Dec. 23, 1930. D. E. LESPERANCE 1,786,210

HANDLE LOCK FOR VACUUM SWEEPERS

Filed March 1, 1930

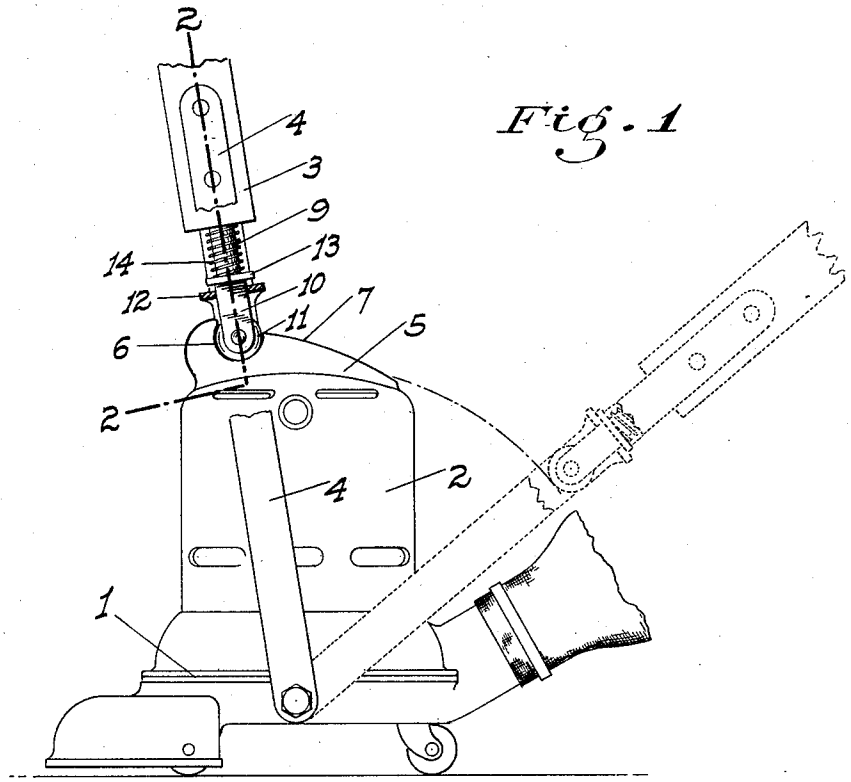


Fig. 1

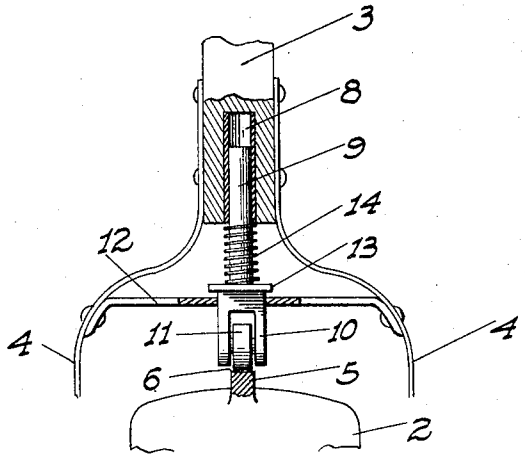


Fig. 2

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Patented Dec. 23, 1930 1,786,210

UNITED STATES PATENT OFFICE

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HANDLE LOCK FOR VACUUM SWEEPERS

Application filed March 1, 1930. Serial No. 432,423.

This invention relates to attachments for vacuum sweepers to keep the flexibly mounted operating handles of the same in an upright and relatively immovable position when not in use.

Devices for the purpose such as are now provided consist of clips or catches mounted on the motor casing or head of the sweeper which engage one of the forks of the handle. This arrangement wears the fork almost through after considerable use, frequently causing it to break at that point; and even without such breakage catches of this character very often become loose and cease to function.

The principal object of my invention is to avoid the above objectionable features by providing a catch device arranged between the head and handle, so designed that the handle will be properly maintained in its upright and non-operative position without any wear on the handles or its forks being had; and which is of such a nature that it will function indefinitely without giving trouble or wearing out.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views:

Fig. 1 is a fragmentary side outline of a vacuum sweeper showing my improved catch means applied thereto.

Fig. 2 is an enlarged fragmentary cross-section taken on the line 2—2 of Fig. 1.

Referring now more particularly to the characters of reference on the drawings the vacuum sweeper as shown and which is of a standard type, includes a main wheel supported base or frame 1, projecting upwardly from which is the operating motor which is enclosed in a casing or head 2. The means for manipulating the sweeper along a floor consists of the usual rigid handlebar 3, to the lower end of which are secured the laterally diverging fork bars 4 which straddle the head and at their lower ends also straddle and are pivoted onto the base 1. This mounting of the handle, which as above indicated, is standard, enables the same to be moved from an upright inoperative position to different operative positions at an angle to said upright position as may be required by the operator.

My improved catch means to hold the handle in said upright position comprises a relatively narrow block 5 mounted on top of or formed with the head 2; the major axis of said block extending in the direction of swinging movement of the handle. Toward its forward end, relative to the direction of advancing movement of the sweeper, said block is provided with a circular depression 6, the forward side of which is somewhat higher than the rear side. The top surface of the block from the rear edge of the depression to the rear end of the block is formed with a curved cam surface 7 which is eccentric to the pivotal connection of the forks; being closer to the said pivotal connection at its rear end than at its forward end or where it merges with the depression.

Seated in the lower end of the handlebar between the two forks is a sleeve 8 in which a spindle 9 is slidable. This spindle projects below the lower end of the handlebar a certain distance and on its lower end carries a rectangular forked head 10 in which a roller 11 is turnably mounted. This roller is transversely alined with the block 5 and is substantially the same diameter as the depression 6 so as to fit fairly snugly therein. The head 10 is slidable through a cross-plate or bracket 12 which extends between and is secured to the forks 4. This bracket prevents rotation of the head such as would throw the roller out of proper alinement with the cam block. Said bracket also forms a stop for a flange 13 secured on the upper end of the head 10; a spring 14 about the stem 9 between the lower end of the handlebar 3 and the bracket 12 tending to force the said flange against the bracket.

The distance from the pivotal connection of the forks to the bottom of the roller when

the latter is at its lowermost position, as determined by the engagement of the flange 13 with the bracket, is slightly greater than the distance between said pivotal connection and the rearmost edge of the cam surface 7, as indicated in Fig. 1. It will therefore be seen that as the handlebar is moved upwardly from its operating position (as shown in dotted lines in Fig. 1), the roller will engage the cam surface and will be gradually raised as it moves along said surface; the spring being of course increasingly compressed. This raising of the roller and the compression of the spring will take place when the roller is in direct overhanging relation with the depression 6, whereupon the spring will immediately force the roller down into the depression and of course hold the handle against undesired movement. The handle cannot then be moved further forward or in the opposite direction to that in which it is intended to be turned, owing to the height of the forward edge of the depression, which engages the roller almost to the top of the same and of course provides an insurmountable ledge. The opposite or back side of the depression however being considerably lower, the roller can be easily disengaged from the depression by a rearward pull on the handle.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:

1. Catch means for a vacuum sweeper handle, said handle comprising a main bar, and fork straps depending from the bar in straddling relation to and pivoted at their lower ends on the sweeper; said catch means including a cam mounted on the sweeper between the forks and below the lower end of the handlebar, and eccentric relative to the fork-pivots, said cam terminating at its end furthest from said pivots in a depression, a stem slidable in and depending from the lower end of the handle-bar, a head on the lower end of the stem, a bracket secured to the forks through which the head slidably but nonturnably projects, a roller carried by the head below the bracket to ride on the cam and seat in the depression, a spring on the stem between the head and handle-bar to force the stem and head downwardly, and means between the head and bracket limiting such movement of the head.

2. In a vacuum sweeper, the combination with the motor casing and the swivelly mounted handle-bar of the sweeper, of a block fixed on top of the casing and having a circular depression in its upper surface, and a roller yieldably depending from and supported in connection with the handle-bar for yieldable engagement with the depression from one end of the same when the handle is in a substantially upright position; the depression at said one end being relatively shallow but at the other end extending upwardly to a termination adjacent the plane of the upper edge of the roller whereby to form a positive stop for the roller to prevent further movement of the same in that direction.

In testimony whereof I affix my signature.

DENNIS E. LESPERANCE.