

V. SRAMCIK.
TAMPING DEVICE.
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1,239,631.

Patented Sept. 11, 1917.

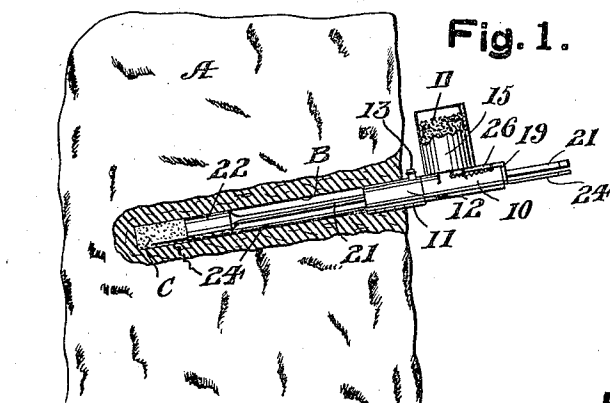


Fig. 1.

Fig. 7.

Fig. 2.

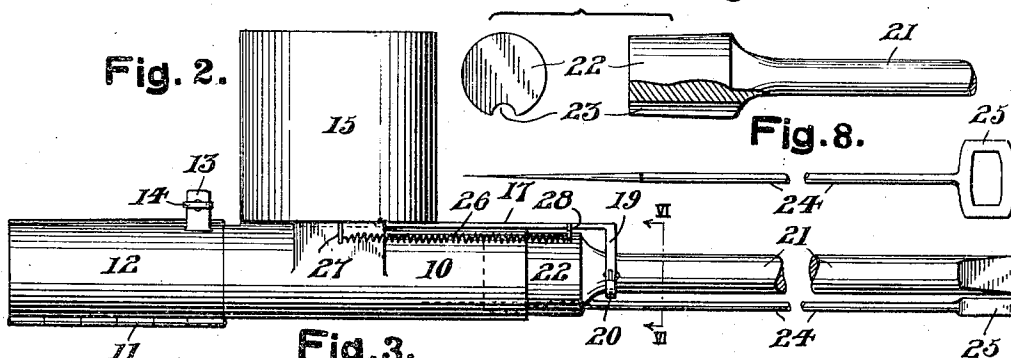


Fig. 8.

Fig. 3.

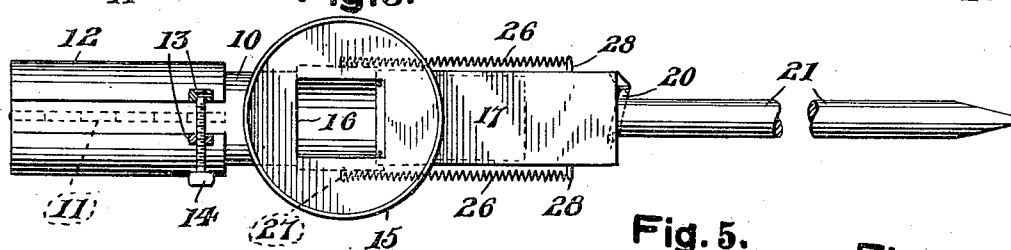
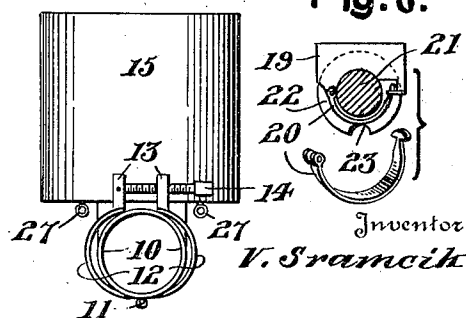
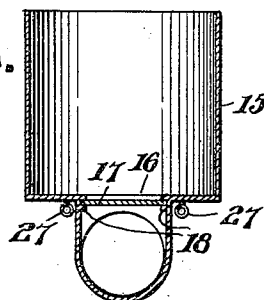


Fig. 5.

Fig. 6.

Fig. 4.



Inventor

V. Sramcik

By

A. M. Wilson

Attorney

UNITED STATES PATENT OFFICE.

VENDEL SRAMCIK, OF SENECAVILLE, OHIO.

TAMPING DEVICE.

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To all whom it may concern:

Be it known that I, VENDEL SRAMCIK, a subject of the King of Hungary, residing at Senecaville, in the county of Guernsey and State of Ohio, have invented certain new and useful Improvements in Tamping Devices, of which the following is a specification.

This invention relates to certain new and useful improvements in tamping devices.

An object of the present invention is to provide a tamping device particularly adapted for positioning explosive charges in connection with coal mining, etc., and in which there is provided a receptacle associated with the tamping device or plunger for containing packing clay or similar material to enable the device to be operated by a single person.

A further object of the invention is to provide a tamping device in which there is provided a receptacle to contain clay or other packing material and in which the receptacle is provided with a valve-controlled passage-way which is automatically controlled by the sliding movement of the plunger or tamping bar.

With these general objects in view and others that will appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings, and then claimed.

In the drawings forming a part of this application and in which like designating characters refer to corresponding parts throughout the several views:—

Figure 1 is a side elevational view of the tamping device in operative position in a coal or rock wall.

Fig. 2 is a side elevational view of the device removed from the wall.

Fig. 3 is a top plan view of the same showing the sliding valve in open position.

Fig. 4 is a vertical cross-sectional view taken centrally through the clay receptacle and adjacent tube portion.

Fig. 5 is an end elevational view showing the clamping device for positioning the same in a wall opening.

Fig. 6 includes detail views, partly in section, of the tamping member, and the guide support for the same.

Fig. 7 includes detail views, partly in section, of the tamping member, and,

Fig. 8 is a side elevational view, partly broken away, of the blasting needle.

In blasting, as in coal mining or other forms thereof, the placing of an explosive charge has usually required two persons, one to do the tamping or packing of the filling clay or the like in the wall opening while the other person usually performs the duty of throwing the packing material into the opening. With the present invention, the packing of an explosive charge may be accomplished by one person, such as positioning the blasting needle, the feeding of the packing material and the tamping operation. The present invention includes a tubular member carrying an expansible collar or sleeve that is adapted to be positioned in a drilled opening in a coal bank or other wall and adapted to be expanded so as to hold the tubular member in the desired position. A packing material receptacle is associated with the tubular member and is provided with a valve-controlled passage-way forming communication therewith. A tamping rod or bar is slidably positioned in the tubular member and has the enlarged head thereof extending into the wall opening, and by reciprocating the tamping bar, and drawing the same rearwardly to the desired position, the controlling valve for the packing material receptacle may be opened to permit the desired amount of packing material to fall into the tube to be carried forward by the tamping bar, and during such forward movement, the valve is automatically closed.

Referring more in detail to the accompanying drawing, the reference numeral 10 designates a tube that is preferably cylindrical in cross-section, the same being open at each end to permit the ready insertion and free movements of a tamping bar. One end of the tube 10 as shown more clearly in Figs. 2, 3 and 5 has secured to the bottom face thereof as by a hinge connection 11, a pair of semi-circular members 12, the free swinging edges of which carry upstanding ears 13 that receive an adjusting screw 14 that may be operated to cause the clamping members 12 to be moved relative to the tubular member 10.

A packing material receptacle 15 is centrally carried by the tube 10 and the bottom wall thereof is provided with an opening 16 that forms communication between the receptacle 15 and the tube 10. The communi-

cating opening 16 is controlled by the sliding valve member 17 in the form of an elongated rectangular plate, one end of the valve 17 passing between the bottom of the receptacle 15 and the tube 10 as shown in Figs. 2 and 3 to be received between the guide flanges 18 formed at the side walls of the opening. Stop pins are carried by the inner end of the valve 17 which will limit the sliding movement thereof in opposite directions. The outer end of the valve plate 17 is angularly bent as at 19 to the form best shown in Figs. 2 and 6, while a swinging clasp 20 is hinged at one end to one side of the bent end 19 with the other end detachably connected thereto so as to provide a supporting guide and lock for the tamping bar.

The tamping bar is shown in detail in Fig. 7 and includes a shank 21 that is provided with any suitable form of handle end as may be desired while the operative end thereof is enlarged to provide a tamping head 22 having a longitudinal groove 23 formed in one side thereof. The blasting needle 24 is in the form of an elongated wire member that carries the handle 25. With the tamping bar 21 in operative position as shown in Figs. 2 and 3, by withdrawing the same to the position shown, the head 20 will engage the bent end 19 of the sliding valve plate 17 and withdraw the same to uncover the valve opening 16 as shown more clearly in Fig. 3, and in this position, the springs 26 secured at one end to depending pins 27 on the receptacle 15 and at their other end to depending pins 28 on the outer end of the valve plate are placed under tension so that when the tamping bar moves forwardly, the said springs will return the valve plate 17 to a position to close the receptacle opening 16.

In assembling the parts, the swinging clasp 20 may be moved on its hinge point to permit the head 22 of the tamping bar to be inserted in the open outer end of the tube 10. The blasting needle 24 may then be inserted in the tamping head groove 23 and moved into the tube 10 the desired distance. A coal or rock bank A shown in Fig. 1 is provided with a drilled opening B in which is placed an explosive charge C. The clamping members 12 are drawn into close relationship with the tube 10 by the adjusting screw 14 and the clamping end of the tube is then positioned within the drilled opening B. In this position, the adjusting screw 14 may be operated to cause the clamping members 12 to expand to frictionally engage the side walls of the opening and securely hold the packing material receptacle 15 in upright position as shown in Fig. 1. The packing material D shown within the receptacle 15 in Fig. 1 is fed into the tube 10 when the tamping bar 21 is moved outwardly and the rear end of the head 22 caused to engage the angularly bent end 19 of the sliding valve

plate 17, thereby moving the plate 17 to uncover the valve opening 16 and permit the contents of the receptacle 15 to descend into the tube 10. When so moved rearwardly, the springs 26 are placed under tension and upon a forward or inward movement of the tamping bar, the packing material within the tube is moved forwardly and the springs 26 automatically close the valve opening 16. The tamping bar may then be reciprocated the desired number of times to securely pack or tamp the filling material in the opening B. It is to be understood that the blasting needle 24 is inserted into the opening B through the tubular member 10 the desired distance to cause the pointed end thereof to engage with the blasting charge C in the opening. When the blast charge has been properly tamped and sealed with the filling material, the needle 24 may be readily removed by grasping the handle 25, which will leave an unobstructed opening or passage-way in the filling material to the explosive charge for the ready insertion of a fuse. The clamping members 12 may then be moved by the adjusting screw 14 to cause the same to be disengaged from the side walls of the opening B and the tamping device bodily removed.

While the form of the invention herein shown and described is what is believed to be the preferred embodiment thereof, it is nevertheless to be understood that various forms, modifications and arrangement of the parts may be made without departing from the spirit and scope of the invention as claimed.

What I claim as new is:—

1. A tamping device including a tubular member, a packing material receptacle carried thereby, a valve-controlled opening forming communication between the receptacle and tubular member, a blasting needle positioned in said tubular member and extending beyond the same, a tamping bar slidably mounted in the tubular member and having a longitudinal groove in one side face thereof to receive the blasting needle, the said tamping bar adapted to open the valve to permit the contents of the receptacle to fall into the tubular member when the tamping bar moves to a point adjacent its extreme outer movement.

2. A tamping device including a tubular member, a packing material receptacle carried thereby, there being a communicating opening between the receptacle and tubular member, a sliding plate valve closing said opening, and a tamping bar slidably mounted in said tubular member adapted to engage and slide the plate valve when the tamping bar reaches a point adjacent its extreme outer movement to uncover the communicating opening.

3. A tamping device including a tubular

member, a packing material receptacle carried thereby, there being a communicating opening between the tubular member and receptacle, a sliding plate valve closing said opening, an angular extension carried by the outer end of the valve, means for normally holding the valve closed, and a tamping bar slidably mounted in the tubular member adapted to engage the valve extension to move the valve to open position in opposition to the means for normally holding the same closed.

4. A tamping device including a tubular member, a packing material receptacle carried thereby, there being a communicating opening between the tubular member and receptacle, a sliding valve for closing said opening, springs connected at one end to said valve and at the other end to said receptacle for normally holding the valve in

closed position, a tamping bar having an enlarged head slidably mounted in the tubular member, and means carried by said valve adapted to be engaged by said head when the tamping bar is moved outwardly to cause the valve to be opened against the tension of the springs.

5. A tamping device including a tubular member, means carried thereby for feeding packing material thereto, a pair of hinged clamping members connected to the outer end of the tubular member, opposed ears carried by the clamping members, an adjusting screw associated with said ears whereby the clamping members may be moved relative to the tube, and a blasting needle and tamping bar associated with the tubular member.

In testimony whereof I affix my signature.

VENDEL SRAMCIK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."