

(No Model.)

A. M. STICKNEY.
LEVER CLUTCH.

No. 403,562.

Patented May 21, 1889.

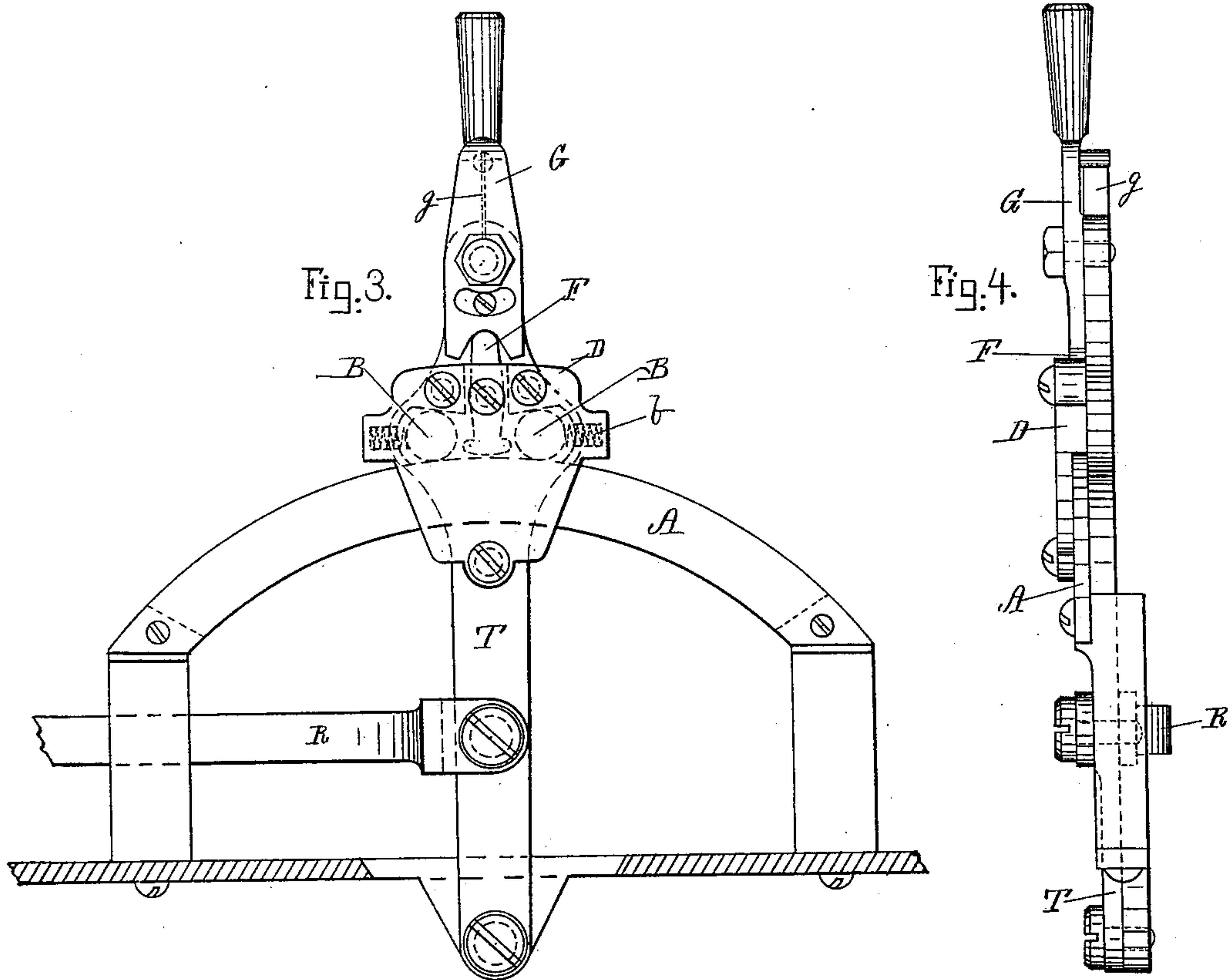


Fig. 1.

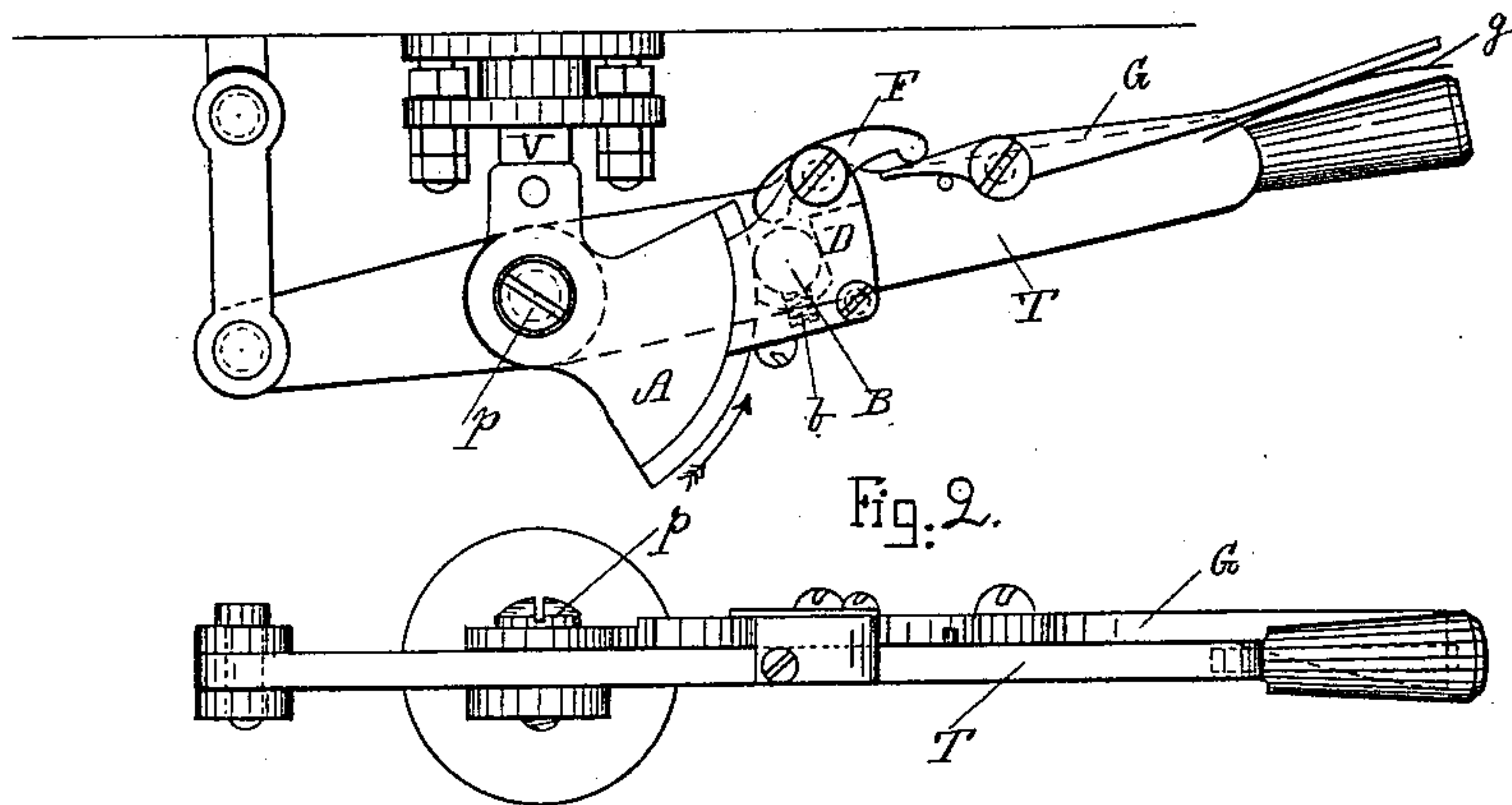


Fig. 2.

Witnesses.

Lauritz W. Miller
John R. Snow

Inventor.

Allison M. Stickney
by his attorney
J. E. Maynard

UNITED STATES PATENT OFFICE.

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
5 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 ex-
cept by the aid of lever G; but this is ob-
10 viously 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 operat-
ing substantially as described.

ALLISON M. STICKNEY.

Witnesses:

EDWARD S. BEACH,
JOHN R. SNOW.