O. F. H. CARLSON.

LEVER.

APPLICATION FILED SEPT. 30, 1919.

1,392,299. Patented Oct. 4, 1921.

Fig. 3.

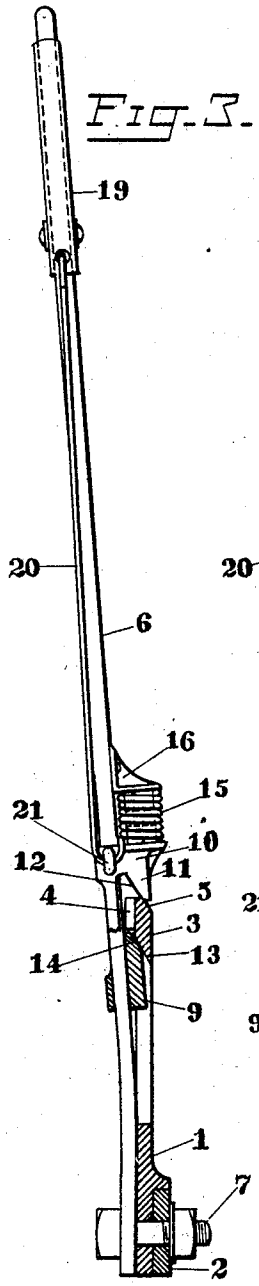


Fig. 2.

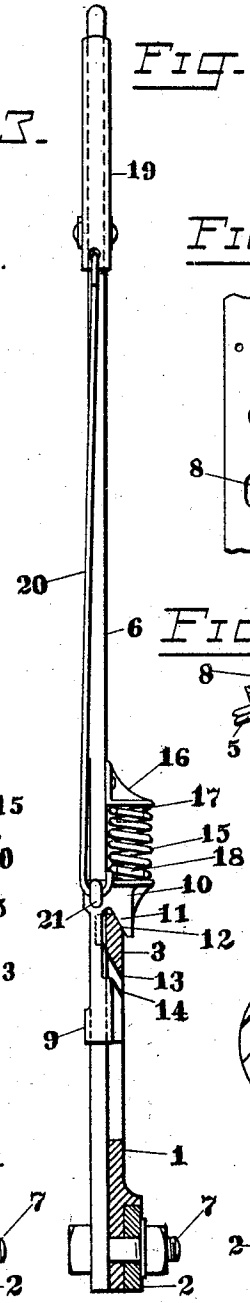


Fig. 5.

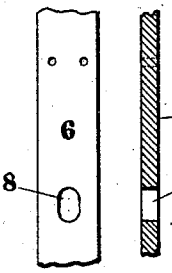


Fig. 4.

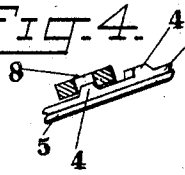
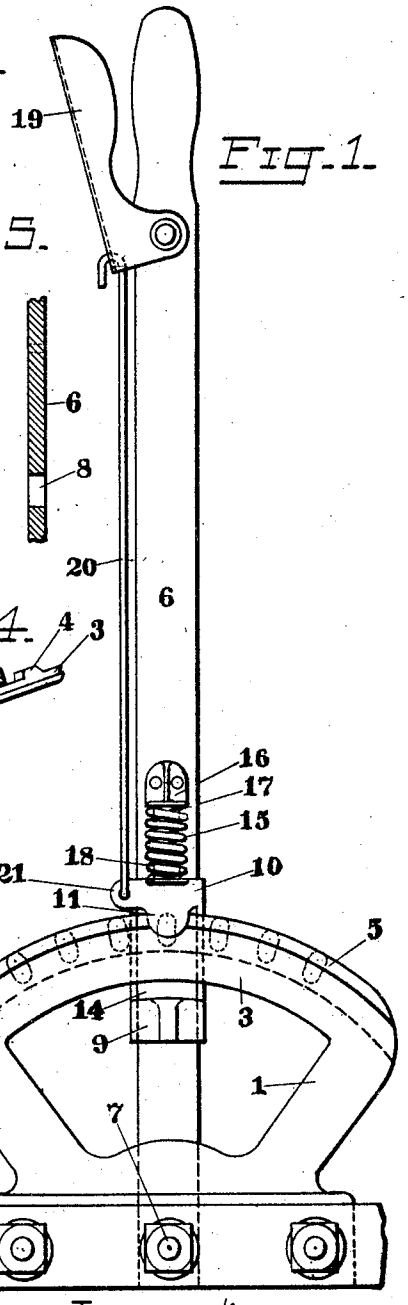


Fig. 1.



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UNITED STATES PATENT OFFICE.

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LEVER.

1,392,299. Specification of Letters Patent. Patented Oct. 4, 1921.

Application filed September 30, 1919. Serial No. 327,555.

To all whom it may concern:

Be it known that I, OSCAR F. H. CARLSON, a citizen of the United States, residing at Moline, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Levers, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to a lever mechanism having certain novel features and effectiveness in operation as will be fully described and claimed in the following specification.

Referring to the drawings in which similar numerals indicate identical parts—

Figure 1 is a side elevation of a sector having my improved lever mechanism in connection therewith.

Fig. 2 is a front elevation of Fig. 1 in part section.

Fig. 3 is a similar view to Fig. 2 but with the lever free to be swung on its pivot.

Fig. 4 is a detail view showing part of the means employed to hold the lever in position, and

Fig. 5 is a detail view of part of the lever.

A sector 1 is mounted on a support 2, and has on one side of its arc 3 a plurality of teeth 4, and on the edge of the opposite side a bevel 5. A lever 6 is pivotally supported on a bolt 7 which passes through the lower end of the lever 6, part of the sector 1, and the support 2, and is secured in place by a suitable nut. A slot 8, with which any one of the teeth 4 is adapted to engage, is formed in the lever 6. A casting 9 is slidably mounted on the lever 6, its upper portion 10 extending away from the lever and having a downward projection 11 the under side of which is a bevel 12 adapted to rest and slide on the bevel 5 of the arc 3.

On the underside of the arc 3 is a bevel 13 against which a bevel 14 on the adjacent face of the casting 9 is adapted to operate. A coiled spring 15 is interposed between the upper end of the casting 9 and the under side of a member 16 rigidly secured to the lever 6, and is held in place by lugs 17 and 18 on the member 16 and the casting 9 respectively.

Pivotally mounted on the upper end of the lever 6 is a rocking grip 19 to which is connected a rod 20 the lower end of which is hooked in an eye 21 projecting from the casting 9.

As shown in Figs. 1 and 2 the lever 6 is locked in position, when, however, it is desired to rock the lever the grip 19 is rocked and, through the rod 20, the casting 9 slides upwardly on the lever 6 bringing the bevels 13 and 14 into contact; a continued upward movement of the casting 9 will cause the bevel 14 to slide upon the bevel 13, and as the sector 1 is rigid the lever 6 will be sprung outwardly releasing the slot 8 from engagement with the adjacent tooth 4 so the lever 6 is free to be rocked on its pivot in the desired direction. When the new position has been reached the grip 19 is released, and the bevel 12 of the projection 11 being in contact with the bevel 5, the expansive force of the spring 15 moves the casting downward and toward the arc 3, moving the lever 6 toward the arc 3 at the same time until the tooth 4 at the adjusted position enters the slot 8, at this time the parts are in position, as shown in Figs. 1 and 2, and the lever 6 is locked against lateral movement by the projection 11 pressing against the arc 3 on the opposite side from the lever 6.

What I claim is—

1. In a lever mechanism, the combination with a sector, of a lever pivotally mounted to be rocked lengthwise of the sector, means on the lever coacting with means on the arc to hold the lever from rocking, and means on the lever operable to spring the lever laterally to release it from said holding means.

2. In a lever mechanism, the combination with a sector, of a lever pivotally mounted to be rocked lengthwise of the sector, means on the lever coacting with means on the arc to hold the lever from rocking, means on the lever contacting with a side of the arc to hold the lever from lateral movement, and means on the lever operable to spring the lever laterally to release it from said holding means.

3. In a lever mechanism, the combination with a sector having teeth on one side of its arc, of a lever pivotally mounted to be rocked lengthwise of the sector, a slot in the lever to engage with any one of said teeth to hold the lever from rocking, said lever adapted to be sprung laterally to free it from said teeth, means on the lever contacting with the other side of the arc to hold the lever from lateral movement and adapted to be raised to permit the lever to be

sprung laterally, and means on the lever operable to spring said lever laterally whereby it is free to be rocked.

4. In a lever mechanism, the combination with a sector having teeth on one side of its arc, of a lever pivotally mounted to be rocked lengthwise of the sector, a slot in the lever to engage with any one of said teeth to hold the lever from rocking, said lever adapted to be sprung laterally to free it from said teeth, a member slidably mounted on the lever, said member having a downwardly extending projection contacting with the side of the arc opposite the lever to hold the latter in engagement with the teeth and adapted to be raised to free the lever for lateral movement, and means on said member operating to spring the lever laterally as said member is raised.

5. In a lever mechanism, the combination with a sector having teeth on one side of its arc, of a lever pivotally mounted to be rocked lengthwise of the sector, a slot in the lever to engage with any one of said teeth to hold the lever from rocking, said lever adapted to be sprung laterally to free it from said teeth, and a member slidably mounted on the lever, and having a downwardly extending projection with a side beveled adjacent the arc, said bevel contacting with a bevel on the side of the arc opposite the lever to hold the lever in engagement with the teeth, said member adapted to be raised to free the lever for lateral movement and to simultaneously spring the lever laterally whereby it is freed from the teeth for rocking movement.

6. In a lever mechanism, the combination with a sector having teeth on one side of its arc, of a lever pivotally mounted to be rocked lengthwise of the sector, a slot in the lever to engage with any one of said teeth to hold the lever from rocking, said lever adapted to be sprung laterally to free it from said teeth, and a member slidably mounted on the lever and having a downwardly extending projection with a side beveled adjacent the arc, said bevel contacting with a bevel on the side of the arc opposite the teeth to hold the lever in engagement with the teeth, said member adapted to be raised to free the lever for lateral movement, and a bevel on the lower side of the arc adjacent the lever against which a bevel on said member operates to spring the lever laterally as said member is raised whereby the lever is freed from the teeth for lateral movement.

OSCAR F. H. CARLSON.