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E. P. HURD
TIRE CHAIN LOCK
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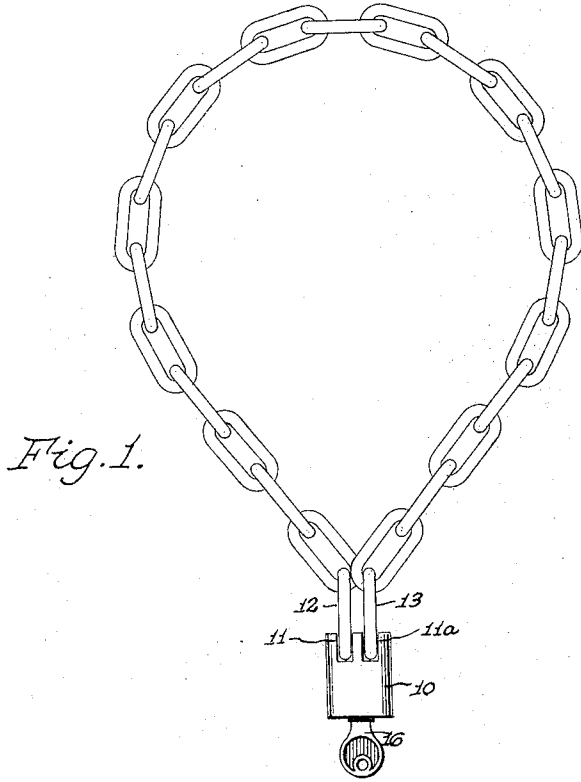


Fig. 1.

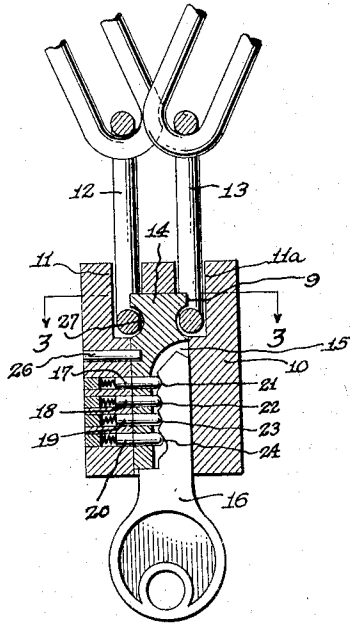


Fig. 2.

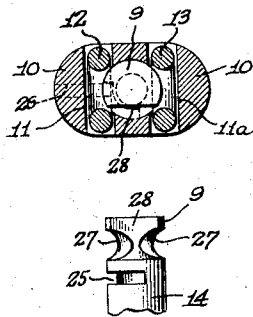


Fig. 3.

Fig. 4.

Inventor
Edwin P. Hurd,
By *Richard V. Burt*
Attorneys

UNITED STATES PATENT OFFICE.

EDWIN P. HURD, OF DETROIT, MICHIGAN.

TIRE-CHAIN LOCK.

Application filed September 4, 1926. Serial No. 133,575.

This invention relates to means for securing one or more tires or rims to an automobile, and has for its object the provision of a simple and inexpensive lock construction especially adapted for use with small lengths of chains which are used to secure the spare tires to the automobile frame, and one which involves a considerable saving of parts in the assembling of such devices.

The invention consists essentially in the novel construction, arrangement and combination of the various parts described in the following specification, and pointed out in the annexed claims.

In the accompanying drawings,

Figure 1 is a plan view of the lock with chain attached;

Fig. 2 is a longitudinal sectional view of the lock;

Fig. 3 is a cross sectional view of the lock taken on the line 3—3 of Figure 2;

Fig. 4 is a detail view of the cam which engages the links of the chain.

Referring now to the drawings:—

10 indicates the lock casing provided at its upper end with adjacent vertical slots 11 and 11^a of a size to freely accommodate the reception of the end links 12 and 13 of the tire carrier chain.

In the specific embodiment of lock illustrated in Figure 2, the casing 10 houses a lock barrel 14 having a longitudinal key slot 15 adapted to receive a key 16. A series of tumblers 17, 18, 19 and 20 are provided in the side of the casing for co-operation with the wards 21, 22, 23 and 24 of the key as is usual in this type of lock. The upper end of barrel 14 is formed with a short circumferential groove 25 adapted to engage with the stop pin 26 disposed in a suitable aperture in the wall of the casing 10, and has also a continuous circumferential groove 27 adjacent the extreme end for the reception of the ends of the links 12 and 13.

The end of the barrel 14 above the said groove 27 is cut away, as indicated at 28 (see Fig. 3) to provide a cam 9 which when turned about its axis to present its straight surface parallel with the inner side of one of the slots 11 and 11^a, permits the passage of a chain link into the casing and upon its further rotation retains the link securely in place therein.

After one link 12 has been inserted within either one of the slots, barrel 14 is partially

rotated to cause the cam 9 to retain the link in place, said link arranging itself in groove 27 of the barrel; and then the pin 26 is inserted in the wall of the casing and pushed in to engage with the groove 25 formed on the circumference of the barrel 14.

Said groove 25 is so arranged on the periphery of the barrel 14 that the straight surface 28 of the cam 9 can be rotated through only a quarter turn from the position where it is parallel with the wall of the slot, thus keeping the link 12 always within its slot and connected thereto, during the locking and unlocking operation of the other link 13.

In operation, with link 12 secured to the casing 10, as indicated above, the key 16 is inserted within the slot 15 of the key barrel and turned to bring the straight surface 28 of the cam parallel with the side of the slot. The link 13 is then inserted in the slot 11^a, the opening in the link being adjacent the said cam. When the key is turned in the opposite direction, that is to say, in the locking direction, the cam is rotated to project its lobe within the link, which locks the link 13 within its slot.

From the foregoing, it will be seen that there is provided a simple and novel type of lock requiring no extra fittings to secure the chain to the lock housing or casing, and which avoids the use of pivoted latches or shackles and other fittings, well known with the use of padlocks.

Modification of the above may be made within the spirit and scope of the invention.

What I claim is:—

1. A lock comprising a casing provided with a pair of adjacent slots in one end thereof and adapted to receive the opposite end links of a chain, a rotary cam engageable within the said slots adapted to permit the entrance of one link at a time into said slots, and key controlled means for moving the said cam into engagement with the said end links.

2. In a chain lock, a lock casing having adjacent slots for the reception of the end links of a chain, a rotatable cam for engagement within the said slots to lock one link in permanent position, the other in removable position, and key controlled means for operating said cam.

3. In a chain lock including a lock casing having slots to receive chain links, a cam movable in said housing and adapted to permit the passage of said links into the said

slots, key controlled means for operating the cam, and means for limiting the arc of rotation of the cam whereby one of the links is held permanently attached to said casing.

- 5 4. A lock for locking together the end links of a chain including a casing having adjacent slots to receive said links, a cam operable within the slots and casing, engageable with both links simultaneously to hold the same attached to the lock casing, and means for permitting the disengagement of one link from the casing without the disengagement of the other.

- 10 5. A chain lock including a lock casing having a pair of adjacent slots to receive the end links of a chain, a rotatably grooved cam

mounted between the slots for engagement with said links, key actuating means, and means to lock one link to the casing while permitting the removal of the other link therefrom. 20

6. A lock comprising a casing provided with a pair of adjacent slots adapted to receive the end links of a chain, a movable locking member adapted for entrance into said slots and to lock and release such ends with respect to said casing, and key controlled means for locking and unlocking said movable member relatively to said casing. 25

In testimony whereof I affix my signature.

EDWIN P. HURD.