Jan. 29, 1924. 1,481,958

P. FANNON

POWDER JACK

Filed Feb. 28, 1923

Fig. 1.

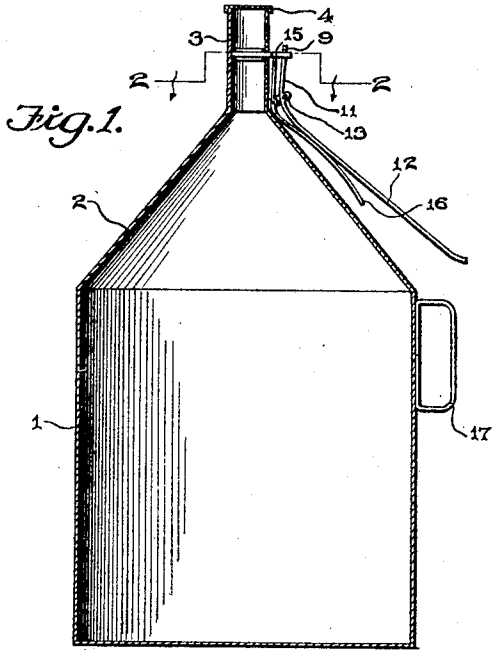


Fig. 2.

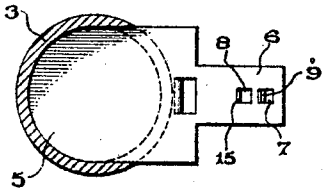
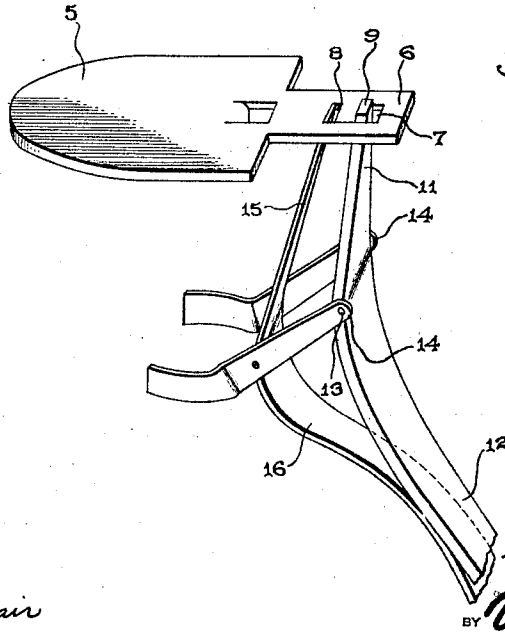


Fig. 3.



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UNITED STATES PATENT OFFICE.

PAT FANNON, OF HARLAN, KENTUCKY.

POWDER JACK.

Application filed February 28, 1923. Serial No. 621,924.

To all whom it may concern:

Be it known that I, PAT FANNON, a citizen of the United States, residing at Harlan, in the county of Harlan and State of Kentucky, have invented new and useful Improvements in Powder Jacks, of which the following is a specification.

This invention has reference to a powder flask, and especially to that class of loose explosive holders employed in mines and commonly called a powder jack.

The primary object of the invention is to produce an explosive holder which is normally closed so that the contents thereof will not be exposed to sparks or flame and thus protected from accidental explosion, but wherein the same may be readily opened by a miner in preparing his shots.

A further object is to produce a powder jack having a removable cap on the outlet spout thereof and having a handle operated spring influenced valve normally closing the passage through the spout, the handle for the valve being arranged in close proximity to the handle of the jack so that a pressure thereon may be exerted by the hand of the miner holding the jack to open the valve.

A still further object is to produce a powder jack having a valve of a particular and peculiar construction closing the passage through the spout thereof, said valve being operated by a pivoted handle which latter, as well as the valve is contacted and influenced in a direction to hold the valve seated by the arms of an angle spring, the latter at the juncture of the arms thereof being secured to the spout of the jack.

To the attainment of the foregoing and other objects which will present themselves as the nature of the invention is better understood, reference is to be had to the drawing which accompanies and which forms part of this application.

In the drawing—

Figure 1 is a central vertical longitudinal sectional view through a powder jack in accordance with this invention.

Figure 2 is a horizontal sectional view approximately on the line 2—2 of Figure 1.

Figure 3 is a perspective view of the valve, the operating handle therefor and the angle spring which influences both the handle and valve to hold the latter in closed position.

The powder jack is in the nature of a metal pan having a tubular body 1 provided with a funnel-shaped neck 2 from which extends the outlet spout 3. The mouth of the spout is normally closed by a cap 4, and preferably there is a flexible connection between the cap and spout.

The spout 3, slightly outward of its juncture with the neck 2 is provided with inner guides for a slidable valve 5. The valve, as disclosed by the drawings, has its inner end rounded to correspond with the inner contour of the spout 3 and its outer end preferably reduced to provide a central extension 6. The body of the valve, inward of the extension is preferably slitted longitudinally and transversely. The extension 6 is provided with an outer slot 7 and an inner slot 8. The outer slot 7 receives therein the reduced end or tongue 9 formed on an arm 11 of an angularly disposed lever 12. The lever, at the juncture of the arms thereof is pivoted, as at 13 between ears 14 that extend at an outward and upward angle from the juncture of the spout 3 with the neck 2. Between these ears there is fixedly secured a two arm spring. One arm of this spring, indicated by the numeral 15 is received through the slot 8 in the valve extension, the second arm indicated by the numeral 16 is in contacting engagement with the under face of the arm 12 of the valve operating lever. This arm is arranged directly above the handle 17 of the jack, so that the miner holding the jack can employ his thumb for swinging the lever to open the valve against the influence of both arms 15 and 16 of the spring. By providing a two-armed spring, one of the arms thereof exerts a direct pressure upon the valve and the other arm 16 thereof exerts a direct pressure upon the lever, swinging the latter to cause the end 9 thereof to exert a pressure against the inner wall of the slot 7 and further influences the valve to closed position.

The explosive in the can, not being exposed to the atmosphere will not have a tendency to clog so that the dangerous method of inserting picks or other pieces of metal through the can to break up the lumps of the explosive therein will be entirely obviated. A predetermined amount of explosive for a shot is obtained by opening the valve to allow a quantity of explosive to pass through the spout on to the cap 4, but, of course, larger amounts of explosives may be delivered from the jack, if desired. The device protects the powder in the jack from explosion under all conditions, as the two-

arm spring not only serves to effectively seat the valve but is of such strength and exerts such tension against the valve and the handle in such a manner that a determined amount of pressure must be exerted upon the handle or lever before the valve can be opened.

It is thought that the foregoing description, when taken in connection with the drawing will fully set forth the construction and advantages of the improvement to those skilled in the art to which this invention relates and that further detailed description will not be required.

Having described the invention, I claim:—

A powder jack for miners' use having an outlet spout and a slidable valve for closing the passage therethrough, said valve having its outer portion provided with spaced slots, an angle lever pivotally supported on the jack having the end of one of its arms received in one of said slots, a two-armed spring fixed to the jack having one of its arms received through the second slot in the valve and its second arm in contacting engagement with the under face of the lever, both of said arms exerting tension upon the elements engaged thereby to force the valve to closed position and to swing the lever to cause the latter to further influence the valve in such closed position.

In testimony whereof I affix my signature.

PAT FANNON.