JOSEPH F. EMMERT.

COUPLING.

116939

PATENTED JUL 11 1871

Fig. I.

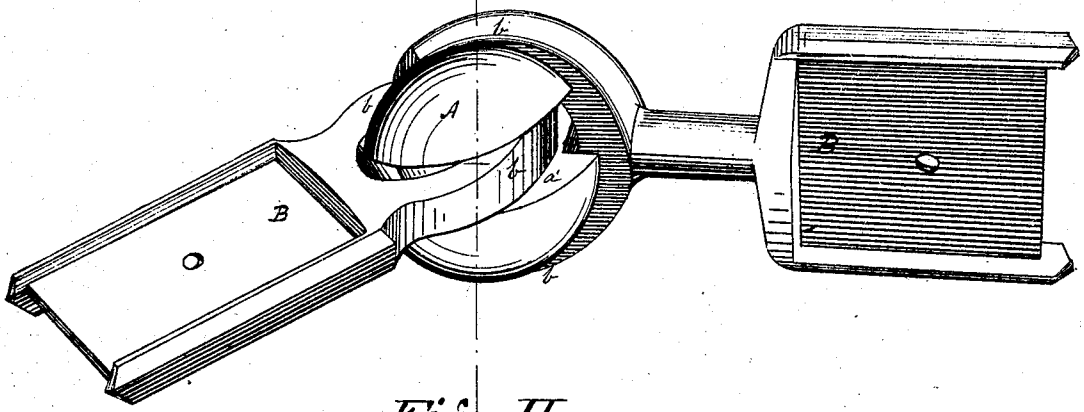


Fig. II.

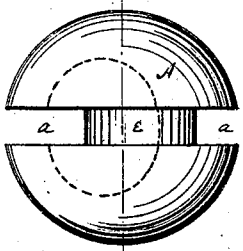
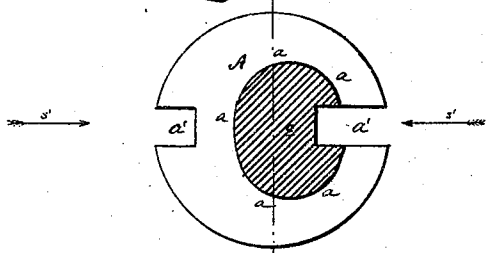


Fig. III.



Witnesses:

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Pattison & Ellsworth.

Inventor:

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UNITED STATES PATENT OFFICE.

JOSEPH F. EMMERT, OF WAYNESBOROUGH, PENNSYLVANIA.

IMPROVEMENT IN UNIVERSAL JOINTS FOR SHAFT-COUPLINGS.

Specification forming part of Letters Patent No. 116,939, dated July 11, 1871.

To all whom it may concern:

Be it known that I, JOSEPH F. EMMERT, of Waynesborough, in the county of Franklin and State of Pennsylvania, have invented a new and Improved Coupling; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a perspective view, showing the coupling and shaft-plates connected. Fig. 2 is a side elevation of the connecting-block, and Fig. 3 is a diametrical section of the connecting-block.

Similar letters of reference in the accompanying drawing denote corresponding parts.

This invention relates to that class of couplings employed to connect the sections of the "tumbling-rod," so called, which transmits motion from a "horse-power" to the machinery operated by it; and the invention consists in a novel and peculiar connecting-block and the combination thereof with two bifurcated plates attached to the shaft or rod, substantially as hereinafter set forth.

In the drawing, A is the connecting-block and B B are the bifurcated plates attached to the shaft or rod in any suitable manner. The block is constructed in the form of a sphere, having two circumferential grooves, *a a'*, at right angles to each other. Each groove is eccentric to the sphere, as clearly shown in Figs. 2 and 3, so that each divides the sphere into two hemispheres, connected by a neck, *e*, the form of which is shown by the section in Fig. 3. The plates B B are constructed with curved arms *b b*, the ends of which approach each other so as to embrace and partially lock around the necks *e*, and thus hold the plates securely connected to the block. The curved arms are gotten over the neck by presenting them in the direction of the arrow *s*, Fig. 3, in which direction the neck is very narrow. They are then turned around to the line of the arrow *s'*, in which direction the neck is very wide, so that the ends of the fork will not pass over it. The sections of the tumbling-rod are thus connected, as shown in Fig. 1, so that, while the joints are flexible, the rod or shaft, however long it may be, can be rotated by power applied at one end. When no longer necessary to use it, the sections of rod can be readily separated from each other by simply lifting up the blocks A A until the connected plates hang at right angles to their position when working, in which case the forked plates will drop off of the necks by their own gravity. In some cases it may be desirable to lock the plates to the connecting-block in such a manner that they will not thus detach themselves. This is easily done by attaching the plates to the block in the position shown in Fig. 1, and then turning them both around until each projects from the side of the block opposite to that from which they project, as seen in said drawing. Each plate will then lock the other, preventing it from turning far enough to become disengaged. This coupling is adapted to many other uses than simply that above referred to. It may be employed wherever flexible shafting or a universal joint in a shaft is required.

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

1. The connecting-block A, constructed with the two eccentric grooves *a a'*, substantially as and for the purposes set forth.

2. The forked plates B B, with their forked ends curved toward each other, and their opposite extremity adapted to be fastened to the shafting, substantially as and for the purposes set forth.

JOSEPH F. EMMERT.

Witnesses:
D. B. RUSSELL,
OLIVER BESORE.