June 13, 1933. S. J. ENTRIKIN 1,914,246

METAL HAND OR GRAB

Filed Aug. 17, 1932

Fig. 1.

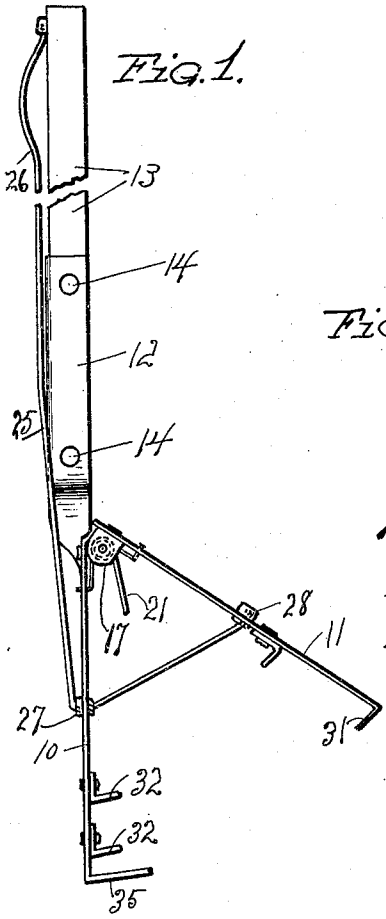


Fig. 2.

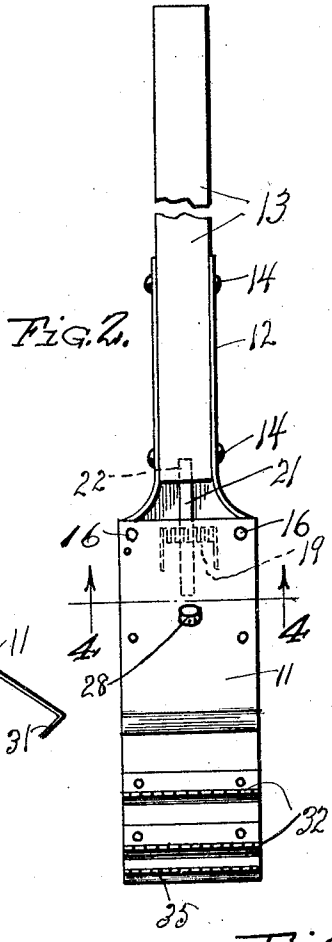


Fig. 3.

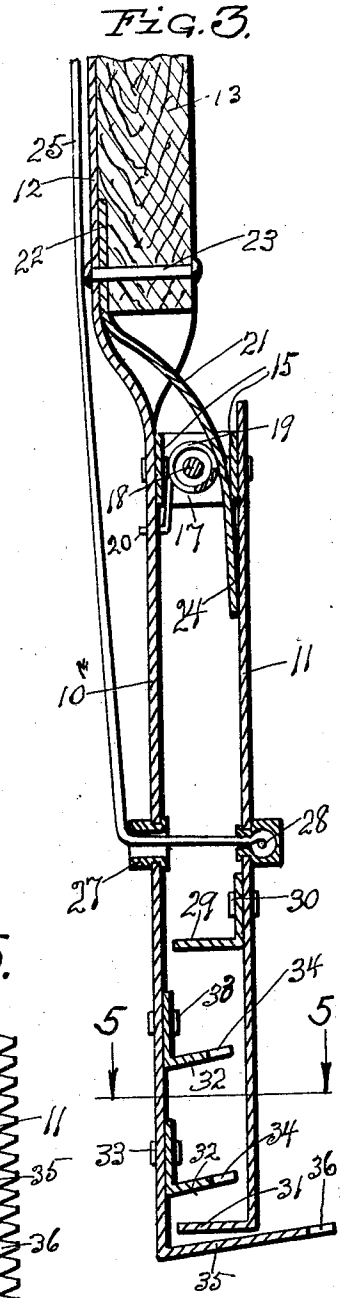


Fig. 4.

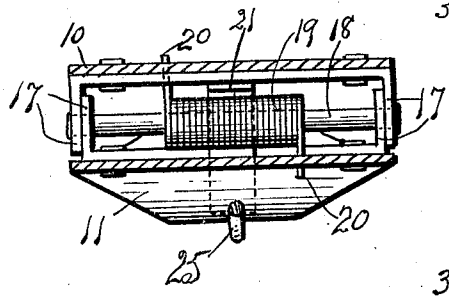
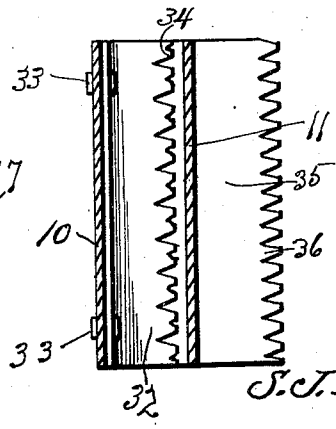


Fig. 5.



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UNITED STATES PATENT OFFICE

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METAL HAND OR GRAB

Application filed August 17, 1932. Serial No. 629,212.

This invention relates to certain new and useful improvements in metal hands or grabs.

The primary object of the invention is to provide a metal hand or grab comprising tensioned jaw members normally assuming an open position and adapted to be closed by means of a pull cord, cable or the like to be used for various purposes, such as the pulling of moss from trees, holding a mop or dust cloth, a fruit picker and wherever it is desired to grip or grab an article.

A further object of the invention is to provide a metal hand or grab of the foregoing character wherein toothed or serrated blades carried by opposite jaws inter-fit with each other when the jaws are closed for the more effective gripping of an article with the outer end of one jaw carrying a toothed flange extending beyond the other jaw when the two jaws are in closed position to present a rake edge or scraper for various purposes, the metal hand or grab being carried by a handle of the desired length to accommodate use thereof in various connections.

With the above and other objects in view that will become apparent as the nature of the invention is better understood, the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawing and claimed.

In the drawing:—

Figure 1 is a side elevational view of a metal hand or grab constructed in accordance with the present invention, the hand or grab jaws being illustrated in their open positions;

Figure 2 is a front elevational view of the device with the jaws in open position and illustrating the serrated flanges carried by one jaw;

Figure 3 is an enlarged fragmentary longitudinal sectional view with the jaws in closed position against spring tension thereon, showing the inter-fitting gripping flanges on the inner faces of the jaws and the pull cord or cable for closing the jaws;

Figure 4 is a cross-sectional view taken on line 4—4 of Figure 2, showing the spring device for normally holding the jaws in open position; and

Figure 5 is a cross-sectional view taken on line 5—5 of Figure 3, showing the serrated end flange on one jaw projecting laterally of the other jaw when the two jaws are in closed position.

Referring more in detail to the accompanying drawing, there is indicated a metal hand or grab for purposes hereinbefore specified, including a pair of cooperating jaw members, comprising metal plates 10 and 11 preferably of rectangular formation in plan view as shown in Figure 2, the plate members 10 and 11 having a spring hinge connection at one end thereof while the plate member 10 is extended to provide a channel member 12 receiving a handle 13 of any length desired that is retained therein by means of cross pins or rivets 14. The spring hinge connection between the plate members 10 and 11 of the metal hand or grab includes a cross strap 15 secured as at 16 transversely of the ends of the plate members 10 and 11, each strap 15 carrying end perpendicular lugs 17 receiving a bearing shaft 18 that forms a hinge connection between the plate members. The shaft 18 intermediate its ends is surrounded by a coil spring 19 having opposite ends thereof respectively engaged with the plate members 10 and 11 as at 20, the spring 19 acting to hold the plate members of the metal hand or grab in a separated or open position as illustrated in Figure 1. The plate members 10 and 11 are additionally tensioned for normally assuming open positions by means of the spring strip 21 having one end 22 thereof anchored in the handle end of the device as at 23 with the other end 24 engageable with the inner plate member 11 outwardly of the hingle shaft 18 as illustrated in Figure 3. The end 24 of the spring is spaced from the plate member 11 when the latter is in its fully opened position so that only increased resistance is offered to the closing movement of the plate members when they reach nearly closed positions.

The plate members 10 and 11 of the metal hand or grab are closed by means of a pull cord or cable 25 having one end 26 thereof disposed adjacent the handle 13 with the other end of the cable passing through a

guide eye 27 centrally of the plate member 10 with the free end of the cable anchored as at 28 to the opposite plate member 11.

Gripping members are associated with the outer swinging ends of the plate members 10 and 11 and as shown more clearly in Figure 3, the inner face of the plate member 11 at a point outwardly of the cable connection has a transversely extending gripping flange 29 secured as at 30 to the plate member 11 with the outer terminal end of the plate member 11 perpendicularly bent in the direction of the flange 29 to provide an end gripping flange 31. A pair of transversely extending gripping flanges 32 in spaced relation is carried by the inner face of the plate member 10 to be disposed between the gripping flanges 29 and 31 of the plate member 11 when the two plate members are in closed position, the gripping flanges 32 being anchored in position as at 33 and having their operative transverse edges toothed or serrated as at 34 for increased gripping or scraping action. The outer terminal end of the plate member 10 is angularly bent to provide a gripping or scraping flange 35 of a length to extend beyond the outer face of the plate member 11 with the transverse edge thereof toothed or serrated as at 36. From the above detailed description of the invention, it is believed that the construction and use thereof will at once be apparent, it being noted that the metal hand or grab may be constructed of any suitable material and in any size desired and it may be used for removing moss from trees or other plants, for griping a mop or dust cloth or as a grab in general for lifting or hoisting any kind of article. The handle 13 may be of the desired length to accommodate the metal hand or grab for various uses. By serrating the edges of the griping flanges 32, a more secure engagement may be established with an engaged article and by extending the end flange 35 of the plate member 10 beyond the plate member 11 and serrating the edge thereof as at 36, the flange 35 may be used as a scraper or rake. The spring hinge connection between the brake members 10 and 11 normally hold the jaws in an open position for gripping engagement with an article, the jaws or plate members to be closed by the pull cable 25 against the tension of the spring head.

While there is herein shown and described the preferred embodiment of the invention, it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the invention as claimed.

I claim:—

1. In a metal hand or grab, a pair of gripping jaws, a spring hinge connection for the jaws normally holding the jaws in an open position and a pull cable attached at one end to one jaw and threaded through the other jaw for moving the jaws to closed position, and gripping flanges on the opposed faces of the jaws, some of said gripping flanges having serrated edges, the spring hinge connection including a coil spring having ends respectively engaged with the jaws and a leaf spring engaged with one jaw and spaced therefrom when the jaws are in fully opened position.

2. In a metal hand or grab, a pair of gripping jaws, a spring hinge connection for the jaws normally holding the jaws in an open position and a pull cable attached at one end to one jaw and threaded through the other jaw for moving the jaws to closed position, and gripping flanges on the opposed faces of the jaws, some of said gripping flanges having serrated edges with the gripping flanges interfitting when the jaws are closed, the spring hinge connection including a coil spring having ends respectively engaged with the jaws and a leaf spring engaged with one jaw and spaced therefrom when the jaws are in fully opened position.

3. In a metal hand or grab, a pair of gripping jaws, a spring hinge connection for the jaws normally holding the jaws in an open position and a pull cable attached at one end to one jaw and threaded through the other jaw for moving the jaws to closed position, and gripping flanges on the opposed faces of the jaws, some of said gripping flanges having serrated edges, a gripping flange being located at the outer end of each jaw with one end flange extending beyond the other jaw when the jaws are closed with its edge serrated for use as a rake or scraper.

4. In a metal hand or grab, a pair of gripping jaws, a spring hinge connection for the jaws normally holding the jaws in an open position and a pull cable attached at one end to one jaw and threaded through the other jaw for moving the jaws to closed position, and gripping flanges on the opposed faces of the jaws, some of said gripping flanges having serrated edges with the gripping flanges interfitting when the jaws are closed, a gripping flange being located at the outer end of each jaw with one end flange extending beyond the other jaw when the jaws are closed with its edge serrated for use as a rake or scraper.

In testimony whereof I affix my signature.

SAMUEL J. ENTRIKIN.