

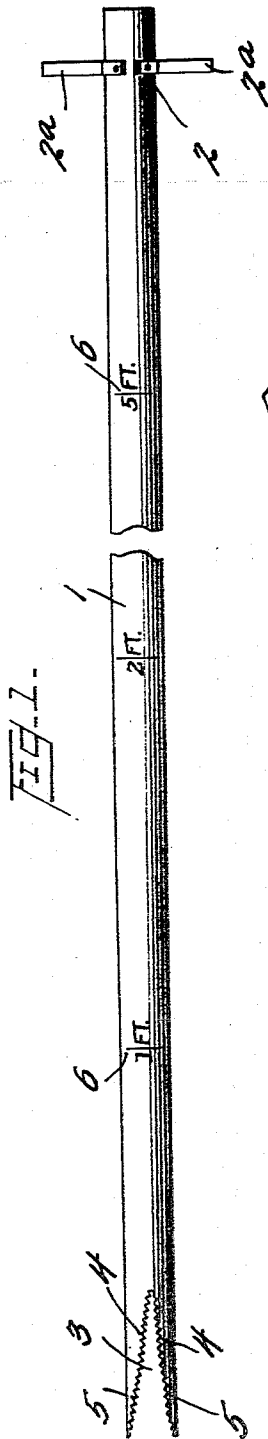
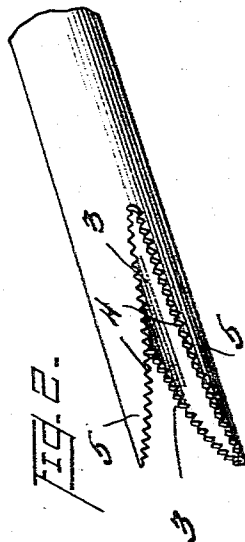
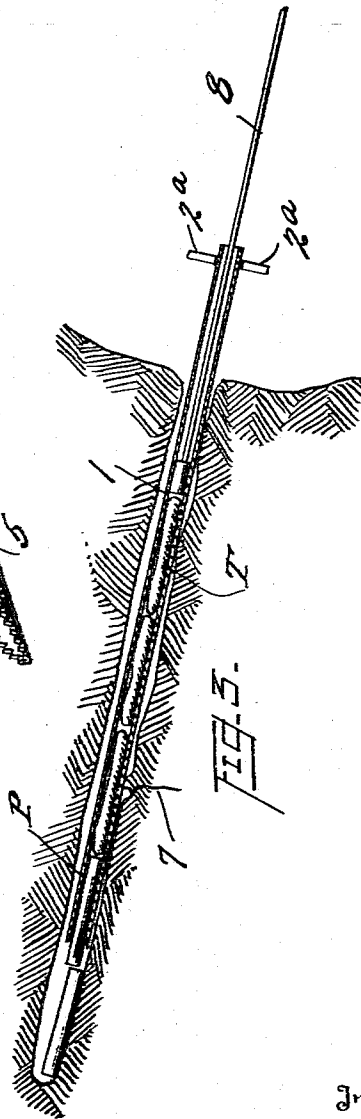
Nov. 3, 1942.

J. SAVAGE

2,300,813

TAMPING TUBE

Filed Feb. 20, 1941



Inventor

Joseph Savage,

By *Eugene H. Tracy*
His Attorney

UNITED STATES PATENT OFFICE

2,300,813

TAMPING TUBE

Joseph Savage, Lafin, Pa.

Application February 20, 1941, Serial No. 379,889

1 Claim. (Cl. 102—22)

This invention relates to tubes of the character used in blasting operations, particularly in mining, for introducing explosive charges within previously drilled shot holes and for tamping such charges prior to their detonation.

An important object of my invention is to provide a cylindrical tamping tube of the above character having means for cutting away obstructions upon the interior of the drilled shot hole during its insertion, and for providing a smooth liner through which the powder charge and the bags of tamping clay or earth may be readily inserted into the hole. More specifically, the cutting means are provided by V-shaped slots or notches in one end of the tube, the edges of the slots being formed with teeth for biting into earth or stone which may obstruct its passage into the hole, and a handle mounted upon the opposite end of the tube for manually rocking the tube back and forth about its longitudinal axis during its passage into the shot hole.

Other objects and advantages will be apparent from the following detailed description of a preferred embodiment of the invention, reference being had to the annexed drawing, in which:

Figure 1 is a side view of the tamping tube;

Figure 2 is a detail view of the cutting end of the tamping tube; and

Figure 3 indicates how the tamping tube may be used for placing a charge of blasting powder within a previously drilled hole, the tube being shown in longitudinal cross-section.

In the drawing, 1 designates a cylindrical tamping tube upon one end of which is rigidly secured a handle 2 comprising two diametrically disposed laterally projecting handle bars 2a. At its opposite end the tube is cut away to form a pair of circumferentially opposed V-shaped slots 3 extending longitudinally inward from the end of the tube. The edges of these slots are formed with saw teeth 4. The slots 3 thus define a pair of longitudinally extending saw-toothed cutting blades 5. For convenience in measuring the depth of a hole, the tube is longitudinally marked with a scale, in feet, as indicated at 6.

The manner of using the tamping tube in introducing an explosive charge into a previously drilled hole preparatory to blasting, as for example in coal mining, is illustrated in Fig. 3. As indicated at 7, cracks sometimes occur in the hole and the bags containing the tamping material snag into these cracks as they are pushed into place behind the previously deposited sticks of powder constituting the blasting charge. When this occurs, the miner in a moment of forgetful-

ness is apt to try to dislodge the bag with a blow pipe and may produce a spark which discharges the explosive. Such accidents usually are quite disastrous.

In preparing a blasting charge in accordance with my invention, the tamping tube is inserted into the drilled hole until it reaches the bottom thereof. During this insertion, should the tube encounter any obstructions such as the sharp edges produced by a crack 7, such obstructions are removed by simply rotating the tube back and forth by means of the handle bars 2a to cause the teeth 4 on the blades 5 to cut or rip away the obstructing earth or rock.

The sticks of explosives P are pushed through the smooth bore of the tube by means of a ram rod 8 after which the bags of tamping material T are forced through the tube to close the hole behind the explosive charge. As the sticks of explosives and bags of tamping material are introduced into the hole, the tube is progressively withdrawn the proper distance for each bag or stick of powder deposited in the hole, the scale on the tube assisting the miner in gauging these distances. Because the wall of the tube is slotted adjacent its end, plugging of the tube is avoided. That is, should the miner fail to withdraw the tube a suitable distance from the hole before tamping a bag into place, the bag will bulge through the slots into engagement with the wall of the hole so as to provide frictional resistance by which the bag is held in place during subsequent withdrawal of the tube.

Obviously various changes in the form, construction, arrangement and combination of the several parts of my new tamping tube may be made and substituted for those herein shown and described without departing from the nature and principle of my invention.

I claim:

A device for loading previously drilled shot holes preparatory to blasting comprising an elongated cylindrical metal tube having an unobstructed bore throughout its length, a handle mounted adjacent one of its ends affording means for manually imparting rotary movement to the tube about its longitudinal axis, said tube having its walls formed with a plurality of slots extending for a substantial distance lengthwise from the other end of the tube, said slots decreasing in width in a direction from the end of the tube lengthwise thereof and forming a plurality of tapered, longitudinally-directed blades, and teeth provided on the edges of said slots for cutting away obstructions from the interior of the shot hole during its rotation.

JOSEPH SAVAGE.