G. G. & L. C. HOWE.

DRIVE CHAIN.

APPLICATION FILED JULY 23, 1913.

1,082,332 Patented Dec. 23, 1913.

Fig. 1.

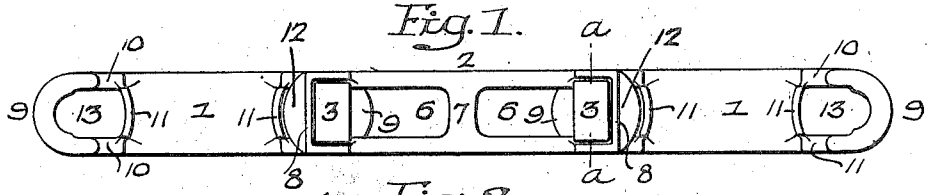


Fig. 2.

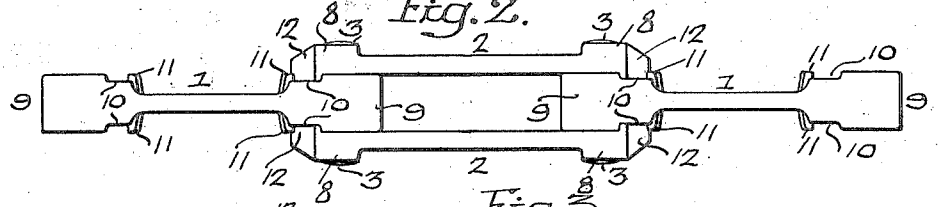


Fig. 3.

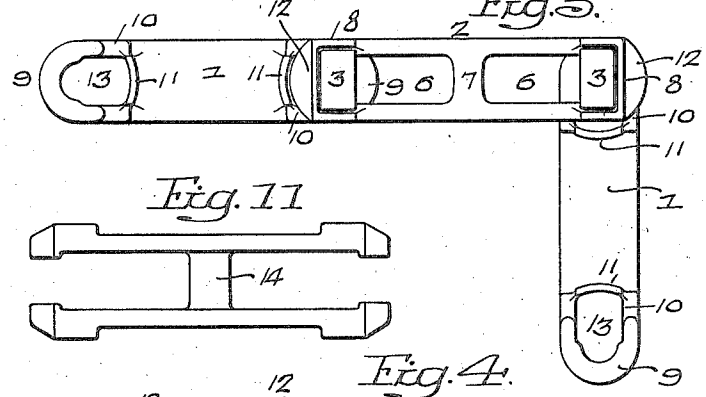


Fig. 11

Fig. 6.

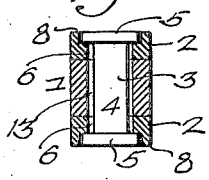


Fig. 4.

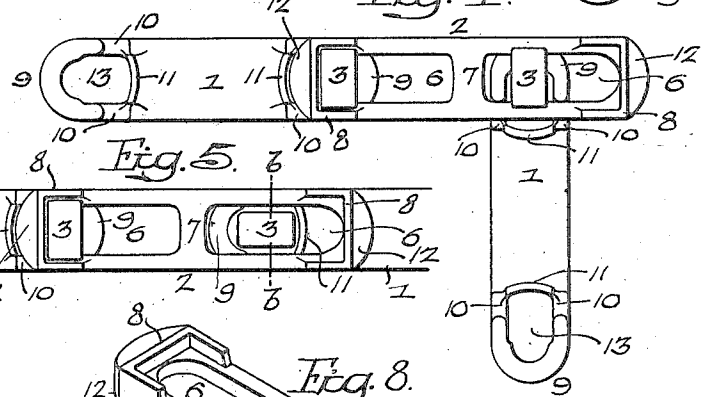


Fig. 5.

Fig. 7.

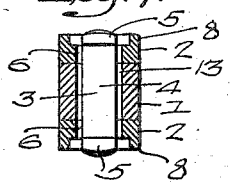


Fig. 8.

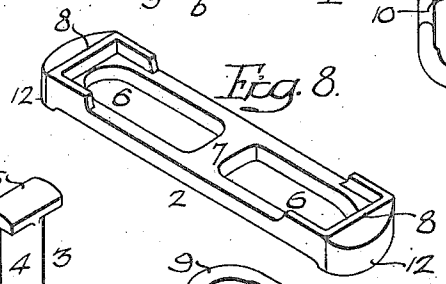


Fig. 10.

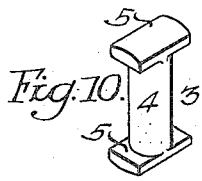
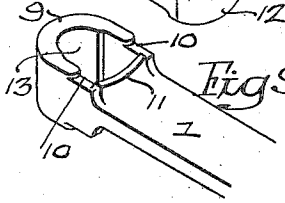


Fig. 9



Witnesses:
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Walter R. Pullinger

Inventors:
Glenn G. Howe and Louis C. Howe.
by their Attorneys.
Howson & Howson

UNITED STATES PATENT OFFICE.

GLENN G. HOWE AND LOUIS C. HOWE, OF INDIANAPOLIS, INDIANA, ASSIGNORS TO LINK-BELT COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

DRIVE-CHAIN.

1,082,332. Specification of Letters Patent. Patented Dec. 23, 1913.

Application filed July 23, 1913. Serial No. 780,716.

To all whom it may concern:

Be it known that we, GLENN G. HOWE and LOUIS C. HOWE, citizens of the United States, residing in Indianapolis, county of Marion, State of Indiana, have invented certain Improvements in Drive-Chains, of which the following is a specification.

This invention relates to certain improvements in chains of the type in which double headed pins connect the several links.

One object of our invention is to construct the chain so that the links can be readily detached and a section added or removed from the chain.

A further object of the invention is to construct the links so that when they are in alinement the pins are held in position and cannot be accidentally detached but by manipulating the links the pins can be readily detached. The links can be made from malleable iron or they can be forged as desired.

In the accompanying drawings: Figure 1 is a plan view of our improved chain; Fig. 2 is a side view; Figs. 3, 4, and 5 are plan views illustrating the links in three different positions and showing the method of detaching the links; Fig. 6 is a transverse sectional view on the line *a*—*a*, Fig. 1; Fig. 7 is a transverse sectional view on the line *b*—*b*, Fig. 5; Figs. 8 and 9 are detached perspective views of the two links; Fig. 10 is a perspective view of one of the pins; and Fig. 11 is a view of a modification.

The chain is made of a series of links 1 alternating with pairs of links. The link elements 2 of each pair are identical and are spaced apart for the reception of the ends of the links 1, as clearly shown in Fig. 2.

3, 3 are the pivot pins which connect the several links. The pivot pins, as illustrated in Fig. 10, have a round shaft 4 and a rectangular head 5 at each end, as shown in Fig. 10. The link elements 2 are slotted at 6, in the present instance, and the side members are preferably connected by a web 7 at the center, although this web may be dispensed with in some instances.

At each end of each link element 2 is a flange 8 which extends on three sides of the slot 6 and the heads 5 of each pin 3 fit snugly between the side flanges and against the end flange. Thus, when the pins are in the position illustrated in Fig. 1, they are prevented from turning by the neat fit of the heads in the space bounded by the flange. In some instances the end flange may be omitted.

The ends 9 of the links 1 are preferably greater in width than the body portion of the link, as shown, and fit snugly between the two link elements 2 so that when the link 1 is located between the two link elements and the pin is in place, the heads of the pin rest in the recess formed by the flanges 8.

In order to prevent independent longitudinal movement of one link with respect to the other a recess 10 is formed at each side of each link 1 between the enlarged end portion 9 and a flange 11, and ribs 12 at the ends of the link elements 2 extend into the recesses 10, as clearly shown in Fig. 2. The pivot pins 3 are held with their heads between the flanges and, consequently, cannot be detached without swinging one of the links at an angle to the other to clear the ribs, as described hereinafter.

If it is wished to detach the links and to remove one or more of the pins, then one of the links is turned at right angles to the other as, for instance, in Fig. 3. This movement releases the rib 12 from the control of the flange 11 of the link 1 and when the link is in the position illustrated in Fig. 3 it can be moved bodily with the pin 3 to the position illustrated in Fig. 4. It can then be turned to the position illustrated in Fig. 5, as the flange 11 will be back of the rib 12 and the pin 3 can be turned so that its head will be in the position illustrated in Fig. 5, and, as the head is narrower in width than the slot 6 in the link elements 2 or the cavity 13 in the link 1, the pin will drop through the links, releasing the two links. As many sections as desired can be detached in this manner and if it is necessary to lengthen the chain other sections can be added thereto.

In Fig. 2, we have shown the link elements 2 disconnected but they may be connected by a web 14, as shown in Fig. 11 without departing from the essential features of the invention.

We claim:

1. The combination in a chain, of two links, one consisting of a single link element and the other of two link elements spaced apart; a double headed pin connecting the two elements, the heads of the pin being pre-

vented from turning by being confined in the double link element; and means for preventing independent longitudinal movement of one link with respect to the other.

2. The combination in a chain, of two link elements spaced apart and each having a socket at each end; a link located between the two link elements; a double headed pin extending through an opening in the said link and through slots in the link elements, the heads of the pin resting in the sockets so as to prevent the pin from turning in the said link elements; a lateral recess in the link; and a rib on one of the link elements extending into the recess of the link and preventing the links from moving longitudinally, one with respect to the other.

3. The combination in a chain, of two link elements spaced apart and slotted longitudinally; a single link located between the two link elements and having a recess at one end; a double headed pin extending through the slots in the two link elements and the recess in the single link; a flange on two sides of each link element arranged to engage the heads of the pin and preventing them from turning in the link elements; a flange on the link; and a rib on one link element engaging the flange so as to prevent longitudinal movement of one link with respect to the other, except when one link is turned at an angle to the other to shift the rib out of line with the flange.

4. The combination in a chain, of two link elements spaced apart, each link element being slotted at each end; a link having an enlarged end located between the two link elements; an opening in the said link; a double headed pin extending through the slots in the link elements and through the opening in the link; means on the link elements engaging the heads of the pin and preventing them from turning; a flange on each side of the link spaced from the enlarged end to form a recess; and a rib on each link element extending into the recess of the link so that the links are prevented from moving longitudinally, one with respect to the other, except when one link is turned at an angle to the other.

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

GLENN G. HOWE.
LOUIS C. HOWE.

Witnesses:
L. B. CALVELAGE,
A. D. THRASHER.