(No Model.)

A. M. STICKNEY.

LEVER CLUTCH.

No. 403,562. Patented May 21, 1889.

Fig. 3.

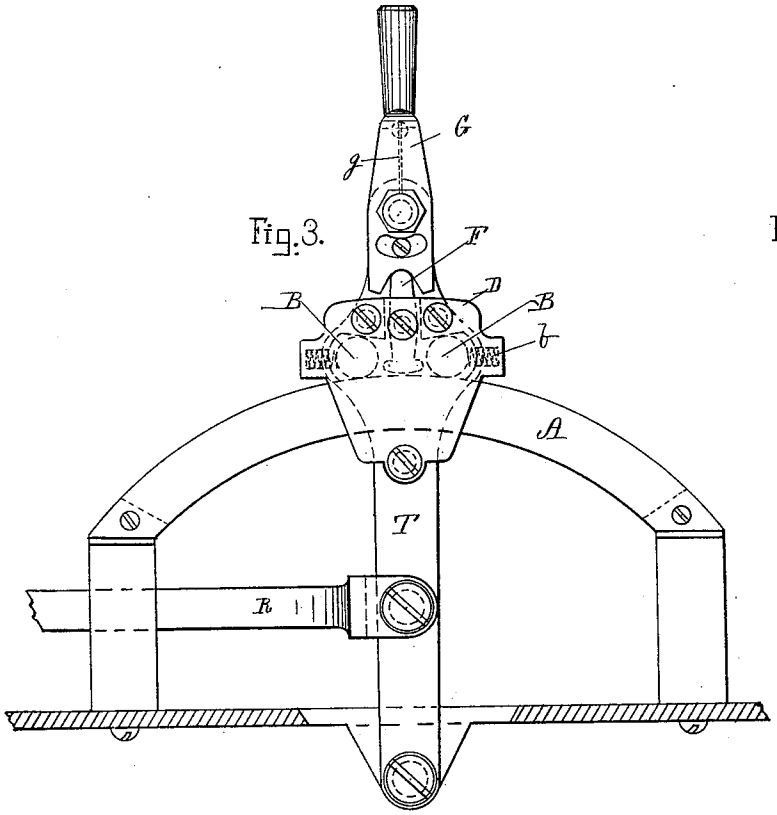


Fig. 4.

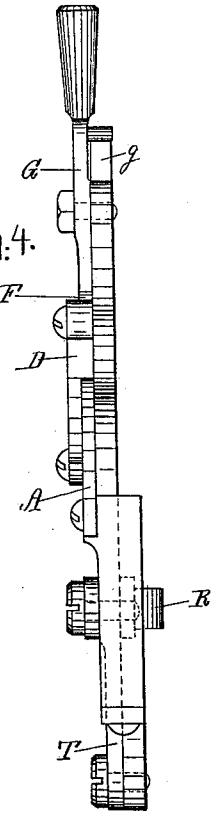


Fig. 1.

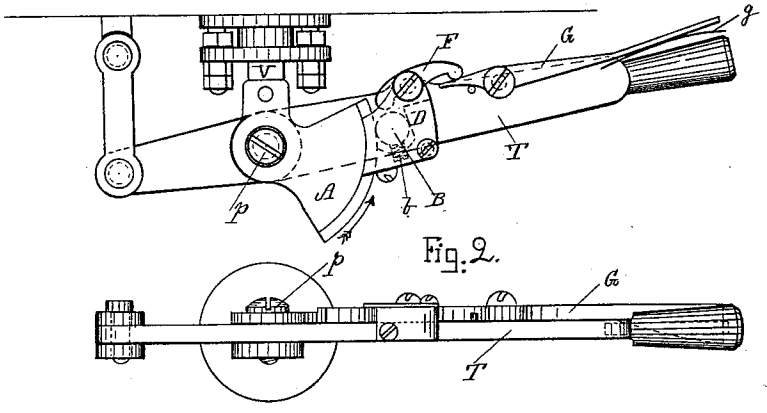


Fig. 2.

Witnesses.

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ALLISON M. STICKNEY, OF MEDFORD, MASSACHUSETTS.

LEVER-CLUTCH.

SPECIFICATION forming part of Letters Patent No. 403,562, dated May 21, 1889.

Application filed February 9, 1889. Serial No. 299,305. (No model.)

To all whom it may concern:

Be it known that I, ALLISON MORRIS STICKNEY, of Medford, in the county of Middlesex and State of Massachusetts, have invented an Improved Lever-Clutch, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side view, and Fig. 2 an edge view, of a single clutch embodying my invention applied to the lever of a throttle-valve. Fig. 3 is a side view, and Fig. 4 an edge view, of a double clutch embodying my invention applied to a lever.

My invention consists in the combination, with a clutch of well-known construction, of two levers, the inner lever forcing one member of the clutch away from the other when operated by the outer lever.

In the drawings, A is one member of the clutch, (shown in all the figures as a segment,) and B the other member, (shown in dotted lines in Figs. 1 and 3,) and is the usual cylinder of hardened steel, which is thrown forward by a spring, *b*, (shown in dotted lines in Figs. 1 and 3,) between the periphery of a segment, A, and an inclined plane formed upon the clutch-holder D, all these parts being familiar to all skilled in the art, and, as is well known, a globe or ball being often used in lieu of the cylinder B. It will also be clear without further description that a clutch of this well-known kind permits free motion of the holder D in one direction with relation to segment A, but prevents relative motion of the holder D in the other direction. For example, in Fig. 1 holder D will move freely over segment A in the direction shown by the arrow, the cylinder B moving slightly back against the force of spring *b;* but if it be attempted to move holder D over segment A in a direction opposite to the arrow in Fig. 1 cylinder B will jam between the periphery of the segment A and the inclined plane forming a part of holder D and prevent motion in that direction.

My invention is the combination, with the clutch A B and its holder D, of the levers F and G, the lever F serving to force the member B of the clutch away from member A and hold it away, and thereby allow holder D to be moved freely over segment A in a direction opposite that shown by the arrow in Fig. 1. The lever F is moved by the lever G, and it will be seen from Fig. 1 that a pull upon the lever G in a direction opposite to the arrow in Fig. 1 will release member B from member A—that is, unclutch holder D and permit holder D to move freely over segment A in a direction opposite to the arrow in Fig. 1. In short, the lever T in Fig. 1, to which holder D is fast, may be moved freely in the direction of the arrow shown in Fig. 1, (and thereby close the throttle-valve;) but it cannot be moved in a direction opposite to the arrow in Fig. 1 unless power be applied to lever G, and through lever G to lever F, and through lever F to disengage member B from member A.

In Fig. 3 the clutch is double, so that the holder D cannot be moved in either direction until one of the cylinders B is disengaged from the segment A, and the levers F and G are therefore double-acting, a pull upon the lever G in one direction releasing that cylinder B which before it is released prevents movement in that direction, and vice versa, as will be plain without further description.

In Fig. 1 the segment A is rigidly attached to the outer end of a valve-stem, V, and the valve-stem is pinned by pin *p* to lever T, lever G being shown as a mere grip-lever, its outer end forming a part of the grip of lever T.

In Fig. 3 the lever T, to which holder D is fast, is connected by rod R to the device which is to be controlled by lever T—for example, the reversing-gear of a locomotive, a switch, or whatever is to be moved and locked in place. The spring *g* serves to return the lever G into position, and in Fig. 1 acts only in one direction; but in Fig. 3 it is double-acting, because both levers G and F in that figure are double-acting. This spring might, of course, be as well applied to the lever F as to the lever G; but in most cases it is more convenient to apply it to the lever G.

While I have shown my invention as applied only to a lever, T, it will be clear that my invention is applicable in all cases where the holder D is used, and it will also be clear that the lever G may be detachable and only

applied when it becomes necessary to actuate the lever F; for example, where the rod K connects with a railroad-switch, the holder D and lever F may be inclosed by a metal cover, and the lever G be inserted through a slot in that cover to engage with the lever F when the switch is to be moved, thus making a locked switch which cannot be thrown except by the aid of lever G; but this is obviously only one out of many uses to which my invention is applicable.

What I claim as my invention is—

In combination, the clutch A B, holder D, and levers F and G, all arranged and operating substantially as described.

ALLISON M. STICKNEY.

Witnesses:
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JOHN R. SNOW.