

No. 628,744.

Patented July 11, 1899.

W. R. BLEVINS.
FAN ATTACHMENT.

(Application filed Mar. 24, 1899.)

(No Model.)

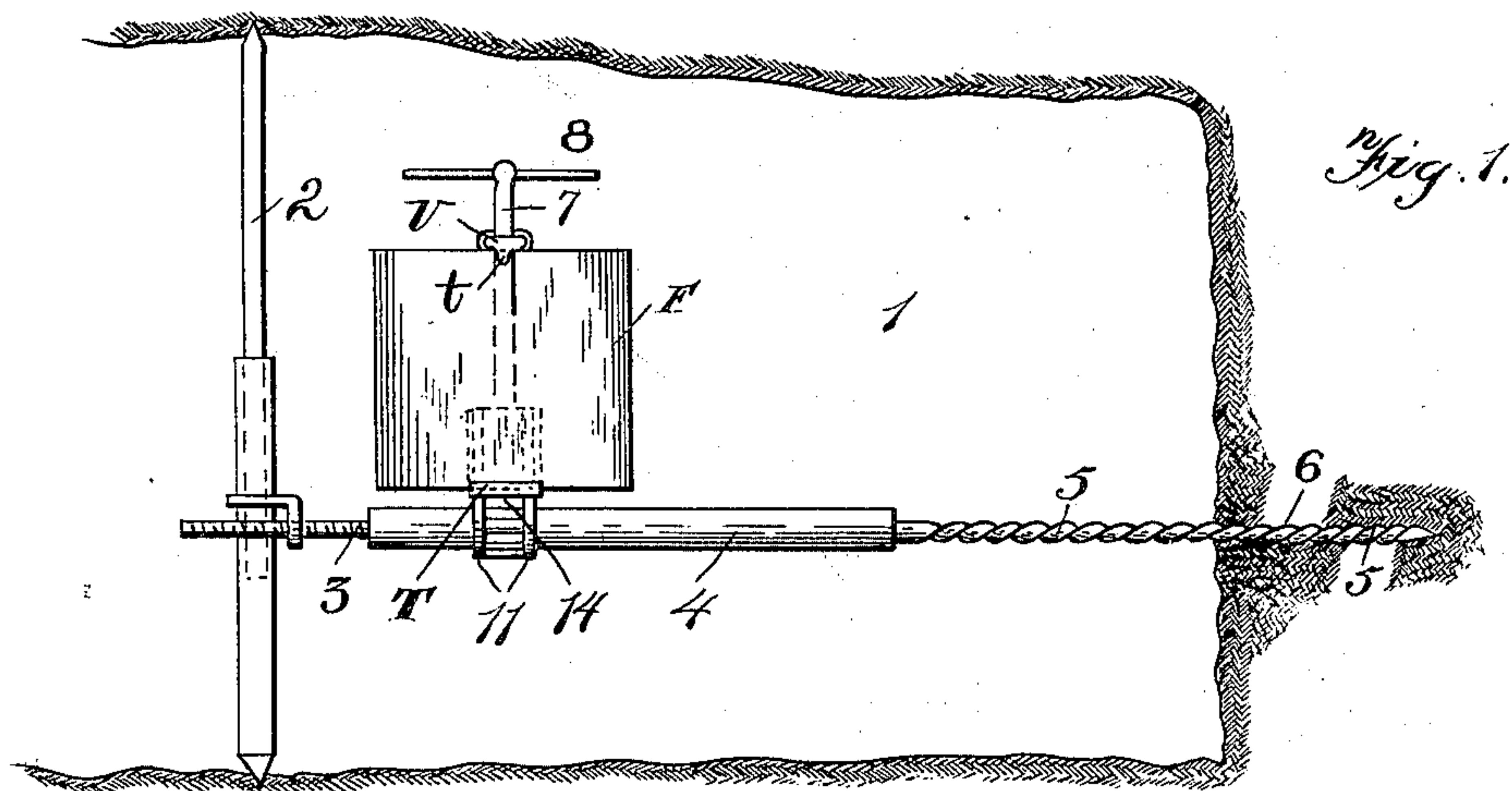


Fig. 2.

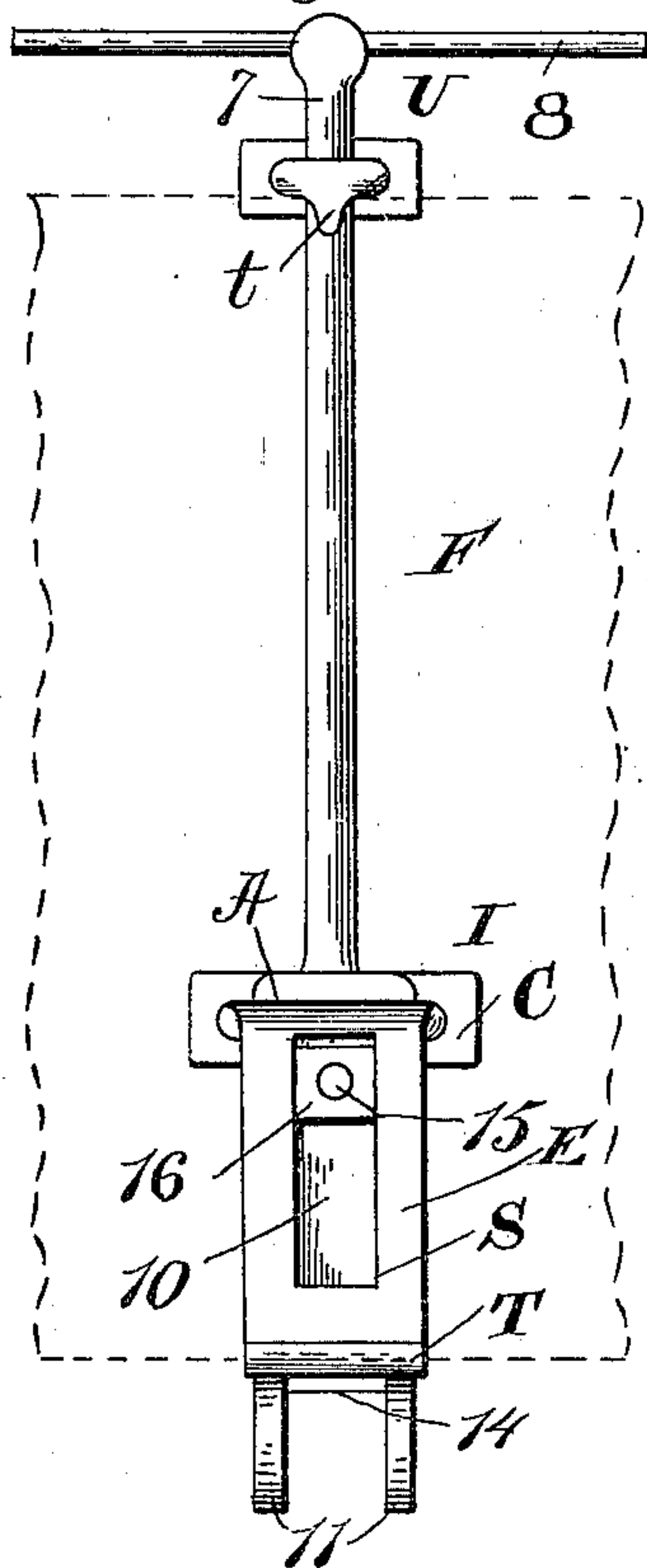


Fig. 3.

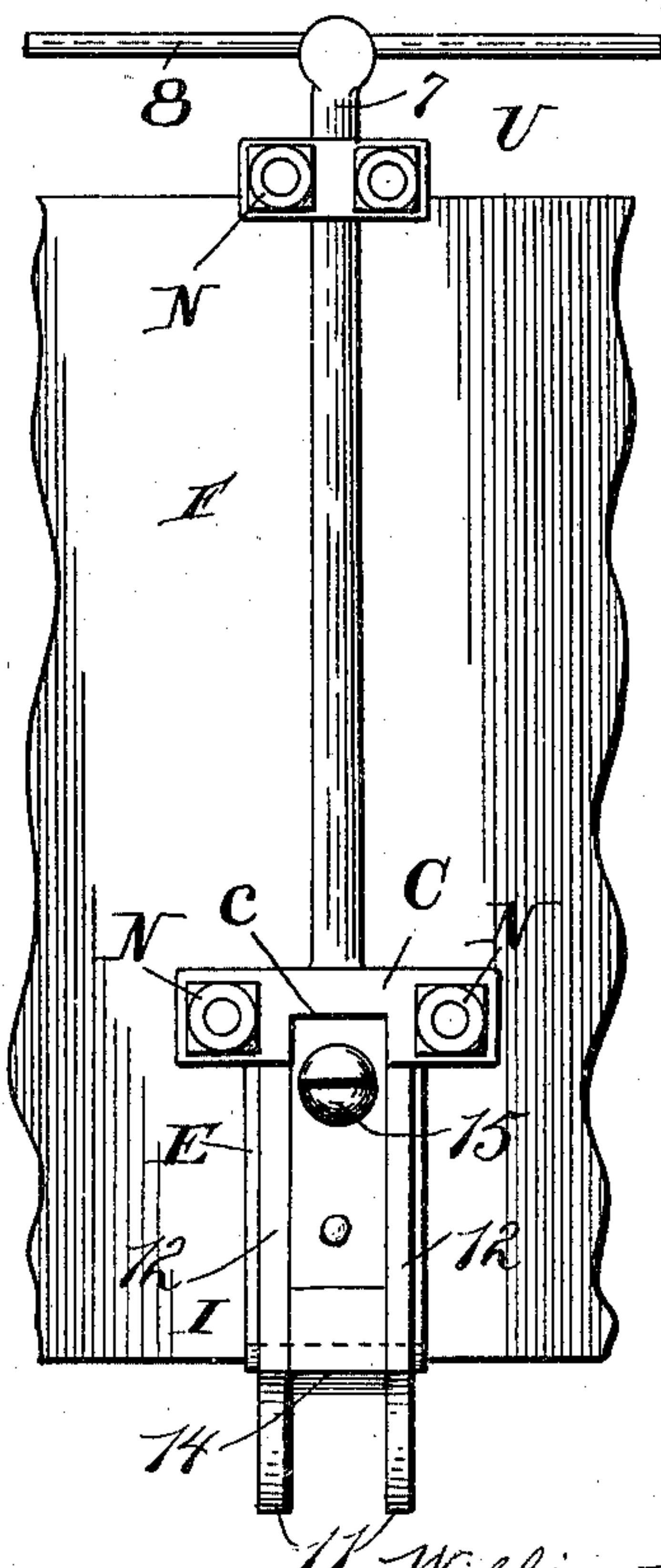
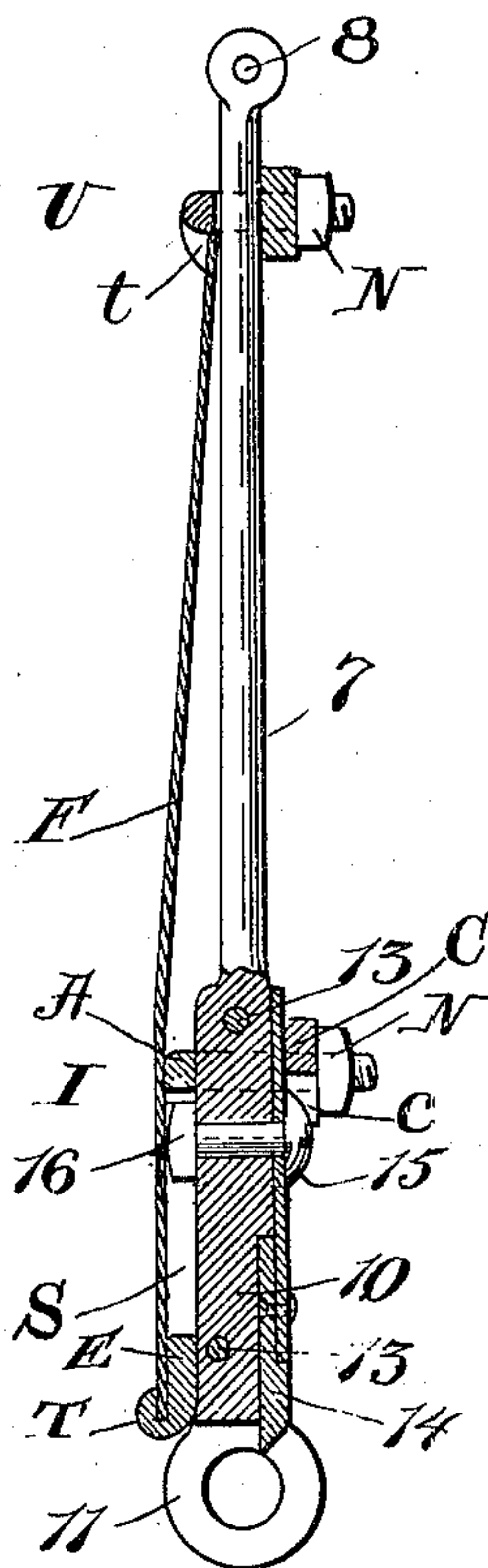


Fig. 4.



Witnesses:
Geo. E. Frick,
J. H. Jackson Jr.,

William R. Blevins, Inventor,
by Collamer & Co.,

Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM RICHARD BLEVINS, OF CARDIFF, TENNESSEE.

FAN ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 628,744, dated July 11, 1899.

Application filed March 24, 1899. Serial No. 710,342. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM RICHARD BLEVINS, a citizen of the United States, and a resident of Cardiff, Roane county, State of Tennessee, have invented certain new and useful Improvements in Fan Attachments; and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying the novelty.

This invention relates to ventilating devices such as are employed in mines for the purpose of dissipating smoke and gases, and more especially to fans when so used; and the object of the same is to produce an improved attachment by which the fan-blade can be removably and adjustably secured to the lever of the ordinary ratchet-drill now in common use or to any other swinging arm or member located within the shaft or other chamber where said smoke and gases are likely to arise and accumulate.

To this end the present invention consists in peculiarly-constructed clip members about as described below and shown in the accompanying drawings, in which—

Figure 1 is a side elevation of an ordinary ratchet-drill set up for use and my fan and attachments applied thereto. Fig. 2 is a front elevation of the drill-lever and attachments, the fan-blade being shown in dotted outline. Fig. 3 is a rear elevation of the same, and Fig. 4 a central vertical section with the blade in full lines.

In the drawings I have shown my improved attachments as connecting a fan-blade to the swinging lever of an ordinary ratchet-drill, and the attachments are proportioned and shaped with this object in view; but it will be clear that the blade could be as easily secured by my attachments (especially if proportioned and shaped as necessary) to any rod or lever located where ventilation by means of the act of fanning was desired so long as said rod or lever had the requisite motion to give the blade a fanning movement. Hence, although so specifically described below, I do not desire to be limited to the use of my fan attachments exactly as herein set forth.

Referring to the drawings, 1 is a mine-shaft, wherein is here shown as set up a stand 2,

supporting the feed-screw 3 of a drill. 4 is the ratchet-barrel, 5 the drill-point, and 6 the hole being formed. 7 is the swinging lever carrying the pawl for turning the ratchet, and 8 is a cross-bar or handpiece at the outer end of this lever, which bar the operator grasps as he stands at one side of the entire machine and by which he reciprocates the lever to work the drill, all as well known and forming no part of the present invention. In this view is shown the fan-blade F to illustrate its relative position and proportion, and it will be clear that as the lever is moved back and forth the fan will dissipate the smoke, gases, and odors within the shaft 1 at a point most remote from fresh air and where ventilation is most seriously needed for the comfort and safety of the operator.

Referring to Figs. 2, 3, and 4 I will now describe the attachments employed to connect the fan-blade F with the lever 7 as used herein. Said lever in these views is shown as enlarged and squared near its inner end, as at 10, provided with two eyes 11, whose shanks 12 are bolted, as at 13, to two opposite sides thereof and as having between said shanks, at one side, a spring-pawl 14, held in place by a bolt 15, whose nut 16 is seen in Fig. 3. With this construction of lever the attachments are shaped as follows: U is the upper or outer member, which is, in effect, a clip, whose body is of U shape, surrounding the lever 7 and whose arms pass through the usual clip-plate and are threaded to receive nuts N. In the bend of the U is formed at one side a small tongue t, standing over and in line with the lever 7 and extending toward its inner end. I is the lower or inner member, which is, in effect, another clip shaped to engage the squared portion of the lever 7. It has substantially the same body and arms, the latter threaded to receive the nuts N, as usual; but the clip-plate C is necessarily longer and here, preferably, has a notch c, in which the head of the bolt 15 may stand; but said body I after embracing the lever is here bent at an angle at A into an extension E, which passes inward and lies against the edges of the eye-shanks 12 and the flat face of the lever 7 opposite the pawl 14, and which extension is slotted, as at S, for the reception of the nut 16 of the bolt 15. At its innermost end this

extension is turned upward and backward over itself, thus forming a comparatively wide or laterally-elongated tongue T, opposing said other and smaller tongue t, described
 5 above. By this construction the distance between the two tongues is rendered as great as possible, and a quite large fan-blade F can evidently be locked in place by engaging its opposite edges beneath these tongues. The inner member I strengthens the inner end of
 10 the lever and may even take the place of one bolt 13, yet it can be adjusted when necessary by loosening nuts N, as is clear. Its notch c and slot S permit this member to be
 15 applied to levers of this type of considerable variety as to size and shape; but the outer member U, being smaller and more easily adjusted, is the one ordinarily employed for removably attaching and detaching the blade F.
 20 The operation is obvious. As the user reciprocates the lever 7 to sink the drill the blade F is moved to and fro at a point within the mine-shaft where ventilation is most desired and where gases are usually most dense.
 25 I do not limit myself to the sizes, shapes, proportions, and materials of parts, save as necessary to make up an operative whole.

What is claimed as new is—

1. The combination with a moving lever
 30 forming part of a mining-machine or the like; of a fan-blade, and an attaching device therefor comprising two members each having a body adjustably secured to said lever and a tongue projecting toward the other member
 35 and embracing the edge of said blade, as and for the purpose set forth.

2. The combination with a moving lever forming part of a mining-machine or the like; of a fan-blade, and an attaching device there-
 40 for comprising two members each having a clip-shaped body whose plate and nuts stand at one side of said lever and an integral tongue carried by said body at the opposite side of the lever and projecting toward the other
 45 member, said tongues embracing the edges of the blade, as and for the purpose set forth.

3. The combination with a moving lever forming part of a mining-machine or the like; of a fan-blade, and an attaching device there-

for comprising two members each having a
 50 body secured to said lever by devices on side of the latter and a tongue at the opposite side of the lever projecting toward the other member, one of said tongues being elongated on a transverse line, as and for the purpose set
 55 forth.

4. The combination with a moving lever forming part of a mining-machine or the like; of a fan-blade, and an attaching device there-
 60 for comprising an inwardly-projecting tongue near the outer end of the lever, a clip adjustably mounted on such lever, an integral extension on the clip-body projecting away from said tongue, and at the inner end of the ex-
 65 tension a transversely-elongated tongue opposing that first mentioned, all as and for the purpose set forth.

5. The combination with a ratchet-drill lever having a squared inner end with side
 70 eyes, a spring-pawl, and an attaching-bolt therefor passing through said squared end at right angles to the axis of the eyes; of a clip surrounding the lever and having an extension lying against the edges of the shanks of
 75 said eyes and slotted for the nut of said attaching-bolt, a tongue at the inner end of such extension, a second tongue on the lever near its outer end, and a fan-blade held be-
 80 tween the tongues, as and for the purpose set forth.

6. The combination with a ratchet-drill lever having a squared inner end, a spring-
 85 pawl, and an attaching-bolt therefor passing through said squared end; of a clip surrounding the lever and having an extension slotted for the nut of said attaching-bolt, a tongue at the inner end of such extension, the clip-plate notched for the head of said bolt, a second
 90 tongue on the lever near its outer end, and a fan-blade held between the tongues, as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my signature this the 19th day of March, A. D. 1899.

WILLIAM RICHARD BLEVINS.

Witnesses:

W. H. RUSSELL,

JAS. ISHAM.