

(Model.)

D. J. SHELDRICH.

DRIVE CHAIN.

No. 377,121.

Patented Jan. 31, 1888.

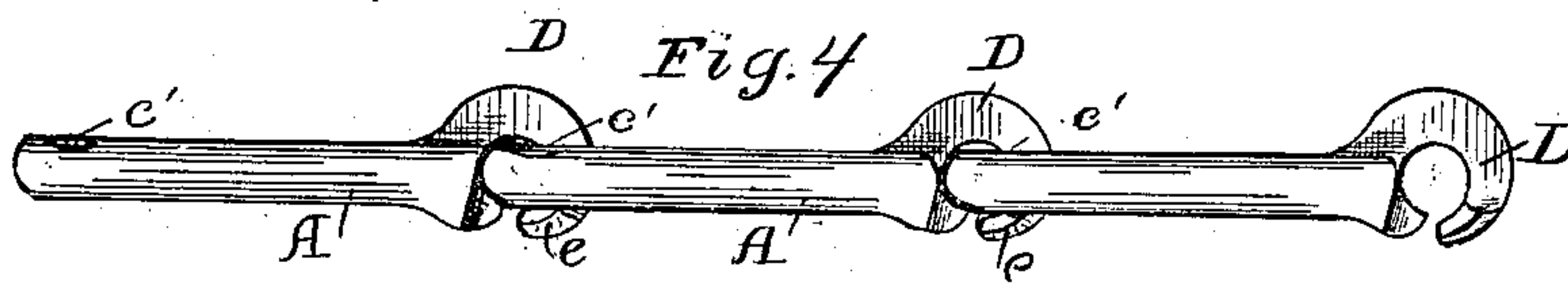
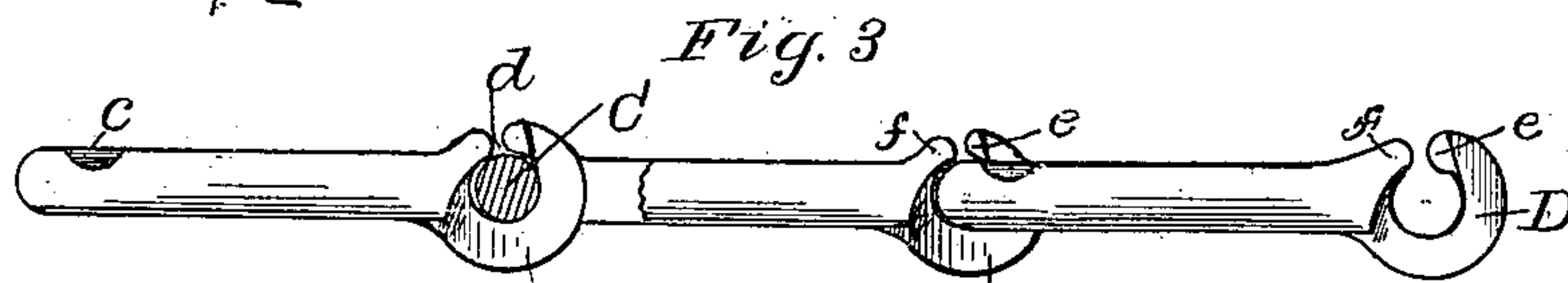
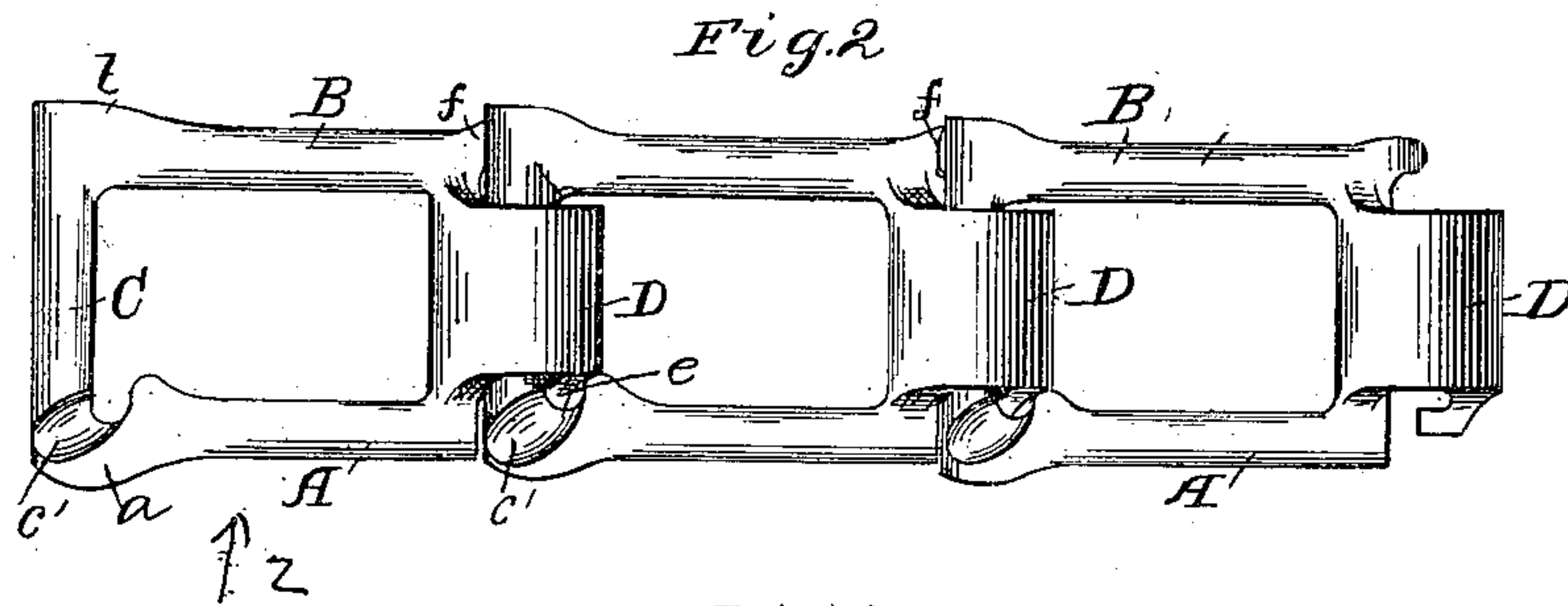
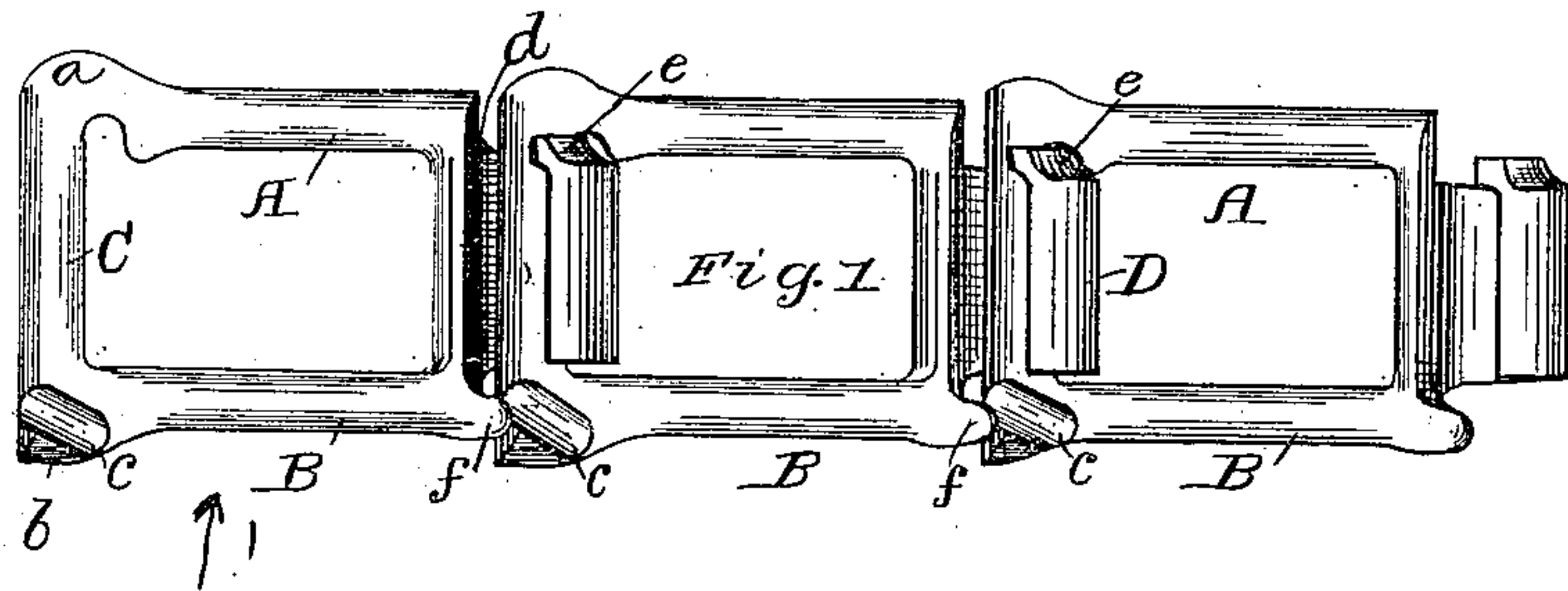


Fig. 5

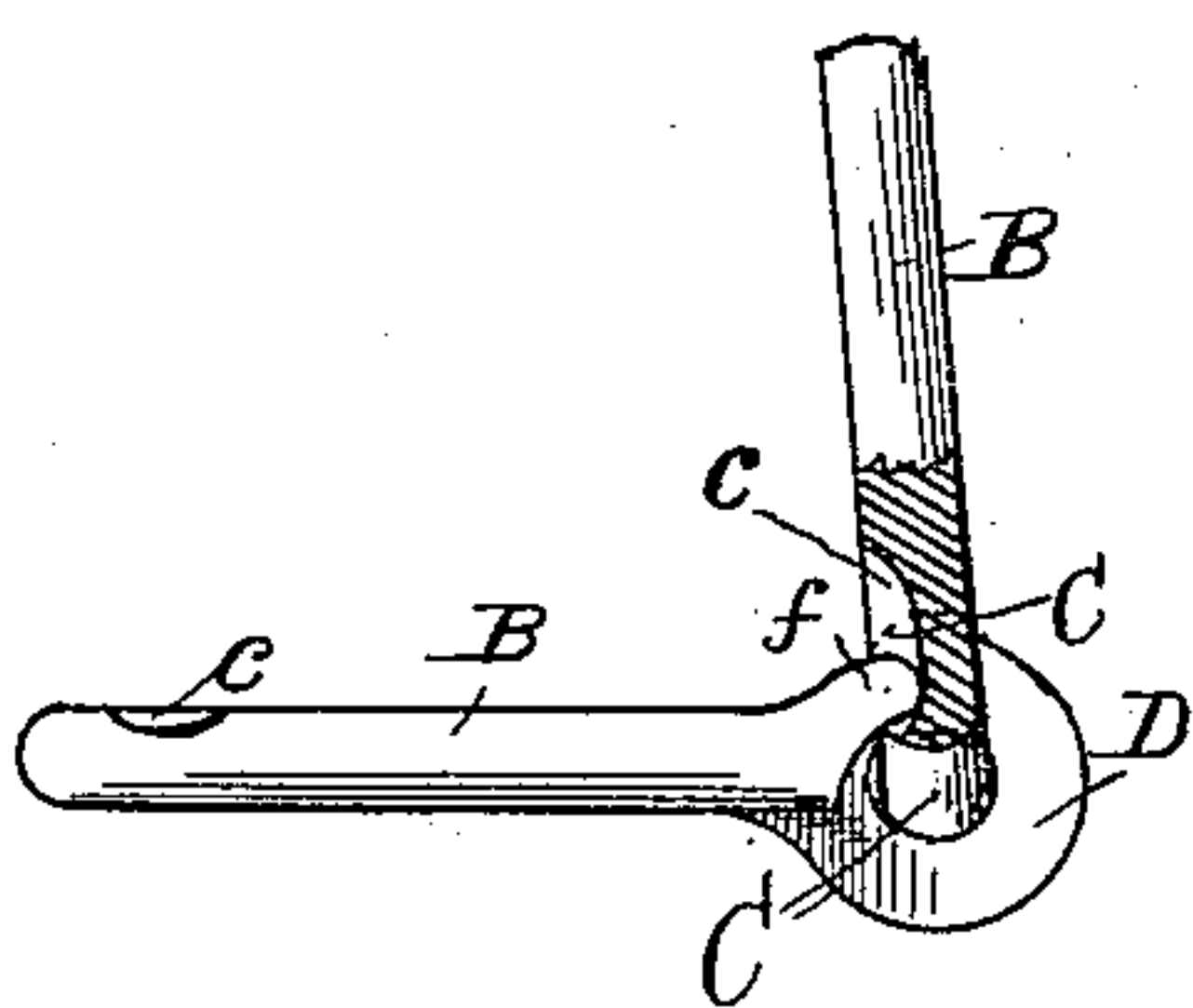


Fig. 6

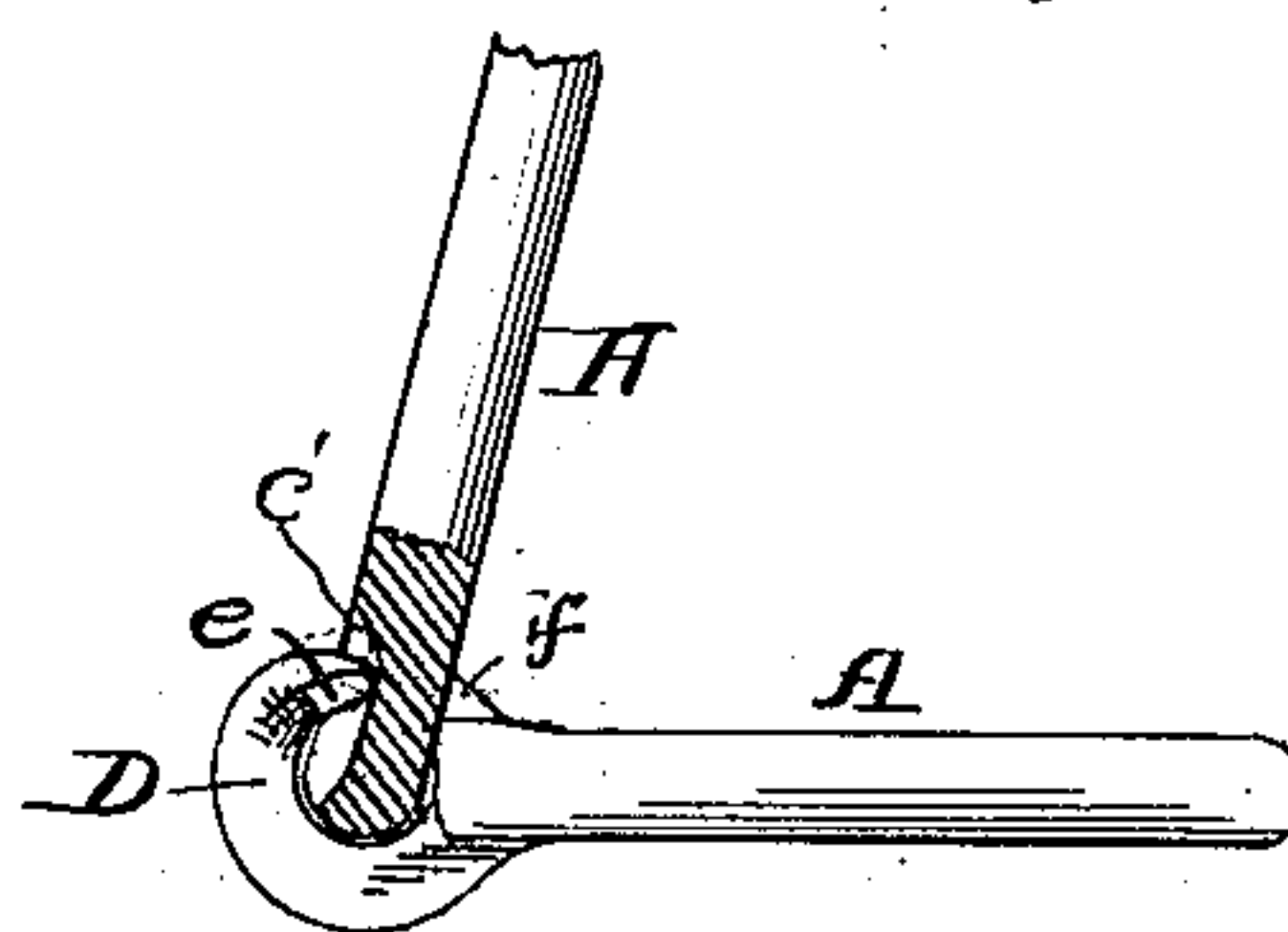
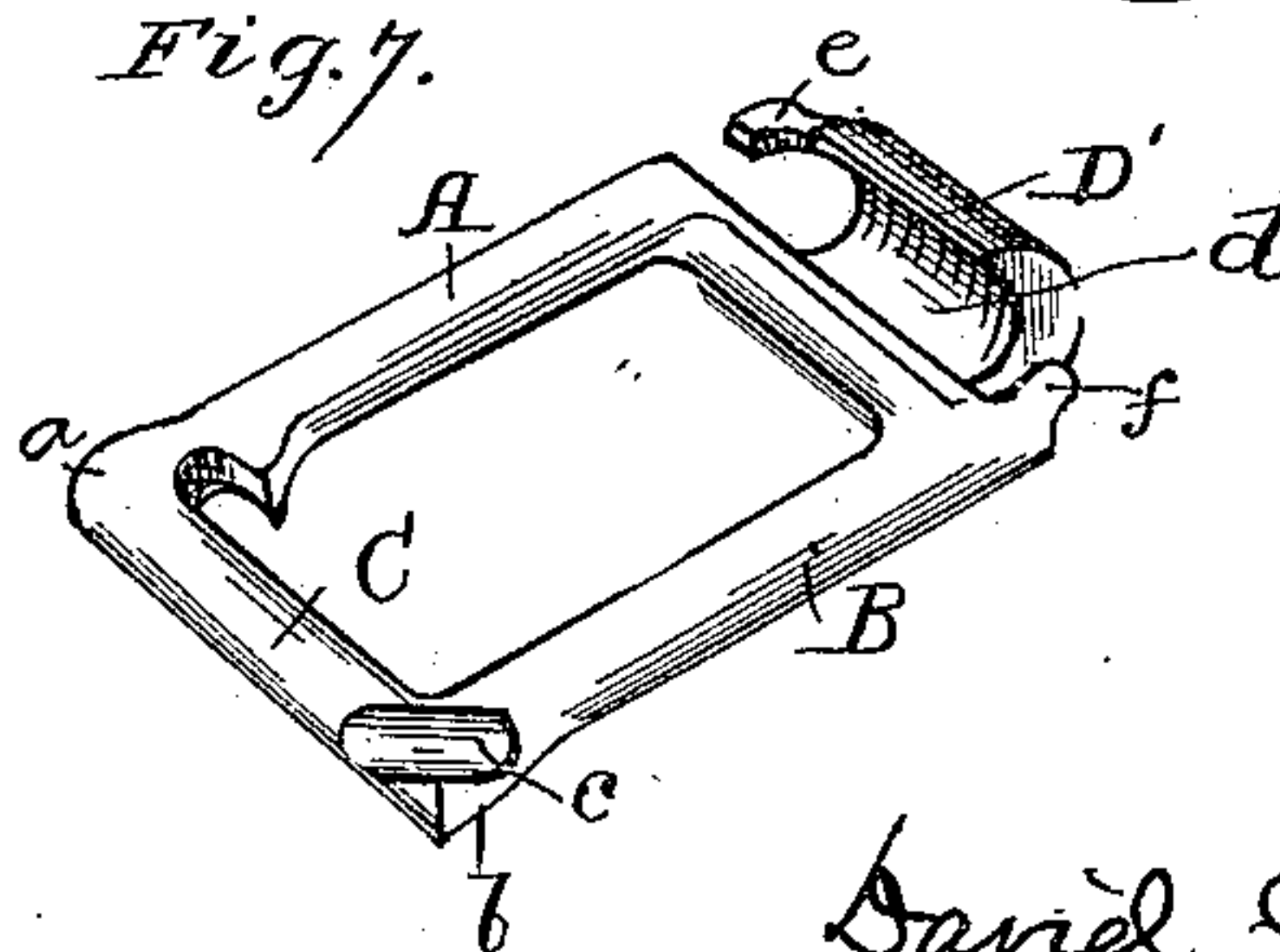


Fig. 7



Witnesses:
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UNITED STATES PATENT OFFICE.

DAVID J. SHELDRIK, OF COLUMBUS, OHIO.

DRIVE-CHAIN.

SPECIFICATION forming part of Letters Patent No. 377,121, dated January 31, 1888.

Application filed March 10, 1887. Serial No. 230,333. (Model.)

To all whom it may concern:

Be it known that I, DAVID J. SHELDRIK, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Drive-Chains, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a top or plan view of my improved chain. Fig. 2 is a bottom view. Fig. 3 is an edge view of Fig. 1, looking in the direction of the arrow 1, Fig. 1, partly broken away. Fig. 4 is an edge view of Fig. 2, looking in the direction of the arrow 2, Fig. 2. Fig. 5 is an edge view, partly broken away, of two links in position for coupling. Fig. 6 is a similar view, partly broken away, taken from the opposite side of the links shown in Fig. 5. Fig. 7 is a detached view, in perspective, of one of the links.

The object of my invention is to produce a cheap, economical drive-chain, the links of which can be permanently kept together, making the chain non-detachable, while at the same time they can be easily separated by slightly bending some of the parts.

Like reference-letters indicate like parts in all the figures.

Each link is a duplicate of each of the others, and therefore I will first describe one of them.

A *a* is one of the side bars, preferably round in cross-section, except that near one end it has a projection or abutment, *a*, for the purpose to be explained.

B *b* is the opposite side bar, also round in cross-section, and of substantially uniform diameter throughout, except at one end, where it is expanded, as at *b*.

C is the end bar.

c c' are grooves or recesses formed at the intersections of the side bars and the end bars, the recess *c* being upon the upper side of the link—that is to say, upon the side which has the throat of the hook.

It will be noticed that both side bars are expanded laterally at the junctions of the end bar, in order that the reduction in material due to the grooves *c c'* may not unduly weaken the link at those points.

D D' are respectively the base and lip of the hook, the throat *d* of which is of a width equal to the diameter of the end bar in cross-

section, so that the links would readily couple or uncouple in any ordinary position, either straightened out for work or at right angles to each other, were it not for the presence of one or more locking-spurs. These spurs are marked *e f*, the spur *e* projecting from the corner of the lip of the hook, preferably both forward—that is to say, toward the base of the hook—and outward, as plainly shown in Fig. 1. The spur *f* projects from the end of the side bar B *b*. The shape of the link is such that it can be conveniently cast in sand by any of the well-known processes which are commonly used among molders. These links can be united to form a chain by placing them in about the position indicated in Fig. 5, in which one end of the end bar has been thrust into one end of the hook, the lip *e* having passed through the groove or recess *c'*, after which the coupling may be completed by thrusting the remainder of the end bar into the hook, the spur *f* passing through the recess or groove *c*.

By an examination of Fig. 1 it will be readily understood that when the links are straightened out into working position they are incapable of separation, because, first, of the fact that the spur *e* overlaps the adjacent part of the end bar, and, secondly, the spur *f* also overlaps the adjacent portion of the end bar. When thus straightened out, the overlapping lips or spurs *e f* also serve to keep the links in place, and thus insure the proper running of the chain over the wheels with which it engages, and also prevent the undue wear of the articulations to which they would be liable if there was only one spur at one side of each link. By forming one spur, *e*, upon the lip of the hook and the other spur, *f*, upon the end bar at the opposite side of the link, I am able to make the grooves *c c'* upon opposite sides of the link wholly at the corners or intersections of the side bars with the end bar, thus preserving the cylindrical form of the end bar in cross-section throughout its entire length, thus insuring a much better and more durable articulation than could be obtained in case the spurs both projected from the lip of the hook, in which case one of the diagonal grooves or recesses would have to be formed in that part of the end bar which engages directly with its seat in the hook. It will also be seen that when the links are turned at right angles to each other

they are not liable to accidental separation, because of the fact that the uncoupling requires a peculiar diagonal movement of each of the spurs through its corresponding groove or recess, such movement being of a character which is not liable to result from any action or operation to which the chain will ordinarily be subjected when in use, except when the links are manipulated by hand for the express purpose of uncoupling. In fact, by bending down the spurs slightly, after the links are coupled, it will become practically impossible to uncouple them without first bending the spurs backward a little into about the positions in which they are shown in the drawings.

What I claim is—

A detachable drive-chain link having a spur, *e*, projecting from the lip of the hook, the spur *f*, projecting in the opposite direction from the end of the side bar at the opposite side of the link, and the diagonal grooves or recesses *c c'* upon opposite sides of the link and in the opposite corners of the link, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID J. SHELDRIK.

Witnesses:

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