

(No Model.)

W. H. BUTTERWORTH & J. BUTTERWORTH, Jr.

LINK FOR HORSE POWER CHAINS.

No. 372,252.

Patented Oct. 25, 1887.

FIG. 2.

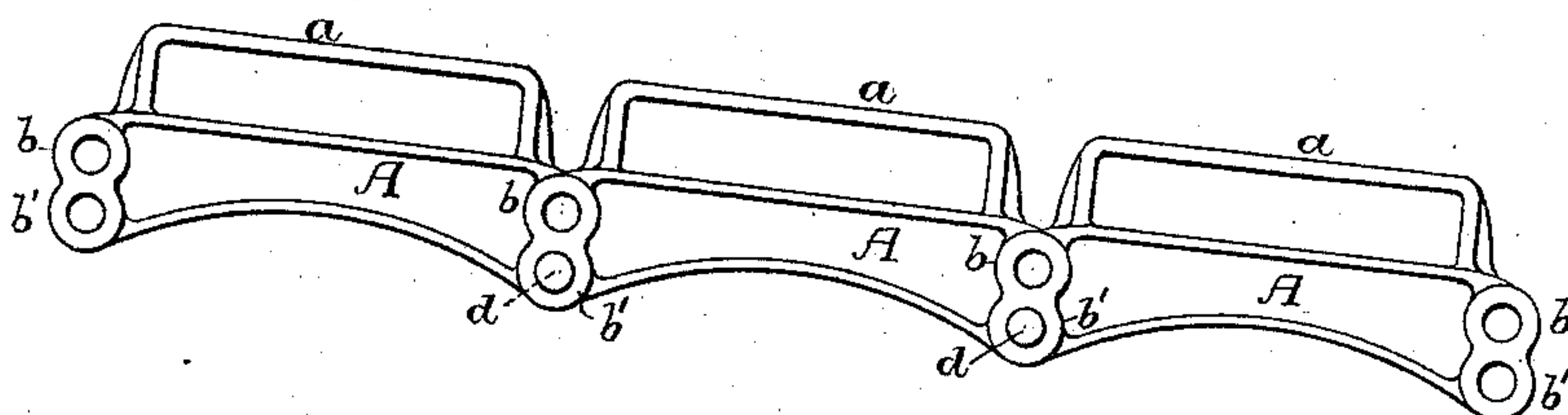


FIG. 3.

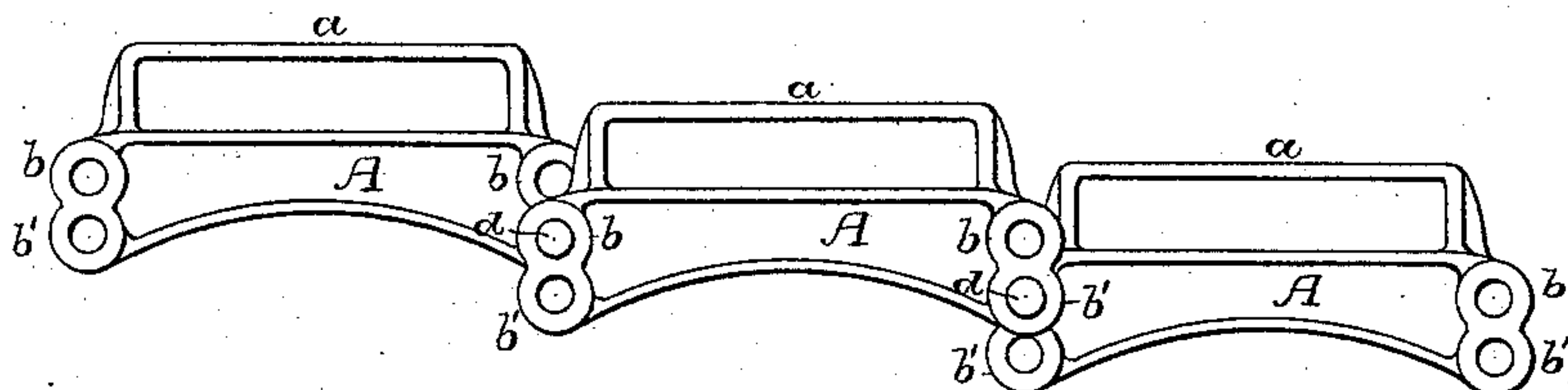


FIG. 4.

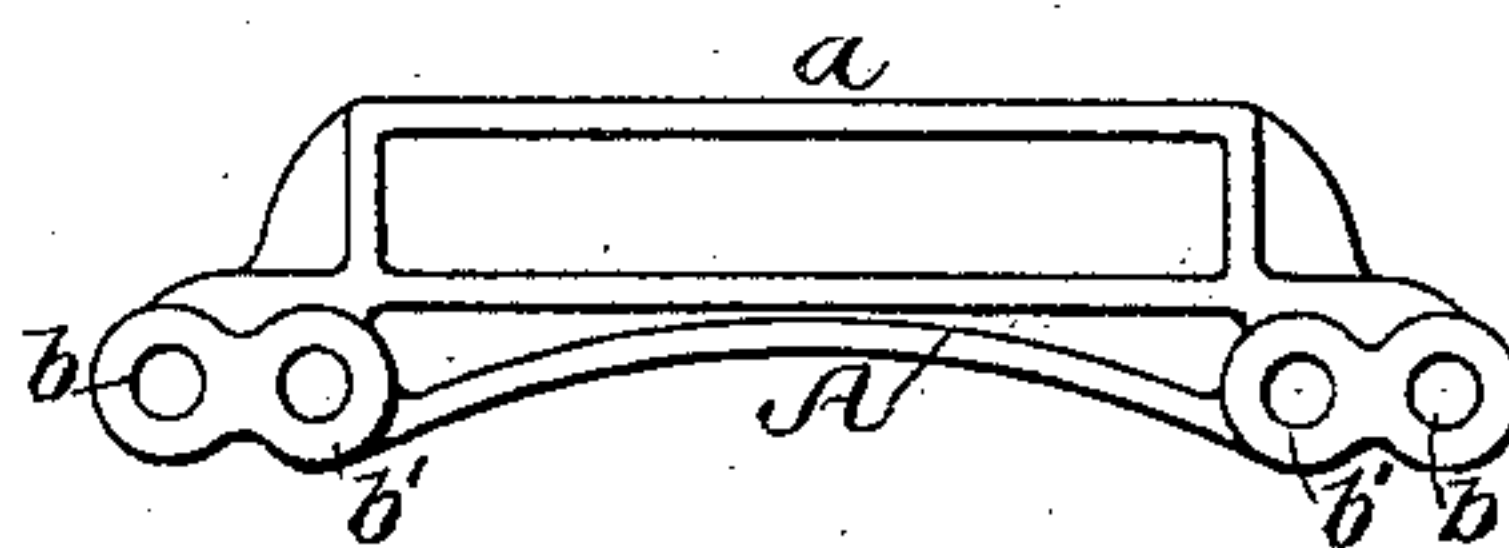


FIG. 1.

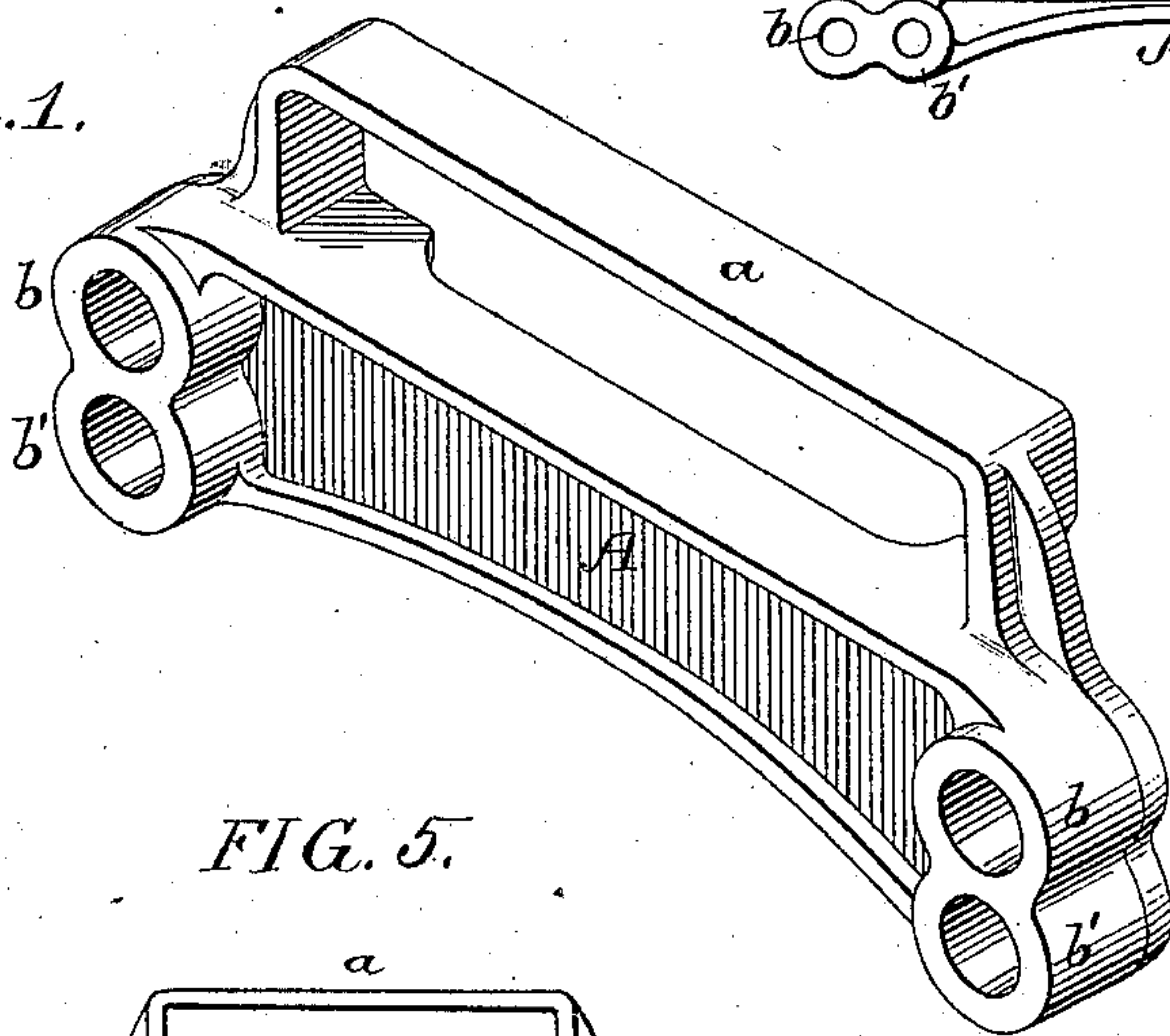
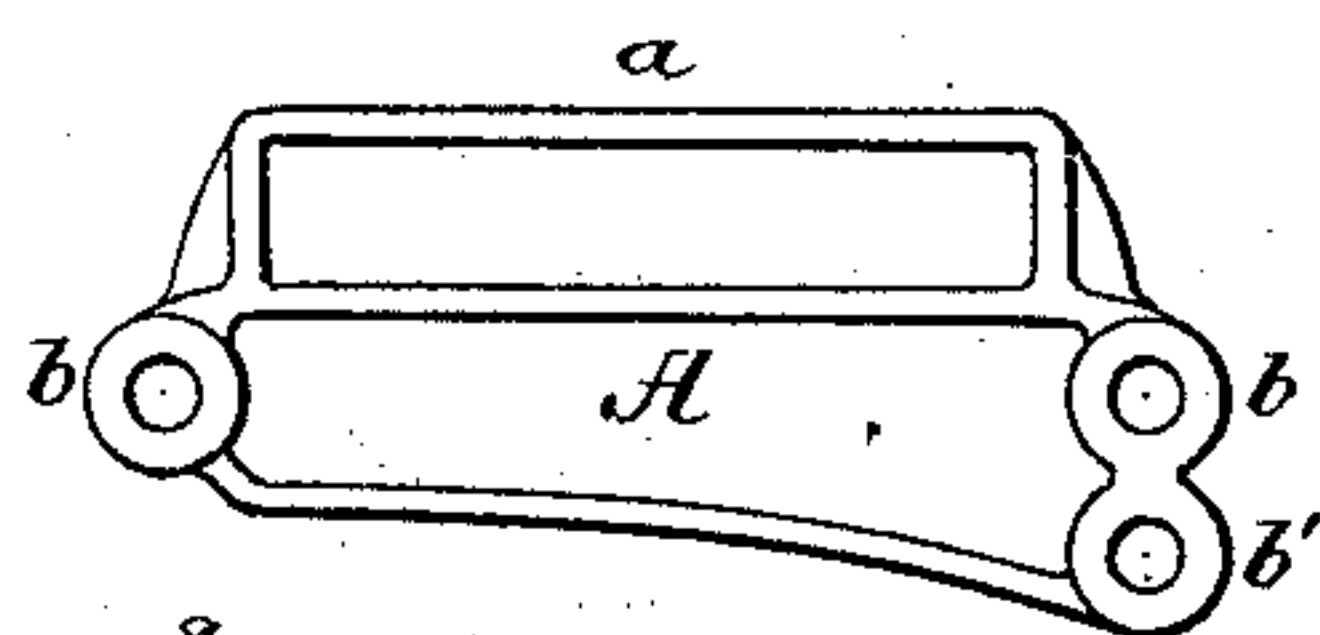


FIG. 5.



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# UNITED STATES PATENT OFFICE.

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## LINK FOR HORSE-POWER CHAINS.

SPECIFICATION forming part of Letters Patent No. 372,252, dated October 25, 1887.

Application filed March 21, 1887. Serial No. 231,727. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM H. BUTTERWORTH and JOHN BUTTERWORTH, Jr., both citizens of the United States, and residents of Trenton, Mercer county, New Jersey, have invented certain Improvements in Links for Horse-Power Chains, of which the following is a specification.

One object of our invention is to so construct the links of chains for carrying the treads of a horse-power that said links will be serviceable for a longer time than usual, a further object being to provide for coupling the links, so as to form either an inclined tread or a level tread, as may be desired.

In the accompanying drawings, Figure 1 is a perspective view of a horse-power-chain link constructed in accordance with our invention. Fig. 2 is a side view of a series of the links coupled together in such a manner as to form an inclined tread; Fig. 3, a side view of a series of the links coupled together to form a level tread, and Figs. 4 and 5 side views of other forms of link embodying our invention.

A is the body or web of the link, which has on top a yoke, *a*, forming, with the body of the link, a mortise for the reception of the tenoned end of a lag forming part of the tread of the horse-power; or the link may be otherwise constructed in any of the usual ways for the reception of the end of the lag.

The body A of the link shown in Figs. 1 to 3 has at each end two eyes, *b b'*, one above the other, whereby we are enabled to use said links in making chains either for an inclined tread or a level tread. Thus, as shown in Fig. 2, like eyes of adjoining links coincide with each other and receive the pivot bolt or rod *d*, so that the tread is inclined, it being understood that the carrying-wheels at the front end of the chain are higher than those at the rear. Where the links are coupled as in Fig. 3, however, the upper eye, *b*, at the end of one link coincides with the lower eye, *b'*, at the adjacent end of the link in advance, the consequence being that the tread of each link occupies a horizontal plane somewhat lower than that of the link in advance. The use of two

special forms of link is thus rendered unnecessary.

By providing a double eye at each end of the link the latter is calculated to wear twice as long as an ordinary single-eyed link, the wearing of the eyes to which the pivot pins or rods are first fitted simply necessitating the transfer of said pins or rods to the other eyes.

Fig. 4 shows a form of link in which the eyes at the ends of the link are in the same horizontal plane instead of being located one above the other; but while this link has the same advantages as the link shown in Figs. 1 to 3 as regards wearing qualities, it is not available for use in making a level tread; hence the construction shown in Figs. 1 to 3 is preferred.

The link may, if desired, have but a single eye at one end, for so long as there is a fresh eye in reserve at either end of the link the shifting of the pivot-pin to this fresh eye will in great measure overcome the looseness of the chain due to wear. Fig. 5 shows a link of this character.

We claim as our invention—

1. A horse-power-chain link having at each end a series of eyes, each of which is adapted for the reception of the pivot-pin which couples the links, all substantially as specified.

2. A horse-power-chain link having at one of its ends two eyes, one above the other, and each adapted for the reception of the pivot-pin whereby the link is coupled to an adjoining link, all substantially as specified.

3. A horse-power-chain link having at each end two eyes, one above the other, and each adapted for the reception of the pivot-pin which couples adjoining links, all substantially as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WILLIAM H. BUTTERWORTH.  
JOHN BUTTERWORTH, JR.

Witnesses:

J. W. DIGNAN,  
GEORGE MUEHEID.