

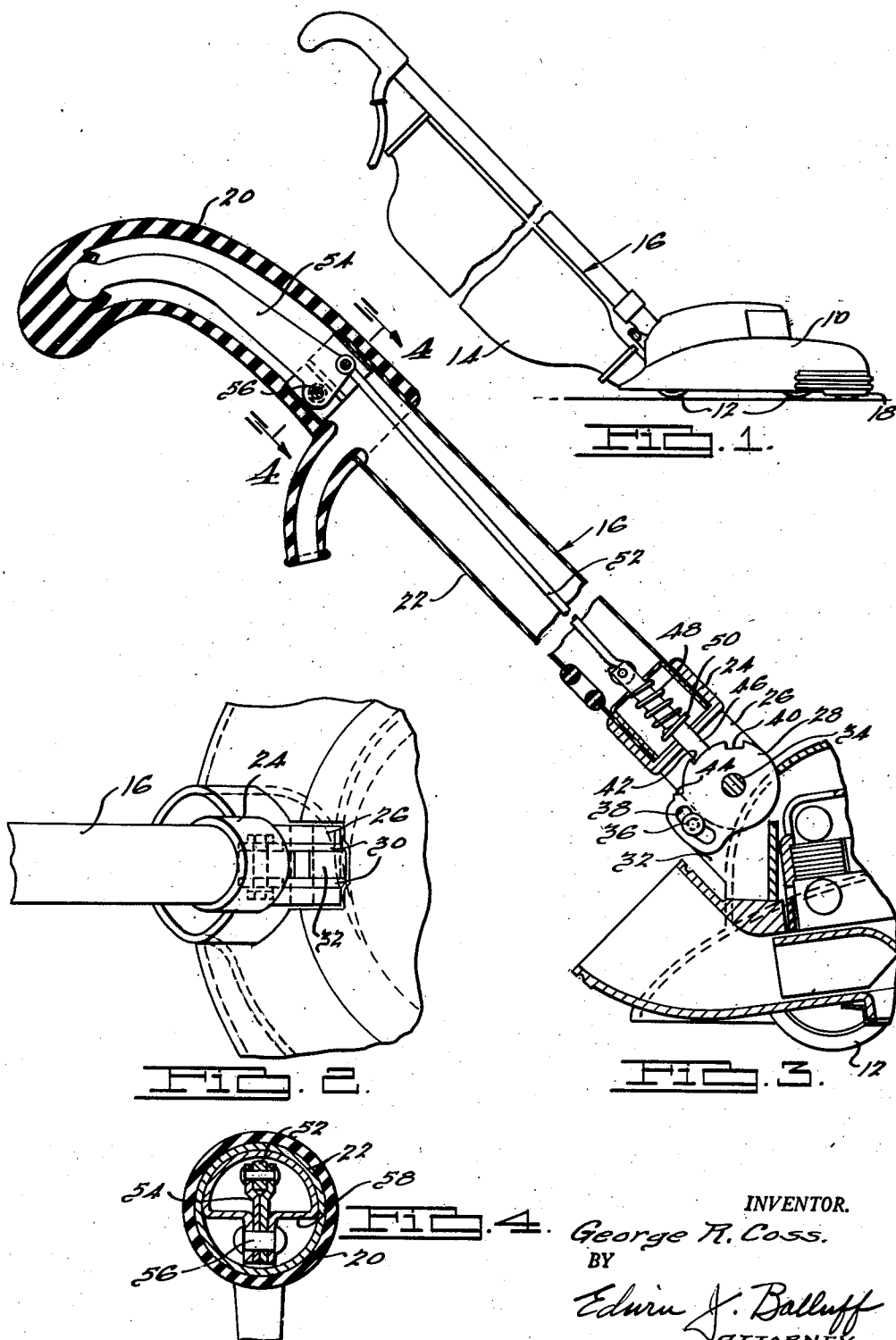
April 2, 1946.

G. R. COSS

2,397,537

SUCTION CLEANER

Filed Aug. 4, 1944



INVENTOR.

George R. Coss.

BY

Edwin J. Balluff
ATTORNEY.

UNITED STATES PATENT OFFICE

2,397,537

SUCTION CLEANER

George R. Coss, Detroit, Mich., assignor to
Eureka Williams Corporation, a corporation of
Michigan

Application August 4, 1944, Serial No. 548,066

6 Claims. (Cl. 306—13)

This invention relates to suction cleaners of the floor type and has particular reference to a new and useful improvement relating to the handle and handle lock therefor.

The principal object of the invention is to provide a new and more efficient handle and handle lock for a suction cleaner of the floor type.

Other objects and advantages of the invention will be apparent from a consideration of the following specification taken in conjunction with the accompanying drawing, of which there is one sheet and wherein:

Fig. 1 is a side elevational view of a cleaner embodying the invention;

Fig. 2 is a plan view of the handle lock;

Fig. 3 is an enlarged fragmentary sectional view through the handle and the handle lock; and

Fig. 4 is a sectional view taken along the line 4—4 of Fig. 3.

A suction cleaner embodying the invention includes a body or casing 10 mounted on front and rear wheels 12, a dust bag 14, and a handle 16. The casing 10 includes a floor nozzle 18 through which dirt laden air is drawn during operation of the cleaner by an electric motor driven fan which discharges the dirt laden stream of air into the dust bag.

The handle 16 is pivoted to the cleaner body 10 above the rear wheels and includes a hand grip 20 which preferably is provided by a molded flexible piece of rubber or other suitable material. The handle 16 further includes a hollow tube 22 the upper end of which is fitted and secured within a suitable socket in the handle grip 20. The lower end of the tube 20 has suitably secured thereto a bail 24 which includes a pair of spaced, parallel arms 26 which straddle a lock member 28. The lock member 28 may be U-shaped in cross section and include duplicate spaced parts 30 which straddle an upstanding post 32 projecting upwardly from the cleaner body at the rear thereof.

The post 32 is provided with a trunnion or pivot pin 34 which extends through suitable openings in the parts 30 of the member 28 and laterally therebeyond into suitable bearing surfaces formed in the arms 26 so as to provide a pivotal mounting for the handle 16. A bolt 36 extending through slots 38 in the parts 30 clamps the parts 30 against rotation relative to the post 32. The edges of the slots 38 may be serrated so as to prevent slippage.

The parts 30 have their upper periphery formed

to provide a keeper or notch 40 and spaced shoulders or stops 42 and 44. The handle is pivoted for swinging movement between a vertical position and a horizontal position, the vertical position sometimes being referred to as the parked position of the handle. The position in which the handle is illustrated in Fig. 3 sometimes is designated as the operating position or range. A lock member 46 forming a latch is cooperable with the slot 40 when the handle is in its vertical position to lock the handle against pivotal movement relative to the cleaner body.

The latch 46 is axially slidably mounted in the handle and constrained against the periphery of the member 28 by a spring 48 one end of which bears against a transverse wall in the handle while the other end of the spring bears against a collar 50 fixed to the latch 46 to move therewith. Thus, when the handle is rotated in a clockwise direction from the position illustrated in Fig. 3 to a vertical position, the latch 46 will drop into the notch 40 and lock the handle 16 against movement relative to the cleaner.

A link 52 connected at one end to the latch 46 is pivotally connected at its other end to a bell crank 54 pivoted at 56 by a pin carried by a bracket 58 secured within the upper end of the tube 22. The other end of the bell crank 54 is formed in the shape of a ball and arranged in a correspondingly shaped socket formed in the upper end of the hand grip 20. By bending the hand grip 20 in a counterclockwise direction sufficient to pivot the bell crank 54 about its pivot 56, the link 52 will pull the latch 46 out of the notch 40 thereby releasing the handle for movement toward its operating range. The upper end of the operating range is limited by the slot 40 while the lower end thereof is defined by the shoulder 42. The latch 46 rides freely on the upper surface of the lock member 28 between the shoulder 42 and the notch 40.

In order to move the handle 16 downwardly below its normal operating range, the hand grip 20 again is bent downwardly or backwardly sufficient to actuate the bell crank 54 to lift the latch 46 over the shoulder 42. The shoulder 44 limits the counterclockwise pivotal movement of the handle. As the handle is moved in a counterclockwise direction from its horizontal position, the latch 46 will simply ride over the shoulder 42 and thence into the notch 40.

While the invention has been described with some detail, it is to be understood that the description is for the purpose of illustration only and is not definitive of the limits of the inventive

idea. The right is reserved to make such changes in the details of construction and arrangement of parts as will fall within the purview of the attached claims.

I claim:

1. In a suction cleaner having a body with an upstanding handle pivotally mounted thereon for maneuvering said cleaner, a handle lock including interengageable relatively movable locking members, mounted on said body and handle respectively, and operable for locking the handle against pivotal movement relative to said body and vice versa, said handle having a flexible hand grip therefor at the upper end thereof and means at least partially encased by said hand grip and actuated by flexing of said hand grip and connected to one of said members for disengaging the same from the other in order to release said lock.

2. In a suction cleaner having a body with an upstanding handle pivotally mounted thereon for maneuvering said cleaner, a handle lock including a lock mounted on said body and a latch member movably mounted on said handle, said members being interengageable for locking said handle against pivotal movement relative to said body and vice versa, said handle having a flexible hand grip therefor at the upper end thereof and means at least partially encased by said hand grip and actuated by flexing of said hand grip and connected to said latch member for disengaging the same from said lock member in order to release said lock.

3. In a suction cleaner having a body with an upstanding handle pivotally mounted thereon for maneuvering said cleaner, a handle lock including a lock member mounted on said body having a keeper and a shoulder spaced therefrom, a latch member movably mounted on said handle and engageable with said keeper for locking the handle against pivotal movement relative to said body and vice versa, said latch when disengaged from said keeper permitting pivoting movement of said handle, said latch being engageable with said shoulder for limiting the extent of said handle movement, said handle having a flexible hand grip therefor at the upper end thereof and means at least partially encased by said hand grip and actuated by flexing of said hand grip

and connected to said latch member for disengaging the same from said keeper in order to release said lock or from said shoulder to permit further pivoting movement of said handle.

4. In a suction cleaner having a body, an upstanding handle therefor by means of which said cleaner may be maneuvered, a pivotal mounting for said handle on said body, a member mounted on said body adjacent said pivotal mounting and having spaced shoulders, a latch member carried by said handle and cooperable with said shoulder upon pivotal movement of said handle for limiting the pivotal movement of said handle relative to said body, said handle having a flexible hand grip therefor at the upper end thereof and means at least partially encased by said hand grip and actuated by flexing of said hand grip and connected to said latch member for moving said latch so that it will not engage one of said shoulders thereby to permit further pivotal movement of said handle.

5. In a suction cleaner having a body, an upstanding handle for maneuvering said cleaner, a pivotal mounting on said body for said handle, a handle lock including engageable relatively movable locking members associated with said body and handle for locking the handle against pivotal movement relative to said body and vice versa, said handle having a flexible hand grip therefor at the upper end thereof, and means at least partially encased by said hand grip and actuated by flexing of said hand grip and connected to one of said members for disengaging the same from the other in order to release said lock.

6. In a suction cleaner having a body, an upstanding handle for maneuvering said cleaner, a pivotal mounting on said body for said handle, a handle lock including engageable relatively movable locking members associated with said body and handle for locking the handle against pivotal movement relative to said body and vice versa, said handle having a lever at the upper end thereof connected to one of said members for disengaging the same from the other in order to release said lock, and means encasing said lever and forming a hand grip for said handle.

GEORGE R. COSS.