

A CALIFORNIA PLUMMET-LAMP

by Dale R. Beeks

Of the varied forms of plumb bobs, one of the most unusual designs, the plummet-lamp, was adapted for use in underground mining and tunnel surveys. The purpose of the plummet-lamp was to provide an illuminated target for the surveyor/engineer conducting his work underground. Unlike above-ground surveying, backsight and foresight stations in underground surveys were placed in the ceiling (as constant work would obliterate points in the floor). In use, the plummet-lamp was suspended from a station spad in the ceiling and the wick (fed from a fuel font within the hollowed body of the plummet) was ignited. The instrument man then had an easily sightable illuminated point.

The conventional plummet-lamp incorporated a heavy inverted brass cone with an internal fuel font and exposed wick, suspended in a gimbaled ring, the later held at two points of attachment by a suspension chain. This form

exposed the lamp wick and flame, to wind currents and dripping ceilings; its operation is not too efficient in some mine surveying applications.

A unique design of plummet lamp evolved from the shop of San Francisco instrument manufacturer John Roach (1813-1891). Roach's design incorporated a brass hood and a mica or glass chimney that protected the flame from both wind currents and water drips from the ceiling; a lantern atop a plummet. The design evolved sometime in the late 1870's and in 1883 was awarded a silver metal from the Mechanics' Institute. It was patented by Roach on October 30, 1883 and continued being marketed by Roach's successor J.C. Sala until at least 1894. This form of plummet-lamp is very rare today. Possibly because Roach and Sala were the only maker/suppliers of this patent form. We are aware of only one example of this patent plummet-lamp. It is a pre-patent example signed, "J. Roach S.F. Cal., Pat. Appl'd for".

For illustration, see front cover.

J. ROACH.
PLUMMET LAMP.

Patented Oct. 30, 1883.
No. 287,580.

Fig. 4

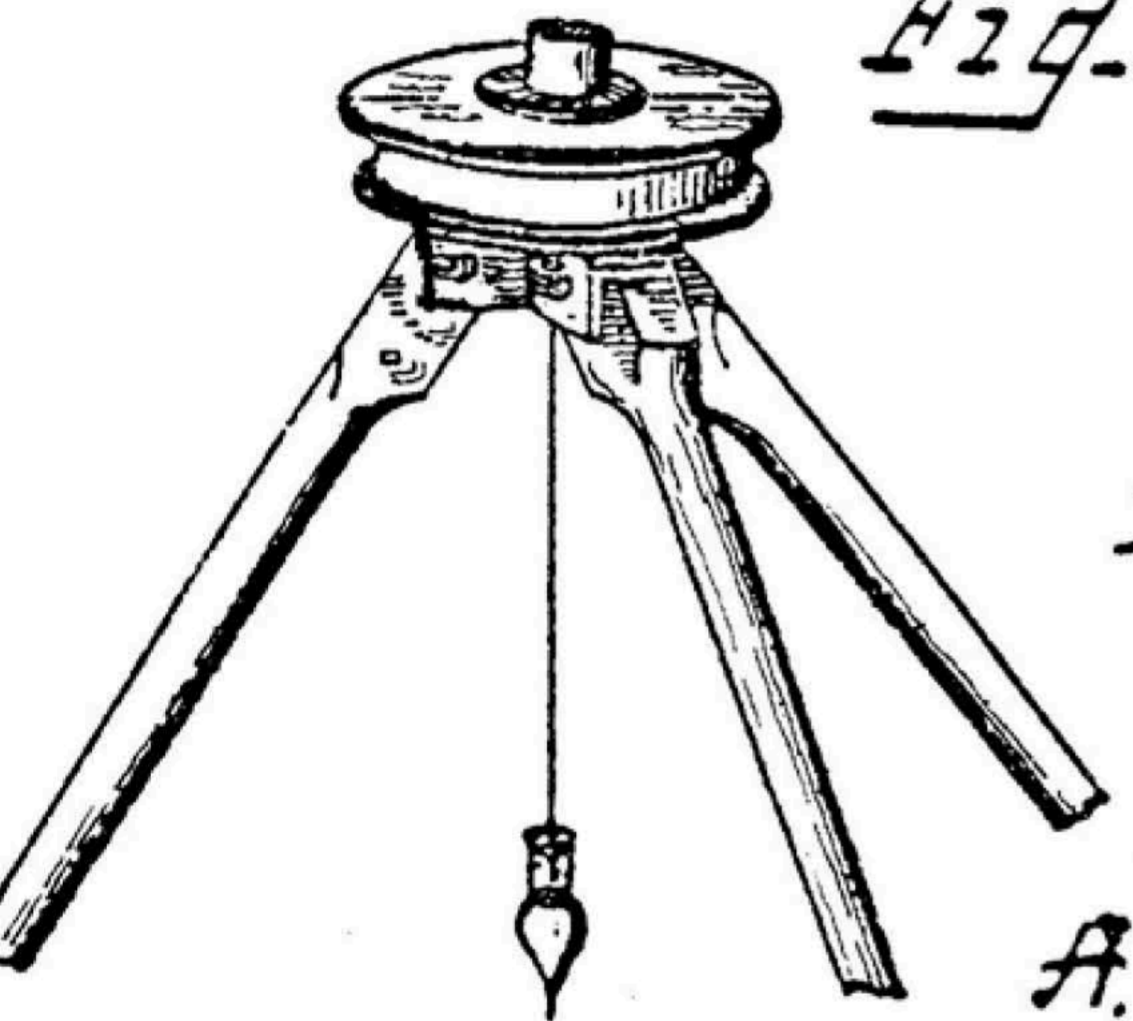
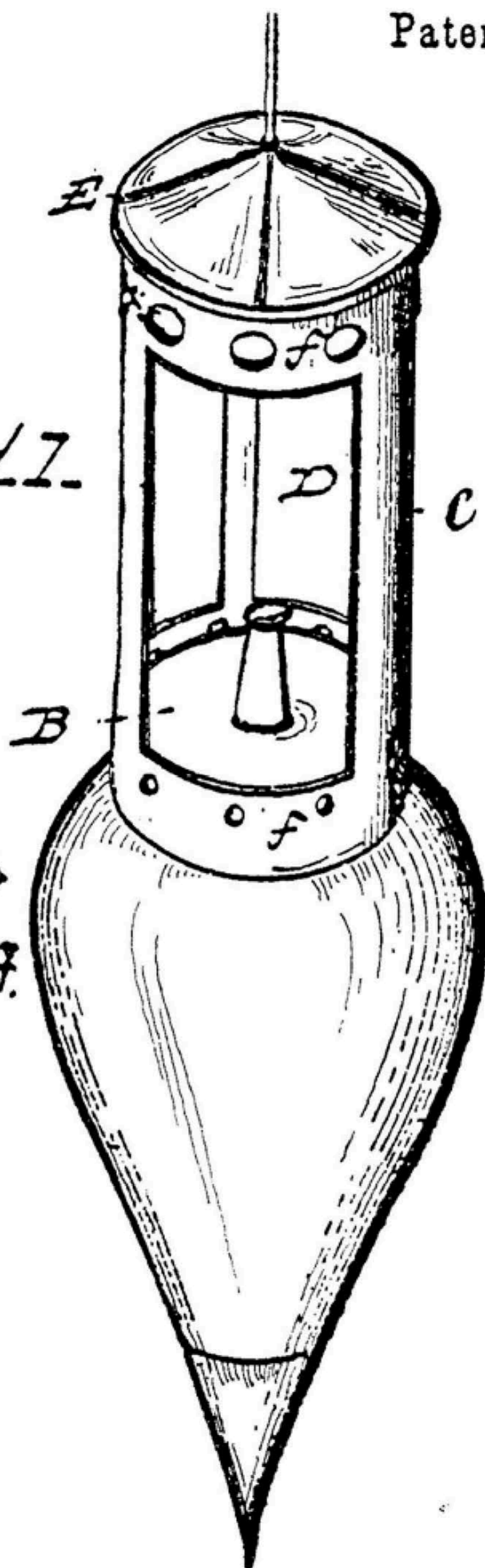


Fig. 1



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WITNESSES
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