L. G. CARON.

ARTIFICIAL HAND.

APPLICATION FILED JUNE 27, 1918.

1,284,875. Patented Nov. 12, 1918.

Fig. 1.

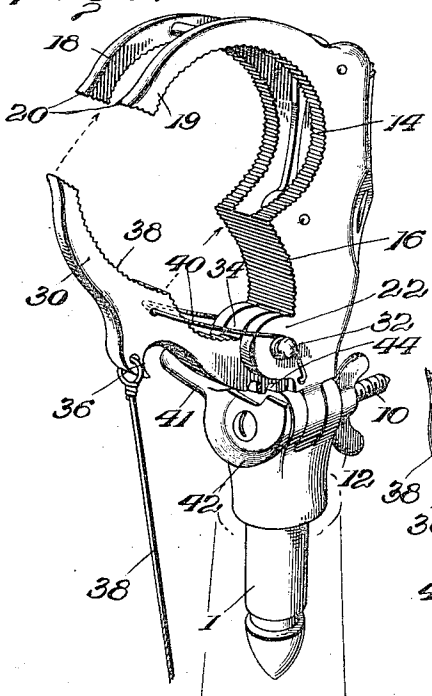


Fig. 2.

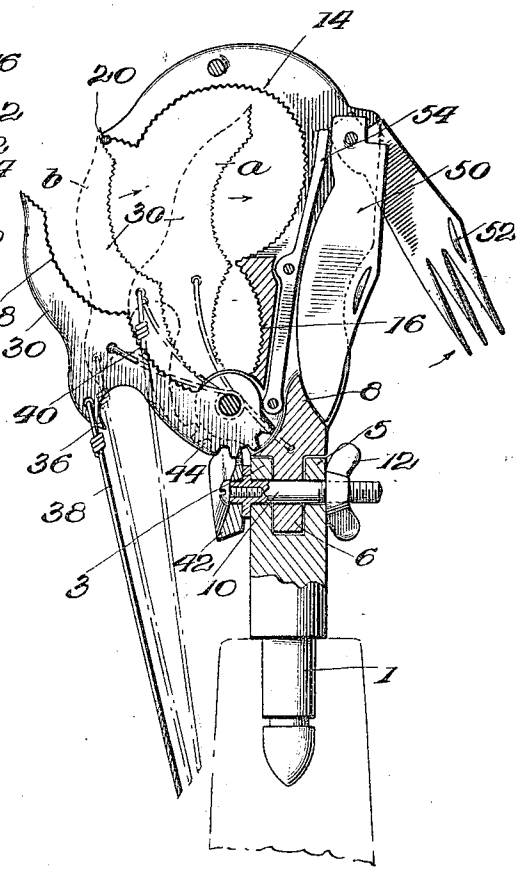
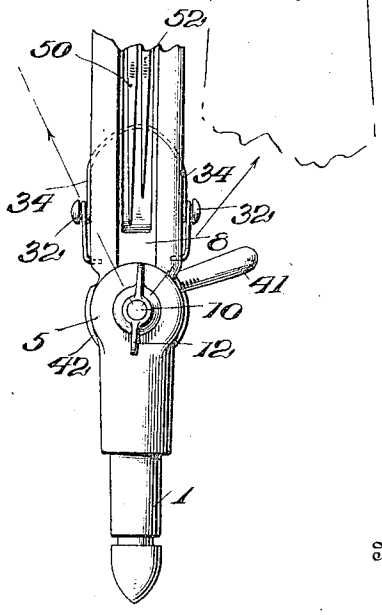


Fig. 3.



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UNITED STATES PATENT OFFICE.

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ARTIFICIAL HAND.

1,284,875. Specification of Letters Patent. Patented Nov. 12, 1918.

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To all whom it may concern:

Be it known that I, LOUIS G. CARON, a citizen of the United States of America, and a resident of Washington, in the District of Columbia, have invented certain new and useful Improvements in Artificial Hands, of which the following is a specification.

This invention relates to improvements in artificial hands of the kind comprising members mechanically arranged to perform their functions, and the object of the invention is to produce a device which will make it possible for the wearer to easily pick up articles of various sizes and to conveniently lock the parts in position so as to hold the article picked up. Another object of my invention is to provide a hand with a knife and fork located so as to normally be out of sight and yet capable of being opened so that either the knife or the fork may be used.

The invention relates to the device hereinafter described, the preferable embodiment of which is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a hand made in accordance with my invention.

Fig. 2 is a vertical central section showing the parts in several different positions.

Fig. 3 is an end view.

Referring now to the details of the drawings by numerals: 1 designates the usual socket member which is adapted to be secured within a socket of any desired construction so as to be swiveled therein. At its outer end this socket member is provided with two ears 3 and 5 to receive between them the ear 6 projecting from the relatively stationary member 8. A bolt 10 passes through the ears 3, 5 and 6, a wing-nut 12 being provided whereby the ears 3 and 5 may be tightened upon the ear 6 in order to hold the stationary member in any desired position, and yet admit of adjustment on the bolt 10 with respect to the socket member 1. The stationary member 8 is preferably made of the peculiar configuration shown in Figs. 1 and 2 and as there shown it has two sets of serrated or corrugated pinching surfaces 14 and 16 adapted to serve as clamping jaws. The upper end of the stationary member 8 is provided with two curved fingers 18 and 19, slightly spaced apart, and having comparatively sharp points 20 and 24 designed to assist in picking up various articles, even as small as pins. The stationary member is further provided with a hinge member 22 and to this hinge member is pivoted the movable clamp 30, said clamp working upon a pivotal pin 32 passing through the hinge member 22 and provided with a spring 34 which is designed to normally hold the clamping member 30 in the position shown at *a* in dotted lines in Fig. 2. Near the center of the back of the clamping member I form a hook-shaped projection 36 which may be used, when desirable, for opening bottles, etc., and this hook member provides a means of connection with the wire or cord 38 connected to the shoulder or other part as desired for opening the member 30 as shown in full lines in Fig. 2. When it is desired to pick up an article such as a pin or nail, the pin or nail is grasped between the pointed ends 20 and 21 and the end of the clamping member 30, when said object is in the position shown at *b* in dotted lines in Fig. 2. The clamping member is shown at its extreme open position in full lines in Fig. 2. The aforesaid clamping member 30 is provided with two serrated pinching surfaces 38 and 40, the surface 38 coacting with the upper serrated pinching surface 14 of the stationary member, when it is desired to hold large articles, and the serrated pinching surface 40 of the clamping member co-acting with the pinching surface 16 of the stationary member when it is desired to hold smaller articles.

In order to securely hold any article which may have been placed between the aforesaid serrated pinching surfaces of the clamping member 30 and the pinching surface of the stationary member 8, I provide means for moving and holding the clamping member in any set position. This means consists of a cam lever 41 having a cam surface 42 designed to fit into any of several grooves 44 in the hinged end of the clamping member 30. This cam lever may be pivoted on the end of the bolt 10, as clearly illustrated in the drawings. When it is desired to use this cam lever the clamping member 30 is moved until it holds the desired article between it and the relatively stationary member 8, and then the cam lever 41 is moved so as to cause the cam surface 42 to enter the appropriate groove 44, and as the handle of the cam lever 41 is moved, the larger part of the cam moves

the clamping member 30 against the device being held with sufficient pressure to hold it until the cam lever is released.

In the rear side of the relatively stationary member 8 I pivot a knife 50 and a fork 52, these articles being provided with springs as 54 to hold them in any desired positions. The knife and fork, inclosed, are practically out of sight, and yet either one of them can be moved into operative position whenever necessary.

From the foregoing and accompanying drawings it will be seen that I have provided a mechanical hand which will be exceedingly useful and at the same time is capable of a number of different uses and yet is not unduly complicated or likely to get out of order.

What I claim as my invention is:

1. In an artificial hand, the combination of a relatively fixed member having a pointed grasping end, a clamping member pivotally supported in operative relation to said fixed member and having an end arranged to coöperate with the pointed end of said fixed member, said fixed member and said clamping member each having two sets of opposed grasping surfaces adapted to hold objects of different sizes, substantially as described.

2. In an artificial hand, the combination of a relatively fixed member having a pointed grasping end, a clamping member pivotally supported in operative relation to said fixed member and having an end arranged to coöperate with the pointed end of said fixed member, and a cam lever on said fixed member adapted to engage a groove in said pivoted member and clamp and lock the latter in position, substantially as described.

3. In an artificial hand, the combination of a relatively fixed member having a pointed grasping end, a clamping member pivotally supported in operative relation to said fixed member and having an end arranged to coöperate with the pointed end of said fixed member, and a cam lever on said fixed member adapted to engage a groove in said pivoted member and clamp and lock the latter in position, said fixed member and said clamping member each having two sets of opposed grasping surfaces adapted to hold objects of different sizes, substantially as described.

4. In an artificial hand, the combination of a relatively fixed member, a clamping member pivotally supported in operative relation to said fixed member, said fixed member and said clamping member each having opposed grasping surfaces adapted to hold objects of different sizes, a socket member, a bolt and wing-nut for pivotally connecting the fixed member to said socket member whereby the fixed member may be adjusted on said bolt, said clamping member having a groove near its pivotal point, and a cam lever supported by the aforesaid bolt and adapted to engage the groove in said clamping member to clamp and lock the latter in position, substantially as described.

5. In an artificial hand, the combination of a relatively fixed member having a grasping or pinching surface, a clamping member pivotally supported in operative relation to said fixed member, one of said members having a recess therein, a knife and fork mounted in the aforesaid recess, and springs for holding said knife and fork in closed and open positions, substantially as described.

6. In an artificial hand, the combination of a relatively fixed member having a recess therein, a knife and fork supported in said recess, and springs for holding said knife and fork in closed and open positions, substantially as described.

7. In an artificial hand, the combination of a relatively fixed member having two curved fingers slightly spaced apart, a clamping member pivotally supported in operative relation to said fixed member and having an end arranged to co-act with the pointed ends of said fixed member and to enter the space between the same, and a spring for normally holding said clamping member in its grasping position, substantially as described.

8. In an artificial hand, the combination of a relatively fixed member having a grasping or pinching surface, a clamping member pivotally supported in operative relation to said fixed member, a spring for holding said clamping member in its grasping position, and a cam lever on said fixed member adapted to engage the clamping member to clamp and lock the latter in position, substantially as described.

9. In an artificial hand, the combination of a relatively fixed member, and a clamping member pivotally supported in operative relation to said fixed member, said fixed and clamping members each having two sets of opposed grasping surfaces adapted to hold objects of different sizes, substantially as described.

10. In an artificial hand, the combination of a relatively fixed member, a clamping member pivotally supported in operative relation to said fixed member and having a groove near its pivoted end, and a cam lever on said fixed member adapted to engage the groove in said pivoted member and clamp and lock the latter in position, substantially as described.

In testimony whereof I affix my signature.

LOUIS G. CARON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."