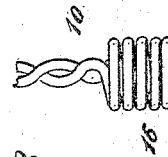
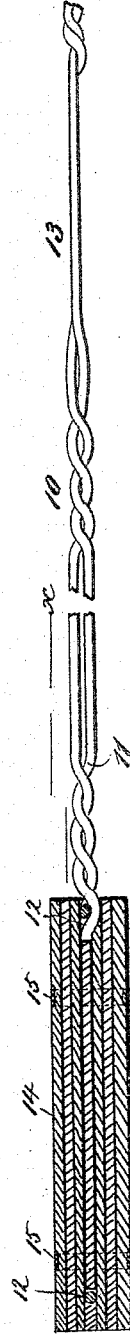
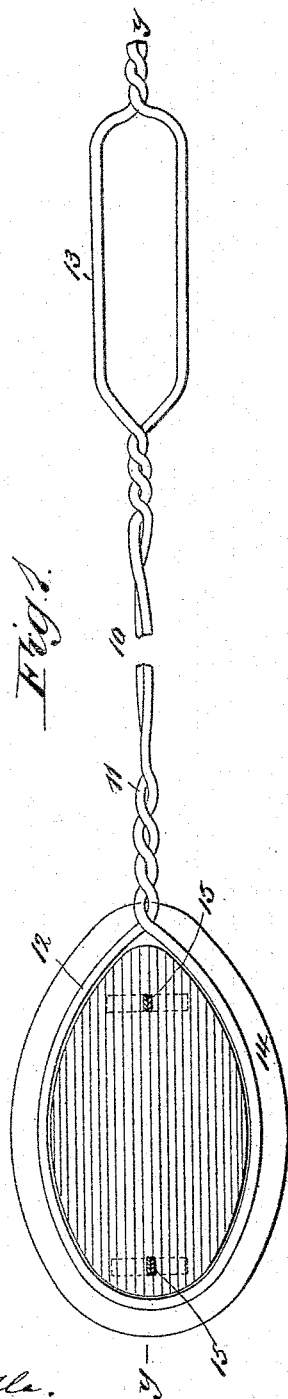


(No Model.)

A. JOHNSON.
FIRE KINDLER.

No. 491,355.

Patented Feb. 7, 1893.



WITNESSES:

J. M. Arde.
C. Sedgwick

INVENTOR

A. Johnson
Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

ALBERT JOHNSON, OF HAVERHILL, MASSACHUSETTS, ASSIGNOR TO THE
INDESTRUCTIBLE FUEL COMPANY, OF SAME PLACE.

FIRE-KINDLER.

SPECIFICATION forming part of Letters Patent No. 491,355, dated February 7, 1893.

Application filed May 4, 1892. Serial No. 431,792. (No model.)

To all whom it may concern:

Be it known that I, ALBERT JOHNSON, of Haverhill, in the county of Essex and State of Massachusetts, have invented a new and
5 Improved Fire-Kindler, of which the following is a full, clear, and exact description.

My invention relates to improvements in fire-kindlers, and the object of my invention is, to produce a simple and inexpensive device, by means of which a fire may be quickly
10 kindled without danger and without soiling the hands, and also to construct a device which may be conveniently and advantageously used for thawing pipes, burning caterpillars and
15 noxious insects off trees, and for other purposes where a firebrand is useful.

To this end, my invention consists in certain features of construction and combinations of parts, which will be hereinafter described and
20 claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

25 Figure 1 is a sectional plan of the device on the line $x-x$ in Fig. 2; Fig. 2 is a longitudinal section on the line $y-y$ in Fig. 1; and Fig. 3 is a broken detail view of a modified form of handle.

30 The device is provided with a handle 10, which is preferably of wire, which is twisted together as shown at 11 to give it the necessary strength. The handle is formed at one end into an elongated loop 12, which is adapted
35 to hold the swab, and at the other end into a hand-hold 13.

The swab consists of a series of leaves 14,

which are cut so as to have no projecting corners, and which are made of asbestos or other indestructible absorbent. These leaves are 40 placed compactly upon the loop 12, which is arranged near the center of them, and firmly clamped to the same by means of the split pins 15, which are thrust through the leaves and have their ends doubled over, as shown 45 in dotted lines in the drawings, or any other suitable fastening may be used. In some cases the handle 10, terminates at its outer end in a coil 16, which may be placed upon the end of a long handle so that the swab may be con- 50 veniently applied to insects, &c., in the top of a tree.

The swab is kept immersed in oil, and when a fire is to be kindled the swab is removed, lighted, and placed beneath the kindlings, 55 which it quickly ignites. The swab absorbs oil enough to enable it to burn for quite a long time, and it may be conveniently handled for thawing pipes, or for any desired purpose.

Having thus described my invention, I 60 claim as new, and desire to secure by Letters Patent,—

A fire kindler, comprising a wire handle formed with a loop 12 at one end, a series of absorbent leaves lying face to face and be- 65 tween which lies the said loop, and the transverse fastenings 15 securing the leaves together upon the loop, substantially as set forth.

ALBERT JOHNSON.

Witnesses:

FRED H. NUTTER,
HERBERT A. CHASES.