(No Model.) 2 Sheets—Sheet 1.

A. STAMM.

SCUTTLE LOCK AND OPENER.

No. 443,804. Patented Dec. 30, 1890.

Fig. 1.

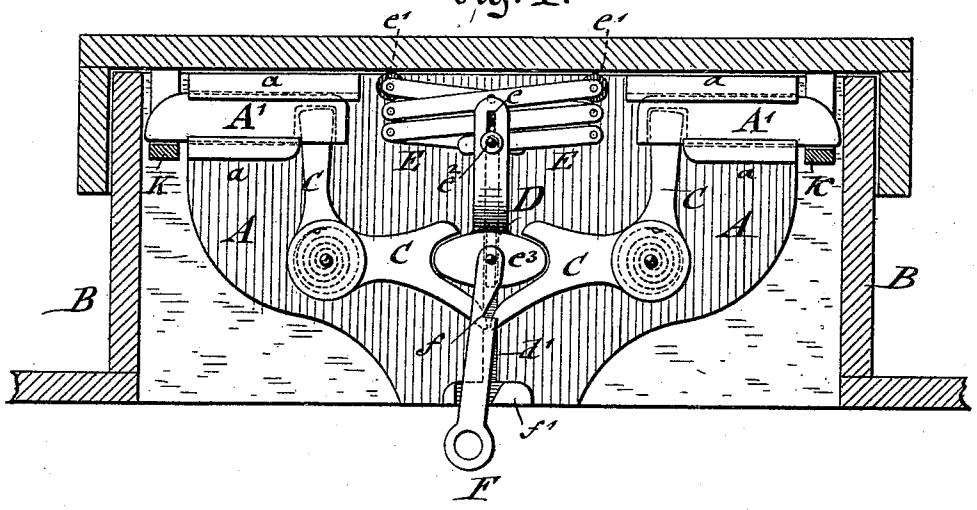
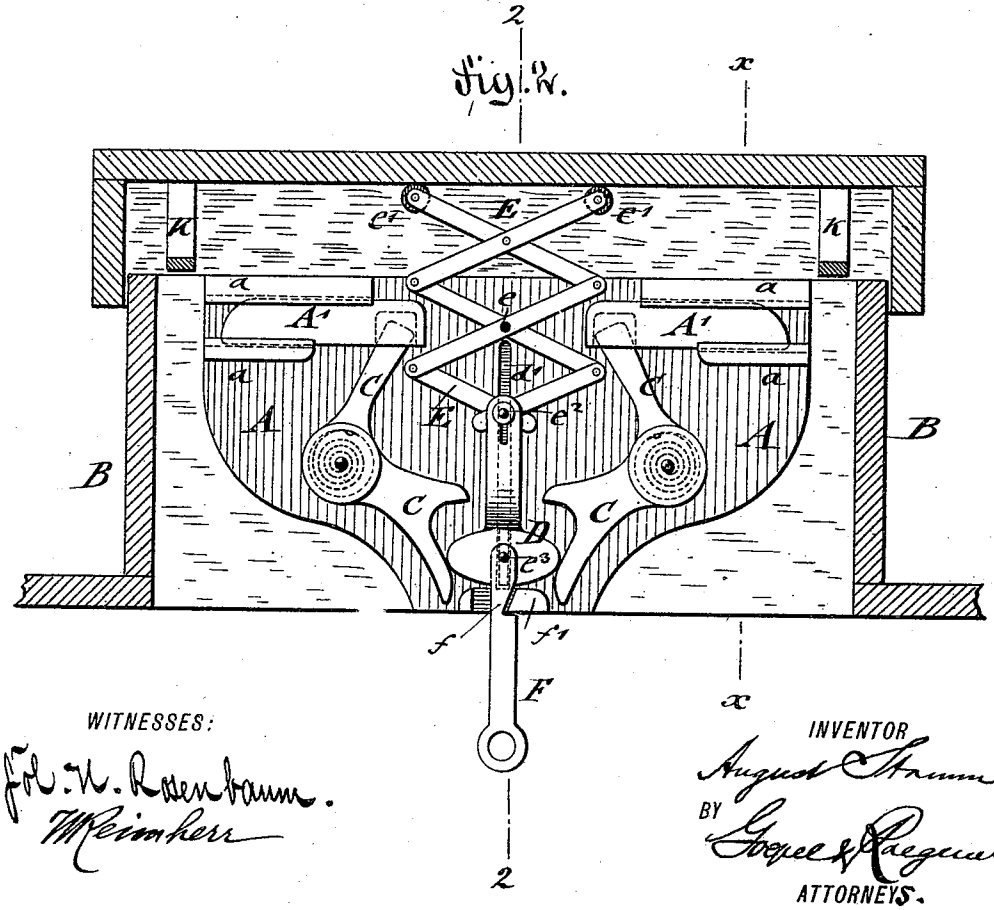


Fig. 2.



WITNESSES:

F. W. Rosenbaum.

M. Reinhart

INVENTOR

August Stamm

BY

Goepel & Raegener

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

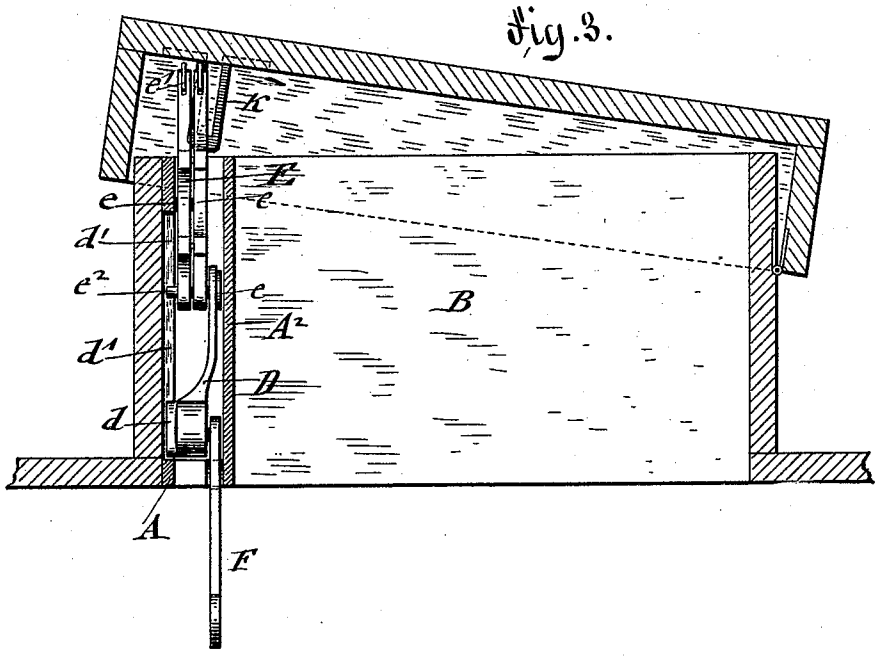


Fig. 5.

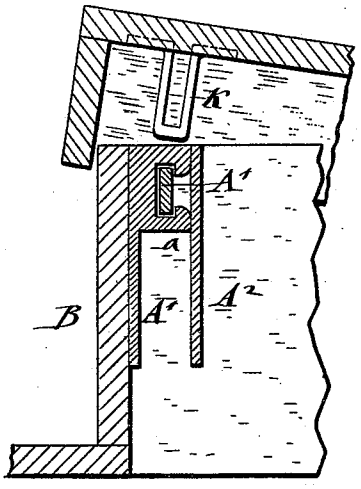
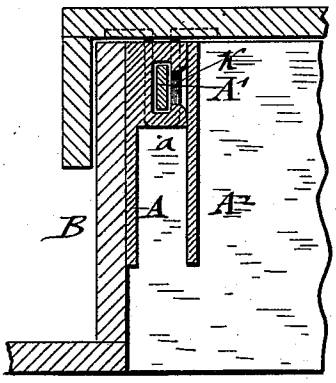


Fig. 4.



WITNESSES:

F. W. Rosenbaum.

M. Reinhart

INVENTOR

August Stamm

BY Goepel & Weisgerber

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

AUGUST STAMM, OF NEW YORK, N. Y.

SCUTTLE LOCK AND OPENER.

SPECIFICATION forming part of Letters Patent No. 443,804, dated December 30, 1890.

Application filed June 26, 1890. Serial No. 356,778. (No model.)

To all whom it may concern:

Be it known that I, AUGUST STAMM, of the city, county, and State of New York, a citizen of the Empire of Germany, have invented certain new and useful Improvements in Scuttle Locks and Openers, of which the following is a specification.

This invention relates to an improved scuttle lock and opener of that class in which simultaneously with the withdrawing of the locking-bolts of the scuttle a lifting device is operated by which the scuttle is partly raised, so as to be readily opened when it is desired to get onto the roof of the building.

The invention consists of a scuttle lock and opener which comprises two slide-bolts that are guided in ways or keepers of a plate attached to the side wall of the scuttle-opening, said bolts engaging keepers of the scuttle-door and being operated by means of fulcrumed and spring-actuated bell-crank levers, the upper ends of which engage the bolts, while the lower forked ends are engaged by the head of a T-shaped slide-piece, which is guided in a vertical slot of the supporting-plate of the lock. The sliding T-piece is pivoted to the lower end of the lazy-tongs, which latter are fulcrumed to the supporting-plate, the connecting-pivot of the T-piece and lower end of the lazy-tongs being also guided in the central slot of the supporting-plate. The upper ends of the lazy-tongs press on the scuttle and lift the same when the slide-bolts are withdrawn. A second downwardly-extending rod pivoted to the T-piece serves for opening the lock, said rod being locked by a catch at the lower end of the supporting-plate, so that on releasing said rod from the catch the springs of the bell-crank lever produce the folding up of the lazy-tongs and the throwing of the slide-bolts into the keepers of the scuttle, so as to lock the latter, until by the downward motion of the operating-rod the bolts are withdrawn and the scuttle opened by the tilting action of the lazy-tongs.

In the accompanying drawings, Figure 1 represents a side elevation of my improved scuttle lock and opener, showing the scuttle in locked position. Fig. 2 is a side elevation of the same, showing the scuttle in open position. Fig. 3 is a vertical transverse section on the line 2 2, Fig. 2; and Figs. 4 and 5 are detail vertical transverse sections on line x x, Fig. 2, showing the connection of the slide-bolts with the keepers of the scuttle.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the supporting-plate of my improved scuttle lock and opener, which plate is made of suitable cast metal and attached to the side wall of the scuttle-casing B below that end of the scuttle to which the keepers K are applied. The supporting-plate A is provided at its upper end with parallel dovetail ways a a, which are preferably cast integral with the plate A, and which serve to guide two dovetailed slide-bolts A′ A′, the rear ends of which are recessed, so as to be engaged by the upper ends of the bell-crank levers C, which are fulcrumed to the supporting-plate A. To the fulcra of these bell-crank levers C are attached the inner ends of spirally-coiled springs, the outer ends of which are applied to the lower arms of the bell-crank levers C, as shown in dotted lines in Figs. 1 and 2, said spring exerting a pressure on the levers C, so as to throw the bolts into the keepers of the scuttle. The lower arms of the bell-crank levers C are recessed and engaged by the head of a sliding T-piece D, which is guided by a stud d in a vertical center slot d' of the supporting-plate A. The slotted upper end of the T-piece D is pivoted to the lower end of the lazy-tongs E, the middle part of which is fulcrumed at e' to the supporting-plate A, while the upper ends are provided with anti-friction rollers e', that press against the under side of the scuttle. The connecting pivot-pin e^3 at the lower end of the lazy-tongs E is also guided in the slot d', so as to impart a steady motion to the lazy-tongs E. A handle-rod F is pivoted to the T-piece D at e^3 and provided with a notch f, that is engaged by a notch f', cast integral with the plate A at the lower end of the same. All the operating parts of the lock and opener are inclosed by a covering-plate A^2, so as to protect them against tampering. The plate A^2 is removed in Figs. 1 and 2 for exhibiting the parts below. When the actuating-rod F is pulled down till its notch f is engaged by the catch f', the bell-crank levers are operated by the T-piece, and thereby the slide-bolts B with-

drawn from the keepers K of the scuttle. Simultaneously the lazy-tongs E are extended and thereby the scuttle lifted, so that it can be readily swung on its hinges into open position. The lifting action of the lazy-tongs takes place immediately after the bolts are withdrawn from the keepers of the scuttle, so that the lifting of the scuttle takes place almost simultaneously therewith, whereby the opening of the scuttle is greatly facilitated. For locking the scuttle the actuating-rod F is released from the catch *f*, upon which by the action of the coiled springs of the bell-crank levers the lazy-tongs are folded up, the scuttle dropped, and the slide-bolts thrown into the keepers of the scuttle, whereby the same is firmly and rigidly locked.

The connection of the bell-crank levers with the slide-bolts B and with the T-piece D is made without any pivot-connections, so that all the parts may be cast and directly connected, by which the expense of the scuttle-lock is considerably reduced. The scuttle lock and opener can thereby be produced at comparatively small expense, and can be readily applied to any scuttle-opening, it forming a convenient and reliably operating, locking, and opening device for the scuttle.

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

The combination of a supporting-plate having ways at the upper end, slide-bolts guided in said ways, fulcrumed and spring-actuated bell-crank levers engaging the inner ends of said bolts, a vertically-guided T-piece engaging the recessed lower ends of the bell-crank levers, lazy-tongs fulcrumed to the supporting-plate and connected with said T-piece, an actuating-rod connected with the T-piece, and means for locking or releasing said rod, whereby the bolts are withdrawn and the lazy-tongs extended for lifting the scuttle or the scuttle locked, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

AUGUST STAMM.

Witnesses:
W. REIMHERR,
PAUL GOEPEL.