

No. 627,203.

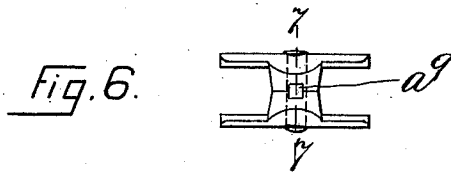
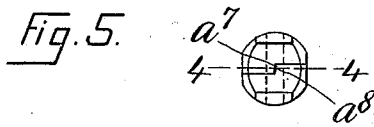
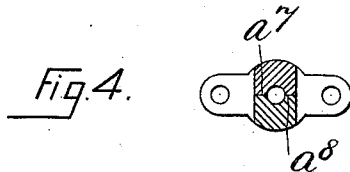
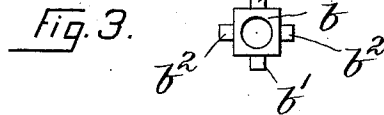
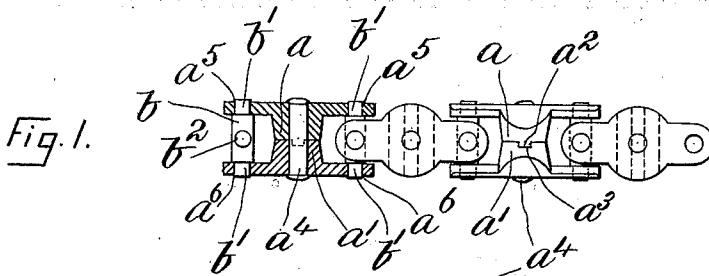
Patented June 20, 1899.

J. K. PRIEST.

CORE FOR FLEXIBLE SHAFTING.

(Application filed Mar. 11, 1899.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JOSEPH K. PRIEST, OF NASHUA, NEW HAMPSHIRE, ASSIGNOR TO THE
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CORE FOR FLEXIBLE SHAFTING.

SPECIFICATION forming part of Letters Patent No. 627,203, dated June 20, 1899.

Application filed March 11, 1899. Serial No. 703,641. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH K. PRIEST, of Nashua, in the county of Hillsborough and State of New Hampshire, have invented an Improved Core for Flexible Shafting, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation, partly in section, of a piece of my improved core. Fig. 2 is an end view of one of the links. Fig. 3 is an elevation of the gimbal-joint connection, and Figs. 4 to 7 show modified forms described below.

The object of my invention is to simplify the construction of flexible shafts and to make a shaft which is easily repaired when any one of its links may be broken, but which will not kink and is especially well adapted to stand torsional strains; and my invention resides, first, in the novel construction of the links, and, secondly, in the means by which the links are connected one to the other, as will now be more fully described.

The links which make up my improved core are composed of the parts $a a'$, one of which, a , is provided with the tongue a^2 and the other, a' , with the groove a^3 , into which the tongue fits when the parts are assembled, the parts $a a'$ being held together by rivet a^4 . The ends of the pieces $a a'$ are provided with bores $a^5 a^6$, which are adapted to receive one set of journals b' on gimbal-block b , which is provided with another set of journals b^2 , which are at right angles to journals b' and fit into bores in the next link. The links are assembled as shown in Fig. 1, each link being turned ninety degrees from the links on either side of it.

The first feature of my invention is the link made up of two parts, each consisting of a body portion with two ears, so that the link consists of two body portions and four ears, the two body portions interlocking to prevent one turning on the other and being held together by a rivet, which is put in place after the four ears have been put in place, each ear over its trunnions on two gimbal-blocks. The interlocking is for some reasons best made in the form of a tongue and groove, yet that is mainly a matter of choice, for a shoulder a^7

on one part may engage an opposed shoulder a^8 on the other part, as shown in Figs. 4 and 5, or a separate piece a^9 may occupy grooves formed in the meeting faces of the two body portions, as shown in Figs. 6 and 7. The essential matter is that each link shall be formed of two body portions and four ears so held together that neither portion can turn upon the other and by means which allow the two portions of each link to be secured together after the two portions are in place on the gimbal-blocks, the spaces between the ears at the ends of each link admitting the ears of the adjoining links.

The second feature of my invention is a block of metal with two pairs of trunnions, all in one piece, this doing away with an objectionable number of pieces, for in the best form of my chain each complete link consists of but five pieces—namely, the two main portions of the link, two gimbal-blocks, and a rivet, and the two gimbal-blocks of each link constitute portions of the two adjoining links.

What I claim as my invention is—

1. In a core for a flexible shaft a link made up of two parts, one provided with a tongue and the other provided with a groove for that tongue, and bores in the parts to receive the journals of a gimbal-joint substantially as described.

2. In a core for a flexible shaft made up of links a gimbal-joint connection between the links comprising a gimbal-block provided with two sets of journals at right angles to each other and adapted to fit into bores in the links substantially as described.

3. The core for a flexible shaft above described made up of links in two parts; a tongue on one of the parts; a groove on the other part; bores in each part; a gimbal-joint made up of a gimbal-block and two sets of journals at right angles to each other and adapted to fit into the bores, and rivets to hold the two parts of the links together, substantially as shown and described.

JOSEPH K. PRIEST.

In presence of—

GEO. B. FRENCH,
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