A. S. HAMILTON.

PORTABLE DETONATOR MAGAZINE.

APPLICATION FILED AUG. 7, 1911.

1,026,860. Patented May 21, 1912.

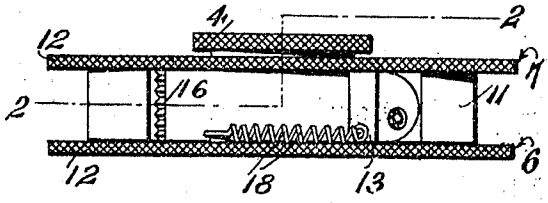

Fig. 1.

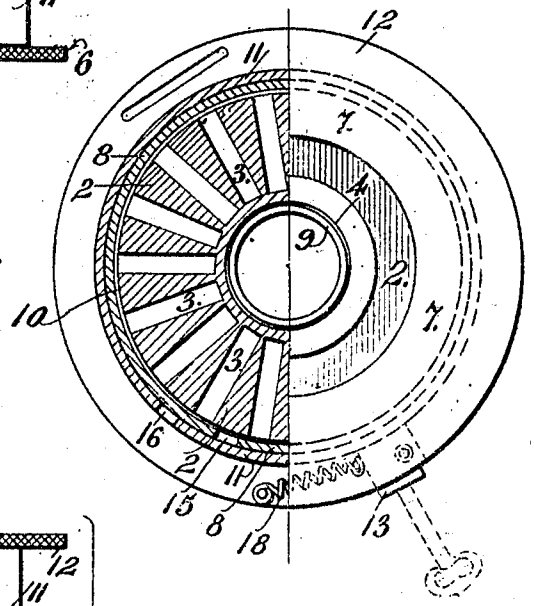

Fig. 2.

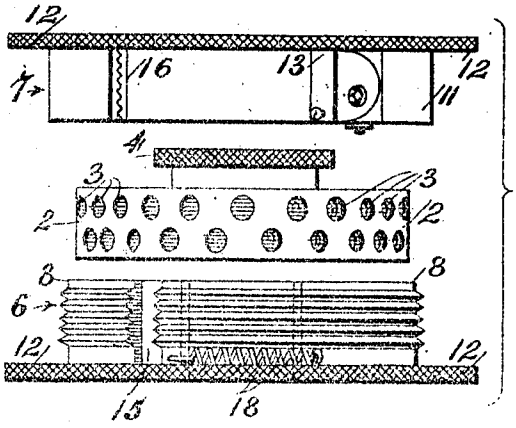

Fig. 3.

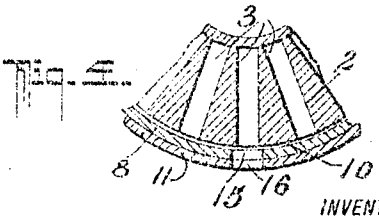

Fig. 5.

WITNESSES.

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PORTABLE DETONATOR-MAGAZINE.

1,026,860. Specification of Letters Patent. Patented May 21, 1912.

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To all whom it may concern:

Be it known that I, ABRAM S. HAMILTON, citizen of the Dominion of Canada, residing at Nanaimo, in the Province of British Columbia, Canada, have invented a new and useful Portable Detonator-Magazine, of which the following is a specification.

This invention relates to a portable safety magazine for detonating caps, wherein the detonators are retained in separate chambers of a magazine rotatable within a double casing having a locked delivery aperture from which they can only be removed one at a time, the chamber automatically locking itself after the desired delivery has been obtained.

The governments of the various States or Provinces, where coal mining is conducted, have found it necessary to require that these blast firing detonators be carried only by the fire bosses and must be carried by each in a locked box that they may not be obtained by the miners. It is for the furtherance and amplification of these provisions for safety that the magazine, which is the subject of this application, has been devised.

The invention is particularly described in the following specification, reference being made to the drawings by which it is accompanied, in which:

Figure 1 is a side elevation of the invention. Fig. 2 is a horizontal section on the line 2—2 of Fig. 1. Fig. 3 is an elevation of the several parts of the device separated. Fig. 4 is a detail section showing the magazine and the closing rings with their apertures in the position for delivery of a detonator.

In these drawings 2 represents an annular cylindrical magazine in which are a series of radial chambers 3 penetrating the magazine from the periphery, each chamber being adapted to contain one detonating cap. Projecting from one side of this magazine 2 adjacent to the inner circle of it is a ring 4 having a milled edge by which it may be rotated when in place within its casing. The casing consists of two parts, 6 and 7, the main part 6 having projecting rings 8 and 9 forming an annular recess 10 to receive the magazine 2. The outside of the ring 8 is provided with a screw thread to receive a corresponding thread on a similar ring 11 projecting from the other part 7 of the casing. The parts 6 and 7 are provided with projecting flanges 12 the edges of which are milled. These serve the double object of affording an effective hand hold for rotating the two parts of the casing, and in protecting the casing rings 8 and 11 from injury in the event of it being dropped. When the ring 11 is screwed upon the ring 8 the magazine 2 is completely inclosed but can be rotated within the casing by means of the milled edge 4 of the magazine which projects through 7.

A portion 15 is removed from the ring 8 of the part 6 and a corresponding portion 16 is removed from ring 11 of the part 7. These removed portions 15 and 16 are so situated that when the two parts of the casing are closely screwed together they do not register and the bolt of a spring lock 13 secured on the side of the ring 11 holds them in that position so that, when locked, a detonator cap cannot be removed from the magazine.

A spring 18 between the two parts 6 and 7 normally holds these two parts of the magazine casing in the locked position, and when the lock latch is withdrawn by means of the key provided the parts may be rotated to bring 15 and 16 to register with one another when the magazine may be rotated by means of the milled projection 4 to bring a detonator opposite to the registering openings when a detonator may be removed from the magazine. It will be noted that the two parts of the casing must be held against the pressure of the spring 18 to hold the openings in register and as soon as the grip is relieved they will, by the spring 18, be drawn into the locked position and automatically locked.

The device is preferably made of a light metal or alloy, such as aluminium, so that its momentum will not cause a heavy shock in the event of it being dropped. Further the containing magazine holds the detonators all separate with the fulminating ends preferably inward, and they are protected against the possibility of injury by double rings 8 and 11 and further by the flanges 12 projecting beyond them.

Means is thus provided by which detonators may be carried in a manner safe from accident and from which they cannot be removed, save by the authorized party who alone is in possession of the key, and from which they can only be removed one at a time and under circumstances which give the party in charge occasion to note how

many he is removing as he requires to hold the casing in the delivery position and to rotate the magazine for each detonator he removes.

Having now particularly described my invention, I hereby declare that what I claim as new and desire to be protected in by Letters Patent, is:

1. A detonator magazine, comprising a cylindrical body provided with radial detonator chambers said magazine being rotatable within a casing provided with a closable aperture, a spring for normally holding said aperture in the closed position and a spring lock for automatically securing it thereat.

2. A detonator magazine, comprising a cylindrical body having detonator chambers in its periphery said magazine being rotatable withing a casing having a delivery aperture, a casing ring rotatable outside the first named casing and provided with a similar aperture susceptible of registering with the other, means for normally holding the two rings with their apertures out of register and means for automatically locking them in the out of register position.

3. A detonator magazine, comprising a cylindrical body having detonator chambers in its periphery said magazine being rotatable within a casing ring having an aperture through which a detonator may be delivered, a second casing ring rotatable outside the first named and provided with a similar delivery aperture, a spring normally holding these two rings with their apertures out of register, a spring lock for securing them in that position and means for rotating them into the register position when the lock is released.

4. A detonator magazine, comprising a cylindrical ring radially penetrated from the outside with detonator chambers and provided with means by which it may be rotated from outside of the casing, a casing ring designed to receive and rotate on this magazine ring the outer ring of the casing having a delivery aperture which may be brought to register with any of the detonator receptacles of the magazine, a closing cover for this casing having a ring rotatable outside that of the other part of the casing said second ring having an aperture corresponding to that in the other part of the casing, a spring drawing the two casing rings to a position where their delivery apertures are out of register, a spring lock securing them in that position and means for rotating them into register when the securing means is released.

5. A detonator magazine, comprising a cylindrical ring provided with radial chambers, a two part cylindrical casing within which the magazine is rotatable said casing being provided with flanges projecting beyond its periphery, by means of which flanges said casing parts may be turned with relation to one another, each of said casing parts having discharge slots that are brought into and out of register with one another as said parts are turned with relation to one another.

6. A detonator magazine comprising a casing composed of two cup like sections threaded together, each of said sections having discharge apertures, means continuously tending to turn said sections with respect to one another to maintain said discharge aperture closed, a detonator holder rotatably mounted within said casing sections and having radial detonator chambers, said holder including a portion projecting through one of said casing sections in virtue of which said holder may be turned within said casing sections.

7. A detonator magazine comprising a casing composed of two cup like sections threaded together, each of said sections having discharge apertures, means continuously tending to turn said sections with respect to one another to maintain said discharge aperture closed, a detonator holder rotatably mounted within said casing sections and having radial detonator chambers, said holder including a portion projecting through one of said casing sections in virtue of which said holder may be turned within said casing sections, and a locking device mounted on one of said casing sections to engage the other casing section to prevent relative turning of said sections to hold said discharge openings of the respective sections out of alinement with one another.

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

ABRAM S. HAMILTON.

Witnesses:
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