

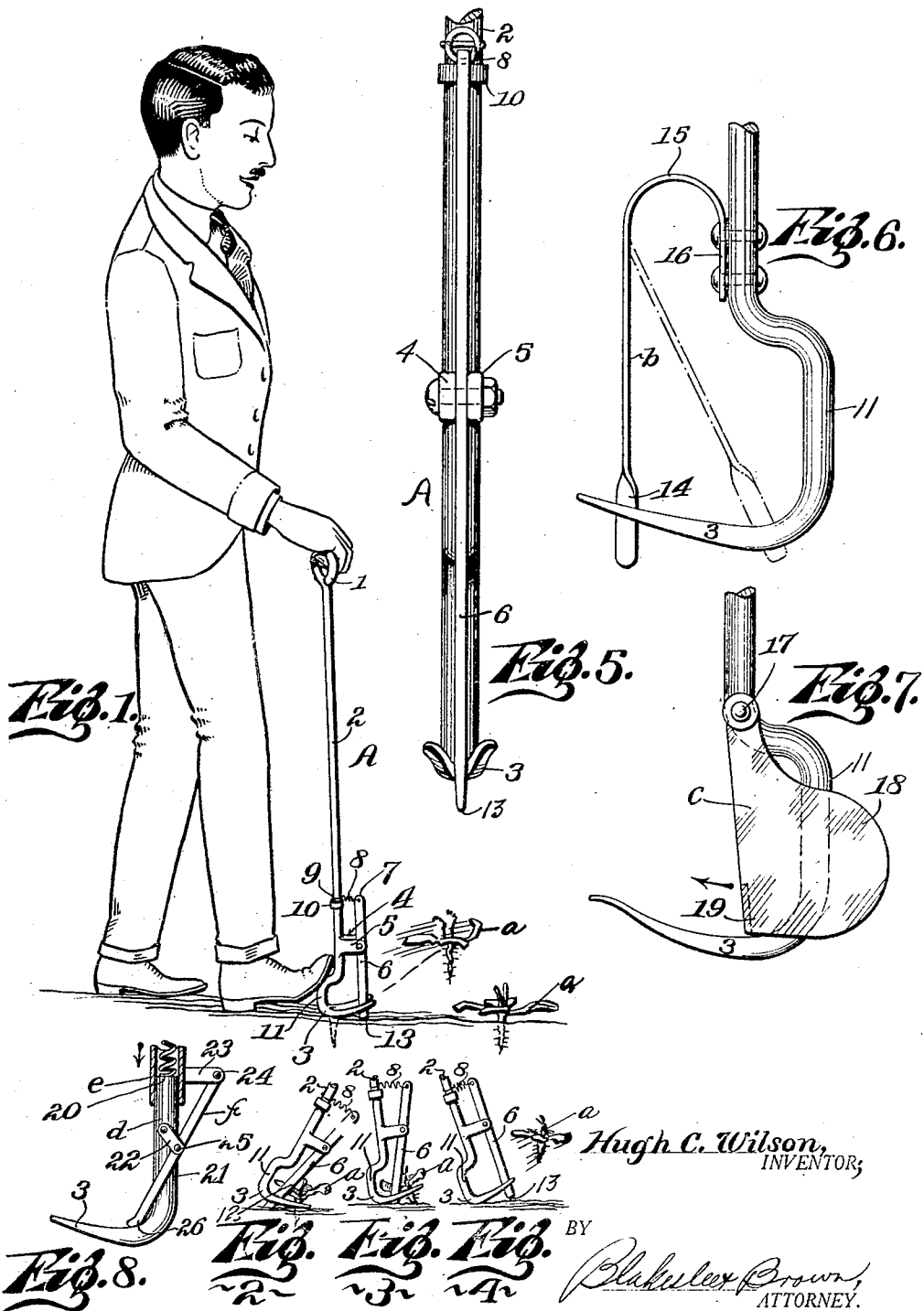
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H. C. WILSON

EXTRACTOR AND EJECTOR

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UNITED STATES PATENT OFFICE.

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EXTRACTOR AND EJECTOR.

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To all whom it may concern:

Be it known that I, HUGH C. WILSON, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Extractors and Ejectors, of which the following is a specification.

This invention relates to extractors and ejectors, and particularly to a device which is adapted to perform many novel functions in the removal of articles from given points, such as the removal of weeds from the ground, removal of tacks from the floor, or broadly speaking, the engagement of and removal of any article desired to be lifted from a given point. The invention contemplates the provision of novel means for engaging the object to be removed and further means for automatically disengaging the article removed from the means effecting such removal.

In practicing the invention I may in one form provide a device which may remove articles when the said device is operated by a person in a standing position, thus overcoming any cramping tendency and making use of the device an easy matter, or I may provide a device which may be used by the hand while the operator of said device is seated on the ground or floor. To accomplish this function I provide a device which may have either a long or short handle, said handle including a stem with one end of said stem provided with a fork-like member, the forks acting to engage the article to be removed. I likewise provide a member adapted to be received between the forks in one instance or to operate in conjunction with the forks for the purpose of automatically disengaging any article removed by the forks.

The invention has for an object the provision of an improved extractor and ejector which will be superior in point of relative simplicity and inexpensiveness, taken in conjunction with utility, durability and general efficiency and serviceability.

With the above mentioned and other objects in view the invention consists in the novel and useful provision, formation, construction and inter-relation of the various parts, members and features comprising the invention, all as shown in the drawing, de-

scribed in the following detailed statement, 55 and finally pointed out in claims.

In the drawing:

Figure 1 is a view showing an operator in a standing position using one of the improved extractors and ejectors, said extractor and ejector having removed a weed 60 from the ground;

Figures 2 to 4 inclusive are fragmentary side views showing the improved device in the act of engaging a weed, removing the weed from the ground and disengaging the weed from the extractor; 65

Figure 5 is a fragmentary front elevation of the improved extractor and ejector; and

Figures 6 to 8 inclusive, are fragmentary 70 views on an enlarged scale, of various modified forms of the device.

Corresponding parts in all the figures are designated by the same reference characters. Referring with particularity to the drawing, the improved extractor and ejector is designated in its entirety by A, of which 1 is a handle member joined with a stem 2, the opposite end of said stem being forked or bifurcated, as shown at 3. 80 Said stem 2 may likewise be provided with two spaced lugs 4 and 5 between which is pivoted an arm 6 called the ejector arm, and which arm is received between the forks 3, the forks being called the extractor portion of the device. The end 7 of the ejector arm 6 is perforated and a spring member 8 is associated with said arm 6 by having an end of the same passed 90 through the opening and having its opposite end secured to the stem 2, as shown at 9. A collar member 10 may be carried by the stem 2 for the purpose of holding the spring end in place. In the embodiment shown in Figures 1 and 5 the stem 95 2 is curved as shown at 11.

Referring to Figures 2 to 4 inclusive the method of using the device depicted in Figure 1 is clearly represented, and Figure 2 shows the extractor portion of the device engaging a weed *a* beneath the head portion thereof, it being understood that the stem portion of the weed is received between the forks 3 of the extractor. It will be noted that as the stem portion of the weed *a* enters between the forks the ejector arm 6 is moved inwardly as shown at 12, responsive to a forward movement 105

of the stem, as for instance, pushing the device along by the foot as illustrated in Figure 1 at what might be termed the heel portion of the device A. In Figure 3 the device has been rocked about the curved portion 11 and has lifted the weed upwardly so that the stem is removed in part from the ground, and this upward movement tends to allow disengagement of the end as 13 of the arm 6, which projects between the forks and preferably beneath the base thereof, so that the arm is released, kicking the weed from between the forks as shown in Figure 4. As a résumé then, in the showing of Figure 1 it is necessary that the arm 6 project beneath the foot of the extractor so that the end as 13 may engage the surface of the ground for the purpose of holding the arm, preventing movement thereof while the extractor is moving forward, so that the weed may be received in advance of the said ejector. It may of course be true that the ejector arm would move backwardly without the necessity of holding the same in a given position, as by having the end engage the ground, but in the embodiment shown it is preferred to hold the end 13 of the arm until the weed has been properly removed from the ground, whereupon a slight movement of the stem 2 will free the end 13 of the ejector arm, and said ejector acting under influence of the spring 8 will kick the weed from the extractor.

In Figure 6 I have shown a modification of the extractor and ejector, and in said figure the ejector is designated as *b*, all other parts of the device being similar. Said ejector arm may comprise a member having resilient or spring-like qualities which will effectively do away with the necessity of providing lugs 4 and 5 upon the stem 2, as well as providing a spring 8. In this particular, the end 14 of the ejector *b* may be flattened for reception between the forks of the extractor and then extend upwardly, having a curved portion at 15 with an end thereof as 16 riveted, spot-welded or otherwise held to the stem 2. As shown by the dotted lines in said figure the ejector arm *b* will act the same and perform a like function, as has been described for the showing of Figures 1 to 4 inclusive.

In Figure 7 I have shown a further modification of the device which consists in providing an ejector arm *c* which is pivoted to the stem, as shown at 17, and which has a curved part 18 extending rearwardly of the part 11 of the extractor. It will be noted that the end 19 of the ejector *c* does not pass between the forks of the extractor but will describe an arc over the top surface of said extractor. In said embodiment it is not necessary for an end

of the ejector to engage the ground, but the weed upon entering the extractor will move said ejector *c* backward and a push upon the part 18 by the foot, hand or otherwise, will cause said ejector to pivot about its point 17 and force the weed from the extractor.

In Figure 8 I have shown a further modification of the device which operates on a slightly different principle, that is to say, the stem 2 of the device A is formed in two parts, one part telescoping the other. In this connection the extractor is designated by *d*' and the stem by *e*, said stem being tubular in part and adapted to receive an end as 20 of the extractor. Included within the tubular member *e* is a coil spring adapted to bear downwardly upon the member *d*, which includes the usual fork portion 3, and pivotally joined to the stem 21 of the extractor is a short lever arm 22. A lug 23 is rigidly attached to the member *e*. The ejector arm is designated as *f*, and is pivoted at one end as shown at 24 to the lug 23, and likewise pivoted to the short arm 22, as shown at 25, the end 26 of said ejector arm *f* is free to slide upon the top surface of the forked portion of the extractor. If we assume a specific instance in the operation of the device shown in Figure 8 the extractor portion would engage the weed as before described, whereupon a downward push upon the stem *e* would cause the arm *f* to move over the top surface of the extractor and force the weed therefrom, said spring immediately returning the ejector arm to a neutral position, as shown in Figure 8 upon relieving pressure from the stem *e*.

It is obvious that I have described a device which combines many novel features of construction and which will be useful for a variety of purposes other than the mere extraction of weeds, and it will likewise be obvious that many changes and variations and modifications may be made in departure from the general description and showing of the accompanying drawing in adapting the invention to varying conditions of use and service, without departing from the true spirit of the invention.

Having thus disclosed my invention, I claim and desire to secure by Letters Patent:

1. In a device of the character disclosed, adapted to remove an object from a given medium, comprising a stem provided with a handle portion at one end thereof with the other end bent to form a curve and terminating in a fork-like portion, said fork-like portion being adapted to engage the object; there being a lever arm receivable between the forks of the fork-like portion, said lever arm being so formed as to have a rocking movement between the forks of said fork-like portion.

2. In a device of the character disclosed,

adapted to remove an object from a given medium, comprising a stem provided with a handle portion at one end thereof, with the other end bent to form a curve and terminating in a fork-like portion, said fork-like portion being adapted to engage the object; there being a lever arm receivable between the forks of the fork-like portion, said lever arm being so formed as to have a rocking movement between the forks of said fork-like portion; there being means for effecting said rocking motion.

3. In a device of the character disclosed, comprising an extractor and an ejector, said extractor including an elongated arm formed with a furcation to receive an object between the furcations for the purpose of removing said object from a given medium, and said ejector including an arm adapted for movement lengthwise of the furcations to eject the object removed from the medium responsive to a rocking movement of said extractor.

4. In a device of the character disclosed, comprising a stem having formed at one end a handle portion and at the other end an extractor portion; said extractor portion comprising a fork-like member, lug members joined to said stem, an ejector arm pivoted between said lug members, tension means joined to said stem and to an end of said ejector arm, the other end of said ejector arm being receivable between the forks of said fork-like member.

5. In a device of the character disclosed, an arm bent at a portion thereof and terminating in a fork-like part, there being a lever arm adapted to have a rocking movement lengthwise of such fork-like part.

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

HUGH C. WILSON.

Witnesses:

J. CALVIN BROWN,
J. SHUTT.