F. A. SMITH.

Scuttle-Elevator.

No. 161,641. Patented April 6, 1875.

Fig 1

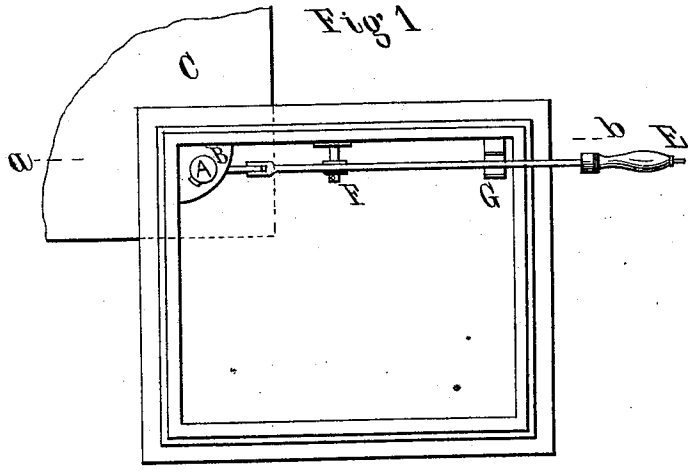


Fig 2

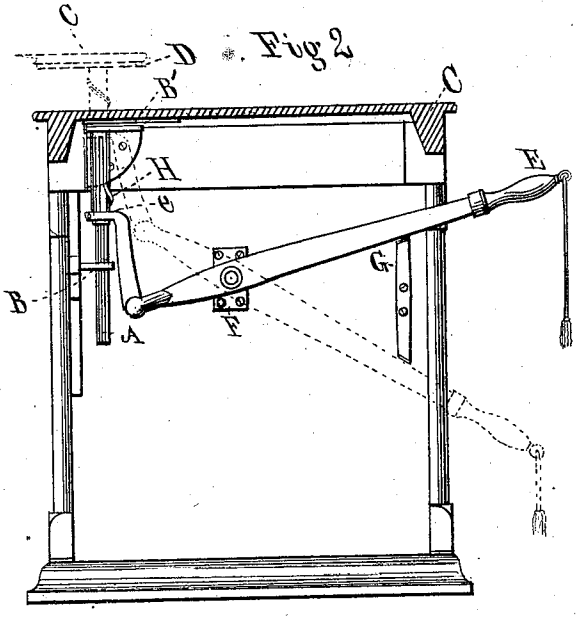
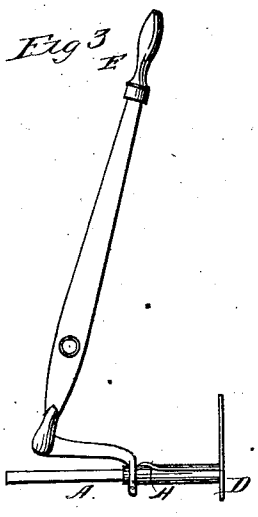


Fig 3



Witnesses

O. E. Hamamark

Henry Shoemaker

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UNITED STATES PATENT OFFICE.

FERDINAND A. SMITH, OF PORTLAND, OREGON.

IMPROVEMENT IN SCUTTLE-ELEVATORS.

Specification forming part of Letters Patent No. **161,641**, dated April 6, 1875; application filed August 21, 1874.

To all whom it may concern:

Be it known that I, FERDINAND A. SMITH, of Portland, Multnomah county, Oregon, have invented a Scuttle, Skylight, and Trap-Door Elevator, of which the following is a specification:

The object of my invention is to provide a mechanism for lifting and replacing scuttle-covers, skylights, trap-doors, and gates with convenience.

The accompanying drawing illustrates its application to a scuttle-cover.

Figure 1 is a plan of the apparatus with the cover lifted, a portion of which is shown at C. Fig. 2 is a section of the scuttle and cover through *a b*, with an elevation of the apparatus. Fig. 3 illustrates the post A and hand-lever E.

The post A is held in position by the brackets B and B′, which are fastened to the side of the scuttle. The scuttle-cover is solidly fixed to the post A by means of the disk D. The hand-lever E is pivoted to the side of the scuttle at F, and is connected with the post A by means of the collar *e*, which is bored of sufficient size to allow the post to revolve within it. The lever is locked in position by the double spring-catch G when the cover is either open or closed. The post A is provided with a feather, H, which is fitted to, and operates in, a slotted way cut vertically through the bracket B′.

The feather extends parallel to the post a sufficient distance from the top to allow the cover in lifting to clear its seat. At this point the spiral portion of the feather comes in contact with the slotted way in the bracket B′, and swings the cover to the position shown at C, Fig. 1.

When the cover is lifted the hand-lever and other movable portions of the mechanism will have a position as indicated by dotted lines in Fig. 2.

It will be evident that my invention can be equally well applied to skylights, trap-doors, and gates, with, in some cases, a change in the form of the outer end of the lever E for convenience.

I claim as my invention—

The combination of the feathered post A, the brackets B and B′, and the lever E, substantially as and for the purpose herein described.

FERDINAND AUGUSTUS SMITH.

Witnesses:

O. E. FARNSWORTH,

HENRY SHOEMAKER.