

(Model.)

R. F. LUDLOW.

DRIVE CHAIN.

No. 302,574.

Patented July 29, 1884.

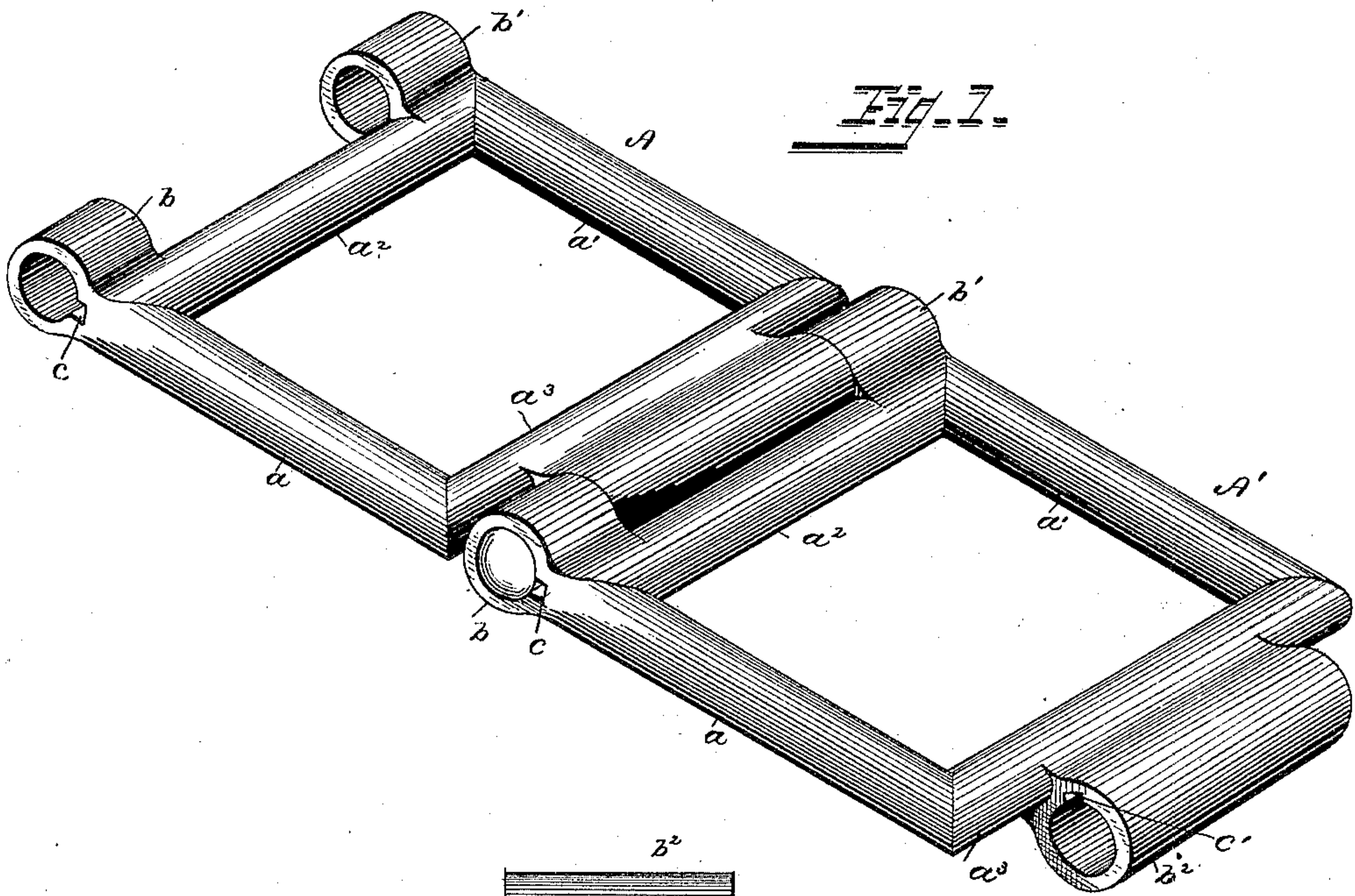
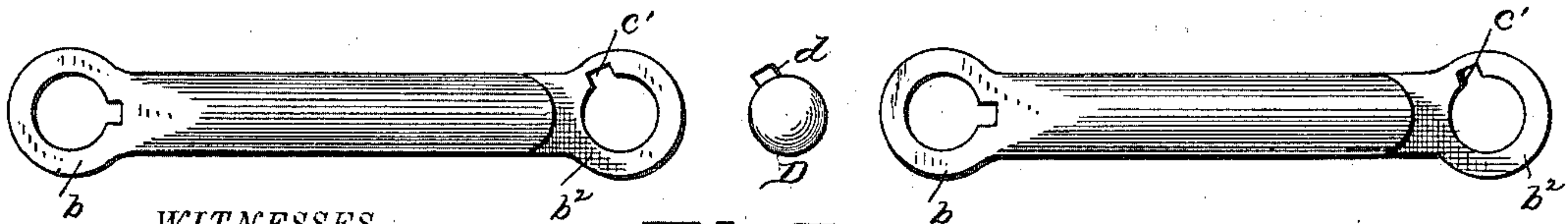
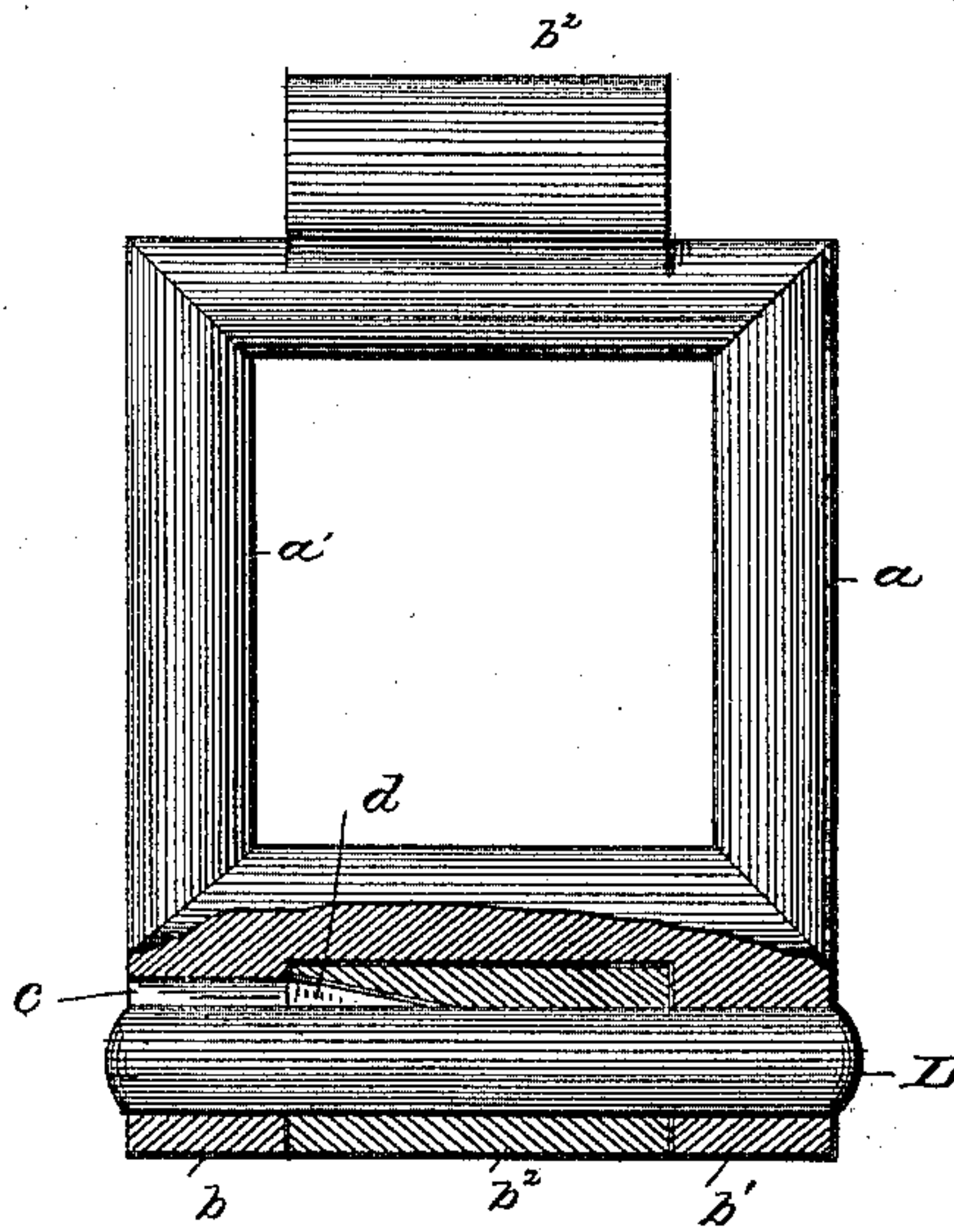


Fig. 2.



WITNESSES
Frank L. Ourand
Rex Smith.

Fig. 3.

INVENTOR
Rodney F. Ludlow.
By A. M. Smith
Attorney

UNITED STATES PATENT OFFICE.

RODNEY F. LUDLOW, OF SPRINGFIELD, OHIO.

DRIVE-CHAIN.

SPECIFICATION forming part of Letters Patent No. 302,574, dated July 29, 1884.

Application filed September 27, 1883. (Model.)

To all whom it may concern:

Be it known that I, RODNEY F. LUDLOW, of Springfield, county of Clark, and State of Ohio, have invented a new and useful Improvement in Drive-Chains, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to that class of drive-chains in which the links are adapted to be readily connected and disconnected, or removed and replaced, or added to for shortening or lengthening the chain, as required, while at the same time any liability of their becoming accidentally detached or disconnected when in use is obviated; and it consists in the combination, with open links provided with interlapping perforated lugs or bosses having suitable grooves and sockets, of a connecting-pin provided with a radial spur or pin adapted, when the links are turned into a certain angle of relation to each other, to be passed through a groove in the ear of one of the links and into a socket in the interlapping ear or boss of the adjoining link, whereby it is made to engage with said boss, causing the pin to be rocked with it as the links are thrown out into operative position, thereby moving the spur away from the entering-groove and preventing accidental displacement of the pin, as hereinafter explained.

In the accompanying drawings, Figure 1 represents in perspective two of the links of my improved drive-chain. Fig. 2 represents the same turned into position for connecting or disconnecting the links, showing the interlapping ears in section and the connecting-pin in elevation; and Fig. 3 is a side elevation of the links and the connecting-pin detached.

A and A' represent two of my improved links, which are of open rectangular form, similar in general outline or configuration to the open links of the driving-chains in common use, a a' representing the side bars, and a^2 a^3 the end bars, of said links, said bars being of the rounded form indicated or made in any usual or preferred form. The end bars, a^2 , are provided each with two perforated ears, b and b' , arranged at or near its ends, and by preference crossing the plane of the side bars,

a and a' , extended, as shown, and the end bars, a^3 , are provided each with a perforated ear or tubular boss, b^2 , arranged centrally of the length of said bar a^3 , and of a width from side to side just sufficient to adapt it to fit snugly between the ears b and b' , as shown. One of the outer ears, b , has the wall of the perforation through it grooved at c , said groove, by preference, being in the side adjacent to the end bar of the link, where the ear connects with the link and there is the greatest weight of metal, said groove extending through the ear b from side to side. The interlapping boss b^2 is provided upon one side with a partial groove or socket, c' , opening into the perforation in said ear, and by preference wedge-shaped, conforming to the shape of a radial spur or wedge-shaped feather, d , formed on one side of a connecting-pin, D, said form serving to firmly hold the pin coupled to boss b^2 without undue weakening or cutting away of the latter to accommodate it; but other forms of spur and socket may be employed, if desired. This spur or feather d is sufficiently far from one end of the pin D to adapt it to be passed entirely through the groove c in the ear b into the socket c' in the ear b^2 in such manner as to free it from the ear b , and to cause it to engage the pin with the boss b^2 . By forming the groove c and socket c' at an angle one with the other, as shown in Fig. 3, the links will necessarily have to be turned to an angle of relation one to the other more acute than they assume when in use, and by preference less than a right angle, as shown, in order to permit the spur d to pass from the groove c into the socket c' , and after it has entered said socket and escaped from the groove c , by turning the links outward into operative position the spur causes the pin to be rocked with the boss b^2 , thereby carrying the spur away from the entering groove c and preventing the withdrawal or escape of the pin. The pin is thus made to serve as a fixed pivot fast in the boss b^2 , and upon which the ears b and b' turn in adapting the links to conform to the path of movement of the chain. If desired, both of the ears b and b' may be grooved, and the boss b^2 may have sockets formed in either or both of its ends, adapting the pin to be entered

from either side; but the construction described and shown is preferred, as it involves the least possible cutting away of metal and consequent weakening of the links.

5 Having now described my invention, I claim as new, viz:

10 1. A rectangular drive-chain link, the side and end bars of which are of substantially uniform size, said link being provided upon one of its end bars with perforated ears, one of which has the wall of its perforation grooved longitudinally, the opposite end bar of said link being provided with a tubular boss formed thereon, and having a retaining tapered socket
15 formed in it for the reception and retention of a bolt or pin provided with a tapered radial spur, all substantially as described.

2. In a drive-chain, the open rectangular links having side and end bars of substantially

uniform size, and provided each upon one of its end bars with perforated ears b b' , one of said ears having the wall of its perforation grooved, and upon its other end bar with a perforated boss, b^2 , formed thereon and provided with a retaining-socket, c' , in combination with a detachable and separate connecting-pin provided with a radial rib or spur adapted to pass through the grooved ear b and into the retaining-socket c' in the boss of the adjacent link for connecting said links, substantially as described. 20 25 30

In testimony whereof I have hereunto set my hand this 25th day of September, A. D. 1883.

RODNEY F. LUDLOW.

Witnesses:

AUGUSTUS N. SUMMERS,
JNO. T. RICKS.