To all whom it may concern:

Be it known that we, Delph H. Groves and Alva S. Groves, citizens of the United States, residing at Terra Alta, in the county of Preston and State of West Virginia, have invented certain new and useful Improvements in a Tire-Chain Connector; and we hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to fastening means for connecting parts which require to be repeatedly separated and joined, such as a tire chain, and which must maintain a secure joint to prevent casual loosening or opening by jar or vibration.

Other objects and advantages will be apparent and suggest themselves as the nature of the invention is understood.

While the drawings illustrate an embodiment of the invention it is to be understood that in adapting the same to meet different conditions and requirements, various changes in the form, proportion and minor details of construction may be resorted to without departing from the nature of the invention.

Referring to the accompanying drawing forming a part of the specification:

Figure 1 is a side view of a fastener embodying the invention showing the same in operative position.

Figure 2 is an elevation of the fastener the near plate being removed and the lock in its position.

Figure 3 is a transverse section on the line a—a of Figure 1, and

Figure 4 is a top view of the fastener.

Corresponding and like parts are referred to in the following description and designated in the several views of the drawing by like reference characters.

45 The fastener comprises similar or like side plates 1 disposed in parallel relation and transversely spaced. A spring 2 is disposed between the plates 1 along the rear or back thereof and is secured at one end by rivets or fastenings 3 which likewise serve to connect the plates 1. A notch 4 is formed in the upper edge of each of the plates 1 and these notches align transversely and are inwardly curved and disposed at one end of the plates. A lock member 5 is disposed between the upper edge portions of the plates 1 and is pivoted at one end thereto, as indicated at 6, the notches 4 being concentric with the pivot fastening 6. The lock 5 is provided near its pivotal end with a notch 7 which is in registering position with the notches 4. The pivotal end of the lock 5 is curved inwardly, as indicated at 8, and its extremity is straight to make contact with the free end of the spring 2 whereby the lock is normally held in closed position. The opposite or free end of the lock 5 is also provided with a notch 9 whereby to provide clearance for the part attached to the fastener. The swinging end of the lock 5 is likewise curved inwardly, as indicated at 10, to engage the opposite end of the spring 2 and limit the closing of the lock. A projection 11 at the swinging end of the lock 5 enables a digit of the hand to obtain a purchase thereon when it is required to open the lock to release the parts coupled thereby or to place said parts in position to be connected. Registering openings 12 are formed in the plates 1 and lock 5 to receive a cotter pin 13 whereby the lock may be secured when in closed position.

The ends of a tire chain to be connected are designated by the numerals 14 and 15. The end 14 is permanently connected to the fastener as indicated at 16 and the notch 9 in the lock 5 clears the part 18 when the lock is closed. The end 15 is adapted to make detachable connection with the fastener and when in engagement therewith enters the notches 4 of the plates 1 and the notch 7 of the lock 5, the latter when closed preventing displacement of the end 15 from the notches 4. The spring 2 is ordinarily sufficient to hold the lock 5 closed but the same may be further secured by means of the cotter pin 13 in the manner indicated.

Having thus described the invention, what we claim is:

1. A connector of the character specified comprising companion plates spaced apart and having corresponding notches in an end portion thereof, a flat spring secured between corresponding edge portions of the plates and a lock disposed between the opposite edge portions of the plates and having opposite end portions inwardly tapered and notched, said lock being pivoted at one end and closing the outer end of the notches formed in the spaced plates and normally held closed by the action of said flat spring.

2. A connector of the character specified
comprising companion plates spaced apart and having registering openings at one end to receive a part to be connected and having corresponding notches in its opposite end portions to receive the other parts to be connected, a flat spring arranged between corresponding edge portions of the plates and a lock disposed between the opposite edge portions of the plates and having opposite end portions inwardly curved and notched to register with the notches and openings of the said plates, said locks being pivoted at one end to the plates and normally closing the outer ends of the notches formed therein and having a finger projection at its free end, said lock and plate having registering openings for the reception of a lock pin.

In testimony whereof we affix our signatures in presence of two witnesses.

DELPH H. GROVES.
ALVA S. GROVES.

Witnesses:
C. W. MILLER,
L. G. COLL.