(No Model.)

J. CHANTRELL.

TOOL HANDLE.

No. 343,224. Patented June 8, 1886.

Fig. 1a

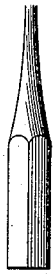


Fig. 2.

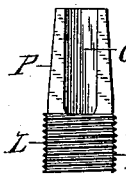


Fig. 3.

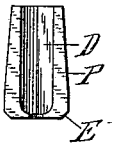


Fig. 1.

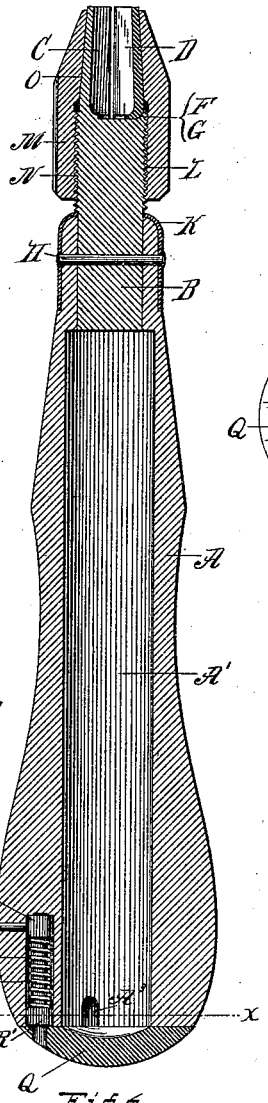


Fig. 5.

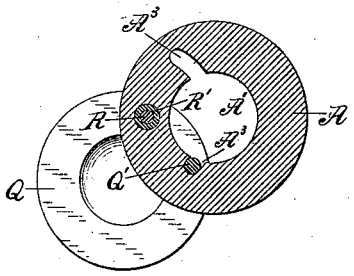


Fig. 4.

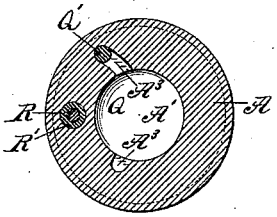


Fig. 7.

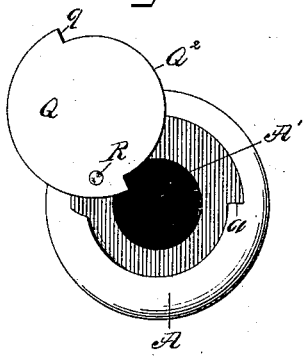
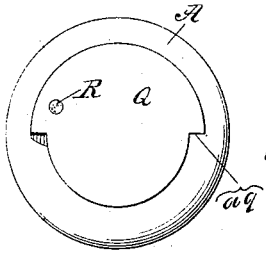


Fig. 6.



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C. E. Ruggles

Inventor,
John Chantrell
By A. M. Wooster
Atty.

UNITED STATES PATENT OFFICE.

JOHN CHANTRELL, OF READING, PENNSYLVANIA.

TOOL-HANDLE.

SPECIFICATION forming part of Letters Patent No. 343,224, dated June 8, 1886.

Application filed February 11, 1886. Serial No. 191,581. (No model.)

To all whom it may concern:

Be it known that I, JOHN CHANTRELL, a citizen of the United States, residing at Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Tool-Handles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to simplify and improve the construction of this class of devices—that is, to produce a construction that may be manufactured at slight expense, will be durable, and will hold the tool so firmly that it cannot be drawn out—in addition to which I provide a self-closing cap or cover for the base of the handle that will open without lifting. With these ends in view I have devised the novel construction which I will now describe, referring by letters to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a central longitudinal section of the device complete. Fig. 1ª shows a tool detached. Fig. 2 is an elevation of a portion of the shank, showing one of the jaws made integral therewith; Fig. 3, a face view of the independent jaw; Fig. 4, a section of the base of the handle on the line *x x* in Fig. 1, looking down, and showing the cap or cover in its closed position; Fig. 5, a similar view showing the cap or cover in its opened position; Fig. 6, a plan view of the base of the handle, the construction being slightly modified in relation to the stops; and Fig. 7 is a view corresponding with Fig. 6, showing the cover in its opened position.

Similar letters denote the same parts in all the figures.

A represents the body of the handle having a central longitudinal opening, A′, extending entirely through it.

B is the shank, and C one of the jaws, made integral with the shank.

D represents an independent jaw, the base of which is curved or inclined, as at E, and rests in a cup or depression, F, at the end of the shank, the latter being provided with an incline, G, corresponding with the incline at the base of the jaw. The lower end of the shank is let into the handle, and is preferably held firmly in position by a rivet, H, which extends through ferrule K, the body of the handle, and the shank. As seen in Fig. 1, the shank closes one end of the opening through the handle.

Below the base of jaw C the shank is provided with an external screw-thread, L.

M represents a sleeve having a screw-thread, N, at its lower end adapted to engage the thread upon the shank, and at its upper end inclines O, which correspond with inclines P on the jaws and lie parallel therewith.

It is an important feature of my construction that the independent jaw is held in place by the sleeve alone, and that the incline upon the sleeve shall be the same length or practically the same as the inclines upon the jaws, so that it will be rendered impossible in practice for one end of the independent jaw to move before the other, or for it to tilt or bind in any way. In practice the inclines upon the sleeve and jaws are in contact their entire length, and as the independent jaw moves forward incline E at its base rides down incline G and into the cup at the end of the shank, thus keeping the faces of the jaws parallel with each other. When the sleeve is raised by turning it upon the shank, it of course moves away from jaw C and permits jaw D to fall back away from the face of jaw C, in which position a tool may be readily inserted or withdrawn.

To close the independent jaw upon the tool, it is simply necessary to turn the sleeve downward. In the closed position of the jaws the entire length of inclines P is in contact with incline O upon the sleeve, and the entire face of both jaws acts to grasp the tool-shank, thus giving a vise-like grip upon it.

A′ represents a central opening in the handle, which is used as a receptacle for tools, and Q is a cap or cover for said opening, which is curved externally to correspond with the contour of the handle. Heretofore this class of covers have been held in proper position by a spring acting to draw the cover inward, and in order to turn the cover to disclose the central opening it was necessary to lift it slightly against the force of the spring, after which it might be turned freely. The cover, moreover, was not self-closing.

By my present improvement I produce a self-closing cover, which does not require to be lifted in order to turn it. R is a stud, rigidly secured to the cover and extending down into a socket, A^2, in the handle. S is a coiled spring surrounding the stud, the lower end of which is attached to a sleeve or collar, R′, which is rigidly secured to or made part of the stud. At the upper end of the stud is a loose sleeve or collar, R^2, to which the other end of the spring is attached. In assembling, stud R is simply set into socket A^2 and secured there by a pin, T, driven in from the outside and engaging sleeve R^2, so that the latter is held against rotation. Q′ represents a stop-pin on the under side of the cover, and A^3 represents slots in the handle, opening out of the central opening, the bottoms of which engage pin Q′, to limit the movement of the cover in either direction. The action of the spring is of course to throw the cover to the closed position—that is, as shown in Figs. 1 and 4. In the latter figure pin Q will be seen to be at the bottom of one of the slots. In Fig. 5 is shown the open position of the cover—that is to say, the cover has been turned against the power of spring S, and pin Q′ is at the bottom of the other slot, thus limiting the outward movement of the cover. It will of course be understood that when the cover is turned stud R moves with it, turning freely in sleeve R^2, to which the upper end of the spring is attached. In the modified form pin Q′ and slots A^3 are dispensed with. One side of the cover is cut away, as at Q^2, leaving shoulders *q* at each end, one of which engages one of the shoulders *a* on the handle, to hold the cover at its closed position. The other is engaged by the cover itself, to limit its outward movement.

I do not desire to limit myself to the exact details or construction shown, as they may be considerably varied without departing from the spirit of my invention.

Having thus described my improvements, I claim—

1. The shank having a fixed jaw made integral therewith, and provided with a screw-thread and an incline at its back, in combination with a detached jaw having a similar incline and a threaded sleeve adapted to engage the shank, and provided with an incline upon its inner side, which secures the detached jaw and acts when turned down to move it toward the fixed jaw, thereby clamping a tool-shank between them.

2. The shank having a fixed jaw made integral therewith and an independent jaw whose face is parallel thereto, the backs of both being provided with inclines, in combination with a sleeve adapted to engage a screw-thread upon the shank, and having an incline, O, which in closing bears against the whole length of the independent jaw, whereby both ends of the latter are caused to move forward evenly and the entire length of both jaws to grasp a tool.

3. The shank having a fixed jaw made integral therewith, and a cup, F, with an incline, G, at one side. in combination with an independent jaw having an incline, E, at its base corresponding with incline G, and a sleeve adapted to rotate upon the shank, to close the independent jaw against a tool.

4. The threaded shank, and fixed jaw made integral therewith, and a detached jaw whose face is parallel thereto, the backs of both jaws having inclines, in combination with a threaded sleeve adapted to engage the shank, and having an incline, O, which in closing bears against the whole length of the detached jaw, whereby said jaw is caused to move forward evenly, so that the entire length of both jaws acts to grasp a tool-shank.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN CHANTRELL.

Witnesses:
ISAAC R. FISHER,
GEORGE MILLER.