Dec. 13, 1949 F. W. COFFING 2,490,947

COLLAPSIBLE MULTIPLE POSITION HANDLE

Filed March 12, 1947

FIG. 1

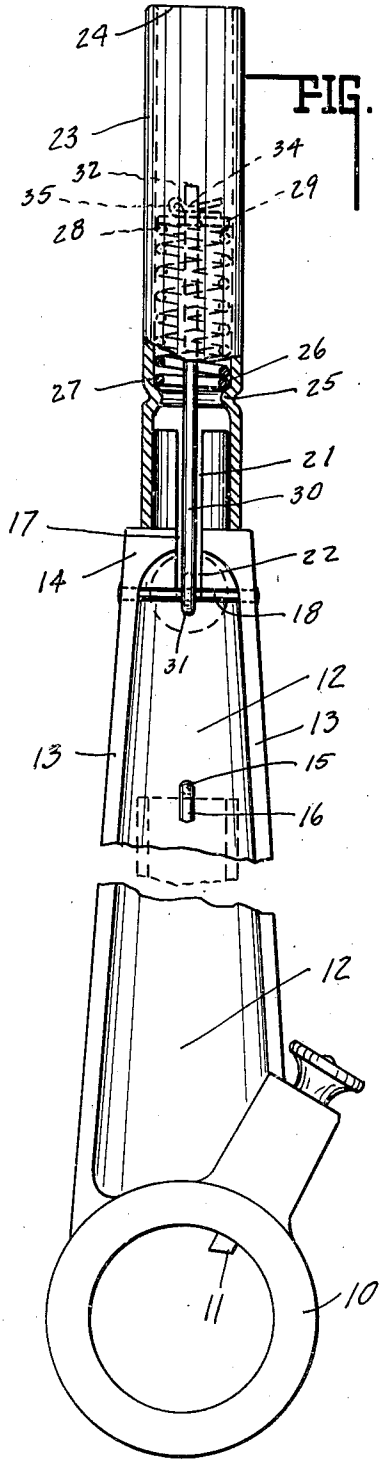
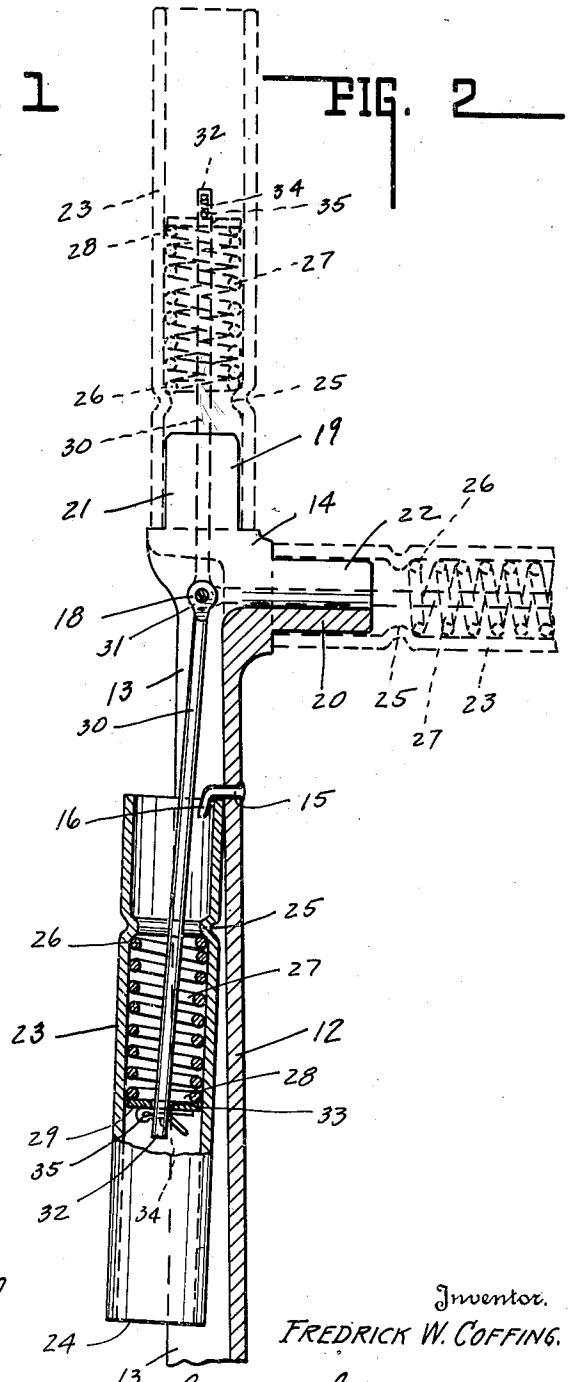


FIG. 2



Inventor.
FREDRICK W. COFFING.

By Lockwood, Goldsmith & Galt.
Attorneys.

Patented Dec. 13, 1949

2,490,947

UNITED STATES PATENT OFFICE

2,490,947

COLLAPSIBLE MULTIPLE POSITION HANDLE

Fredrick W. Coffing, Danville, Ill., assignor to Coffing Hoist Company, Danville, Ill., a corporation

Application March 12, 1947, Serial No. 734,047

1 Claim. (Cl. 74—547)

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This invention relates to a multiple positionable handle for a lever whereby same can be used as a crank or as an extended lever.

The chief object of the present invention is to arrange such a structure that same can be collapsed for shipping purposes.

One chief feature of the present invention resides in slotting the two-way plug ends approximately 270° so that the handle can be disposed substantially parallel to the lever, in alignment therewith or transverse thereto as desired or required.

Another chief feature of the present invention resides in forming the lever adjacent the plug ends of channel type to at least partially nest therein the handle when collapsed.

A further feature of the present invention resides in the provision of a catch upon the lever for holding the handle in collapsed position upon the lever.

Other objects and features of the invention will be set forth more fully hereinafter.

The present invention is exemplified as an improvement upon the two-way handle and lever structure of Patent No. 2,343,884, dated March 14, 1944 and of Patent No. 2,270,271, dated January 20, 1942.

The full nature of the invention will be understood from the accompanying drawings and the following description and claim:

In the drawings Fig. 1 is a plan view of a handle and lever structure embodying the invention and looking toward the inside of the lever, the latter being of channel type, the handle being shown in alignment with the lever and being shown with a portion broken away to show the same in central section and greater detail.

Fig. 2 is a longitudinal sectional view of the lever, a portion of the handle being shown in elevation, the handle being disposed in collapsed position, dotted lines at the upper and right hand portions of this figure illustrating the extended lever and crank formations, respectively.

Since the patents aforesaid illustrate a somewhat similar two way handle, which however, has its handle portion limited to but two positions only, but brief reference will be had thereto.

Herein 10 indicates a hub or collar portion supporting radially disposed pawl 11, etc. From the former, projects radially the central portion 12 and the two webs or flanges 13, these being disposed in channel-type formation and tapering toward outer end 14.

Centrally disposed, in the present embodiment,

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and projecting inwardly from portion 12 appreciably distant from end 14 is a member 15 having end 16 directed toward the hub and spaced slightly from central portion 12. This constitutes the catch.

The end 14 includes a transverse slot 17 that herein is extended to communicate with the channel interior. It is disposed centrally relative thereto. Extending across said channel and suitably secured in opposite sides (flanges) 13 near the end thereof is pin 18.

Projecting from the end 14 of the lever and in alignment therewith is plug 19 and disposed transversely thereto is plug 20. Each is slotted as at 21 and 22, respectively, the former extending completely across plug 19 and the latter extending slightly more than half way across plug 20. In effect, therefore, slots 17, 21, and 22 with the channel provide a slotted portion in excess of two hundred and seventy degrees about the axis of pin 19.

Reference will now be had to the handle 23 which is tubular and it may be plugged after assembly at the end 24. An annular indentation or internal ring 25 serves as a stop or seat for one end 26 of a coil spring 27 having an external diameter but slightly less than the internal diameter of the tubular handle.

The other end 28 of said spring bears upon centrally apertured washer or plate 29 which is slidable longitudinally in the handle. A rod 30 has an eye 31 or like formation at one end to pass pin 18 so that the pin pivotally secures the rod to end 14 of the lever. The other end 32 of rod 30 passes through the aperture 33 in washer 29 and one anchorage connection comprises transverse bore 34 and cotter key 35.

The handle may be swung from the lever aligned position, as illustrated in Fig. 1, to the crank position, see dotted lines, right hand portion of Fig. 2, by pulling outwardly on the handle until the handle is beyond plug 19 and 20. Then the handle is swung to align it with plug 20 and released whereupon plug 20 is nested in the handle for crank formation. In this operation, which is similar to that disclosed in the patents aforesaid, rod 30 passes through the several slots. Repositioning is effected by reversal of the aforesaid.

For collapse and extension the handle is freed of the plug or plugs and rotated, as it were, see Fig. 2, until the handle nests partially within the channel formation of the lever. This is permitted because the slots 21 and 22 with the connecting slot 17 communicate with that channel.

The handle can be "wired" in nested relation for shipping purpose. However, herein the stop or catch 15—16 is so disposed that when spring 27 is compressed and the handle pulled toward hub 10 sufficiently to clear the stop and then released, the handle is hooked under constraint to the lever and held in collapsed and nested position. Release is effected by handle movement sufficient to free the handle of stop retention.

While the invention has been illustrated and described in great detail in the drawings and foregoing description, the same is to be considered as illustrative and not restrictive in character.

The several modifications described herein, as well as others which will readily suggest themselves to persons skilled in this art, all are considered to be within the broad scope of the invention, reference being had to the appended claim.

The invention claimed is:

In a structure of the crank handle and extensible lever type having a handle member of tube form and an elongated lever member, the two members having telescopic association in each of a pair of substantially transverse positions, yielding means disposed within the handle member and pivotally connected at one end to the lever

member substantially coincident with the intersection of the transverse position axes intersection, the axis of pivoting being transverse thereof, the lever member having a channel conformation to nest therein the handle member when disposed oppositely with respect to that position wherein the handle member comprises a longitudinal extension of the lever member, and means carried by said lever member adapted for handle member engagement for retention of the latter when in said nested position, the handle pivoting end of the lever member having a slot extending across the same for movement of said yielding means from any one of the three positions to another of said positions without interference.

FREDRICK W. COFFING.

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The following references are of record in the file of this patent:

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