

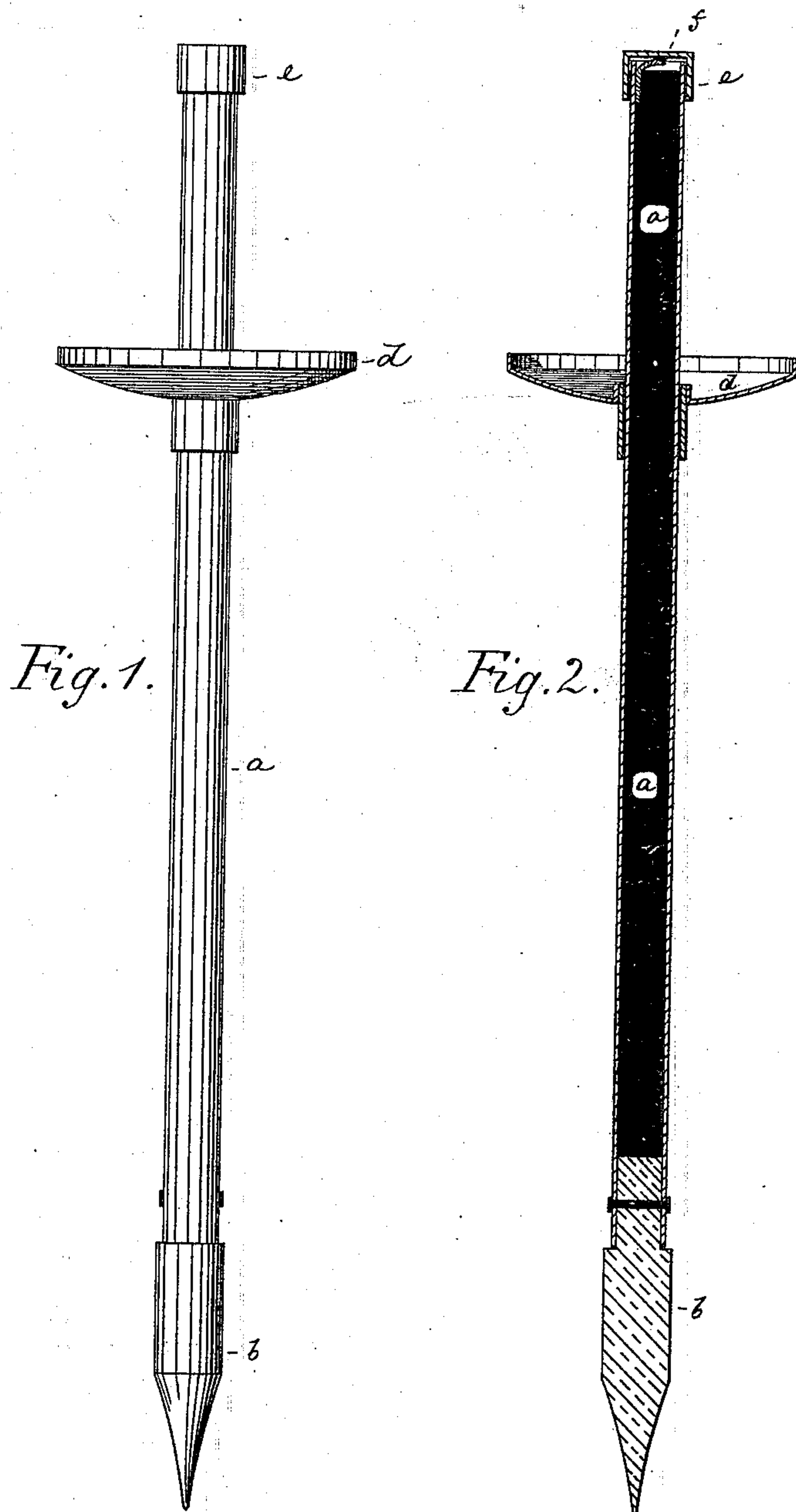
(No Model.)

J. DAX.

PYROTECHNIC SIGNAL TORCH.

No. 329,442.

Patented Nov. 3, 1885.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHANN DAX, OF COLOGNE, GERMANY.

PYROTECHNIC SIGNAL-TORCH.

SPECIFICATION forming part of Letters Patent No. 329,442, dated November 3, 1885.

Application filed February 19, 1885. Serial No. 156,336. (No model.)

To all whom it may concern:

Be it known that I, JOHANN DAX, of Cologne, Germany, have invented a new and Improved Pyrotechnic Signal-Torch, of which
5 the following specification is a full, clear, and exact description.

This invention relates to a new torch to be used for military, naval, mining, and similar purposes.

10 The torch consists of a zinc tube with a pointed handle, drip-cup, and cap. An illuminating-charge, which consumes the tube as it burns down, is contained within the tube, all as will be hereinafter more fully described.

15 In the accompanying drawings, Figure 1 is a side view of my improved torch; Fig. 2, a longitudinal central section of the same.

The letter *a* represents a tube made of sheet-zinc, and open on top and bottom. Into the
20 lower end of this tube fits a downwardly-projecting pointed handle, *b*. This handle is preferably made of wood, and may be either driven into the ground, or it may be grasped by the hand.

25 *d* is a drip-cup, which is made of annular form and surrounds the tube *a*. This cup may be pushed up or down along the tube, and is held by frictional contact in any position in which it may be placed.

30 *e* is a cap for closing the upper end of tube *a*. The tube *a* is filled with an illuminating-charge. This charge is composed of the following ingredients: three parts of sulphur, one-half part of nitrate of potassium, one part

of sulphide of antimony, two parts of realgar, 35 one part zinc filings. A fuse, *f*, is inserted into the upper end of the charge, as shown. When this charge is ignited, it will burn down slowly and will consume the zinc tube *a* in the same degree as it burns down. In this way 40 the charge will at all times give off its luminosity.

In place of the charge above described, other charges may be substituted; but the charges should always be of such a character that they 45 will consume the tube *a* in burning down.

I claim as my invention—

1. The combination of a zinc tube, *a*, with a charge which consumes the zinc tube in burning down, and with a drip-cup, *d*, and 50 cap *e*, substantially as and for the purpose specified.

2. The combination of zinc tube *a* with pointed handle *b*, drip-cup *d*, and cap *e*, and with a charge which consumes the tube in 55 burning down, substantially as specified.

3. The combination of zinc tube *a* with handle *b*, drip-cup *d*, and cap *e*, and with a charge composed of sulphur, nitrate of potassium, sulphide of antimony, realgar, and zinc filings, 60 substantially as specified.

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

JOH. DAX.

Witnesses:

J. BOELLERSBER,
TH. PUTMANN.