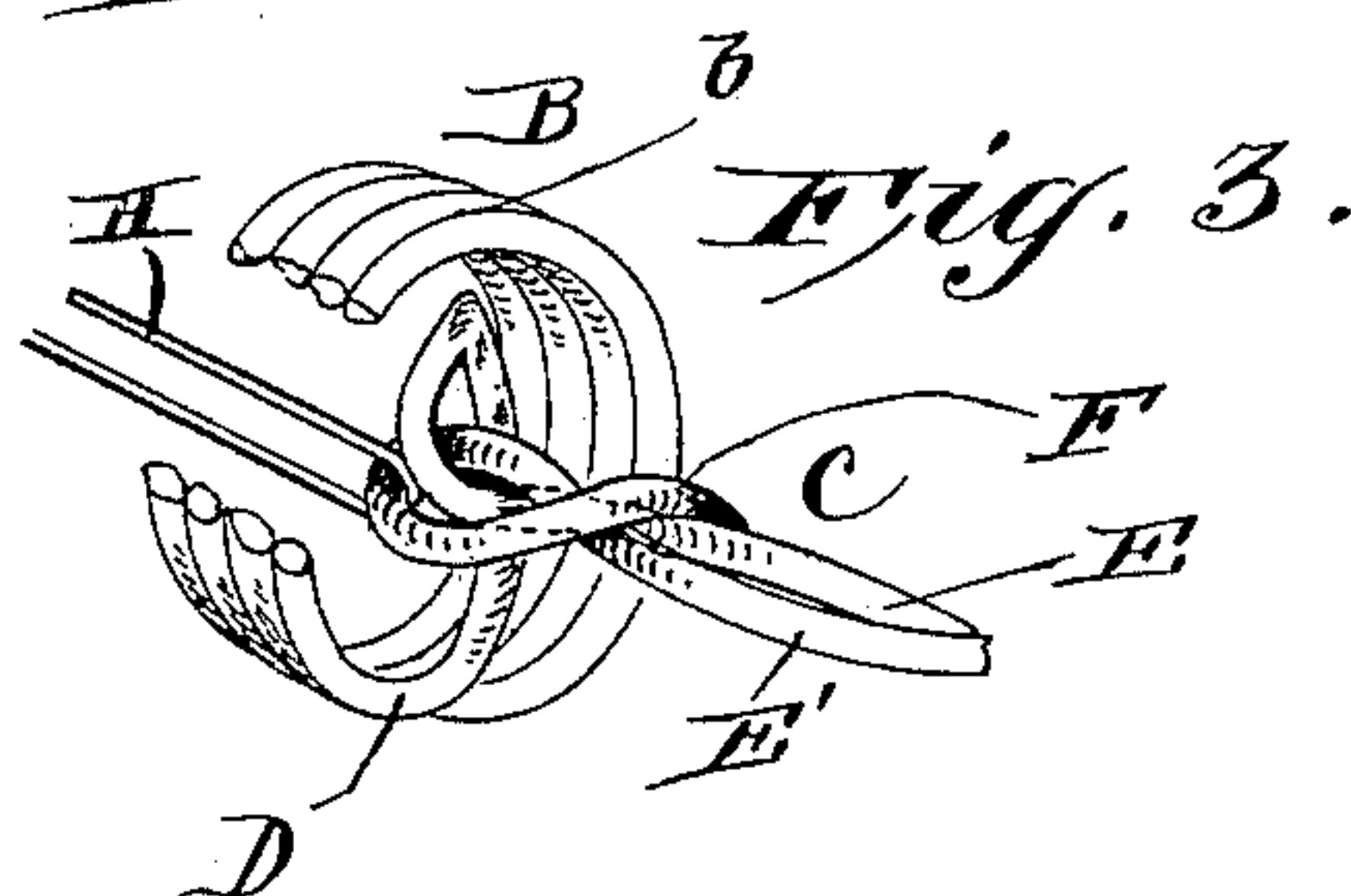
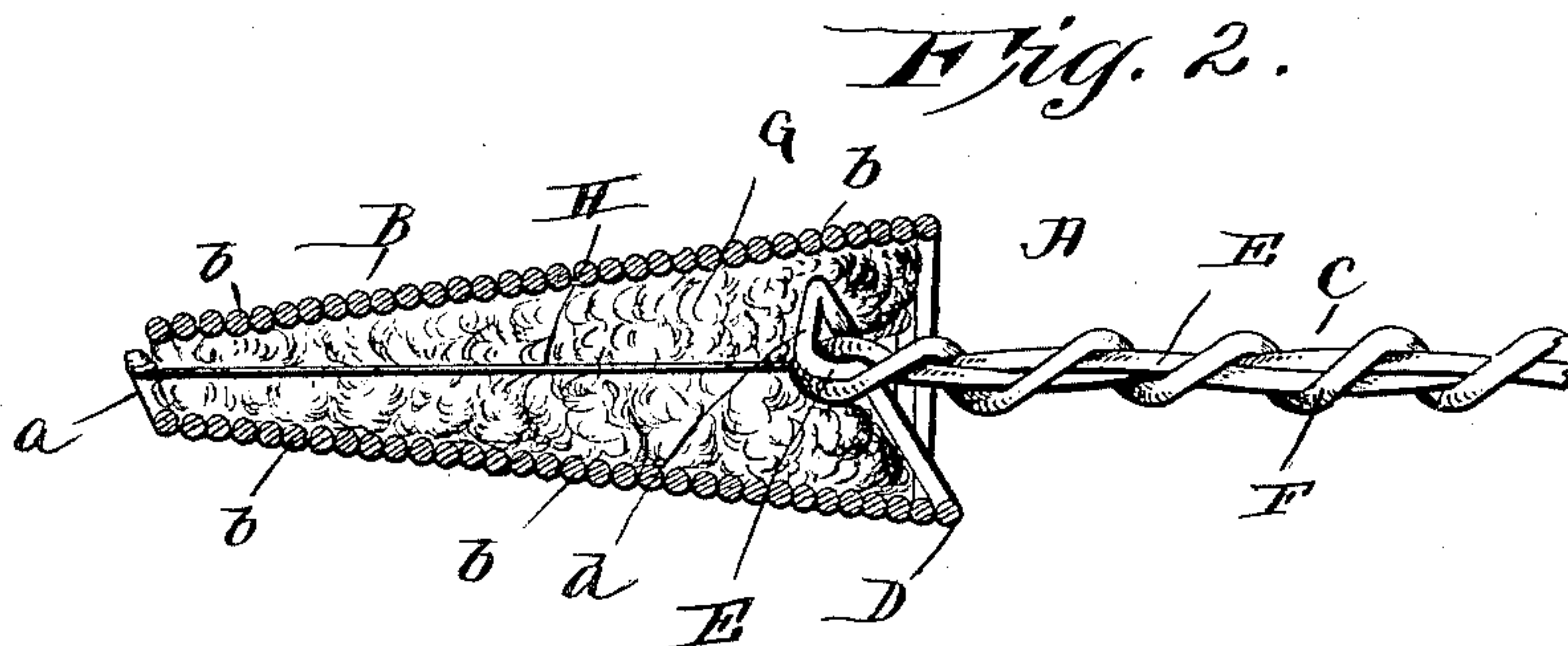
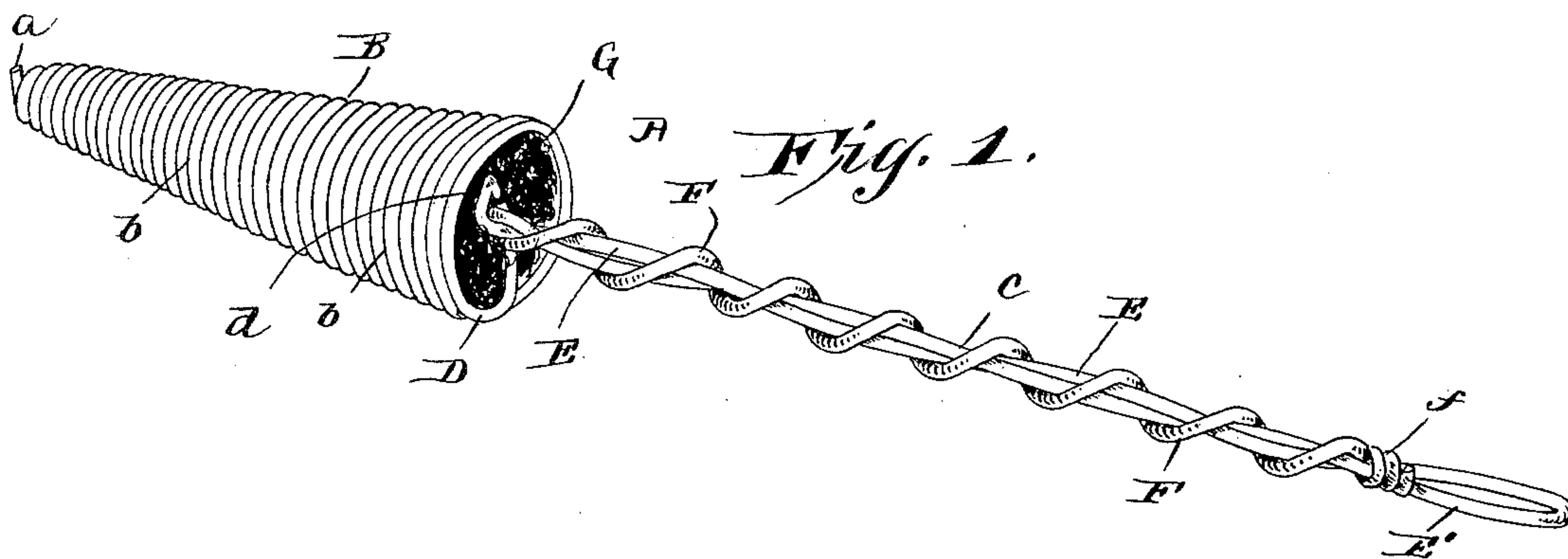


(No Model.)

E. ZONKER.
FIRE KINDLER.

No. 399,463.

Patented Mar. 12, 1889.



Witnesses.

Frank S. O'Brien
J. S. Sipe

Inventor,

Edward Zonker,

By his Attorneys

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

EDWARD ZONKER, OF CORUNNA, INDIANA.

FIRE-KINDLER.

SPECIFICATION forming part of Letters Patent No. 399,463, dated March 12, 1889.

Application filed September 26, 1888. Serial No. 286,405. (No model.)

To all whom it may concern:

Be it known that I, EDWARD ZONKER, a citizen of the United States, residing at Corunna, in the county of De Kalb and State of Indiana, have invented new and useful Improvements in Fire-Kindlers, of which the following is a specification.

The invention relates to improvements in fire-kindlers; and it consists in the construction and novel combination of parts hereinafter described, illustrated in the accompanying drawings, and pointed out in the appended claim.

In the drawings, Figure 1 is a perspective view of a fire-kindler embodying the invention, looking up into the base of the receptacle of the kindler. Fig. 2 is a central longitudinal section of the kindler, the stem thereof not being sectioned. Fig. 3 is an enlarged detail view showing the connection of the conical receptacle with the stem.

The frame A of the kindler is made of a single piece of stout wire wrapped and bent in the following manner, and consists of the conical receptacle B and the stem C. One end of said wire is formed into a small transverse hook, *a*, and from said hook the wire is bent inward into circular coils *b*, increasing regularly in diameter from point to base to form the receptacle B. The base-coil D is inclined in the receptacle to about the sixth or seventh coil therefrom, and opposite the same is bent radially inward, as at *d*, to the axis of the receptacle, and is there bent outward in alignment with said axis to a sufficient distance to form one strand, E, of the handle or stem C, at the outer end of which the wire is bent reflexly on itself to form the second strand, E', of the said stem. The two strands E E' are twisted in long bends on each other to hold them together and give increased stiffness to the stem, and the strand E' at its

inner end is looped over the bend at the junction of the strand E and radial wire *d*, and is then bent outward around the stem, forming the coil F, the outer end, *f*, of which is turned several times tightly around the stem C near its outer end. The receptacle of the frame thus formed can be thrust into an ash-box or between the bars of a grate, and can be withdrawn full of ashes, which when saturated with oil and ignited serves to kindle a fire. The conical form of the receptacle enables it to be thrust in place with more ease. The receptacle, however, may be furnished with a cotton-batting filling, or, preferably, with a filling of asbestos, or other non-combustible material which will be permanent. The said filling is designated by G, and is secured in place by the axial wire H, attached at its ends to the hook *a* and the loop of the strand E', respectively. The coils *b* of wire are in contact, so that the receptacle will hold fine ashes.

Having described my invention, I claim—

In a fire-kindler, the conical receptacle B, having its ends open and composed of a series of integral coils of wire arranged in contact and increasing regularly in diameter from the apex to the base, the stem or handle connected directly to the base of the receptacle and consisting of the strands E E', arranged in contact, and the strand F, coiled around the wires E E', and the strengthening-wire H, extending axially through the receptacle and connecting the base thereof to the apex, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

EDWARD ZONKER.

Witnesses:

JOHN BECKER,

MELVIN REYNOLDS.