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E. S. CLARK.

CONTROLLING APPARATUS.

APPLICATION FILED FEB. 3, 1905.

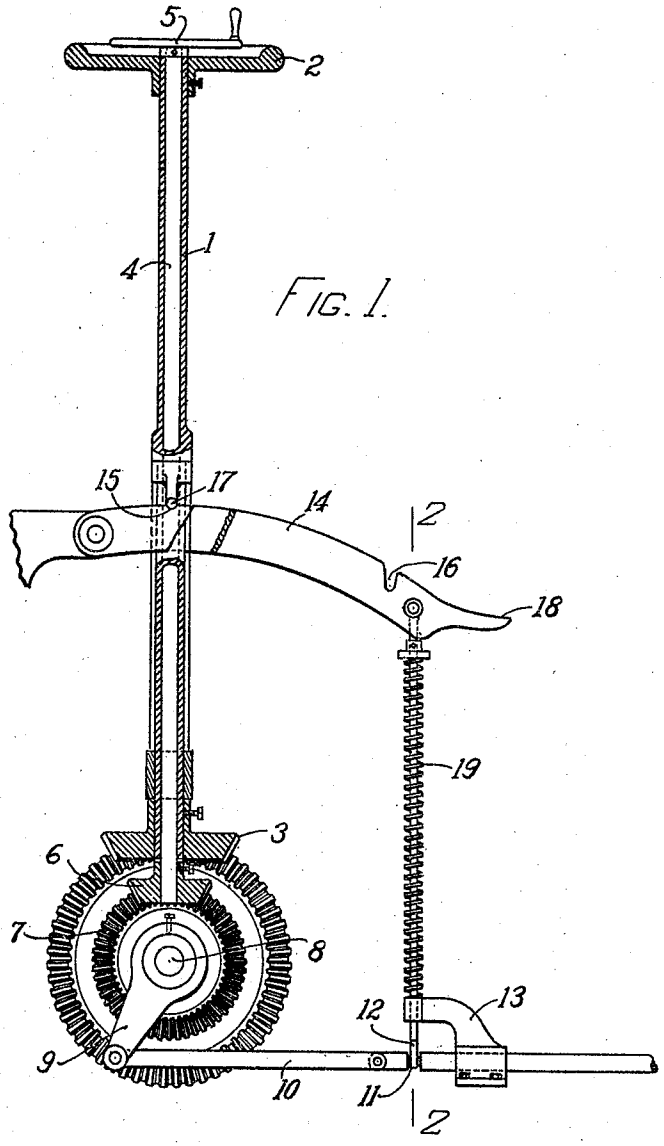


FIG. 1.

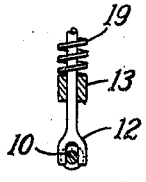


FIG. 2.

WITNESSES

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CONTROLLING APPARATUS.

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To all whom it may concern:

Be it known that I, EDWARD S. CLARK, of the city of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Safety Controlling Apparatus; and I do hereby declare that the following is a clear, full, and exact description of the same.

This invention relates to safety appliances for locomotive carriers—such as automobiles, autoboats, &c.—and has for its object the locking of the starting-gear when the steering-gear is not in a proper position and an automatic and simultaneous unlocking of the starting-gear upon the placing of the steering-gear in an operative position.

Figure 1 is a side view of a device embodying this principle as applied to an automobile-carriage. Fig. 2 is a front view of the starting-gear latch shown at 2 2, Fig. 1.

Like symbols refer to like parts wherever they occur.

1 is the steering-wheel shaft, shown as a hollow tube, to the upper part whereof is secured the steering-wheel 2. On the lower part is secured a bevel-pinion 3, which engages with any suitable bevel gear or rack to operate any suitable steering device. The lower end of this steering-shaft is carried by a suitable carrier, which allows it to revolve upon its own axis and also forms a hinge by which it may be moved into an upright position to allow the operator ready and unobstructed egress and ingress to the vehicle and then may be moved into a position to bring the upper part of this shaft, carrying the steering-wheel, directly in front of and over the lap of the operator when in a sitting position.

4 is a shaft located axially inside of the shaft 1, with a hand-wheel 5 upon its upper end, a bevel-pinion 6 upon its lower end engaging with bevel-gear 7, carried upon a horizontal shaft 8, which also forms the axis about which the steering-shaft 1 is hinged.

Operatively engaged with the bevel-gear 7 and shaft 8 is a lever 9, which is operatively connected to a starting-rod 10, which may operate a steam or air throttle or an electric rheostat or other starting mechanism. This starting-rod 10 is notched down or reduced in diameter at a point marked 11, where it is enveloped by a forked latch 12, both of which are carried by a housing 13 in such a manner that when the forked latch 12 envelops the rod 10 its lateral movement is prevented and when the latch 12 is withdrawn the rod 10 is released. It is obvious that other forms of locking may be used without departing from the spirit of this invention, such as a key axially piercing said shaft or a serrated latch engaging teeth upon the periphery of the shaft.

Attached to the dasher or other suitable framework of the vehicle is a hinged quadrant 14, in this drawing shown as a two-part quadrant having the steering-shaft 1 between the two sectors thereof. These sectors have a shallow notch 15 near one end and a deep notch 16 near the other end, both engaging with a suitable pin 17, carried by the shaft 1, so as to be ready to engage the notches 15 and 16 at any time and yet permit the shaft 1 to be revolved upon its axis. Attached to the opposite end of the quadrant 14 from where it is hinged is a spring 19 of any suitable form, attached in turn to the framework of the vehicle, so as to force the pin 17 into close contact with the quadrant 14 and the notches 15 and 16, formed therein. The quadrant 14 also carries a foot-tread 18 upon the end opposite to its hinge, by which it may be readily moved above its hinged axis in order to release the notches 15 and 16 from the pin 17.

The operation of this device is as follows: Referring to a steam-driven automobile, the operator upon entering the car finds the shaft 1 in an upright position, allowing ready ingress to the seat. After seating, the operator places a foot upon the foothold 18, depressing the rearward end of the quadrant 14 against the spring 19, releasing the pin 17 from the notch 15, and thus allowing the shaft 1, with its hand-wheel 5, and the contained shaft 4, with its appertaining parts, to be drawn downwardly and rearwardly about the axis of its hinge to a position capable of easy manipulation by a seated operator, which position is determined and fixed by the pin 17 entering the notch 16, allowing the rear end of the quadrant 14 to move upward far enough to withdraw the latch 12 from contact with the starting-rod 10, and thus release it. The operator can now turn the shaft 4 by the hand-wheel 5, and by means of the pinion 6 and bevel-gear 7 cause the shaft 8 to revolve upon its axis, moving the lever 9 through a sufficient arc to cause the starting-rod 10 to open the throttle of an engine driving the car, and as long as the steering-shaft 1 is in the position determined by the engagement of the pin 17 and notch 16 the rod 10 may be operated at will. In order to move the steering-shaft 1 from this position, the operator must first move the rod 10 into a position where

the latch 12 and notch 11 on the rod 10 will engage. In this position of the rod 10 the engine-throttle is closed. This will then allow of the depressing of the rear end of the quadrant 14, thus disengaging the pin 17 and the notch 16 and allowing the steering-shaft to be returned to an upright position, when the pin 17 and shallow notch 15 will engage; but this notch 15 is too shallow to allow of the disengagement of the latch 12 and starting-rod 10, which remains locked with the throttle shut.

Having now fully described the construction of this device, what I desire to secure by Letters Patent is set forth in the following claims:

1. In a safety controlling apparatus, a device for simultaneously locking the steering-wheel shaft in an operative position and releasing the starting mechanism, consisting of a hinged steering-wheel shaft, a hinged quadrant engaging therewith, means for compelling said engagement, said engagement in an operative position of said steering-wheel shaft releasing means for operating the starting mechanism.

2. In a safety controlling apparatus, a device for simultaneously locking the starting mechanism in an inoperative position, when the steering-wheel is unlocked, so as to be moved from an operative position, consisting of a hinged steering-wheel shaft, a hinged quadrant engaging therewith, means for compelling said engagement, said engagement in an inoperative position of said steering-shaft, locking the starting mechanism in an inoperative position.

3. In a safety controlling apparatus, a safety device consisting of a hinged steering-wheel shaft, a hinged quadrant engaging therewith, means for compelling said engagement; means for releasing said engagement in an operative position of said steering-wheel shaft and simultaneously locking the starting mechanism, in an inoperative position.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

EDWARD S. CLARK.

Witnesses:
EDWIN D. SIBLEY,
ISAAC H. DAVIS.