(No Model.)

K. A. E. ULBRICHT.

WALKING STICK GRAPPLE.

No. 465,222. Patented Dec. 15, 1891.

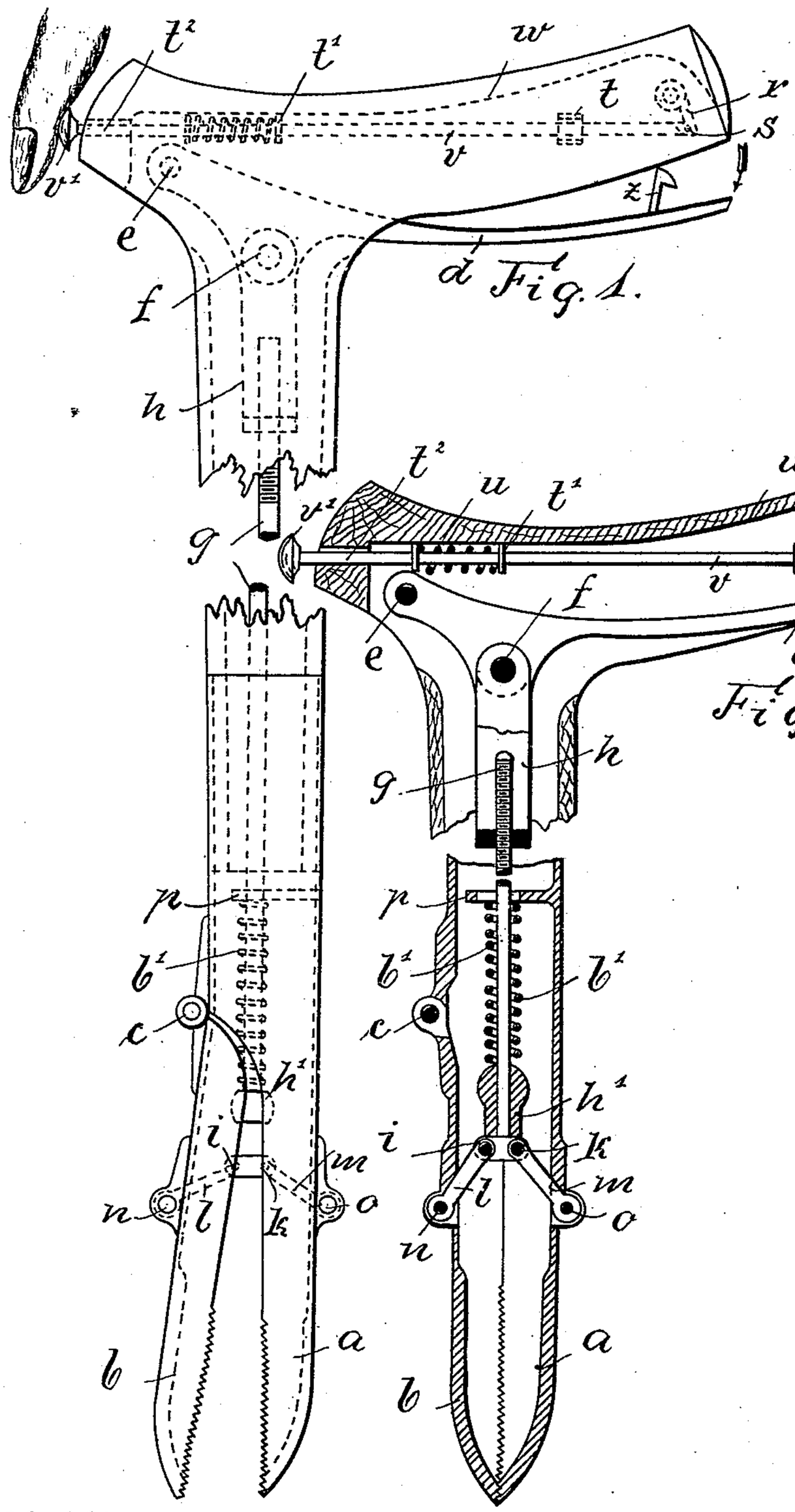

Fig. 1.

Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

KARL ALBERT EGON ULBRICHT, OF TAUBENHEIM, NEAR MEISSEN, GERMANY.

WALKING-STICK GRAPPLE.

SPECIFICATION forming part of Letters Patent No. 465,222, dated December 15, 1891.

Application filed September 28, 1891. Serial No. 407,049. (No model.) Patented in France March 26, 1891, No. 212,383; in Switzerland June 25, 1891, No. 4,105, and in England July 1, 1891, No. 11,219.

To all whom it may concern:

Be it known that I, KARL ALBERT EGON ULBRICHT, a subject of the King of Saxony, and a resident of Taubenheim, near Meissen, in the Kingdom of Saxony, German Empire, have invented certain new and useful Improvements in Walking-Stick Grapples, (for which I have obtained patents in France, No. 212,383, dated March 26, 1891; in England, No. 11,219, dated July 1, 1891, and in Switzerland, No. 4,105, dated June 25, 1891,) of which the following is an exact specification.

This invention relates to a mechanism for conveniently grasping objects lying at some distance away, which mechanism may be attached to a walking-stick or an umbrella or the like. By aid of any stick being furnished with the said mechanism one is enabled to pick up anything lying on the floor without having to stoop down, which particularly will be found of great value on mountains, where stooping down frequently is dangerous.

In order to make my invention perfectly clear, I refer to the accompanying drawings, which illustrate a walking-stick provided with the mechanism forming the object of the present invention.

Figure 1 is an elevation of the stick, wherein the grasping mechanism is opened ready to grasp. Fig. 2 is a section showing the mechanism when closed.

The complete mechanism is concealed within the interior of the stick, with the exception of the grasping-tongs *a* and *b*. The jaw *a* is integral with the stick, and the other jaw *b* is hinged to the same by the pin *c*. When making use of the stick for walking, these tongs are closed upon another, like in Fig. 2. This closing is secured by the lever *d*, which has its fulcrum at *e* and is linked onto a connecting-rod *g* by the pin *f*. The connecting-rod *g* is on its rear end attached to the hinge-stock *h'*, being hinged to the bars *l* and *m*, which are linked to the tongs *a* and *b* in the manner of a toggle-joint. Of these bars *m* connects the stock *h'* to the fixed jaw *a* and *l* connects the same to the loose jaw *b*. A small stay *p* is integral with the shell of the stick. A spiral spring *b'* bears at one end against the stay *p* and at the other against the hinge-block *h'*, and thus tends continuously to open the tongs. It, however, being necessary to keep the tongs generally closed and only allow them to open out at times, the implement is provided with a locking device which firmly holds the jaws together. This locking device consists of a click *r*, which inside of the handle is pivoted to the sides of the same by a pin and is adapted to engage with the hook *z*, which may be riveted on or otherwise attached to the lever *d*. The bar *v* is guided at *t*, *t'*, and *t²* and is loosely pinned to the end of the click *r*. By these means and by aid of a spiral spring *u* the click *r* is continuously drawn toward the hook *z*. If now desired to use the implement, a slight pressure with the thumb on the knob *v'*, sitting on the end of the bar *v*, will suffice to release the hook *z* from the grasp of the click *r*, and, giving way to the tension of the spring *b'*, the connecting-rod *g* moves toward the point of the stick. The legs of the toggle-joint *l m* thereby stretch out and open the jaw *b* in the manner illustrated by Fig. 1. While holding the stick by the handle *w* the lever *d* will lie also within the grasp of the fingers, which thus without difficulty may apply a slight pressure to the same lever *d*. This pressure is transmitted by the rod *g* and toggle-joint *l m* to the tongs *a b*, which firmly hold fast any object coming within their reach. Having then taken the object away the tongs may again be closed by pressing the lever *d* so much that the hook *z* be caught by the click *r*.

I particularly point out that all movable members are placed within the hollow of the stick, and therefore are not liable to be clogged by dirt. Care also has been taken to avoid friction as much as possible. In order to release the locking device arranged within the handle of the stick, one only need apply a very slight pressure on the knob *v'* by the thumb, which generally is held close by when using the stick for walking. By this slight pressure the tongs at once open out.

Another advantage may be mentioned. The implement is always ready for use, no protecting shell need be removed, nor screw nor any other part has to be disjointed beforehand. The appearance of the stick does not differ from other walking-sticks. Nobody, in fact, will take any notice of the parts which are

not common with other sticks unless especially having his attention drawn thereto.

Having thus fully described the nature of my said invention and in what manner the same is to be performed, I declare that what I desire to secure by Letters Patent of the United States is—

In a stick made hollow, the lever *d*, arranged within the handle, the toggle-joint *l h' m*, linked to the fixed jaw *a* and the loose jaw *b*, the connecting-rod *g*, connecting the hinge-block *h'* and the lever *d*, a spiral spring surrounding a portion of the rod *g* and bearing on one end against the hinge-block *h'* and at the other against the stay *p*, in combination with the locking device consisting of the bar *v*, adapted to slide within the handle *w*, and the click *r*, linked to the bar *v* and adapted to engage with the hook *z*, attached to the lever, as for the purpose set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

KARL ALBERT EGON ULBRICHT.

Witnesses:
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