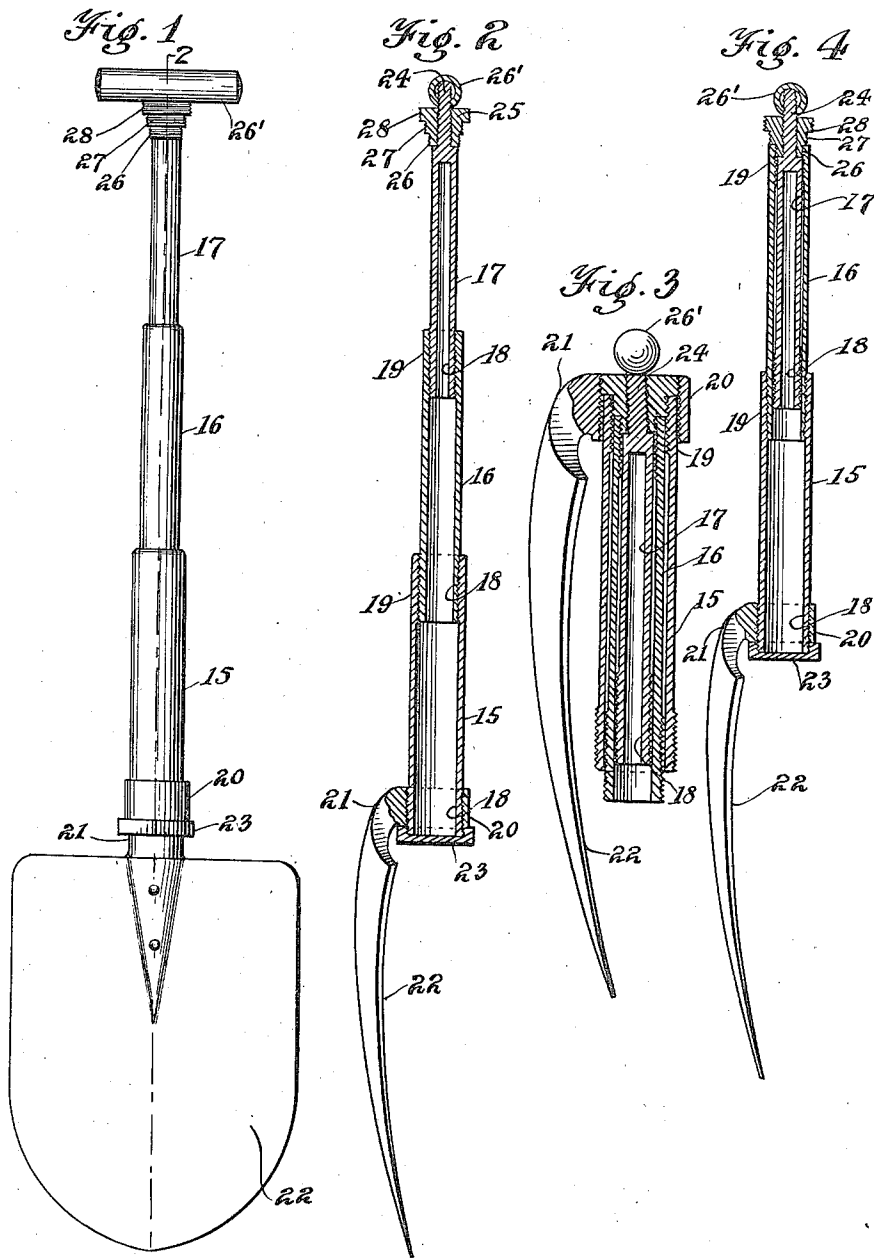


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 COLLAPSIBLE HANDLE.
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1,177,072.

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COLLAPSIBLE HANDLE.

1,177,072.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, SAMUEL GOSSAGE WARMAN, a citizen of the United States, residing at Independence, in the county of Jackson and State of Missouri, have invented new and useful Improvements in Collapsible Handles, of which the following is a specification.

This invention relates to collapsible handles for shovels and the like, and it has for its object to produce a collapsible handle of simple and improved construction which may be totally collapsed for storage and transportation and which may be extended at various lengths for use.

A further object of the invention is to produce a collapsible handle of telescoping type in which the telescoping sections may be securely connected at various adjustments.

A further object of the invention is to produce a telescoping handle for shovels wherein the handle when collapsed will be positioned adjacent to the shovel blade so as to occupy but little room.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawing has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claims may be resorted to when desired.

In the drawing, Figure 1 is a view in front elevation, showing the shovel having the improved collapsible handle, the latter being extended for use. Fig. 2 is a sectional view taken on the line 2-2 in Fig. 1. Fig. 3 is a sectional view showing the tool collapsed. Fig. 4 is a sectional view showing the handle partly extended for use.

Corresponding parts in the several figures are denoted by like characters of reference.

The improved tool handle has been shown as being composed of three telescoping sec-

tions 15, 16 and 17, it being understood that the number of sections may be varied, although for general purposes three is the number preferred. The sections 15, 16, 17 have threaded connections whereby they may be maintained in extended relation, and it will be seen that the external threads are formed on externally thickened or reinforced portions 18 of said sections, while the internal threads are formed on internally reinforced or thickened portions 19 of said sections. Owing to this construction the threaded engaging portions will not interfere with the collapsing of the handle by the telescoping of the sections within one another.

The externally threaded portion at one end of the section 15 which is of larger diameter than the remaining sections engages an internally threaded sleeve formed on a tang 21 with which a shovel blade 22 is connected in any convenient well known manner. The threaded portion of the section 15 projects slightly below the sleeve 20 for the reception of a cap 23 having threaded engagement therewith and which serves the two-fold purpose of preventing dirt from entering within the tubular handle section and of locking the latter with respect to the sleeve.

One end of the section 17, which is of smaller diameter than the remaining sections and which in practice telescopes within the section 16, is provided with a solid reduced portion or pin 24, the same being externally threaded for the reception of a sleeve 25 and a cross bar or hand piece 26. The sleeve 25 has externally threaded portions 26', 27, 28 of various diameters adapted for engagement, respectively, with the internally threaded portions of the sections 16, 15 and the sleeve 20 when the handle is collapsed.

It will be seen from the foregoing description taken in connection with the drawing that when the handle is extended for use to its full length the externally threaded portion of the section 15 is in engagement with the sleeve 20, where it is secured by the cap 23 which functions as a locking device. The externally threaded portion of the intermediate section 16 is in engagement with

the internally threaded portion of the section 15 and the externally threaded portion of the section 17 is in engagement with the internally threaded portion of the section 16. To collapse the handle the interengaging threaded portions of the sections 16 and 17 are disengaged by rotating the section 17 about its axis so as to move it downwardly within the section 16. This may be conveniently effected by means of the cross bar or hand piece 26. When the interengaging threaded portions of the sections 16, 17 have been disengaged, the threaded portion 26' of the sleeve 25 is engaged with the internally threaded portion of the section 16. The length of the handle will now have been reduced approximately by one-third, that is to say, by the length of the section 17 which is telescoped within the section 16. To further collapse the handle the interengaging threaded portions of the sections 15 and 16 are disengaged by rotating the section 16 about its axis, the section 16 telescoping within the section 15 until the threaded portion 27 of the sleeve 25 may be engaged with the internally threaded portion of the section 15. The length of the handle is thus still further reduced, but it still admits of use as a handle for the shovel blade 22. To complete the collapsing of the device, the externally threaded portion of the section 15 is disengaged from the internally threaded sleeve 20, the section 15 being moved downwardly through the sleeve until the threaded portion 28 of the sleeve 25 may be engaged with the internally threaded sleeve. In this position the section 15 will be located adjacent to the shovel blade, as seen in Fig. 3. The tool when thus collapsed is capable of being packed in small space for storage or transportation, as will be readily understood.

While the improved handle has been shown in its preferred application to a shovel blade, no restriction is intended in this respect, as the improved collapsible handle may be used in connection with other tools and implements. As applied to a shovel it provides a tool which is eminently useful as an intrenching tool. It will also furnish a useful and acceptable tool for automobile drivers, for outdoor camping purposes, for the use of surveyors, prospectors and others who require a tool of this character which is simple, easily portable, strong, durable and in every way serviceable for the purposes for which it is intended.

Having thus described the invention, what is claimed as new, is:—

1. The combination with a tool having at its upper end a sleeve standing in a plane forward of and substantially parallel with the face of the tool, of a collapsible handle

comprising members fitting telescopically one within the other and telescopically in said sleeve so that the collapsed handle can extend down from the sleeve adjacent to and substantially parallel with the face of the tool, said handle and sleeve having cooperating means for preventing upward movement of the handle through said sleeve.

2. The combination with a tool having at its upper end a sleeve standing in a plane forward of and substantially parallel with the face of the tool, of a collapsible handle comprising members fitting telescopically one within the other and telescopically in said sleeve so that the collapsed handle can extend down from the sleeve adjacent to and substantially parallel with the face of the tool, said handle having external threads and said sleeve internal threads cooperatively engaging for preventing the handle from moving upward through said sleeve until the handle has been unscrewed from the sleeve.

3. A collapsible handle for tools, comprising telescopic members fitting one within the other, the inner member having an external reinforce portion and the outer member an internal reinforce portion to abut together endwise to limit extension of the handle, and means whereby said members may be interlocked together to prevent collapse or shortening of the handle, and means at the opposite end of the inner member for interlocking engagement with the internally reinforced end of the outer member when the handle is shortened by telescoping the members together.

4. A collapsible handle for tools, comprising telescopic members fitting one within the other, the inner member having an external reinforce portion and the outer member an internal reinforce portion to abut together endwise to limit extension of the handle, and means whereby said members may be interlocked together to prevent collapse or shortening of the handle, means at the opposite end of the inner member for interlocking engagement with the internally reinforced end of the outer member when the handle is shortened by telescoping the members together, and a cross piece secured rigidly to the upper end of the inner member.

5. A collapsible handle comprising a plurality of telescoping sections having threaded connections at their meeting ends, the section of smallest diameter being also provided at its other end with a sleeve having externally threaded portions of various diameters and with a cross bar constituting a handle; the section of largest diameter being externally threaded at the end distant from its meeting end; in combination with a tool having a tang provided with an internally threaded sleeve receiving the exter-

nally threaded portion of the section of
largest diameter, and a cap in threaded en-
gagement with said externally threaded
portion, said cap constituting a closure for
5 the handle and a locking device for said
tool.

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

SAMUEL GOSSAGE WARMAN.

Witnesses:

GEORGE A. SAYLER,
FLORENCE WILSON.