July 14, 1925. 1,545,902

C. L. JOHNSON

SPARE WHEEL LOCK

Filed June 12, 1922

Fig. 2

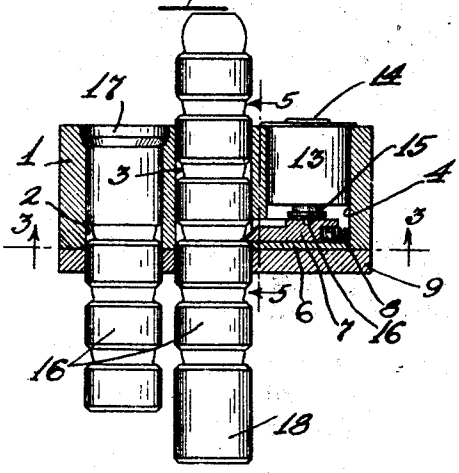


Fig. 1

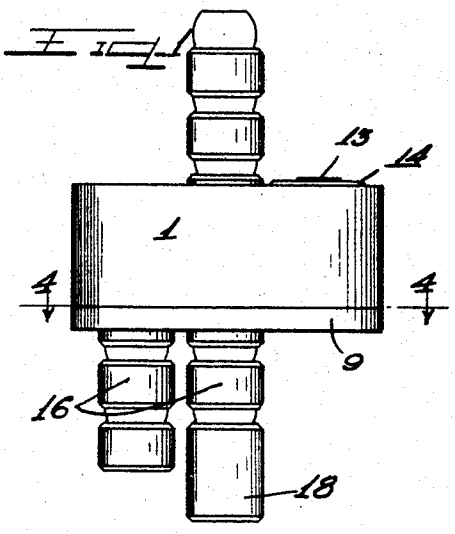


Fig. 3

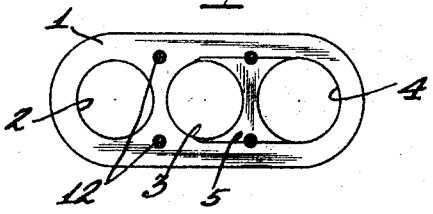


Fig. 5

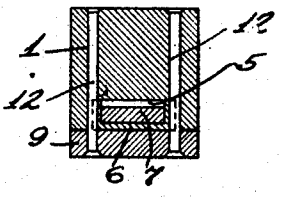
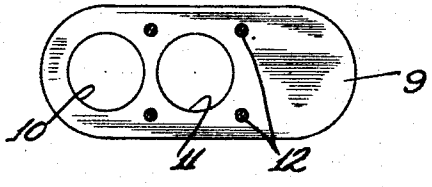


Fig. 4



Witnesses

Inventor

COLVIN L. JOHNSON

by Atty.

Patented July 14, 1925. 1,545,902

UNITED STATES PATENT OFFICE.

COLVIN L. JOHNSON, OF ST. LOUIS, MISSOURI, ASSIGNOR TO JOHNSON AUTOMOBILE LOCK CO., A CORPORATION OF ILLINOIS.

SPARE-WHEEL LOCK.

Application filed June 12, 1922. Serial No. 567,842.

To all whom it may concern:

Be it known that I, COLVIN L. JOHNSON, a citizen of the United States, and a resident of the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in a Spare-Wheel Lock; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the numerals of reference marked thereon, which form a part of this specification.

This invention relates more particularly to an improved method of manufacturing and assembling spare wheel locks whereby the cost of construction is materially reduced and wherein the steel lock latch bolt is positioned to slide in a channel guide of bearing metal held in place by a bottom plate rigidly secured in place on the lock casing.

It is an object of this invention to provide an improved method of manufacturing and assembling spare tire locks.

It is also an object of the invention to provide an improved spare tire or wheel lock wherein the latch bolt is slidable in a guide of Babbitt metal or the like to engage a flexible armored cable engaged through opening provided in a lock block and a retaining plate rigidly secured thereon.

Other and further important objects of this invention will be apparent from disclosures in the specification and accompanying drawings.

The invention (in a preferred form) is illustrated in the drawings hereinafter more fully described.

On the drawings:

Fig. 1 is an elevation of a spare wheel lock embodying the principles of this invention with parts of the armored cable omitted.

Fig. 2 is a longitudinal sectional view thereof showing parts in elevation.

Fig. 3 is a bottom plan view of the lock block or housing taken on line 3—3 of Figure 2.

Fig. 4 is a plan view of the base plate taken on line 4—4 of Figure 1.

Fig. 5 is a transverse section taken on line 5—5 of Fig. 2.

As shown on the drawings:

The spare tire or wheel lock comprises a metal block 1 having drilled therethrough a row of three parallel cylindrical openings 2, 3 and 4 respectively. As illustrated in Fig. 3 the lower end of the lock block 1 is reamed or milled out a short distance at the wall separating the openings 3 and 4 to afford a pocket or recess 5. Seated in the recess 5 is a guide channel 6 made of babbitt or other similar material and affording a suitable contact metal whereon a bevelled latch bolt 7 is positioned to slide, guided by said channel. The latch bolt is normally held projected into the opening 3 in a locking position by means of a spring 8 seated in the channel guide between the outer end of the latch bolt and the block wall forming the opening 4.

For the purpose of holding the latch bolt 7 and the guide channel 6 in proper position a base plate 9 is provided for the block 1 to close one end thereof. The base plate 9 is provided with two circular openings 10 and 11 which register with the block openings 2 and 3 respectively. Both the block 1 and the base plate 9 are drilled to provide a plurality of passages for receiving rivets 12 which rigidly hold the plate secured to the block. The ends of the rivets 12 are ground off flush with the surfaces of the block and plate as illustrated in Fig. 5.

Mounted in the block opening 4 is a cylindrical block 13 having a rotatable barrel 14 provided with a key slot in the usual manner. Engaged in the inner end of the barrel 14 is a cam 15 carrying a pin 16 engaged with the latch bolt 7 to permit retraction thereof when the lock barrel 14 is rotated by means of a key.

The block openings 2 and 3 together with the respective plate openings 10 and 11 are adapted for receiving an armored cable 16. One end of the armored cable 16 is provided with a head member 17 while the other end of the armored cable has a terminal member 18 connected thereto. The armored cable is similar in construction to that disclosed and claimed in the patent of Colvin L. Johnson, No. 1,394,259 for an "automobile tire lock cable" patented October 18, 1921, assigned to the Johnson Automobile Lock Co. The armored cable is adapted to be projected through the block opening 2 and the base plate opening 10 to permit the enlarged end

of the terminal head member 17 to seat in the opening 2 which is reamed out to receive the head as illustrated in Fig. 2.

The cable is adapted to be looped around a tire or other article, and then be projected through the block openings 3 and 11. During the pulling of the flexible armored cable through the block openings 3 and 11 the spring impelled latch bolt is forced into retracted position, with the passing of each link of the cable. The spring 8 acts to project the latch into locking engagement with the cable as shown in Fig. 2 to prevent retraction of the cable through its block openings 3 and 11. The latch bolt may be retracted by means of a key to permit withdrawal of the cable through the block openings 3 and 11. The channel member 6 affords a suitable guide for the latch bolt 7 and is preferably made of babbit or other suitable bearing material.

The method of manufacturing the spare wheel lock is simple and inexpensive and the parts are adapted to be readily assembled to produce the finished article. The block 1 is first drilled and reamed to provide the openings 2, 3 and 4 and the recess 5, after which the latch bolt and the guide channel are placed within the recess 5 and retained in operating relation by the base plate 9 which is riveted in position as described. The key lock 13 and the armored cable are then mounted in place to provide the finished lock.

I am aware that numerous details of construction may be varied through a wide range without departing from the principles of this invention, and I therefore do not purpose limiting the patent granted otherwise than necessitated by the prior art.

I claim as my invention:

1. A spare wheel lock comprising a block having a plurality of parallel openings therethrough and a recess connecting two of said openings, a guide channel in said recess, a latch bolt slidable in said guide channel, a spring for holding said latch bolt projected into one of said openings, a base plate rigidly secured to the recessed end of said block having openings therein registering with two of the openings in said block, an armored cable engaged through the registering openings in said block and base plate and adapted to be locked by said latch bolt, and a key operated lock in the remaining opening of said block positioned to coact with the latch bolt to permit retraction thereof.

2. A spare wheel lock comprising a block having three parallel openings therethrough and a recess connecting two of said openings, a guide channel in said recess, a latch bolt slidable in said guide channel, a plate secured to said block for holding said guide channel and latch bolt in place and having two openings therein registering with two of the block openings, a flexible member projecting through the two block openings registering with said plate openings and adapted to be engaged by said projecting latch bolt to hold the flexible member locked against a reverse movement through the block openings, and means in the third block opening for retracting the latch bolt to unlock the flexible member.

3. A lock of the class described comprising a flexible armored cable and a latch mechanism, a block supporting the same having openings drilled therethrough two of which are connected by a recess within which the latch mechanism is disposed, and a retaining plate for said latch mechanism rigidly secured to said block and having openings therein to permit the armored cable to pass therethrough.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

COLVIN L. JOHNSON.

Witnesses:

CARLTON HILL,

OSCAR HARTMANN.