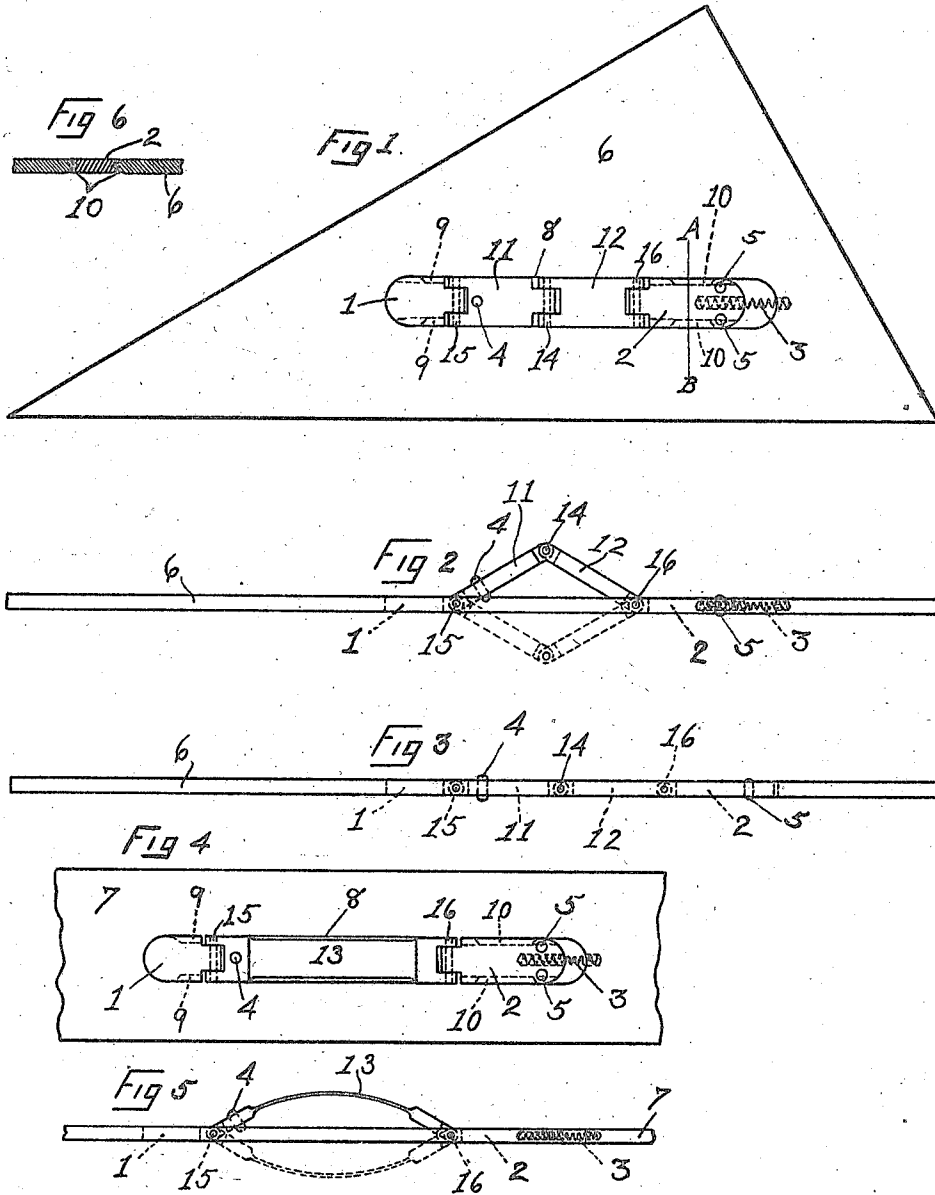


R. B. WARE.
 PICK-UP FOR FLAT IMPLEMENTS.
 APPLICATION FILED JULY 15, 1914.

1,145,531.

Patented July 6, 1915.



WITNESSES:
 Ellen L Ware
 Helen E. Cutter

INVENTOR.
 RODNEY B. WARE,
 BY
 Webster & Co.,
 ATTORNEYS.

UNITED STATES PATENT OFFICE.

RODNEY B. WARE, OF SPRINGFIELD, MASSACHUSETTS.

PICK-UP FOR FLAT IMPLEMENTS.

1,145,531.

Specification of Letters Patent.

Patented July 6, 1915.

Application filed July 15, 1914. Serial No. 851,073.

To all whom it may concern:

Be it known that I, RODNEY B. WARE, a citizen of the United States of America, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented a new and useful Pick-Up for Flat Implements, of which the following is a specification.

My invention relates to improvements in handles for flat implements or objects, such as draftsman's triangles and the like, and consists of a normally projecting device having its ends mounted in a slot in the object to which it is applied, and capable of being collapsed or compressed and thrust through such slot, whereby the projecting portions may be presented on either side of said object, all as hereinafter set forth.

One object of my invention is to provide a flat implement with an ever-ready and convenient handle or pick-up with which the difficulty of handling such implement is entirely removed.

A further object is to provide a device of this kind that can be projected on either side of the implement with equal facility, and can also be flattened so as not to increase the space which the implement should normally occupy for shipment or when placed in a tool-box or other place of storage, it being possible to press said device entirely into the slot provided therefor and to retain it therein with any suitable means of compression. An implement equipped with this pick-up can be used either side up in the customary manner, and when said implement is turned over the position of the said pick-up is changed at and during the same time, consequently does not cause delay or inconvenience.

Other objects and advantages will appear in the course of the following description.

I attain the objects and secure the advantages of my invention by the means illustrated in the accompanying drawings, in which—

Figure 1 is a plan of a draftsman's triangle equipped with a practical form of the invention; Fig. 2, an edge elevation of said triangle and the pick-up, the latter being shown projected upwardly in full lines and downwardly by dotted lines, the better to illustrate how said pick-up is operative or equally serviceable on either side of the implement; Fig. 3, a similar view to the pre-

ceding one, but here showing how the pick-up may be pressed completely into the triangle out of the way; Fig. 4, a plan of a portion of a draftsman's straight-edge or similar implement equipped with a modified form of said invention; Fig. 5, an edge elevation of the parts and members appearing in Fig. 4, the two projecting positions of the pick-up being represented as in Fig. 2, and, Fig. 6, a cross-section taken on line A—B, in Fig. 1.

Similar reference numerals designate similar parts throughout the several views.

The pick-up illustrated in the first three views is of the toggle-joint type, while that illustrated in Figs. 4 and 5 is of the flexible-strip type. In these two types mechanical equivalents are employed, and there is therefore no material difference in structure or function. In this connection it may be well to observe that my pick-up is susceptible of more or less change in other respects without departing from the spirit of the invention. This fact is obvious to one skilled in the art to which my invention appertains.

I have illustrated the new device in connection with or as applied to a triangle and a straight-edge as concrete examples merely, it being understood that said device is applicable to a great variety of other flat implements or objects, to any in fact which are of a type that would be more serviceable by the addition thereto of a device of this kind.

In the drawings a triangle is represented at 6, and a portion of a straight-edge at 7. There is a slot 8 in the triangle 6, and a similar slot in the straight-edge 7. The longitudinal edges of each slot 8 are provided with inwardly extending V-guides 9 and 10, the first pair being at the left-hand end of said slot and the second pair adjacent to the right-hand end thereof.

The pick-up in each example shown comprises a fixed end-piece 1, a movable end-piece or slide 2, and the connecting element which constitutes the handle proper. In the first example the aforesaid connecting element consists of toggle-joint members 11 and 12, and in the second example such element consists of a flexible strip 13. The members 11 and 12 are pivotally connected at contiguous ends by a pin 14, and the outer ends of said members are pivotally connected respectively with contiguous ends of the end-piece 1 and the slide 2 by pins 15

and 16. Like the outer ends of the members 11 and 12, the ends of the strip 13 are pivotally connected, by pins 15 and 16 respectively, with the associated end-piece 1 and slide 2.

Each end-piece 1 is provided in its longitudinal edges with V-grooves to receive one or the other pairs of V-guides 9, and such end-piece is slipped into place in the left-hand end of its slot 8 and there permanently secured and fixed by means of glue or otherwise. Each slide 2 is also provided in its longitudinal edges with V-grooves to receive one or the other pairs of V-guides 10, and such slide is slipped into place in the right-hand end of the slot 8 in which the companion end-piece 1 has been or is to be located. A spring 3 has one terminal pocketed in a recess that opens into each slot 8 at the right-hand end of the same, and the other terminal of said spring is received in a recess in the slide 2 in said slot, the latter recess opening through the outer end of said slide. Thus it is seen that each slide 2 is pressed to the left or toward the companion end-piece 1. This movement is limited by two vertical pins 5 which are fixed in the slide in such a way that they cut across the V-grooves for the V-guides 10 and encounter the right-hand ends of said V-guides when said slide is left to the influence of its spring 3. Normally, therefore, the slide 2 of each pick-up is retained in what may be termed its forward position, and the toggle members 11 and 12 are projected beyond one surface (naturally the upper) of the triangle 6, in the one case, and the strip 13 is similarly projected, in the other case, the lengths of the parts in question being properly proportioned to enable the desired results to be produced. Necessarily the resistance of the strip 13 must be less than that of the associated spring 3, otherwise the device which consists in part of said strip would be inoperative.

There is clearance enough between the outer end of either slide 2, when the latter is thrust forward by its spring 3 as far as it can go, and the adjacent end of the slot 8 in which said slide is located to permit the members 11 and 12 (or the strip 13) to be straightened by being pressed completely into the slot 8 from which said members normally project (or said strip normally projects), against the resiliency of the associated spring 3—see Fig. 3. Ordinarily the projecting members 11 and 12 will not thus remain straight in their slot without exterior confining means, but will spring out on one side or the other, and the same thing is true of the strip 13.

From the foregoing it is clear how, when the implement is turned over, the yielding projecting element (the members 11 and

12 or the strip 13) is thrust into and through its slot and snapped out on the other side.

To facilitate the operation of changing the yielding projecting element from one side of the implement to the other, I provide such element with a slight projection on each side, a double-headed pin 4 being employed in each of the present cases. In the first device the pin 4 is inserted in the member 11, and in the second device the pin 4 is inserted in the strip 13. Upon turning either implement over and pressing it down on a firm flat surface, the pick-up with which such implement is provided is not only forced completely into its slot in a straight condition, but is forced by the part of its pin 4 that contacts with such surface above a straight line, when the compressed spring 3 immediately acts to throw the pick-up into operative position on the other side of the implement. This is a convenient and valuable feature of the invention.

None of the pick-up members should be any thicker than the implement 6 (or 7), if said implement is to lie flat when in use, and all of said members except the pin 4, are to be receivable wholly in their slot. The projecting parts of the pins 4 are so slight as not to interfere seriously when the pick-ups are compressed and the implements packed together or confined in close quarters.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a flat object having a slot therein, of a pick-up comprising a handle element having its ends mounted in such slot, and relatively movable toward and from one another, such element being adapted in its intermediate portion normally to project beyond either side of said object, without at the same time projecting beyond the opposite side.

2. The combination, with a flat object having a slot therein, of a pick-up comprising an element normally projecting from said object and mounted in said slot, and yielding means to maintain said element in projected position.

3. The combination, with a flat object having a slot therein, of a pick-up comprising an element normally projecting from said object and mounted in said slot, yielding means to maintain said element in projected position, and protuberances on both sides of said element which are adapted to throw said element out of a straight line when forced into said slot and said object is pressed against a flat resisting surface.

4. The combination, with a flat object having a slot therein, of a spring-pressed slide mounted in said slot, and an element normally projecting from said object and piv-

otally connected at one end to a fixed point in said slot and at the other end to said slide, the arrangement of parts being such that said element may be pressed completely into said slot or forced through beyond either side of said object.

5 5. The combination, with a flat object having a slot therein, of a spring-pressed slide mounted in said slot, means to limit the
10 movement of said slide, and an element normally projecting from said object and pivotally connected at one end to a fixed point in said slot and at the other end to said
15 slide, the arrangement of parts being such that said element may be pressed completely into said slot or forced through beyond either side of said object.

6. The combination, with a flat object having a slot therein, of a fixed member in one
20 end of said slot, a spring-pressed slide mounted in said slot adjacent to the other end thereof, and pivotally connected handle members having their outer ends pivotally connected with said fixed member and said

slide, the arrangement of parts being such
25 that said handle members may be pressed completely into said slot or forced through to project beyond either side of said object.

7. The combination, with a flat object having a slot therein, of a fixed member in one
30 end of said slot, a spring-pressed slide mounted in said slot adjacent to the other end thereof, pivotally connected members having their outer ends pivotally connected with said fixed member and said slide, the
35 arrangement of parts being such that said handle members may be pressed completely into said slot or forced through to project beyond either side of said object, and protuberances on both sides of one of said han-
40 dle members, which protuberances extend beyond the planes of both major surfaces of said object when said handle members are disposed wholly within said slot.

RODNEY B. WARE.

Witnesses:

F. A. CUTLER,

- A. C. FAIRBANKS.