F. A. McDANIELS.

CONTROLLING DEVICE.

APPLICATION FILED JULY 13, 1920.

1,401,093. Patented Dec. 20, 1921.

Fig. 1.

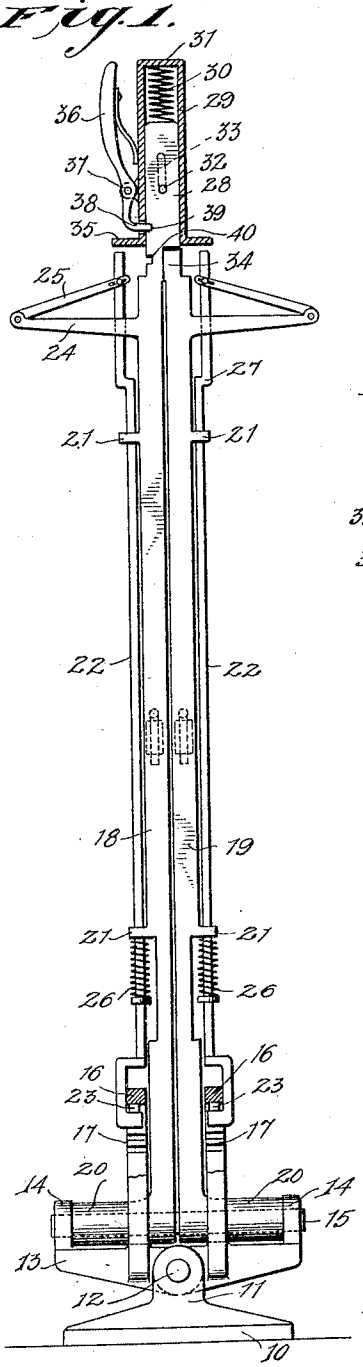


Fig. 3.

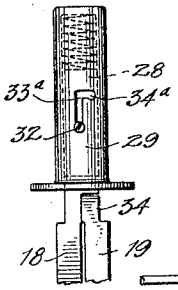
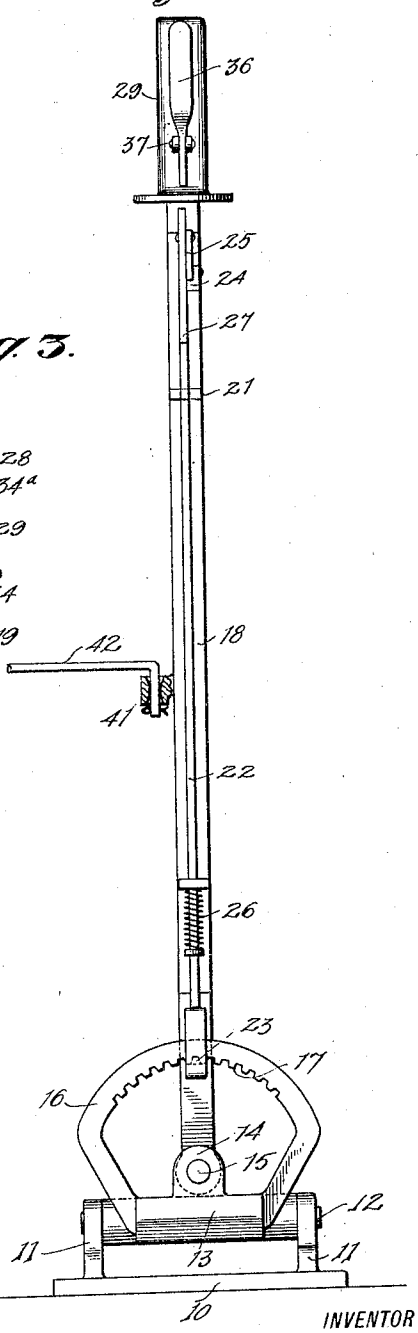


Fig. 2.



WITNESSES

H. C. Hebig

Hugh V. Allt

INVENTOR

FRANK A. McDANIELS

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANK ALBA McDANIELS, OF PORTLAND, OREGON.

CONTROLLING DEVICE.

1,401,093. Specification of Letters Patent. Patented Dec. 20, 1921.

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To all whom it may concern:

Be it known that I, FRANK A. McDANIELS, a citizen of the United States, and resident of Portland, in the county of Multnomah and State of Oregon, have invented a new and Improved Controlling Device, of which the following is a full, clear, and exact description.

This invention relates to control levers and has specific relation to an improved controlling means for self-propelled vehicles or tractors of the type which embodies a single motor and mechanism for independently or simultaneously coupling the driving elements thereto.

The invention primarily contemplates the association of a plurality of levers with independent connections whereby the levers may be independently or simultaneously operated and retained in any one of their adjusted positions.

An important advantage of the present invention resides in the convenient proximity of the manipulating means for controlling the levers thereby simplying the manipulation of the device.

A further object of the invention is to provide a device of the character described which is simple in construction, inexpensive to produce, strong, durable and highly efficient in the purpose for which it is intended.

With the above recited and other objects in view, some of which will be more apparent as the nature, purpose and operation of the device is understood from the following description and claims, reference is had to the accompanying drawings in which—

Figure 1 is a front elevation of the device mounted on any suitable support.

Fig. 2 is a side elevation thereof.

Fig. 3 is a fragmentary detail view of a slightly modified form of a handle locking means.

Referring to the drawings in detail by characters of reference which denote like parts throughout the several views thereof, 10 designates a base provided with upstanding spaced bearing lugs 11 cast or otherwise formed thereon and provided with alined apertures for the reception of a pivot pin or shaft 12. A yoke 13 having spaced bearing ears 14 for the reception of a pivot pin 15 is pivotally mounted on the pin 12 for transverse rocking movements and said yoke is provided with a pair of spaced segments 16 having rack teeth 17. A pair of levers 18 and 19 are formed with transverse bearing sleeves 20 at their lower ends for the reception of the pivot pin 15 whereby the same are associated with the yoke for longitudinal rocking movements. The levers are respectively provided with vertically spaced guides or bearings 21 in which are mounted for vertical sliding movements the detent rods 22, the lower extremities thereof being provided with the detents 23. The levers are further provided adjacent their upper extremities with laterally extending arms 24 and the upper extremity of each detent rod 22 is connected to the free extremity of said arms 24 by a link 25, said arms and links constituting respectively a hand grip for independently releasing the detents from operative engagement with the rack teeth 17 of the segments. Each detent rod 22 is provided with a contractile spring 26 for normally effecting engagement of the detents with the teeth. The detent rods 22 are further provided with offset upper extremities constituting stops 27 which are adapted to co-act with the upper guides 21 to limit the downward movement thereof. The lever 18 is provided with an extension 28 projecting beyond the extremity of the lever 19 and a substantially cylindrical handle 29 is mounted on the said extension for vertical movements with respect thereto. An expansion spring 30 is interposed between the extreme end of the extension and the end wall 31 of the handle to effect normal relative separation of said handle from the extension. The extension is provided with a transverse pin 32 which extends through the slots 33 in the handle to limit movements of the handle with respect to the extension in either direction. The lever 19 is provided with a reduced extremity 34 and when the levers are arranged in transverse alinement, the handle 29 is capable of being shifted to a position to telescope the reduced extremity 34 of the handle 19. The lower open end of the handle 29 is provided with an annular flange 35 and the upper extremities of the detent rods 22 are disposed in the path of movement of the flange 35 whereby upon shifting of the handle to a position to telescope the reduced extremity 34 of the lever 19, said flange will engage the extremities of said detent rods to simultaneously effect the release of the detents from the rack teeth 17 of the segment. In order to provide means for locking the handle in either one of its adjusted positions,

the same is provided with a spring actuated latch 36 pivoted as at 37 thereto. The latch is provided with a nose 38 which is adapted to operate through the opening in the side wall of the handle for respective engagement with the spaced notches 39 and 40 formed respectively in the extension 28 and the lever 18.

In the modified form illustrated in Fig. 3 of the drawings, the handle 29 is provided with bayonet slots 33ª in lieu of the straight slots 33 in the preferred form, said bayonet slots co-acting with the transverse pin 32 in the extension 28 to limit the relative separation of the handle from the extension and also serve to retain the handle in its lowermost adjustment, when the offset portion 34ª of the slot is engaged with the pin.

The levers are preferably provided on their rear faces with eye lugs 41 for the reception of connecting rods 42 adapted to associate the levers with any suitable mechanism.

By the construction heretofore set forth, it will be seen that by operating the hand grip of either of the levers 18 and 19, the detent rods will be depressed to release said levers and permit of the independent shifting of the same in either direction. If however it is desirable to shift both levers simultaneously, the handle 29 is grasped thereby releasing the nose 38 from the notch 39; downward movement of the handle will serve to couple the levers 18 and 19 together by the telescopic engagement of the open end of the handle 29 over the reduced extremity 34 of the lever 19. At the same time the annular flange 35 of the handle will engage and effect downward movement of the detent rods to disengage the detents from the rack teeth 17 of the segments. This permits of simultaneous shifting of the levers.

While several of the preferred embodiments of the invention have been illustrated, no limitation is made to the precise details of construction therein exhibited and it is understood that variations and modifications which fall within the scope of the appended claims may be resorted to when found expedient.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. The combination with a pair of pivoted levers, of independent means for retaining the same against movement, independent means for releasing the same, and means for simultaneously releasing the same, said latter means also serving to couple the levers for simultaneous movement.

2. The combination with a pair of pivoted levers, of independent means for retaining the same against movement, independent means for releasing the same, and means carried by one of the levers, adapted to co-act with the other lever to couple said levers for simultaneous movement and to effect simultaneous release of the retaining means of both levers.

3. The combination with a pair of pivoted levers, of independent means for retaining the same against movement, independent means for releasing the same, and telescopic means carried by one of the levers, adapted to co-act with the other lever to couple said levers for simultaneously movement and to effect simultaneous release of the retaining means of both levers.

4. The combination with a pair of pivoted levers, of independent means for retaining the same against movement, independent means for releasing the same, telescopic means carried by one of the levers, adapted to co-act with the other lever to couple said levers for simultaneous movement and to effect simultaneous release of the retaining means of both levers, and means for effecting normal disengagement of said lever coupling means.

5. The combination with a pair of pivoted levers, of independent means for retaining the same against movement, independent means for releasing the same, telescopic means carried by one of the levers, adapted to co-act with the other lever to couple said levers for simultaneous movement and to effect simultaneous release of the retaining means of both levers, means for effecting normal disengagement of said lever coupling means, and means for locking said lever coupling means in operative position.

6. The combination with a pair of independently pivoted levers, of a pair of segments and spring actuated detents adapted to co-act with each lever for retaining the same against movement, means carried by each lever for singly releasing said detents, and a telescopic handle carried by one lever adapted to co-act with the remaining lever to couple said levers for simultaneous operation, and serving to effect simultaneous release of both detents upon the coupling of said levers.

7. In a controlling device, a pivoted yoke, a pair of levers independentlv pivoted thereto, a pair of segments carried by said yoke, spring actuated detents carried by each lever and adapted to co-act with the segments for respectively retaining each lever against movement, a telescopic handle carried by one lever, adapted to co-act with the remaining lever to couple the levers for simultaneous operation, and means adapted to co-act with the detents to effect simultaneous release thereof upon coupling of the levers.

8. A controlling device comprising a base, a yoke pivoted thereto for transverse rock-

ing movement, a pair of levers pivoted to said yoke for longitudinal rocking movement, independent means for retaining each lever against longitudinal rocking movement, independent means for releasing each retaining means, and means for simultaneously releasing the retaining means.

9. A controlling device comprising a base, a yoke pivoted thereto for transverse rocking movement, a pair of levers pivoted to said yoke for longitudinal rocking movement, independent means for retaining each lever against longitudinal rocking movement, independent means for releasing each retaining means, and means for simultaneously releasing the retaining means, said means also serving to couple the levers for simultaneous longitudinal rocking movements.

FRANK ALBA McDANIELS.