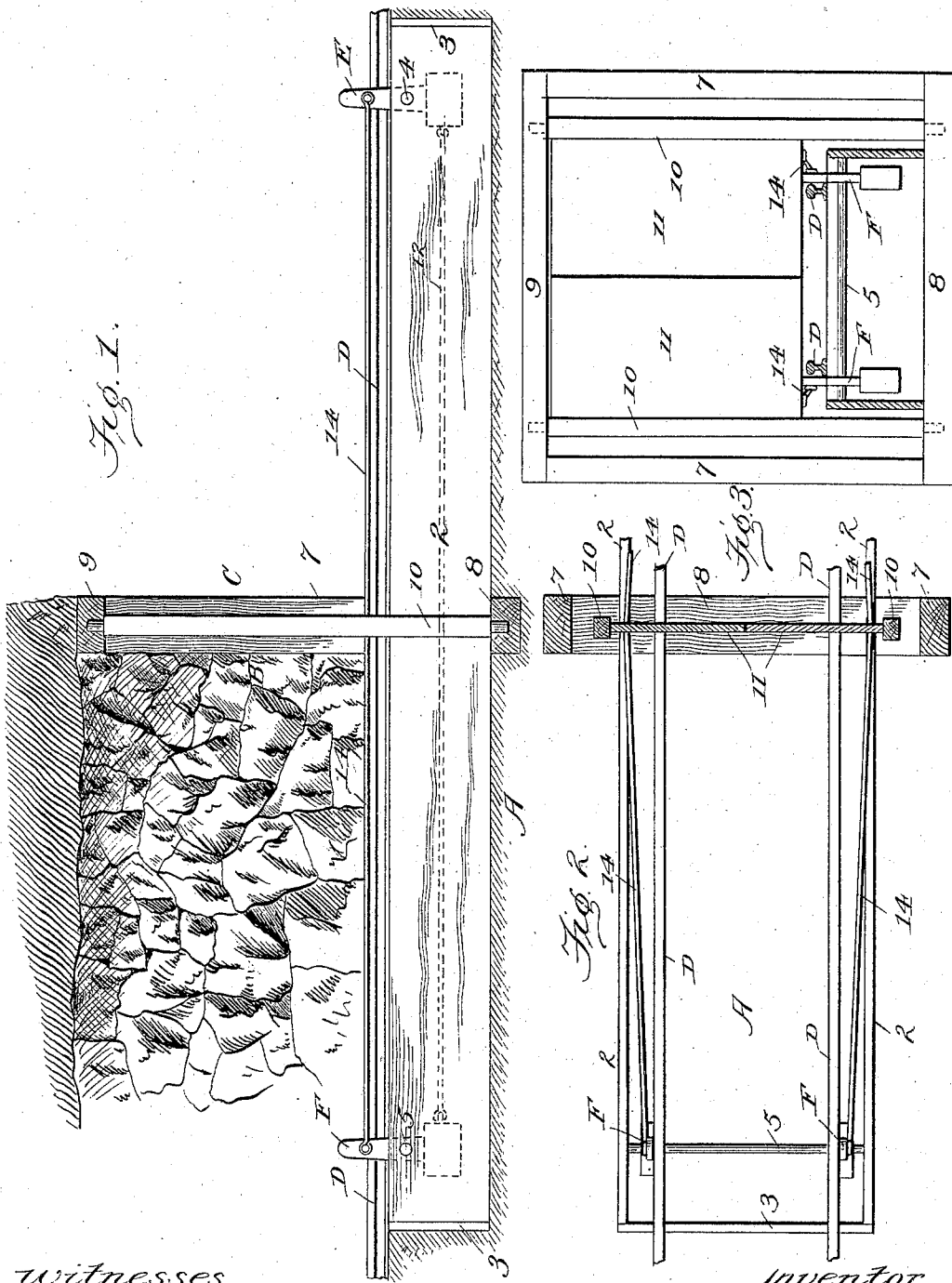


(No Model.)

G. G. LEWIS.
GATE.

No. 576,460.

Patented Feb. 2, 1897.



witnesses
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UNITED STATES PATENT OFFICE.

GEORGE G. LEWIS, OF ATHENS, OHIO.

GATE.

SPECIFICATION forming part of Letters Patent No. 576,460, dated February 2, 1897.

Application filed November 5, 1896. Serial No. 611,148. (No model.)

To all whom it may concern:

Be it known that I, GEORGE G. LEWIS, of Athens, in the county of Athens and State of Ohio, have invented an Improved Gate, of which the following is a specification.

The present invention relates to gates and means for automatically opening and closing the same. The gates are to be used expressly for mining purposes and are intended for use in mines where it is necessary to keep an entry of a mine closed for purpose of ventilation or for any other suitable purpose, and by acting automatically the necessity to keep a man stationed at the gate is obviated.

With these objects in view the invention consists of the details of arrangement and combination which more fully appear hereinafter.

In the accompanying drawings, which form a part of this application, Figure 1 is a side elevation of my improved gate. Fig. 2 is a top plan view; and Fig. 3 is a front elevation, partly in section.

Like numerals and letters of reference indicate corresponding parts in the several drawings.

Referring to the drawings, A designates a rectangular-shaped casing composed of parallel sides 2 and end pieces 3, upon which are journaled the shafts 4 and 5.

B designates the mouth of the mine, within which the above-mentioned rectangular-shaped casing is situated. The said casing is so placed that about one-half thereof projects out of the mine and one-half inside.

C represents the framework, situated at the mouth of the mine and is composed of side uprights 7, bottom 8, and top pieces 9.

Although I have mentioned the mouth of the mine as being the place where my device is situated, I would have it understood that the device may be used inside of the mine for shutting off the branch entries from the main entry, or may be used in any other suitable place.

D designates the rails upon which the car runs.

Shafts 10 are journaled at the top and bottom in the sill 8 and the top piece 9, and have rigidly attached thereto the gates 11.

Levers E and F are keyed to the shafts 4 and 5, respectively, and are pivotally con-

nected at the bottom by the connecting-rods 12. The said levers E and F are situated on each side of the rails, and their upper ends project upward, for a purpose which will be represented hereinafter. Connecting-rods 14 are pivoted at each end to the upper ends of the said levers and are connected about midway to the bottom of the gate 11 or at any desired point between the top and bottom by means of the most suitable device for making the connection.

The operation of the above will be readily understood from the above description in conjunction with the following description of the operation.

The wheels of the car running upon the rails D strike the upper ends of the first or outer pair of levers, which in this case are the levers E, thus pressing the said levers forward, which action operates the connecting-rods 14, which are attached to the gate. The said gates are then thrown forward, allowing the car to pass, and as soon as the car clears the inner pair of levers F the gates fly back into their former position.

In the above description I describe my invention as being used in mines, but I would like to have it understood that by modifying the above principles of my invention it can be utilized for farm-gates and other suitable purposes.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In the herein-described gate for use in mines, the combination with a casing, shafts journaled therein, rails, levers keyed to said shafts and situated on each side of the said rails, connecting-rod 12, connecting the bottom of the said levers, a casing situated in the mine, upright shafts journaled in said casing, gates secured to said shafts, connecting-rods 14 connecting the upper ends of the said levers and the gate, substantially as set forth.

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

GEORGE G. LEWIS.

Witnesses:

W. B. LAWRENCE,
BELLE M. ROSE.