

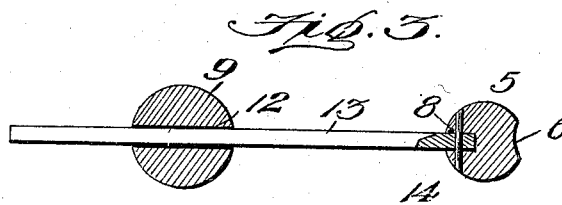
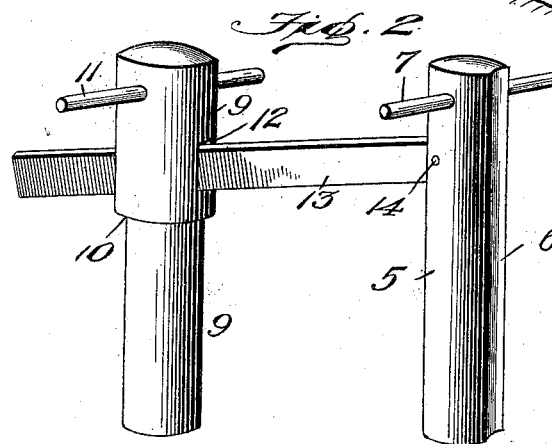
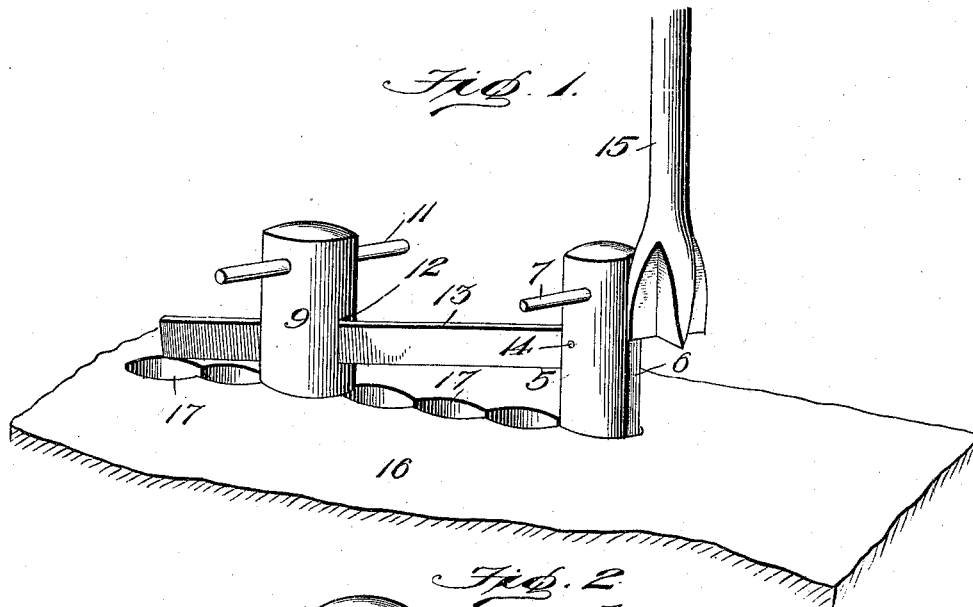
No. 647,133.

Patented Apr. 10, 1900.

T. L. EMERY.  
GUIDE FOR CHANNELING MACHINES.

(Application filed Jan. 5, 1900.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

THOMAS L. EMERY, OF HOLLOWELL, MAINE.

## GUIDE FOR CHANNELING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 647,133, dated April 10, 1900.

Application filed January 5, 1900. Serial No. 454. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS L. EMERY, a citizen of the United States, residing at Hollowell, in the county of Kennebec and State of Maine, have invented a new and useful Guide for Stone-Channeling Machines, of which the following is a specification.

My invention relates to a drill-guide for power-driven stone-channeling machines; and the primary object is to provide improved means by which the drill may be operated in a manner to wholly obviate the formation of a core in the rock between the parallel holes formed by the drill.

A further object is to provide the drill-guide with means which holds the same in place against rotation with the drill, which guide-holding means is shiftable with the guide itself to advance the entire appliance successively from one hole to the other as the work of channeling the rock progresses.

With these ends in view my invention consists of a drill-guide disconnected from the drill or any part of the stone-channeling machine and insertible in the last of a series of holes formed in a stone or rock by a drill, said guide having a flattened face against which the drill is adapted to rotate and travel, whereby the opening formed by the drill will intersect with the opening in which the drill-guide is inserted.

The invention further consists in means connected with the guide to restrain the latter from rotation with the drill, said restraining means being shiftable with the guide.

The invention finally consists in the novel construction and arrangement of parts, which will be hereinafter fully described and claimed.

In the drawings, Figure 1 is a perspective view showing my improved guide fitted in the channel of a rock and illustrating the boring tool or bit in the act of being lowered into position for operation on the rock. Fig. 2 is a detail perspective view of the improved guide. Fig. 3 is a horizontal sectional view through the guide-post and the steadying-block, showing the steadying-bar in plan and connected pivotally with the guide-post.

The same numerals of reference are used to indicate like and corresponding parts in each of the several figures of the drawings.

The guide of my invention essentially comprises a post 5, having a flattened face 6, together with means for restraining said post from rotation with the channeling drill or bit. This post is cylindrical in form and of a diameter which enables the same to be inserted loosely in the last hole of the series formed by the channeling-machine. The face 6 is a chord bisecting the circular outline of the post, and it is essential that the post shall be held in position against rotation in order that the chord or face 6 shall lie in the plane in which it is desired to form the channel in the rock or stone by boring the series of holes therein. To facilitate the adjustment of the post from one hole to another of the channel during the progression thereof, the post is provided with a suitable handle 7, and this post is furthermore provided in the side opposite to the chord or face 6 with a mortise 8, the latter being located, preferably, near the upper end of the post.

As one means for restraining the post against rotation owing to the frictional engagement of the rotary drill with the chord or face 6, I employ a stop-block and a steadying-bar, which parts are shiftable with the guide-post. This stop-block 9 is provided at a point intermediate of its length with an annular shoulder 10, the same adapted to limit the movement of the block when its lower portion is fitted in one of the holes of the channel. This block is also provided with a handle 11 and with a transverse slot 12. The steadying-bar 13 serves to operatively connect the post and the block of the guide, one end of said bar being fitted in the mortise 8 of the post in a manner to receive a pivotal pin 14, which passes transversely through the post and the end portion of the bar inserted in the slot thereof. This bar passes loosely through the slot 12 in the stop-block, and the bar thus spans the space between the post and the block for the purpose of holding said post against rotation.

The drill 15 forms a part of an ordinary stone-channeling machine by which said drill is rotated and advanced longitudinally. The drill is designed to work against the chord or face 6 of my improved guide, and by this arrangement of the parts an important object of my invention is attained—namely, the

channel is formed in the rock without the presence of a core or web between the adjacent holes produced by the drill. This is due to the fact that the chord or face 6 of the guide-  
 5 post enables the drill to operate in producing a hole in the stone, which hole intersects with the hole previously formed in the drill and which is occupied by the post.

In order to more clearly explain the operation of the guide, I have shown the same applied to a rock or stone 16 by Fig. 1, a part of the channel in this rock or stone being produced by the series of intersecting holes 17. In operation the post is fitted in the hole last  
 15 formed by the drill for its chord or face 6 to lie toward the line in which the series of holes are to be drilled to produce the channel, while the block 9 is fitted in an adjacent hole 17 of the series, so that the bar 13 connects the  
 20 post and the block. The drill 15 is positioned to contact the face or chord 6 of the post, and as the drill is rotated and advanced it produces a hole in the rock which intersects with the previously-formed hole occupied by the post. As one hole is completed  
 25 the drill is withdrawn and the entire guide is shifted, so as to advance the post into the next hole, and in thus adjusting the guide the handles 7 and 11 provide convenient means  
 30 by which the post and the block may be lifted out of the holes and placed in the proper holes in advance of those previously occupied by said parts.

Any suitable style of handles may be substituted for the transverse pins 7 and 11 in the post and the block, respectively.

The important feature of my invention is a guide separate from a rock-channeling machine and the drill thereof, said guide having a straight face against which the drill is  
 40 adapted to operate and being shiftable at will on the progression of the work.

Another important feature of this invention is the provision of means which restrains the guide-post from rotation, owing to the  
 45 frictional engagement of the drill therewith.

Changes within the scope of the appended claims may be made in the form and proportion of some of the parts, while their essential features are retained and the spirit of  
 50 the invention is embodied. Hence I do not desire to be limited to the precise form of all the parts as shown, reserving the right to vary therefrom.

Having thus described the invention, what  
 55 I claim is—

1. A guide for the drill of a stone-channeling machine comprising a post having a grooved guide-face, a steadying-block, and an intermediate connection between the block  
 60 and the post, said connection being joined to the post at a point remote from the guide-groove thereof, said connected block and post being wholly independent of the channeling-machine and also shiftable into different openings of a channel, substantially as and for  
 65 the purposes set forth.

2. A guide for channeling-machines comprising a post having a flattened face, a bar pivoted to the post, and a slotted block fitted  
 70 on said bar, the entire guide being disassociated from a channeling-tool and shiftable at will, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in  
 75 the presence of two witnesses.

THOMAS L. EMERY.

Witnesses:

NELSON S. BEANE,  
 F. B. WOOD.