COMBINATION CHAIN LOCK.

To all whom it may concern:

Be it known that I, WILLIAM BURKLE, a citizen of the United States, and resident of Glendale, in the county of Queens and State of New York, have invented certain new and useful Improvements in Combination Chain Locks, of which the following is a specification.

This invention relates to locks and the main object is to provide a lock which is opened or locked without the aid of a key, and particularly adapted for use with chains for locking spare tires on automobiles.

Another object is to provide a lock as mentioned which is essentially composed of a body bolt and a locking bolt, the latter sliding into the former upon which the means for locking both members together is located.

Still another object which is presented as a modification, is a similar type of lock in which the sliding bolt is engaged by an auxiliary bolt which must be first released before the bolt can be withdrawn.

These and other objects will become apparent in the description below, in which characters of reference refer to like named parts in the drawing.

Referring briefly to the drawing, Figure 1 is a longitudinal sectional view of the body showing the bolt locked in place.

Figure 2 is an elevational view of the same showing the external appearance of the lock.

Figure 3 is a perspective view of the sliding bolt.

Figure 4 is a fragmentary perspective view of one of the bolt locking collars.

Figure 5 is a longitudinal elevational view of the modified type of lock showing the sliding bolt engaged by both locking means.

Describing the drawing in detail, the numeral 1 indicates a substantially tubular member which forms one end of the body of the lock, the end of said tube having a diametrically disposed pin 2 secured therein from which the end loop of a connecting chain 3 is suspended.

A long sleeve 4 having a flange 5 at one end is slipped into the tube 1 and is permanently secured in place by a dowel pin 6. A plurality of locking collars 8 are rotatably mounted on the sleeve 4, each provided with engraved letters 9 alphabetically arranged upon the peripheral face. A length of knurling 10 is formed opposite each letter and provides grip means for rotation of the collars. Each collar has an internal flange 11 in which a single channel 12 is cut, said channel being formed directly beneath one of the letters 9. An annular runway 13 lies adjacent each flange 11 in the collars and retains the locking bolt in locked position.

A longitudinal slot 7 is formed in the sleeve 4 and is of such length as to communicate with all the collars on the sleeve.

The head 14 of the locking bolt is of the same diameter as the flange 5 and is designed to give the lock the appearance of a solid cylinder. The opposite end of the chain 3 heretofore mentioned, is directly connected to the head 14 and has a blade 16 extending radially in one direction upon which a plurality of keeper lugs 17 are formed, the latter being adapted to lie in the runways 13 when the bolt is inserted into the lock.

Said keeper lugs are separated from each other by a recess 18, the purpose of which will be more fully hereinafter described.

In the modified type of lock an additional feature is provided which prevents the bolt 15 from becoming disengaged until an auxiliary locking means has been released. This additional locking means comprises a small flat spring 19 which operates in a slot 19' formed in the sleeve 4, and has a lip 22 thereon which engages a notch 23, the latter being cut in the bolt 15. In order to have the lip 22 engage the notch 23, the spring is bent angularly upward in the slot 19'. A plunger 20 is slidable in the wall of sleeve 4 and has a thumb shoe 21 at its exterior end which when depressed causes its inner end to engage the inclined portion of the spring 19 and urge the lip 22 out of the notch 23. This operation is usually performed after the collars 8 have been aligned to permit egress of the bolt 15.

When the locking bolt 15 is to be inserted in place, the collars are consecutively rotated until the channel 12 aligns with the sleeve slot 7. This will permit passage of the keeper lugs 17 through their respective runways. It is to be borne in mind that the person manipulating the collars is familiar with the letters which must be aligned with the slot 7, the latter being clearly seen at the flange 5, before the bolt 15 can be entered into or removed from the lock.

I claim:

A device of the class described com-
prising a tubular body, a slotted sleeve secured thereto, a locking bolt, having a notch thereon and adapted to be inserted into said sleeve, a blade having spaced apart lugs on said bolt, a separate flat spring secured to said sleeve, a lip on the said spring, adapted to normally engage the notched portion of said bolt and independently retain the latter in place, a plurality of collars having channels and annular runways rotatable on said sleeve, said channels when aligned with the sleeve slot being adapted to permit passage of the sliding bolt, said annular runways receiving the blade lugs and permitting rotation of the collars to the locked position, and a plunger slidable in said sleeve having a thumb shoe thereon, the latter when depressed being adapted to lower the spring lip and release the locking bolt.

Signed at New York in the county of New York and State of New York this 14 day of October A. D. 1922.

WILLIAM BURKLE.