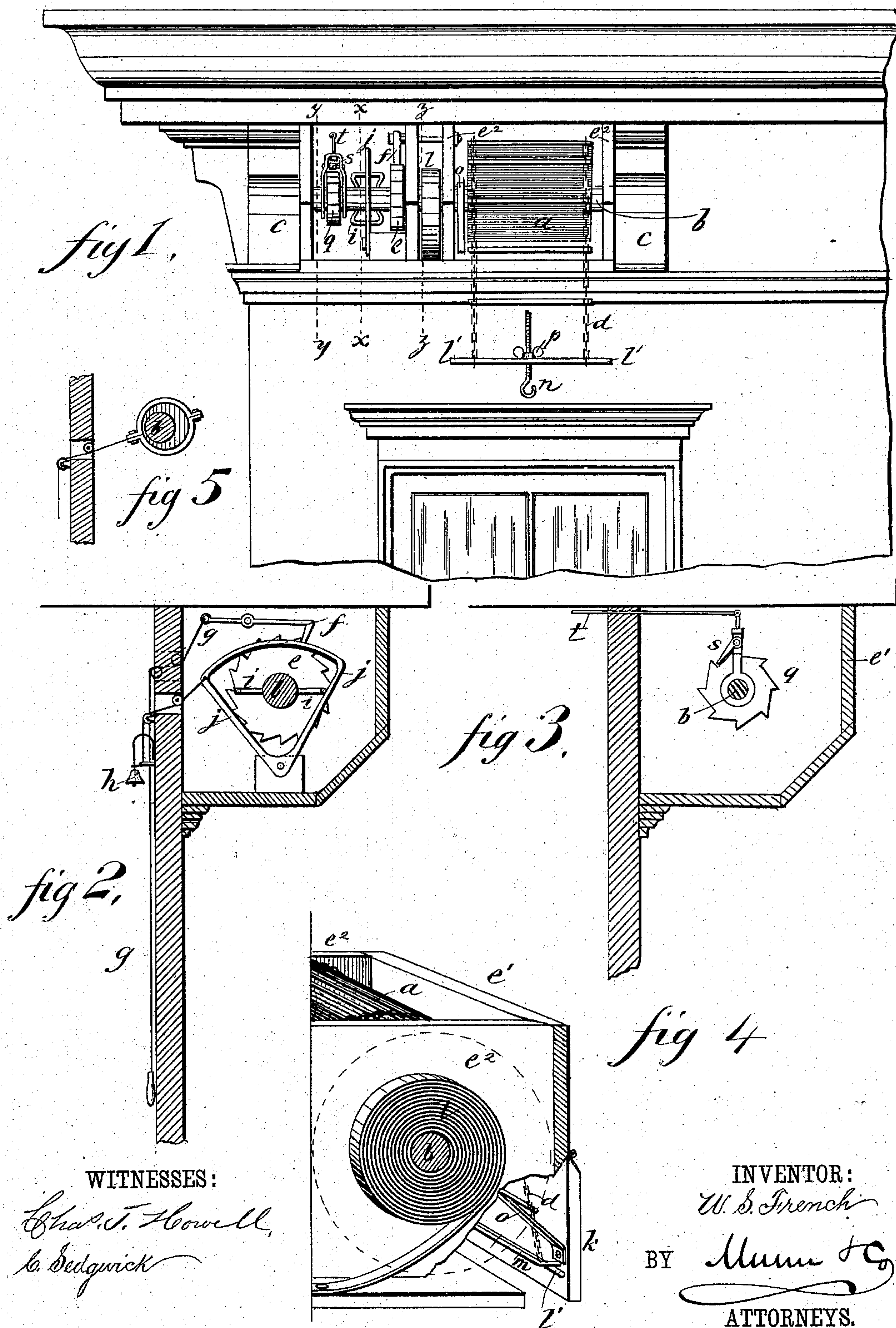


(No Model.)

W. S. FRENCH.
FIRE ESCAPE AND ALARM.

No. 291,326.

Patented Jan. 1, 1884.



WITNESSES:

Chas. T. Howell,
C. Sedgwick

INVENTOR:

W. S. French

BY

Mum & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM S. FRENCH, OF JACKSON, MICHIGAN.

FIRE-ESCAPE AND ALARM.

SPECIFICATION forming part of Letters Patent No. 291,326, dated January 1, 1884.

Application filed March 26, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. FRENCH, of Jackson, in the county of Jackson and State of Michigan, have invented a new and Improved Combined Fire-Escape and Alarm, of which the following is a full, clear, and exact description.

The object of the invention is to combine a fire-escape and alarm, as hereinafter described, and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of a portion of a building, showing my improved fire-escape, the front of the inclosing-case being removed. Fig. 2 is a section of the apparatus on line *xx*, Fig. 1. Fig. 3 is a section on line *yy*, Fig. 1. Fig. 4 is a section on line *zz*, Fig. 1, a part being broken away; and Fig. 5 is a modification of the bell-alarm.

I propose to arrange a drum or reel, *a*, on a shaft, *b*, in bearings in the cornice-brackets *c*, or any approved supports suitably for winding up a chain or other approved ladder, *d*, to be stored in a case, *e*', protecting it from the weather and concealing it from view until wanted for use, the drum being held by a ratchet-wheel, *e*, and pawl *f*, and the pawl having cords or wires *g* extending from it through the different rooms to be pulled from any one at any time by any person who may discover a fire. The drum is also to be made to sound an alarm-bell, *h*, while the ladder is running down, by means of tappets *i* and a yoke, *j*. The drum is to be provided with a clock-spring, *l*, or equivalent device, to set it in rotation. When the pawl *f* is disconnected and a friction-brake, *o*, will be provided to control the speed of the drum in letting down the ladder, which may consist of a friction-band of steel arranged to bear on the face of a pulley on the shaft, and having one end connected with the door *k*, employed to close the opening at the lower part of the inclosing-case *e*' and between the partitions *e*², through which the

ladder descends to be brought into action by the door when it opens, said door being arranged to drop open when the drum begins to turn, it being held shut by the lower rung, *l'*, of the ladder, and a long staple, *m*, on the door, through which the ladder runs for the purpose of automatically closing and opening the door. The said lower rung of the ladder is provided with a hook, *n*, that is to be hooked into an eye-stud fixed in the pavement for the purpose to steady the ladder when tightened up by the screw-shank and nut *p*. The shaft of the drum may be provided with another ratchet-wheel, *q*, for winding up the ladder by a pawl, *s*, and cord *t*, the cord extending through the wall into the building for the purpose.

It is to be understood that the ladder is to drop in front of a window, where it can be reached in the most ready manner. It will be seen that an attachment of this kind will instantly afford good and safe means of escape from any floor and any part of the building, the ladder being placed in front of hall-windows. It may be constructed with but little expense, and will not be unsightly on a building.

I propose in practice to employ an eccentric, as shown in Fig. 5, or a crank or other equivalent device on the drum-shaft, instead of the tappets *i* and yoke *j*, whenever it may be preferred to do so.

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

The combination, with the spring-drum *a*, carrying a flexible fire-escape ladder, tappets *i*, and ratchet-wheel *e*, of the pawl-lever *f*, provided with the pull-cord *g*, the pivoted yoke *j*, and a bell, *h*, connected by a cord, wire, or chain with the yoke, whereby on pulling the pawl-cord the drum will open out the escape-ladder and ring the alarm, as described.

WILLIAM S. FRENCH.

Witnesses:

C. M. JENKS,

WM. HARVEY POTTS.