W. JÄRVIÖ.

AUTOMATIC CHALK LINE HOLDER.

APPLICATION FILED SEPT. 15, 1917.

1,272,270. Patented July 9, 1918.

Fig. 1.

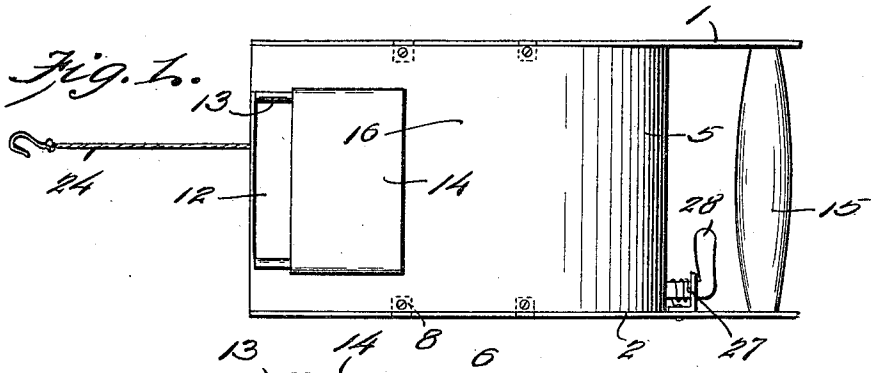


Fig. 2.

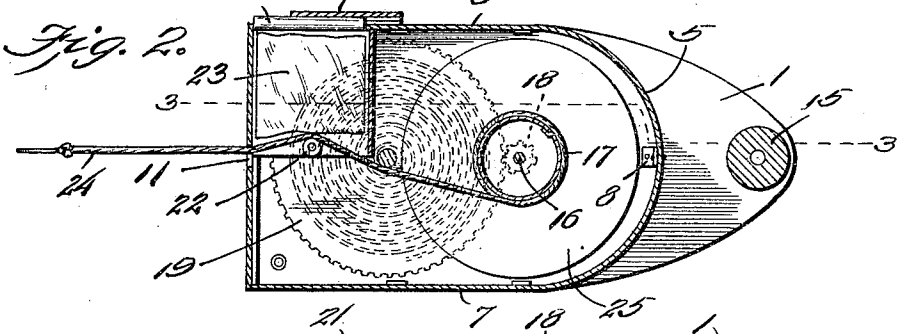


Fig. 3.

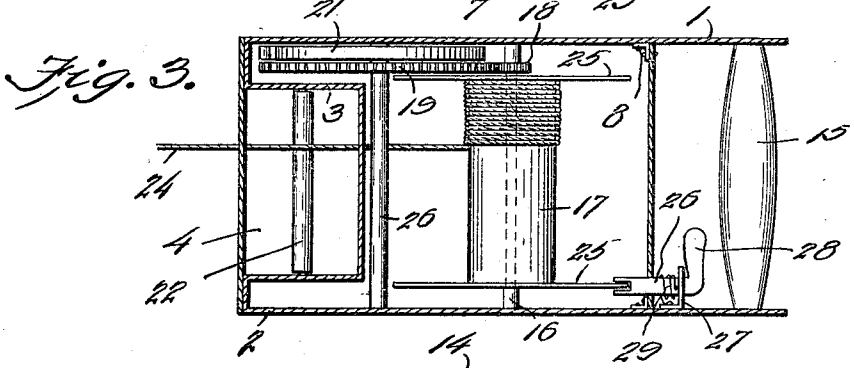
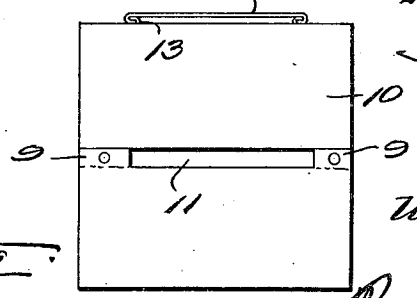


Fig. 4.



WITNESSES

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AUTOMATIC CHALK-LINE HOLDER.

1,272,270. Specification of Letters Patent. Patented July 9, 1918.

Application filed September 15, 1917. Serial No. 191,567.

To all whom it may concern:

Be it known that I, WILLIAM JÄRVIÖ, a citizen of Finland, residing at West Quincy, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Automatic Chalk-Line Holders, of which the following is a specification.

My invention relates to chalk line holders and is particularly adapted to be used to mark lines upon the ground, various materials and the like.

An object of my invention is to provide a device of the above mentioned character having its parts so arranged, so as to keep the line thoroughly coated with chalk at all times.

Another object of my invention is to provide a device of the above mentioned character, including means whereby the line may be automatically rewound into the holder.

A further object of my invention is to provide a device of the above mentioned character including means whereby the line may be prevented from rewinding, when it is being used to chalk a line.

A still further object is to provide a device of the above mentioned character which is simple in construction, strong, durable and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of the description and wherein like numerals are employed to designate like parts throughout the same,

Figure 1 is a top plan view of the device,

Fig. 2 is a side vertical sectional view of the invention,

Fig. 3 is a sectional top plan view of the device taken on the line 3—3, and

Fig. 4 is an end view of the device.

My improved chalk line holder includes a casing comprising spaced sides 1 and 2 which are connected at their forward ends by a strip 3. This strip 3 is integral with the upper half of the forward end of each side and is bent inwardly between said sides to provide the side and rear walls of a chalk chamber 4. The curved rear wall 5, the top wall 6, and the bottom wall 7 of the casing are all formed from a single strip bent as clearly shown in Fig. 2, and secured to the sides 1 and 2 by means of angled fastening cleats 8. The forward end of each of the walls 6 and 7 is adapted to be bent at right angles into engagement with the strip 3 and secured together in overlapping relation as at 9, to provide the front wall 10 of the casing. This front wall 10 is provided with a slot 11 which communicates with the chalk chamber 4. Directly above the chalk chamber 4, the top of the casing is provided with an opening 12 through which the chalk is introduced into the chamber. The opposite lateral margins of this opening are turned back to provide guide flanges 13 which receive the flanged ends of a sliding cover 14 as more clearly shown in Fig. 4.

The rear ends of the sides 1 and 2 are extended beyond the rear wall 5 and reduced as shown, and secured between these reduced ends is a handle 15.

Rotatably mounted in the rear part of the casing is a shaft 16 on which is supported the line carrying reel 17. Secured to one end of this shaft is a small pinion 18 which meshes with a larger pinion 19, the larger pinion being carried by a shaft 20 positioned in proximity to the chalk chamber 4. Secured to the shaft 20 and the pinion 19 in the usual manner is a coiled winding spring 21 which is adapted to be placed under tension as the line is unwound from the reel and when the line is released automatically rewinds the same upon the reel.

The numeral 22 indicates a roller which has its opposite ends rotatably mounted in the side walls of the chamber 4 adjacent the lower edge thereof, and serves as a support for the chalk 23 and to keep the string 24 in close engagement with the chalk. This line has one end secured to the reel 17 and the other end free and provided with a hook. The reel 17 is provided upon each end with guards 25 to prevent the line from running off. In order that the reel may be held against rotation, I provide a stop 26 adjacent the handle 15, which is adapted to coact with the guard 25, and is held in position by the angle bracket 27. A handle 28 is provided upon one end of the stop, and the opposite end is bifurcated to receive the periphery of the guard 25. A coil spring 29 secured to the angle bracket, coiled around the stop, and then secured thereto, to keep the bifurcated end in normal position and to allow the rotation of the reel 17.

In use the hooked end of the line is attached to an object and the chalk line holder is grasped by the handle 15 and pulled away

from the object. As is more clearly shown in Fig. 2, the line will unwind from the reel 17, pass under the shaft 20, between the chalk 23 and the roller 22, where it becomes thoroughly coated with chalk; then out through the opening 11. It will be noticed that as the reel 17 unwinds, the coil spring 21 is put under tension, and when the line is released the spring rotates the reel and rewinds the line. The reel 17 may be prevented from rotation by means of turning the stop 26 and causing the bifurcated portion thereof to bear against the guard 25.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. A chalk line holder including a casing having an opening arranged in the top thereof, a chalk chamber positioned below said opening, a roller arranged below said chamber, and a line carrying reel arranged in said casing.

2. A chalk line holder comprising a casing, a chalk chamber positioned therein, a line carrying reel mounted in said casing, guards mounted on said reel, a brake for said reel comprising a rotatable member having one end slotted to receive the peripheral edge of one of said guards, and an operating handle formed on the opposite end of said rotatable member.

3. A chalk line holder comprising a casing, a chalk chamber positioned therein, a roller supported beneath said chamber, a reel positioned in said casing, a chalk line wound upon said reel and having its free end trained over said roller, and spring rewinding mechanism operatively connected with said reel.

4. A chalk line holder comprising a casing, a chalk line mounted therein, guards mounted on said reel, and a rotatable brake member mounted in said casing and provided with a slotted end to receive the peripheral edge of one of said guard members.

5. A chalk line holder comprising a casing having an opening in the top thereof, said opening having opposite edges thereof turned back to provide guides, a closure slidably engaged with said guides, a chalk chamber positioned below said opening, a roller journaled in said chalk chamber, a reel positioned in said casing, and a line wound upon said reel, said line having the free end thereof trained over said roller.

6. A chalk line holder including a casing comprising top, bottom, side and end walls, a strip connecting the forward ends of said side walls and bent to provide a chalk chamber therebetween, a roller journaled in said chamber, and a chalk line carrying reel rotatably mounted in said casing, the free end of said line being extended over said roller and out through the forward end of the casing.

7. A chalk line holder, including a casing, comprising a top wall having an opening formed therein, a front wall having a slot formed therein, a chalk chamber positioned above said slot and below said opening, a roller journaled in said chamber, a reel positioned in said casing, and a line wound upon said reel and having its free end trained over said roller and extended out through said slot.

8. A chalk line holder, comprising a casing, including top, bottom, side and end walls, said side walls having their rear ends extended beyond the end wall of the casing and reduced, a handle secured between said reduced portion, and a chalk line carrying reel positioned in said casing.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM JÄRVIÖ.

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