

No. 863,079

PATENTED AUG. 13, 1907.

G. J. MEYER.
CHAIN LINK.

APPLICATION FILED DEC. 26, 1905.

Fig. 1.

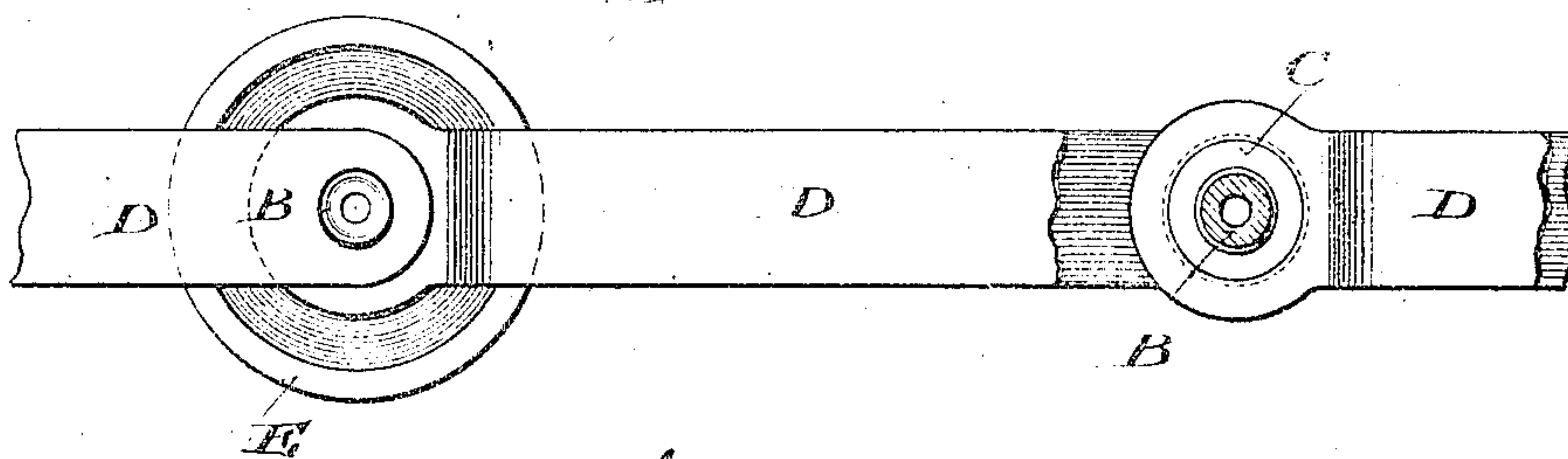


Fig. 2.

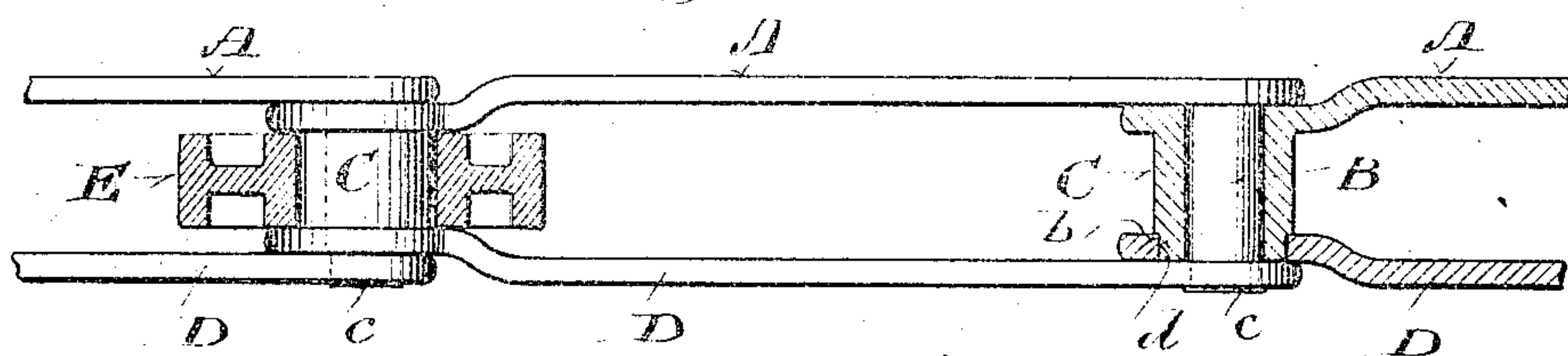


Fig. 3.

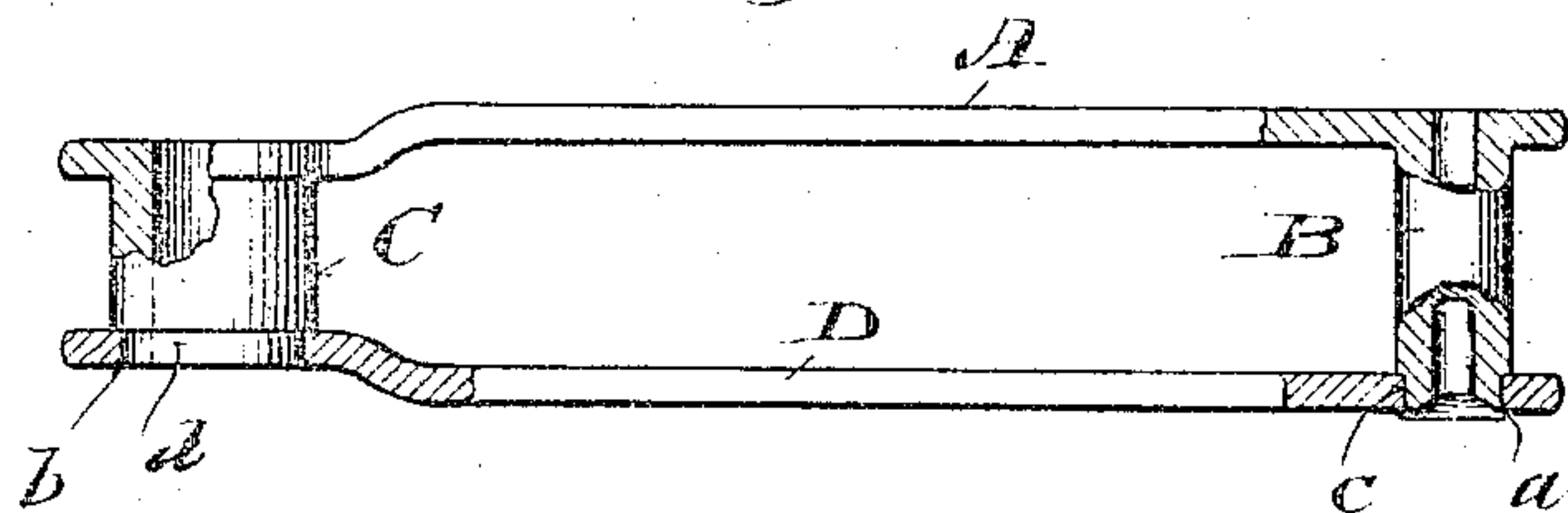


Fig. 4.

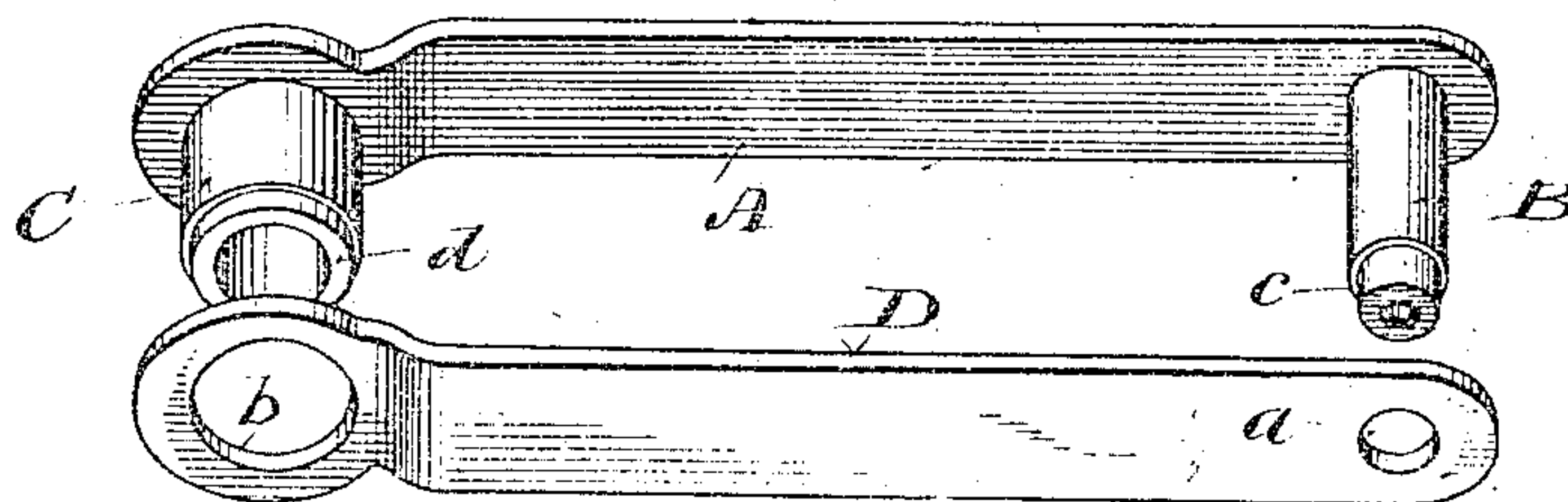
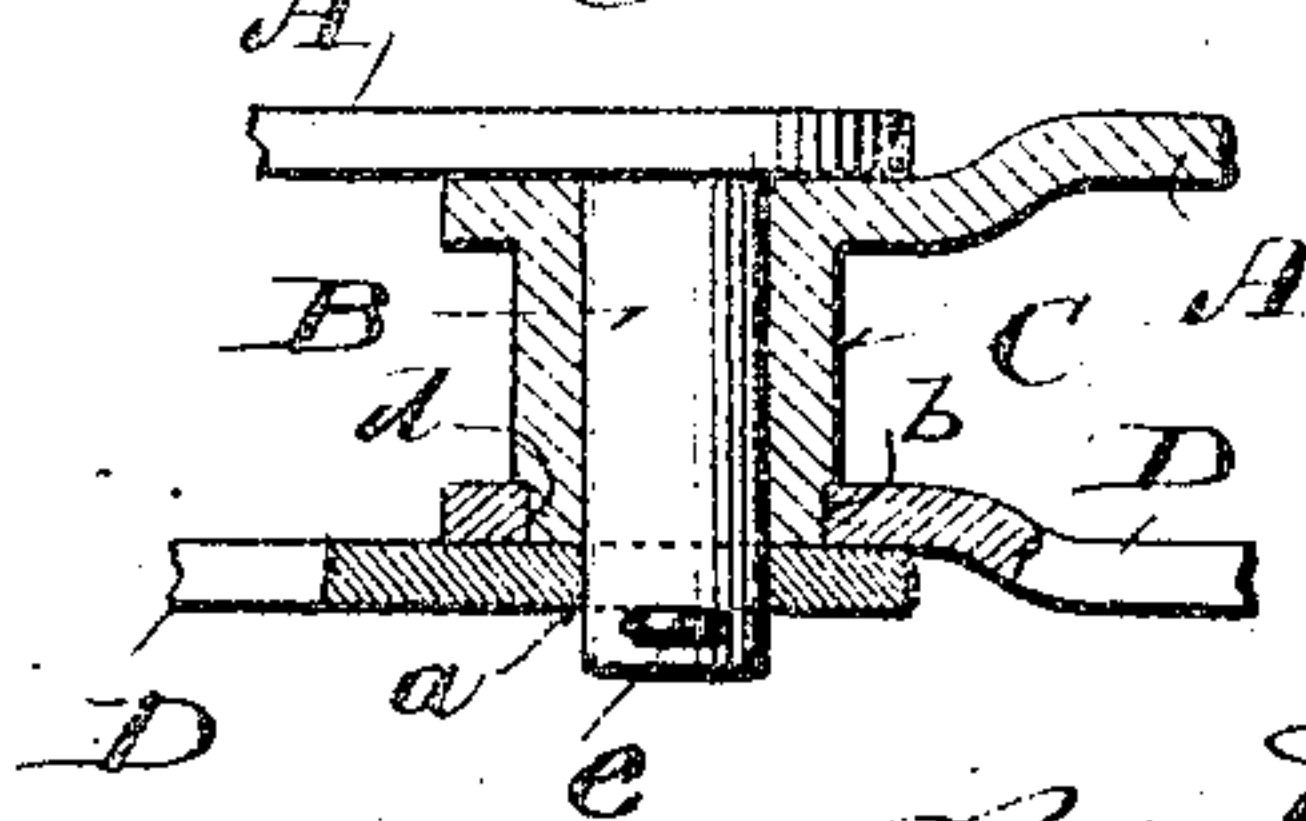


Fig. 5.



Witnesses:

Fred Palm.

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Inventor

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UNITED STATES PATENT OFFICE.

GEORGE J. MEYER, OF MILWAUKEE, WISCONSIN.

CHAIN-LINK.

No. 868,079.

Specification of Letters Patent.

Patented Aug. 13, 1907.

Application filed December 26, 1905. Serial No. 293,266.

To all whom it may concern:

Be it known that I, GEORGE J. MEYER, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Chain-Links; and I do hereby declare that the following is a full, clear, and exact description thereof.

The object of my invention is to provide a simple and economical link for drive-chains or the like, the component parts of which constitute two members so arranged as to reduce friction and wear to a minimum and thereby prevent stretching, which is common in the chain-links of the standard types, owing to the inequality of wearing-surfaces of the link members, the link being also particularly designed so as to provide for the application of anti-friction rollers thereto; said invention consists in certain peculiarities of construction and combination of parts as hereinafter set forth with reference to the accompanying drawings and subsequently claimed.

In the drawings: Figure 1 represents an elevation of a fragment of a chain embodying the various features of my invention, and one of the joints thereof, as shown, is equipped with an anti-friction roller, said view being also partly broken away and in section to better illustrate the details of construction; Fig. 2, a plan view of the same with parts broken away and parts in section to better illustrate the details; Fig. 3, a detail plan view partly in section, of one link assembled; Fig. 4, a perspective view of the separated members of a link, and Fig. 5, a detail section of another form of securing the jointed link-members together.

Referring by letter to the drawings, A indicates a strap-member, the ends of which are formed with integral right-angle male and female pintles B, C, the male pintle B of which, for convenience in casting and strength may be cored, while the female pintle C is cored to fit and receive the male pintle B of the adjacent strap A when the chain is assembled. Each strap A is provided with a retaining strap D which has openings a, b, at its ends arranged to fit over shouldered ends c, d, of the pintles B, C, respectively.

In assembling a chain of the above described members, the male pintle B of each successive strap A is fitted into the cored opening of the female pintle C of the preceding strap A. The retaining strap D is then fitted over the shoulder c of pintle B and shoulder d of pintle C, in which position said strap D is secured by upsetting the end of the shouldered portion c of male pintle B, as shown in the first three figures of the drawings. The other end of said strap is held in place upon the shouldered portion of the female pintle C by the succeeding retaining strap D, which overlaps the end of the first named strap and is secured by upsetting, as previously described. In place of confining the retaining straps D

by upsetting the ends of the shoulders c, in some instances, it is desirable to utilize a cotter-pin e, which as shown in Fig. 5, is pushed through an opening in the male pintle B, the latter being extended outward for this purpose, and by this construction the chain may be readily disconnected and assembled without the use of tools, or the same result may be obtained by passing a bolt through the cored opening of the male pintle, and fastening the bolt in place by a nut in threaded connection therewith.

As shown in Fig. 1 and 2 of the drawings, the construction of my link is such that the rollers E may readily be applied to the link-joint, if necessary, by utilizing the exterior circumference of the female stud C, upon which the rollers may be mounted.

In practice, it is usual to couple the link-members of a chain by loose pins or studs, which are prevented from turning in said links by suitable lugs or keys, such construction, owing to continuous oscillative strain upon the pins will, in time, cause looseness and consequent wear and stretch between the link couplings.

With my device the above mentioned defects are overcome by reason of the straps being formed with integral male and female pintles fitted one within the other and extending the entire width between the parallel strap members constitute a link, which construction causes all the oscillation to take place between the nested studs, which owing to their broad bearing surfaces, reduce the wear at the joints to a minimum, it being understood that the retaining straps, which are fitted over the link studs have absolutely no motion upon the latter.

From the foregoing description and especial reference to Fig. 5 of the drawings, it will readily be understood that link-members carrying the integral male and female pintles are telescopically jointed so that they nest one within the other, and thereby form bearings the full width between the parallel straps in contradistinction to joints of chain-links having loose pintles or parallel straps, wherein the bearings of said straps are of unequal width.

I claim:

1. A drive-chain composed of a succession of straps, having alternate male and female pintles, the male pintle of one strap being arranged to receive the female pintle of the next strap, and retaining straps arranged to fit over said male and female pintles, whereby the latter are held in link-connection.
2. A drive-chain composed of a series of straps, having alternate male and female pintles, the male pintle of one strap being arranged to fit the female pintles of the next strap, anti-friction rollers mounted upon the female pintles, and means for holding said rollers in position thereon.
3. A chain having a series of joints each comprising a strap provided with an integral female pintle, a strap provided with an integral male pintle fitted into the female

pintle of the first named strap, other straps fitted over the male and female pintles forming parallel members in connection with the straps aforesaid, and a fastening device for the straps in connection with the male pintle.

- 5 4. A chain having a series of joints, each comprising a strap provided with an integral female pintle, a roller mounted upon the pintle, a strap provided with an integral male pintle in engagement with the female pintle of the first named strap, other straps having apertured ends fitted
10 over the female and male pintles of the first named straps,

and means in conjunction with the male pintle for securing the assembled strap.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee in the county of Milwaukee and State of Wisconsin in the presence of two witnesses.

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GEORGE J. MEYER.

Witnesses:

GEO. W. YOUNG,
FRED PALM.