

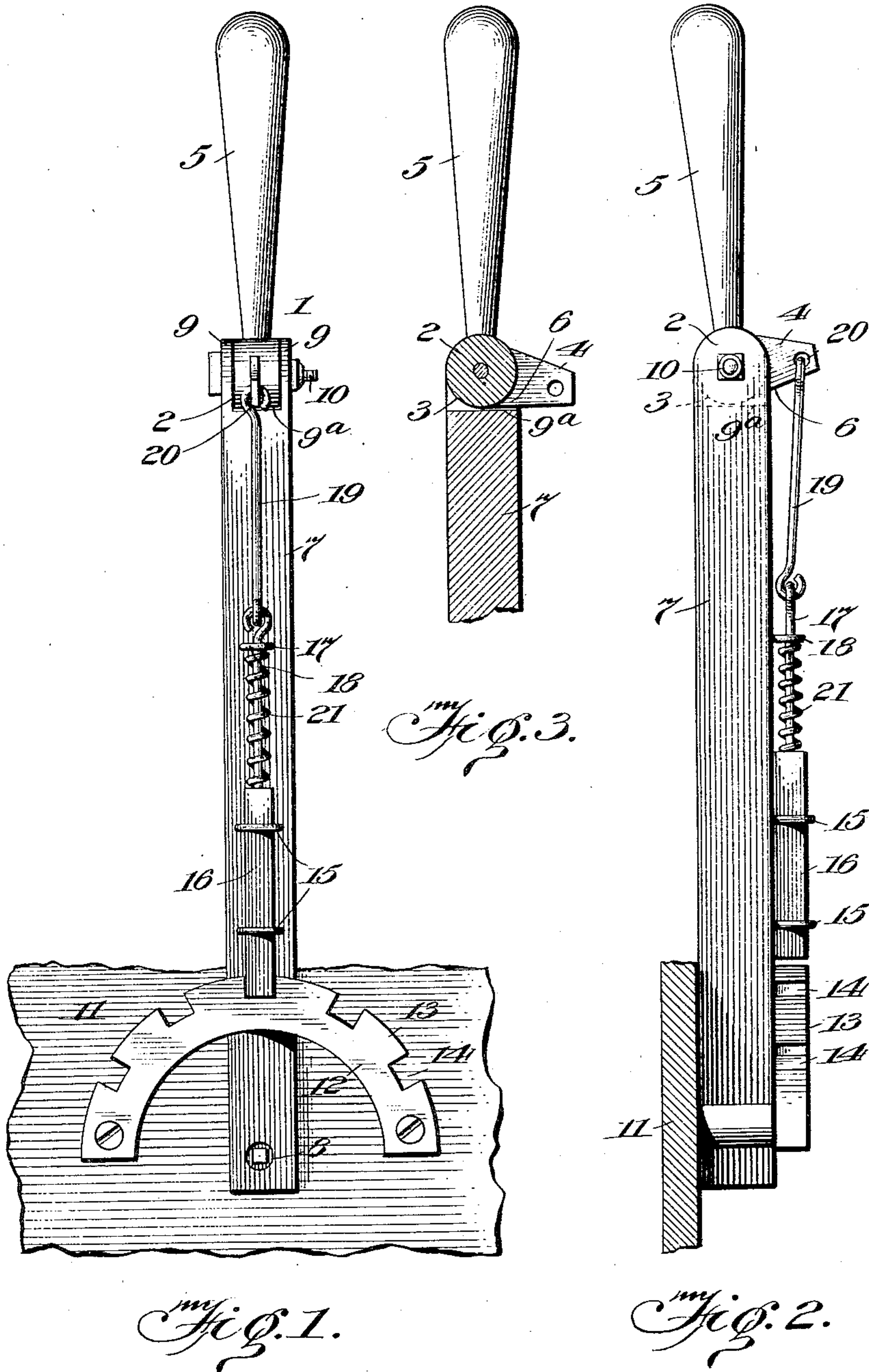
No. 889,198.

PATENTED JUNE 2, 1908.

T. A. BURKE.

LEVER.

APPLICATION FILED APR. 4, 1907.



Witnesses:
G. R. Richards.
J. M. Boston.

Inventor:
Thomas A. Burke,
By G. R. Richards, atty.

UNITED STATES PATENT OFFICE.

THOMAS A. BURKE, OF GALESBURG, ILLINOIS.

LEVER.

No. 889,198.

Specification of Letters Patent.

Patented June 2, 1908.

Application filed April 4, 1907. Serial No. 366,389.

To all whom it may concern:

Be it known that I, THOMAS A. BURKE, a citizen of the United States, and resident of Galesburg, in the county of Knox and State of Illinois, have invented a new and useful Lever, of which the following is a specification.

My invention relates to levers, and primarily to that class thereof employed in automobiles and other motor vehicles. Levers of this nature are, however, used on plows and other vehicles which are not self-propelled, and it will be evident that the invention is equally applicable to such. In levers of this nature as heretofore constructed, those which have come under my observation have consisted of a large number of parts or members, frail and liable to fail in operation.

One of the main objects of my invention is to provide a lever and its connected parts which will be strong, durable, economic of manufacture, pleasing in appearance and which will not become easily disabled or out of order.

A further object is to provide a connection of the lever members in which a positive seat or bearing for one is furnished by the other; in other words, the parts are so connected and each is so formed with relation to the other that when assembled and in use, an extreme jar or jolt such as frequently occurs when at great speed, will not throw one of them off its bearing as in the case of curved or other non-positive bearings. It may here be stated that by the term "positive bearing" I mean to convey the idea of a bearing such that one of the parts rests or is so firmly and securely seated on the other that it cannot without aid from the operator be caused to move therefrom. In this connection another, in fact, a primary object, is to provide a device of the character described in which the handle has movement in one direction or to one side only of the lever bar, and in which the coacting members of such parts are so constructed that extraneous means are not necessary to effect such object.

A further object is to provide improved means for raising the pawl or latch by the same movement which actuates the lever-handle, it being a constituent part thereof; while a final object is to prevent looseness and wobbling of certain of the parts.

To the end of carrying out these objects of the invention it consists in novel struc-

tural features and combinations of parts, the nature and operation of which will be found hereinafter fully described.

In order that all the foregoing may be clearly understood attention is called to the accompanying drawings, in which:

Figure 1 is an elevation embodying my improvements, showing also a fragment of an automobile frame, the view being taken from a point at the right hand side of the machine. Fig. 2 is another elevation, the pawl lifted from its locking position and the view being taken from the driver's seat in rear of the lever, and Fig. 3 a section of the handle and part of the bar, the ears or jaw thereof omitted.

Referring to the drawing by numerals, the same one indicating the same part in the different figures, let 1 represent a handle, its lower portion 2 being enlarged and the heel 3 thereof semicircular in form or outline while its projecting toe 4 (which acts both as a detent and a lever arm,) extends a slight distance at a right angle to the grip portion 5. From a point immediately below its vertical center the base 6 of the detent projection 4 is flat or plane for a purpose hereafter described.

The lever bar 7 is fulcrumed at 8 to a portion of the vehicle and provided at any suitable point with suitable means (not shown) for attachment to the speed controller, brake or other mechanism. At its upper portion is a jaw formed by ears 9 apertured for the reception of a pintle or bolt 10 or other means whereby it may be pivoted between them. Intermediate the ears 9 is a recess the lower portion of which constitutes a plane or flat seat or bearing 9^a for a purpose hereafter related.

Fixed to the vehicle frame 11 at any suitable place is a sector 12 of any ordinary construction provided with teeth 13 and notches 14. The bar 7 is provided with guides 15 in which moves the pawl 16 furnished at its upper end with a rod or connector 17 which passes through a way 18 and is connected with a link 19, the upper end of which engages the eye 20 of the detent 4.

Assuming the parts to be in the relative positions shown at Fig. 1 and it being desirable to move the lever in either direction, the operator will with his right hand grasp the grip or haft 5 to give it a slight throw to the left on the pivot 10 to bring it to the inclined position shown at Fig. 2. It will be evident

that in this movement the heel 3 will wipe smoothly over the plane bearing surface 9^a and the detent be elevated at its point to raise the pawl through the medium of the intermediate means 17, 19 from its engagement with the notch in the sector. By moving the haft (when in the position last described) toward or from the operator, or in a direction at a right angle to the direction of independent movement of the handle, the bar 7 also will be drawn on its fulcrum 8 in a direction at a right angle to the plane of independent movement of the haft 5. When the pawl has reached that one of the notches in which it is desired to set it, the operator will let go the handle, whereupon the spring 21 will expand and act upon said pawl to cause it to engage said notch, and the haft will be automatically returned to its normal position.

It will be seen that unless some means were provided for retarding or limiting the extent of movement of the handle in its return it would pass over its perpendicular position and permit wobbling not only of itself but of the parts connected thereto. An inspection of Fig. 3 will best show the means which I employ to prevent wobbling, such being the plane seat or bearing 9^a on the bar 7 and the plane or flat surface 6 of the detent 4 and parts adjacent thereto. In other words, that face of the enlarged lower portion of the handle which rests on the plane or flat bearing 9^a is also flat, and together they provide a firm and secure means of accomplishing the object sought to be attained, while the projecting detent limits and prevents the pivotal movement of the handle to a greater extent than desired. This construction furnishes a positive bearing or one which firmly and securely holds the lever handle and its connected parts from wobbling or being accidentally thrown out of position by reason of abnormal jolting or jarring.

Having thus described my invention, I claim:—

1. The combination with a lever bar provided with jaws at its free end and a plane horizontal seat therebetween, of a handle pivoted in said jaws and including a plane horizontal bearing at its lowermost portion, said portion extended to form a detent projecting beyond the lever bar and being provided near its extremity with an eye for the purpose described, the handle being prevented from movement on one side of the vertical by said detent.

2. In a lever, the combination with a lever bar having jaws at its free end and a plane horizontal seat therebetween, of a handle pivoted between said jaws, comprising an integral grip portion, a plane lower portion elongated in one direction only to extend beyond the side of the lever bar, where it is provided with an eye for the purpose described, said elongated portion further constituting a detent whereby the movement of the handle to one side of the vertical is prevented.

3. In a lever, in combination, a pivoted bar, a handle, a pivotal connection between them whereby the handle has movement in one direction independently of the bar, a pivotal connection for the bar whereby it and the handle have movement at a right angle to the direction first described, there being a plane, horizontal seat on the bar, a like bearing face on the handle and a detent integral therewith adapted to rest on the aforesaid seat, said detent projecting beyond the side of the bar and adapted to limit the movement of the handle to one on one side only of the vertical, it being provided near its extremity with an eye for the purpose described.

4. In a lever, the combination of a pivoted lever bar adapted to have movement in one direction, there being jaws at its free end and a horizontal, plane seat therebetween, a handle pivoted between said jaws to have movement in a plane at a right angle to the aforesaid direction of movement of the bar, there being a plane bearing surface along the lower end of the handle adapted to rest on said plane seat when the parts are in locked position, and a detent projecting from the lower end of the handle and extending beyond the plane seat aforesaid, whereby the movement of the handle is limited to one in the plane of the lever bar, the opposite side of the lower portion of the handle being curved and adapted to wipe over the seat aforesaid, a single pawl adapted to have longitudinal movement with relation to said handle, means for connecting it to that end of the detent which projects at the side of and beyond the lever bar, and means for returning it and the handle to their normal positions after movement therefrom.

In witness whereof I have hereunto signed my name in presence of two witnesses.

THOMAS A. BURKE.

Witnesses:

W. H. SEARS,
WM. W. STANDARD.