

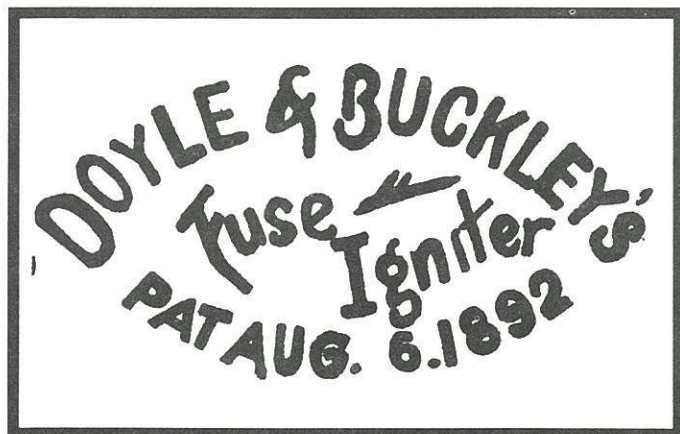
THE DOYLE & BUCKLEYS FUSE IGNITER

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In a previous issue of the MAC (Number 16, Fall 1992), Wendell Wilson wrote an interesting article about the Hagenmeyer fuse lock or fuse igniter patented on October 9, 1866. If you recall, that fuse igniter ignited only one fuse at a time and was intended to be used in a manner so as to allow a miner to light a fuse from a safe distance.

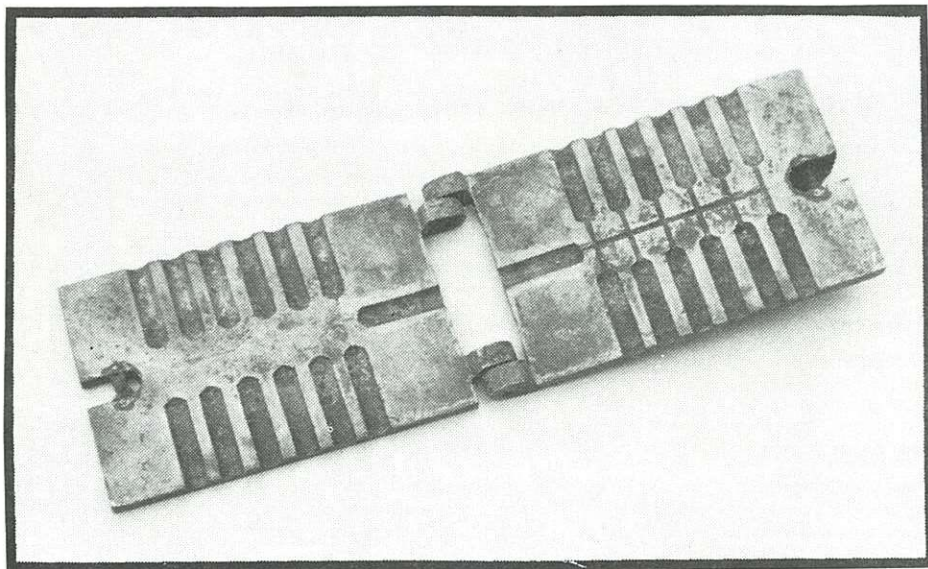
Twenty-six years later, on August 16, 1892, two fellows by the names of William J.C. Doyle and Timothy Buckley, both of Aspen, Colorado, patented "a simple device by means of which any number of fuses may be safely held and simultaneously fired, so that there will be no chance of a miss-fire, . . . which is very simple and cheap and which may be used either in wet or dry blasting."

The only known example of a Doyle & Buckley Fuse Igniter at this time is made of solid brass. As you can see by comparing the example in the photo to the patent drawing, Doyle and Buckley made a few changes in the finished product. The hinge design was improved and they added two more grooves to accommodate twelve fuses instead of the ten shown in the patent drawing. The lock or fastening device (#13) was also changed, but it is missing on the only known example. I would assume that it was some sort of latch that was tightened by a bolt or wing nut.



Shown above is a rubbing of the incused lettering on the front of Doyle & Buckley's Fuse Igniter.

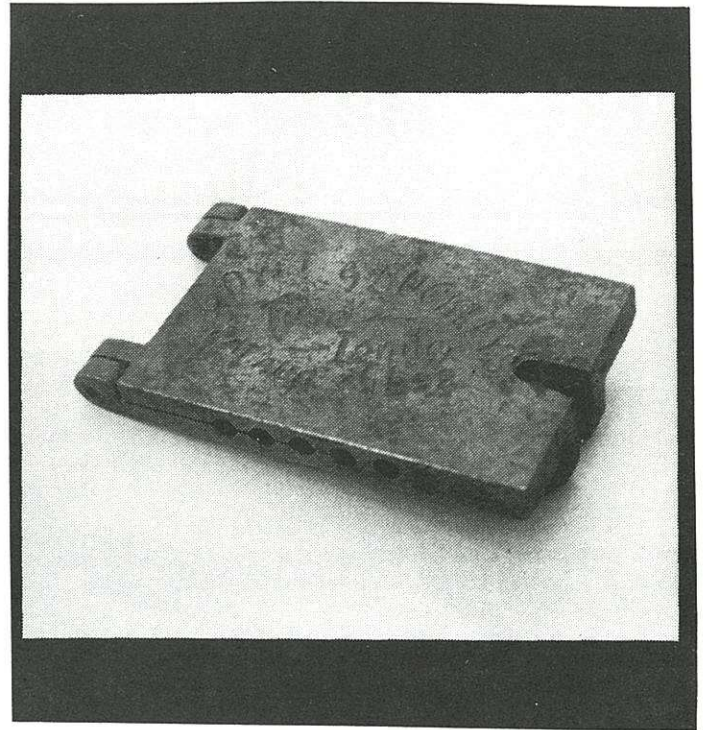
According to the patent information, "When the device is used, the fuses 17, which lead to the various charges to be exploded, are fastened in the grooves 14 14^a, the (black) powder 18 is inserted in the grooves 16, a short fuse 19 is inserted in the grooves 15 15^a, and the members 10 and 11 are firmly fastened together by the fastening 13. If the device is to be used for wet blasting, the edges of the body members 10 and 11 may be first smeared with cartridge-soap, so as to effect a water-tight joint."



A photograph of the solid brass Doyle & Buckley's Fuse Igniter in the open position showing the placement of the grooves for the fuses on the sides, the igniting fuse at one end and the small black powder grooves leading to each fuse. The fuse igniter, in the closed position, is 4 $\frac{1}{4}$ inches long, 2 $\frac{1}{2}$ inches wide and $\frac{7}{8}$ of an inch thick.

Obviously the Doyle & Buckley Fuse Igniter would have been very time consuming to use. Just imagine a powderman at the face of a drift with twelve fuses hanging in front of him and trying to align each one into the grooves of the igniter, not to mention the time it would have taken to mix up the black powder paste that had to be applied into the small grooves.

If you look close, there are two things in the stamping on the brass igniter example that you may have noticed that are different from what is on the patent. The word igniter that is stamped into the brass example is spelled with an "er" whereas in the patent it was spelled with an "or." Also, the date of Aug 6 1892 that is stamped into the brass example does not match the date of Aug. 16, 1892, that is on the patent. I'm sure this was either a simple mistake attributed to the die maker or more probably the 1 in 16 had gotten broken off of the casting since there appears to be a space where a 1 would fit.



Shown below are the original patent drawings for Doyle & Buckley's Fuse Igniter.

Above is a photograph of Doyle & Buckley's Fuse Igniter in the closed position.

