

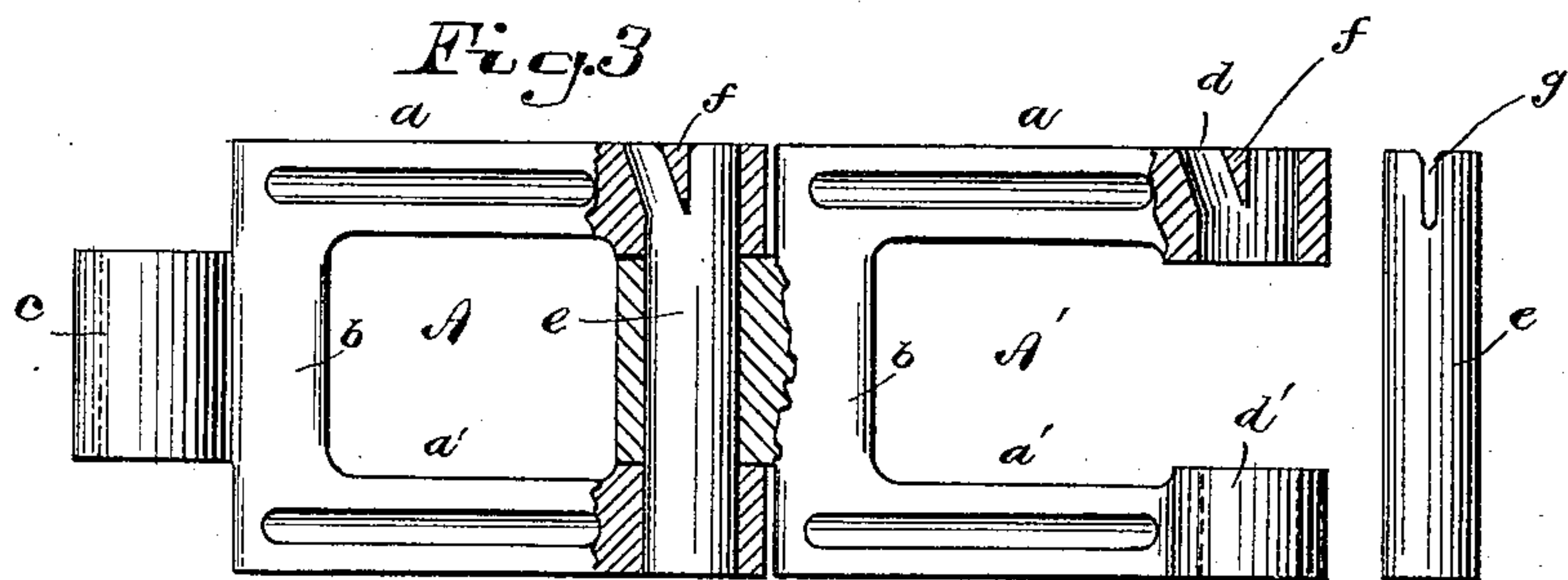
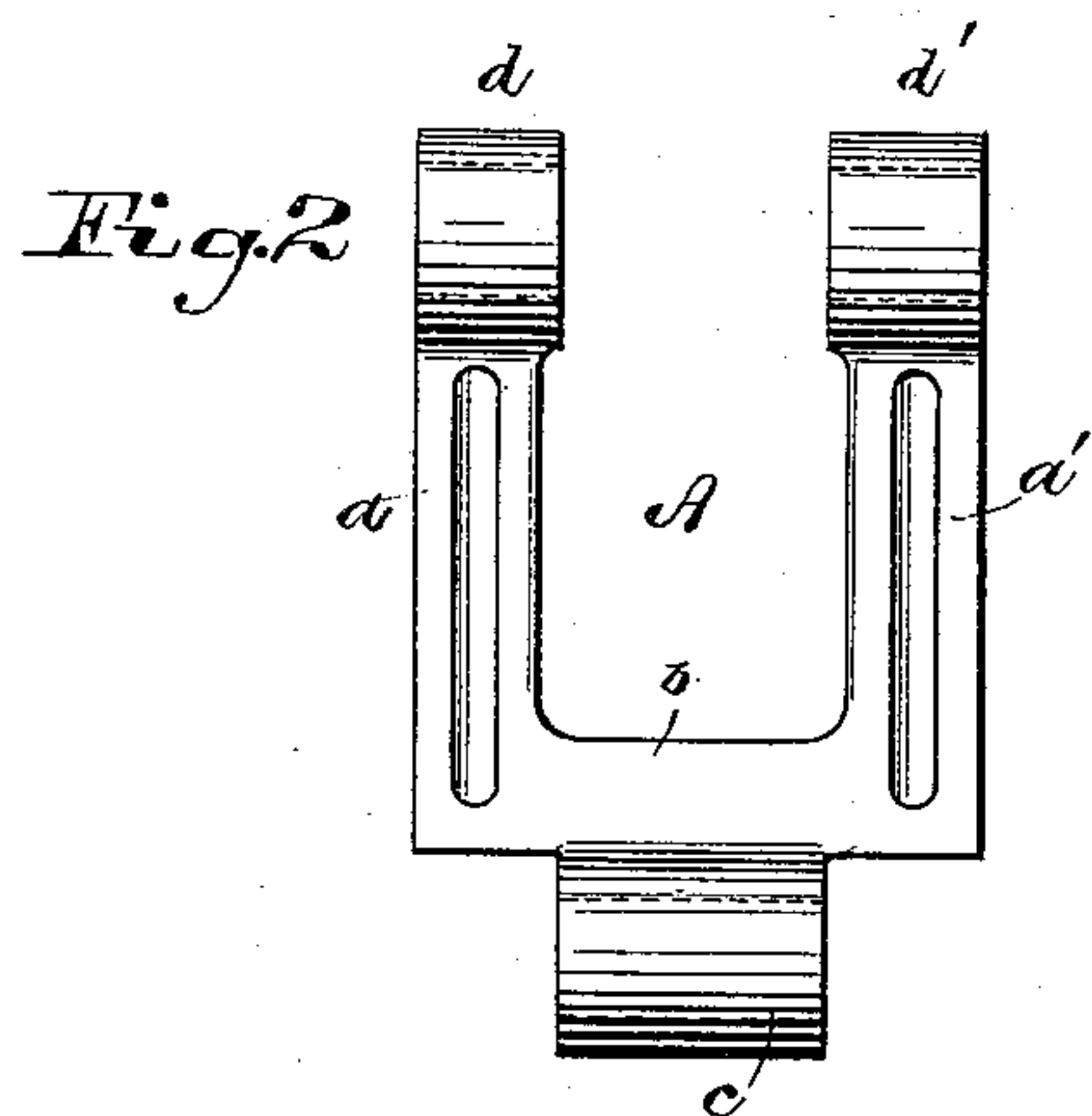
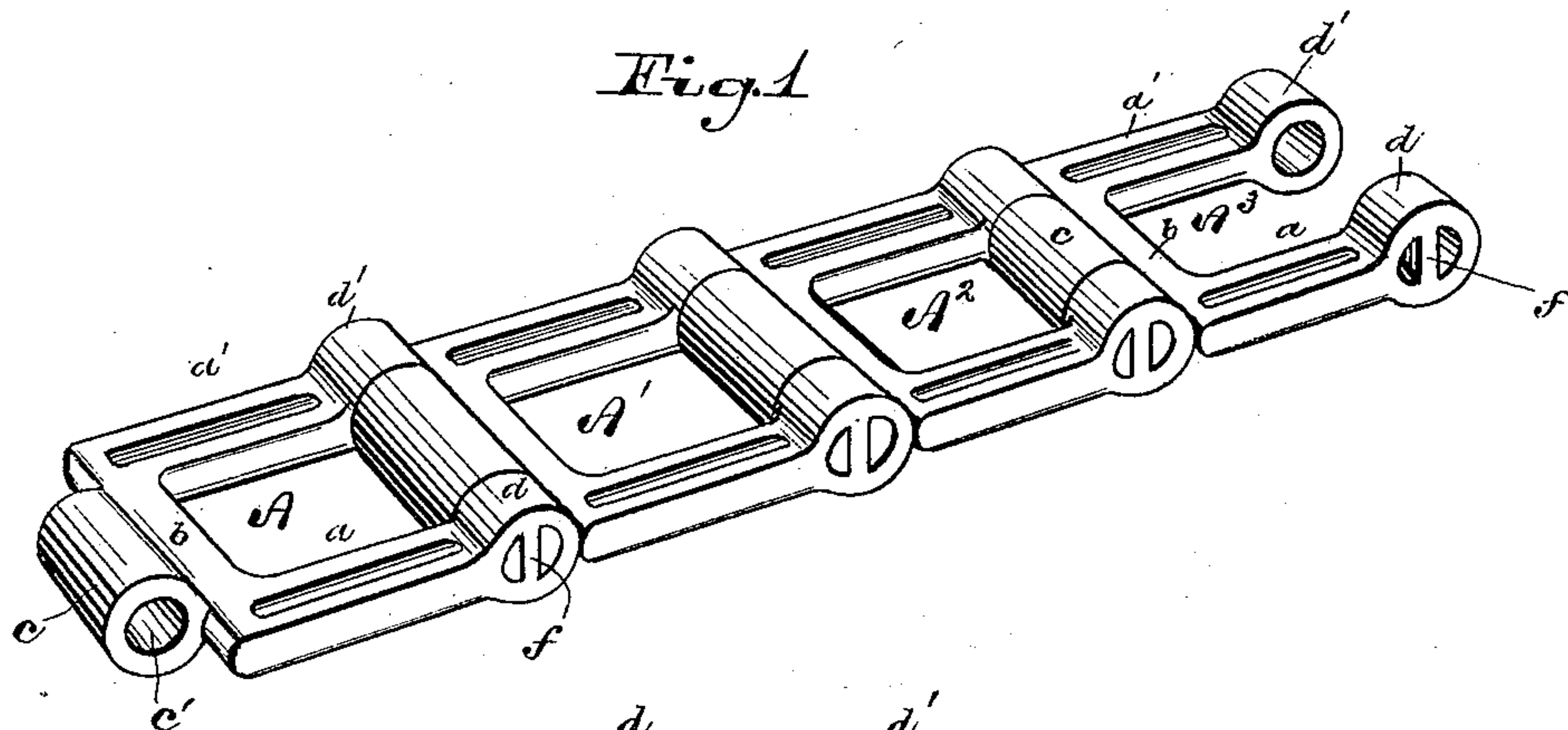
(No Model.)

R. F. LUDLOW.

DRIVE CHAIN.

No. 326,307.

Patented Sept. 15, 1885.



Attest

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UNITED STATES PATENT OFFICE.

RODNEY F. LUDLOW, OF SPRINGFIELD, OHIO.

DRIVE-CHAIN.

SPECIFICATION forming part of Letters Patent No. 326,307, dated September 15, 1885.

Application filed December 29, 1884. (No model.)

To all whom it may concern:

Be it known that I, RODNEY F. LUDLOW, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented a certain new and useful Improvement in Drive-Chains, of which the following is a specification.

My invention relates to that class of drive-chains which are composed of separable links adapted to be joined one to the other in such a manner as to be readily disconnected or connected together for the purpose of shortening or adding to the length of the chain, as desired.

My invention consists in the constructions and combinations hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view showing several links connected together to form a chain embodying my invention. Fig. 2 is a plan view of one of the links detached. Fig. 3 is a plan view of two connected links, shown partly in section, and showing one of the connecting-pins removed.

In the said drawings, A A', &c., represent, respectively, the different links of the chain. Each link A is constructed with two parallel side pieces, *a a'*, the transverse section of which may be of any suitable shape, said side pieces being connected together at one end by an end bar, *b*, which stands at right angles to said side pieces. On this end bar, *b*, is cast a tubular boss or sleeve, *c*, provided with a circular opening, *c'*, extending longitudinally through the center thereof. This tubular boss *c* is made of a length corresponding to the distance between the inner faces of the parallel side pieces, *a a'*, at their outer or free ends, the said side pieces being enlarged at their outer ends into circular bosses *d d'*, corresponding in diameter to the sleeve or tubular boss *c*. These circular bosses *d d'* are each provided with a central longitudinal opening corresponding with the opening through the said sleeve *c*. The ends of the parallel side pieces, *a a'*, of one link are thus adapted to be connected to the circular boss or sleeve *c* of the next link, in the ordinary manner, by means of a connecting-pin, *e*, said pin being adapted to extend through the longitudinal opening in the respective bosses *c* and *d d'*.

Now, in order that the connecting-pins may be held against accidental longitudinal movement through the bosses or sleeves on the respective links, and yet be capable of being readily removed when desired, I provide in one of the circular bosses *d* of each link a wedge-shaped web or rib, *f*, and in the corresponding end of the pin *e*, I also provide a longitudinal slot or groove, *g*. The sides of the opening through the said boss *d* which are opposite to the tapered or inclined side or sides of the rib *f*, I make of the same taper as the said rib. When inserting the pin *e* through the sleeves or bosses of the respective links, the slot *g* in said pin is placed over the edge of the wedge-shaped rib, and by a quick blow the pin is forced into position. It will be seen that as the pin is forced into the boss *d* the end of the pin will be spread into the tapered end of the opening in the said boss, and will thus be held against an accidental longitudinal movement. The pin may, however, be readily removed by a quick blow applied to the split end thereof through the medium of a set punch or drift, the expanded end of the pin being compressed to its normal condition as it is withdrawn.

In order to facilitate the removal of the pin *e*, I preferably place the wedge-shaped web *f* a little on one side of the center of the boss *d*, and leave one side of said web straight, the taper thereof being formed all on one side, as shown. By this construction the pin will be spread in one direction only. One side of the pin would thus be left perfectly straight, and in driving out the pin the drift would be preferably placed against the straight side.

The pins I prefer to make of steel, and the other portions of the chain of malleable iron, although it is obvious that any suitable material may be used.

It will be seen from the above description that I am enabled to make a chain which may readily be connected or disconnected at any point without regard to the relative positions of the links.

I claim as my invention—

1. The combination, with the links of a chain having intermeshing tubular bosses or sleeves, one of said bosses being provided with a wedge-shaped rib extending across the opening therein, and a correspondingly-tapered

opening, of a connecting-pin provided at one end with a slot and adapted to be spread into said tapered opening by said wedge-shaped rib, substantially as set forth.

- 5 2. In a chain-link, the combination, with the circular boss *d*, having a tapered opening therein and wedge-shaped rib *f* extending across said opening, of a pin, *e*, having slot *g*, substantially as specified.
- o 3. The combination, with a pin provided at one end with a slot therein, and adapted to connect the intermeshing links of a chain, of a tapered or wedge-shaped rib extending across

the opening in one of said links, and adapted to spread the end of said pin in the said opening, which is correspondingly tapered, said rib and opening being respectively tapered on one side only, substantially as and for the purpose set forth. 15

In testimony whereof I have hereunto set 20 my hand this 17th day of December, A. D. 1884.

RODNEY F. LUDLOW.

Witnesses:

PAUL A. STALEY,
A. N. SUMMERS.