To all whom it may concern:

Be it known that I, JOHN SCHNEIDER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Locking Devices for Garage Doors, of which the following is a specification.

My invention relates to improvements in locking devices for garage doors.

The object of my invention is to provide a device which will hold the doors locked when they are in their closed position and also for holding them locked when in their open position.

Ordinarily when garage doors are open they are affected by the wind or by not being properly balanced and will not remain in their fully open position under such conditions. In order to open the doors when they are in their closed position it is necessary to insert the key in the lock and turn the same, whereby the mechanism is operated to allow the door to open or swing outward.

Where double doors are used it is only necessary to provide a handle for one door and by pulling upon this handle after the lock is operated, both doors swing outward and when reaching their fully open position they become locked and remain in that position until it is desired to close the same, whereby upon the device is operated to unlock the doors in their open position and to allow them to swing inward or close. As soon as the doors are closed they are automatically locked and it is necessary to again use the key for unlocking the mechanism.

While I have illustrated my invention as applied to double swinging doors it naturally follows that it may be applied equally as well to a single door.

My invention is illustrated in the accompanying drawings wherein:

Figure 1 is a plan view of the mechanism.

Figure 2 is a side view of the mechanism.

Referring to the figures it will be noted that the two doors 1 and 2 are attached to the garage or building by means of the hinges 30 and 31. The door 2 is provided with a handle 7. Adjacent to the door 2 is a lock 44 into which the key 8 is inserted.

Each door is provided with a sliding rod 3 or 4. These rods are attached or hinged to the doors 1 and 2 by means of the blocks or hinges 5 and 6. The opposite ends of the rods 3 and 4 are attached to the sliding block 11 which is mounted upon the tubular rod or pipe 10. As shown in Figure 2 this rod is attached to the roof 40 of the garage by means of the two fixtures 9 and 14. Each end of the rod is provided with an elbow 47 and 48. The block 11 is arranged to slide upon the rod 10. As shown in Figure 1 the two rods 3 and 4 are movably attached to the block 11 at the points 12 and 13.

Mounted upon the rod 10 are two dogs or triggers 17 and 25. The dogs are attached to the brackets 50 and 51, which are clamped and held in place upon the rod 10 by means of the screws 53 and 54. The dogs are capable of moving in an upward and downward direction so that the block 11 when sliding along the rod 40 can lift either dog. As shown in the figures the dogs are in their closed position with the block 11 engaging the dog 17. The dotted lines in Figure 1 show the sliding rods and the doors in their open position.

In order to properly manipulate the two dogs 17 and 25 additional parts operated by the key and lock are provided. The rod 18 is pivotally mounted upon the fixture 20 which is attached to the roof of the garage by means of the screws 56. One end of this rod is provided with a chain or cord 55 which drops down and is engaged by an extension or bar 57 associated with the key operated lock. When the key is turned the bar 57 moves downward causing the cord or chain 55 to be pulled causing the rod 18 to swing or tilt upon the fixture 20. The opposite end of the rod 18 is flattened as shown at 22 and attached to the dog 25 by means of the screw or bolt 24. When the rod 18 tilts the flattened portion 22 moves upward and being attached to the dog 25 causes it to lift.

An additional rod 43 is provided also attached to the roof of the garage by means of the fixture 42. This fixture is fastened to the roof by means of the screws 58. One end of this rod is shown flattened and is attached to the flattened portion 22 of the rod 18 by means of the bolt or screw 4. The opposite end of the rod 43 is also flattened and engages the bar or rod 28 which is attached to the roof of the garage by means of the bolt 30. This rod 28 is also capable of being tilted in an upward or downward direction as the case may be. One end of
the rod 28 is attached to the flat portion 27 of the rod 43 by means of the bolt 29. The opposite end of the rod 28 is attached to the dog or trigger 17 by means of the screw or bolt 36 so that when the rod 43 is tilted it causes the rod 28 to also tilt and lift the dog 17.

The operation of the device is as follows:

When the doors are in their closed position the key 8 is inserted in the lock and turned whereby pressure is exerted upon the chain 55 causing the rod 18 to tilt. The flat portion 22 moves upward and carries with it the dog 25. The tilting of the rod 18 causes a consequent tilting of the rod 43. That portion of the rod 43 which engages the rod 28 tilts downward which in turn causes that portion of the rod 28 which engages the dog 17 to move upward and carry with it the dog 17 to which it is attached.

When the doors are locked the block 11 engages the dog 17 plainly shown in Figure 2. When the dog 17 is lifted upward it disengages the block 11 and when the handle 7 of the door 2 is pulled the door as it is unlocked swings outward. As both rods 3 and 4 are attached to the bearing or block 11 it naturally follows that both doors will swing outward at the same time.

When the doors assume the position shown in the dotted lines then the block 11 engages the dog 25. As soon as this occurs the doors are locked in their open position. In order to close the doors the chain 55 can be pulled or the key 8 turned which will cause the rods 18, 43 and 28 to act in the manner previously described and lift both dogs 25 and 17. The lifting of the dog 25 causes it to disengage the block 11 thus allowing the doors to swing inward and close. As soon as the doors are closed the block 11 engages the dog 17 and the doors are again locked in their closed position.

While I have shown the rod 18, Figure 1, bent in the manner shown it naturally follows that the various parts can be moved close to the doors or the lock 19 arranged to extend further into the garage which would allow the rod 18 to be perfectly straight.

Having thus described my invention what I desire to secure by Letters Patent is:

1. In a device of the class described, the combination of a double door, a rod attached to each door, a center rod upon which said door rods slide, two locking devices mounted upon said center rod, one of said locking devices serving to lock the doors when closed and the other serving to lock the doors when open.

2. In a device of the class described, the combination of a double door, a rod attached to each door, a center rod upon which said door rods slide, two locking devices mounted upon said center rod, one of said locking devices serving to lock the doors when closed and the other serving to lock the doors when open, and means for controlling said locking devices.

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN SCHNEIDER.

Witnesses:

CHRIST SAUSSLER,

ELSIE A. MANNS.