(No Model.)

S. H. BARNES.

SHAFT COUPLING.

No. 384,012. Patented June 5, 1888.

Fig. 1.

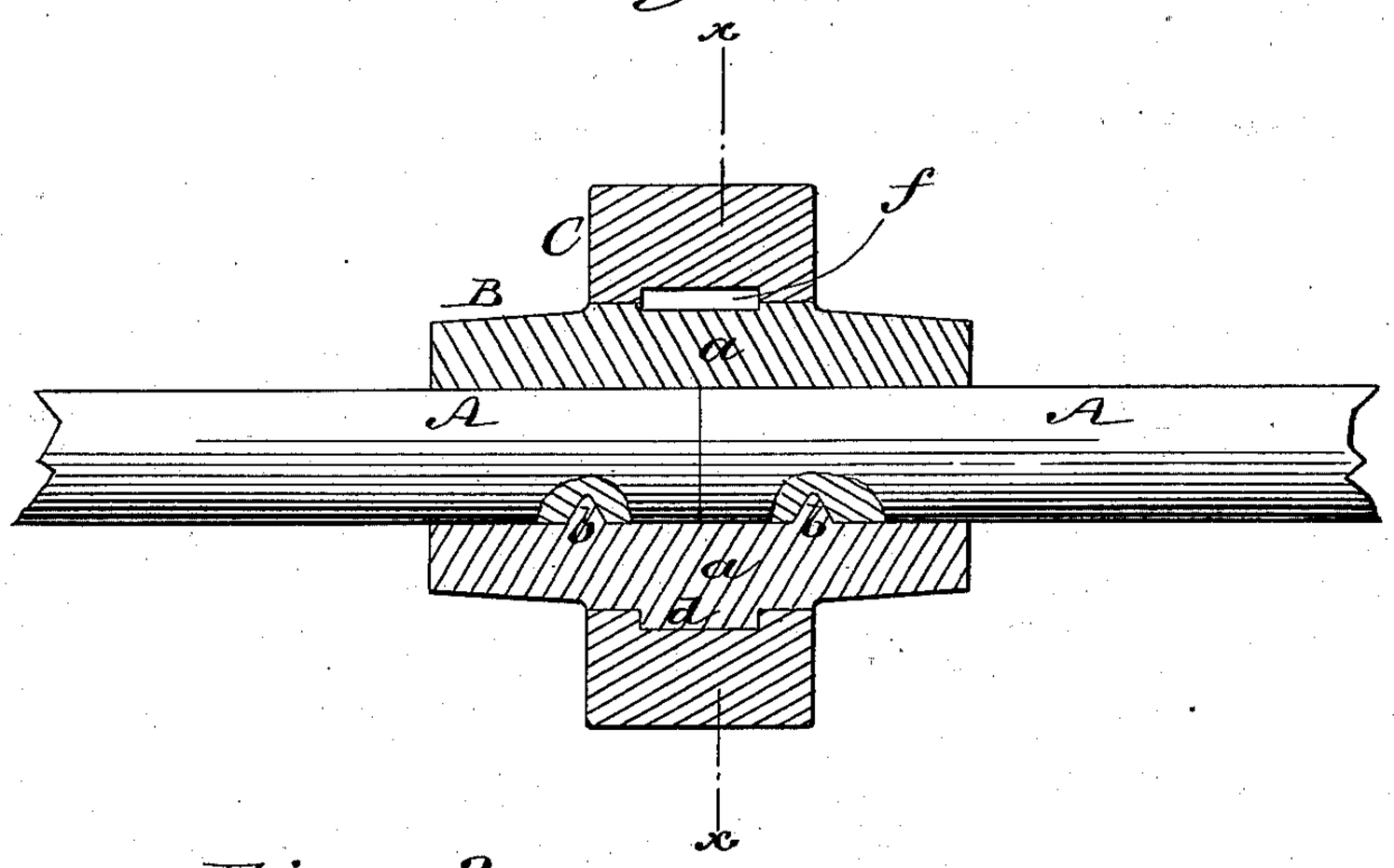


Fig. 2.

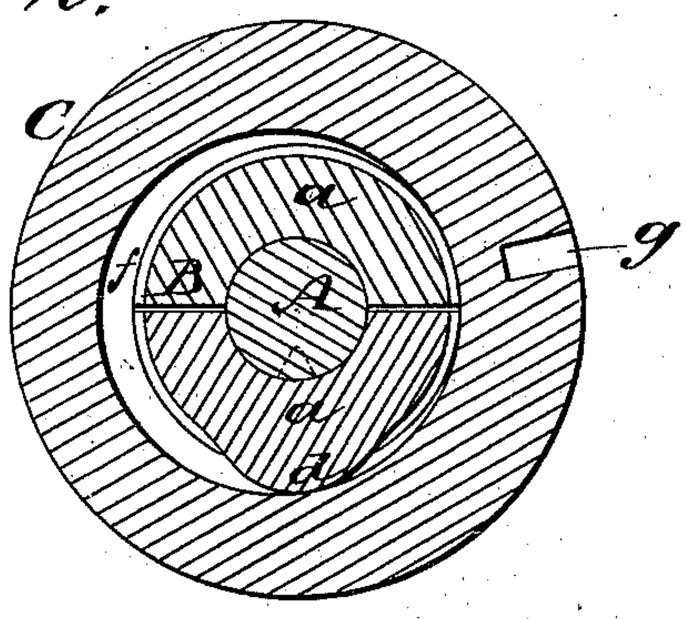
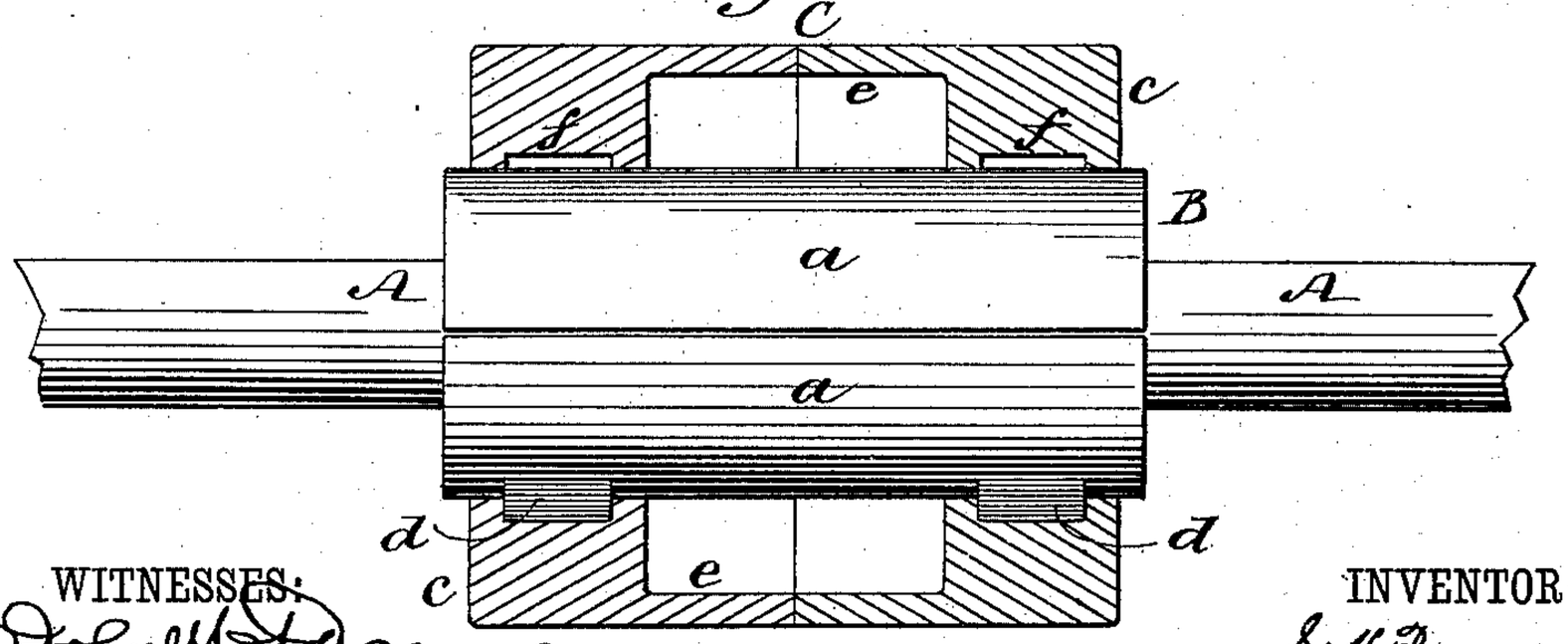


Fig. 3.



WITNESSES:
John H. Loemer
C. Sedgwick.

INVENTOR:
S. H. Barnes.
BY Munn & Co
ATTORNEYS.

UNITED STATES PATENT OFFICE.

SIMON H. BARNES, OF LANESBOROUGH, PENNSYLVANIA.

SHAFT-COUPLING.

SPECIFICATION forming part of Letters Patent No. 384,012, dated June 5, 1888.

Application filed February 25, 1888. Serial No. 265,283. (No model.)

To all whom it may concern:

Be it known that I, SIMON H. BARNES, of Lanesborough, in the county of Susquehanna and State of Pennsylvania, have invented a new and useful Improvement in Shaft-Couplings, of which the following is a full, clear, and exact description.

This invention relates to devices for coupling together the meeting ends of sections of line-shafting, in which a longitudinally-split sleeve, acting as clamps or compressors to grip the meeting end portions of the shaft-sections to couple and hold them in line with one another, is used, and which is inclosed within a tightening and loosening band; and the invention consists in certain novel constructions and combinations of parts, substantially as hereinafter described, and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a longitudinal section of my invention applied to sections of line-shafting, which are shown only in part; Fig. 2, a transverse section of the same, taken upon the line *x x* in Fig. 1; and Fig. 3, a longitudinal view, in partial section, of a modification of the same.

Referring, in the first instance, to Figs. 1 and 2 of the drawings, A A indicate the meeting-end portions of two sections of line-shafting, and B is the split-sleeve clamp or gripper, formed of two equal longitudinal parts, *a a*, which are fitted on the ends of the shafts, but are restricted from coming in close contact with each other at their sides, a space being allowed to admit of the two parts *a a* being pressed firmly around the shafts to firmly hug and couple the latter, as in other shaft-couplings. These sections *a a* of this shaft-gripper are made by casting them on a mandrel or chill, whereby they are made internally of the exact form and size necessary to fit the shafts, thus saving all machine-work of boring and fitting try-pins, as formerly practiced. Either one or both of these gripper-sections *a a* may have teats *b b* cast on them to enter corresponding recesses in the shafts, for the purpose of preventing any longitudinal play or movement of the latter; or said gripper-sections may be left plain on their interior, as desired. Externally these gripper-sections *a a* are preferably circular and tapering or not, as desired, for a portion of their length from either end, and one of them has cast upon its exterior a rounded projection, *d*, opposite its line-face, where the division between the two gripper-sections is.

C is a close band adapted to snugly slide or fit over the gripper-sections *a a* and to turn on or around them. This band is constructed internally with an eccentric groove, *f*, of a suitable width and depth to receive within it the projection *d* of the gripper. Upon turning this band in a suitable direction upon the gripper B, which may be done by inserting a rod or lever in a hole, *g*, in the gripper, or which may be otherwise done, the outer wall of the eccentric groove will be made to bear with a gradual and powerful pressure upon the projection *d*, to force the two gripper-sections *a a* toward one another, and to cause them to firmly hug and bind on or couple the two shafts without forcing them out of line by reason of the circular fit of the band on exterior concentric portions of the gripper-sections.

In Fig. 3 a modification of the invention, adapted to couple large shafts, is shown. In this case the band C is divided into two parts, *c c*, arranged to lie face to face, where it may be formed with lateral flanges *e e*, and the whole be constructed externally to form a broad cylindrical-faced pulley suitable for taking motion from or communicating motion to the coupled shaft-sections A A. In this construction it is desirable also to divide or duplicate the projection *d*, placing one near either end of one of the gripping-sections *a a* of the gripper, and to correspondingly divide or duplicate the eccentric groove *f* on the interior of the band. The action is the same as in the construction shown in Figs. 1 and 2 and hereinbefore described.

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

In a shaft-coupling, the longitudinally-divided gripper having a projection upon the exterior of one of its sections, in combination with a rotatable band fitted to turn upon said sections and provided internally with an eccentric groove adapted to receive and to bear by its outer wall upon the exterior projection of the divided gripper, essentially as shown and described.

SIMON H. BARNES.

Witnesses:
W. JENS BRANON,
L. G. BENSON.