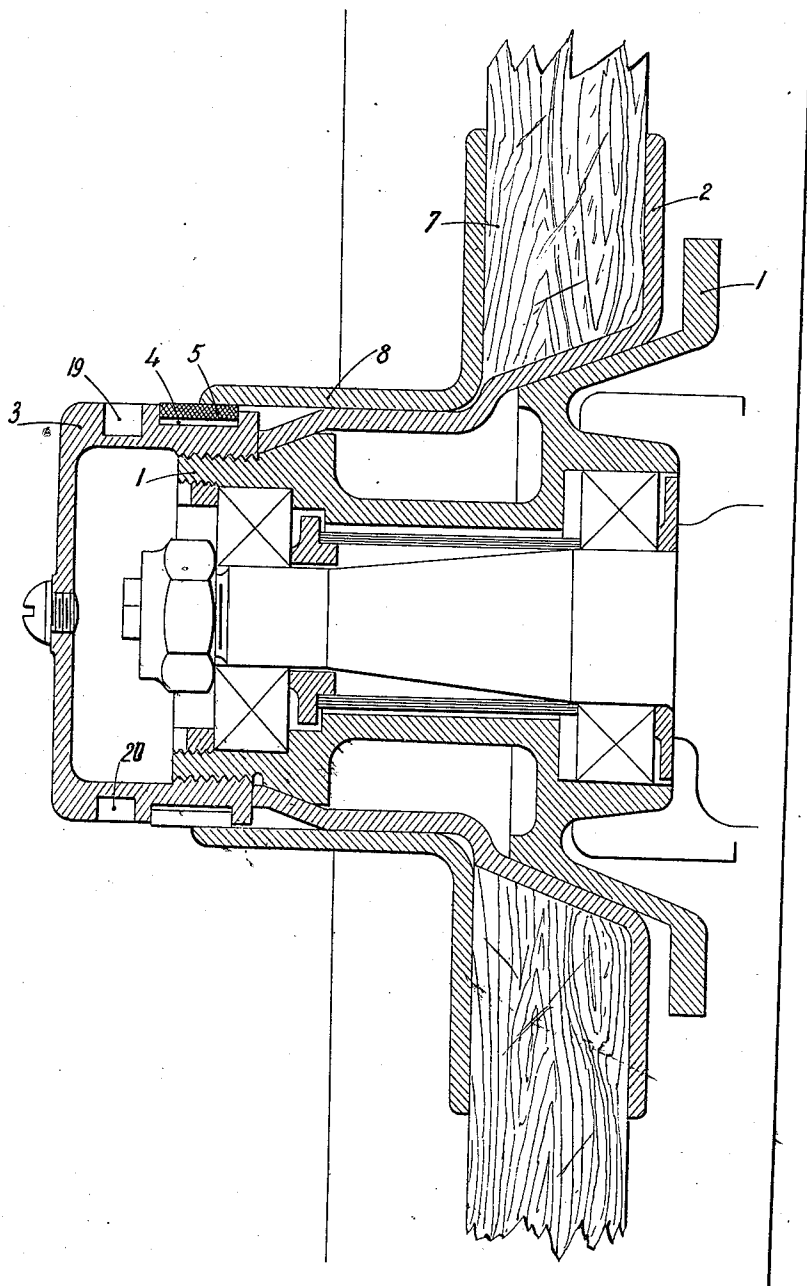


H. GALLET.
 LOCKING DEVICE FOR DETACHABLE WHEELS.
 APPLICATION FILED MAR. 6, 1917.

1,311,341.

Patented July 29, 1919.
 2 SHEETS—SHEET 1.

Fig. 1



Inventor.

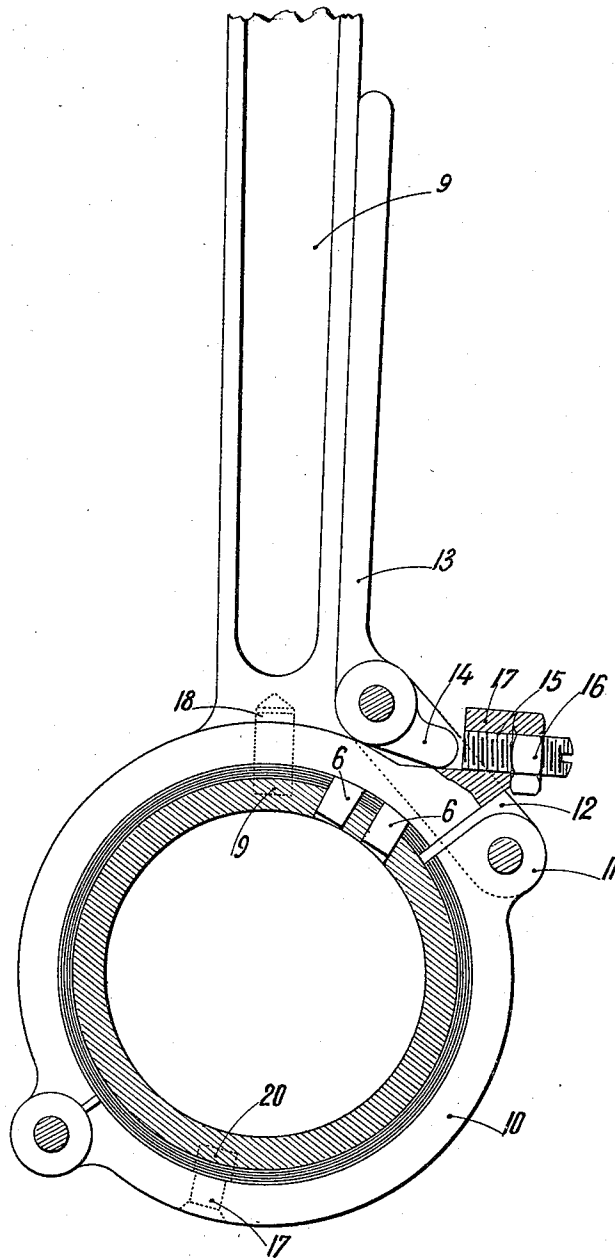
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Paris

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Fig. 2



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UNITED STATES PATENT OFFICE.

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BOUTON, SOCIÉTÉ ANONYME, OF PUTEAUX, FRANCE, A CORPORATION OF
FRANCE.

LOCKING DEVICE FOR DETACHABLE WHEELS.

1,311,341.

Specification of Letters Patent.

Patented July 29, 1919.

Application filed March 6, 1917. Serial No. 152,638.

To all whom it may concern:

Be it known that I, HENRI GALLET, engineer, of 36 Quai National, at Puteaux, Department of the Seine, France, citizen of the French Republic, have invented certain new and useful Improvements in or Relating to Locking Devices for Detachable Wheels; and I do 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.

This invention relates to a lock for detachable wheels, and refers more particularly to locks of the kind comprising a cap and a locking device operated in such a way that any tendency to unscrew the cap tends to increase the locking effect.

Various caps of this type have already been suggested and the object of this invention is to provide an improved locking device whereby not only very great certainty of operation is obtained but also a simple, light and conveniently small construction.

According to this invention the locking device is in the form of a steel segment mounted in a groove in the cap or ring, similar to a piston ring, and surrounding the cap and having a milled external surface the steel segment being fixed to the cap at one end by means of tenons or projecting pins. The segment which is split projects out of the groove on account of its elasticity, the cap is then locked against the false hub by being screwed on to the nave in the usual way, the segment being compressed into the groove by means of a suitable wrench in such a way that it cannot expand against the flange ring of the wheel nave. The latter is milled internally in a manner corresponding to the segment, so that when the wrench is removed the segment expands and the milled surface enters into the milling on the flange ring. The segment is placed in any suitable manner on the cap, so that if the cap tends to unscrew, the direction of its angular displacement tends to expand the segment and to press the milling of the segment more closely against that of the flange ring on the wheel.

The accompanying drawings show by way of example a construction in accordance with the present invention.

Figure 1 is a sectional elevation through

the axis, showing a device in accordance with the invention.

Fig. 2 is a sectional view disclosing the manner in which the wrench operates to compress the locking ring.

Referring to the drawings 1 represents the false hub, 2 the nave and 3 the locking cap of 2 on 1.

The cap 3 is provided with a groove 4 extending around its periphery, in which is placed a segment 5, which is milled on its external surface. This segment is secured to the cap 3 by two tenons 6 or projecting pins in such a way that one of its ends is securely fixed against rotation, whether the segment projects from the groove or not. The wheel, which may be of wood, as shown at 7 in the drawings, is provided with a circular flange ring 8 which projects in such manner as to embrace the cap, leaving a certain amount of clearance. The front part of this flange ring which faces the groove 4, is milled in a manner corresponding to the milling of the segment 5. Arrangements are made to confine the segment in the groove by any suitable means, which enables the cap to be screwed up until it jams, and the segment is then released. As it expands, its milled surface penetrates into that of the flange ring and locks the cap to the wheel. The extremity of the segment to be fixed to the cap is chosen in such a way that the cap, in unscrewing tends to expand the segment still further. In this way the milled surfaces engage each other more effectively and prevent any further rotation of the cap.

Fig. 2 shows a form of wrench given by way of example, which can be used for fastening and unfastening the cap. This wrench comprises a main part 9 which embraces the cap externally and to which a corresponding part or cover-ring 10 is jointed. One of the ends 11 of this ring 10 carries two links 12 pivotally connected on one hand to the end 11 and on the other hand to a lever 13, the short arm 14 of which is provided with a cam or which can abut upon an adjustable stop consisting of a screw 15 locked by a nut 16 in a support 17 on the piece 9. The lever 13 includes a long arm also, which may be used as a handle and which lies adjacent to the main part 9 of the wrench.

The wrench thus constituted actuates the

cap by means of one or two spurs such as 17 and 18 which pass into corresponding holes 19 and 20 in the cap.

The wrench is used in the following manner:

5 The spur 18 is first of all passed into the corresponding hole 19 in the cap. The cover ring 10 is then lowered against the cap so that the spur 17 enters the hole 20. The
10 lever 13 is then moved so that the nose 14 abuts against the extremity of the stop 15, and the handle 13 is acted upon so as to bring it nearer to the key. The guides 12 exert a pull bringing the cover ring 10
15 nearer to the main part 9 of the wrench, and the split segment inclosed between the two parts is fully closed or approximately so when the lever 13 occupies the position shown in Fig. 2. It is sufficient to jam the
20 cap in the usual way, and when this has been done the handle 13 is moved away from the main part 9, the cover-ring 10 is removed and the segment by expanding in the flange-ring, locks the cap.

25 In the example illustrated, the parts are so arranged as to make the point of closure of the two parts of the wrench coincide with the extremities of the segment, so as to act on the latter more directly. Of course this

condition is not essential. It is however 30 preferable, but requires the arrangement of a guide mark on the plug and on the wrench, so as to bring the corresponding parts opposite to one another correctly. The adjustable stop 15 enables the distance between the 35 main piece and the cover-ring to be adjusted for each cap, according to the degree of projection of the segment.

I claim:

The combination with a wheel, including 40 a false hub and a flange ring, the hub and ring being spaced apart at their outer ends, the end of the hub having external threads and the end of the ring having internal milling, of a hub cap adapted to screw upon the 45 end of the false hub and having an annular recess therein, and a split ring located in said recess, said ring having a milled outer face arranged to engage the milled face of the flange ring and having a portion project- 50 ing beyond the end of said ring.

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

HENRI GALLET.

Witnesses:

CHAS. P. PRESSLY,
HENRI COHEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."