling, as set forth.

CHARLES E. MARSTON.

Witnesses:

CHARLES W. HASLER,

MICHAEL QUINLAN.