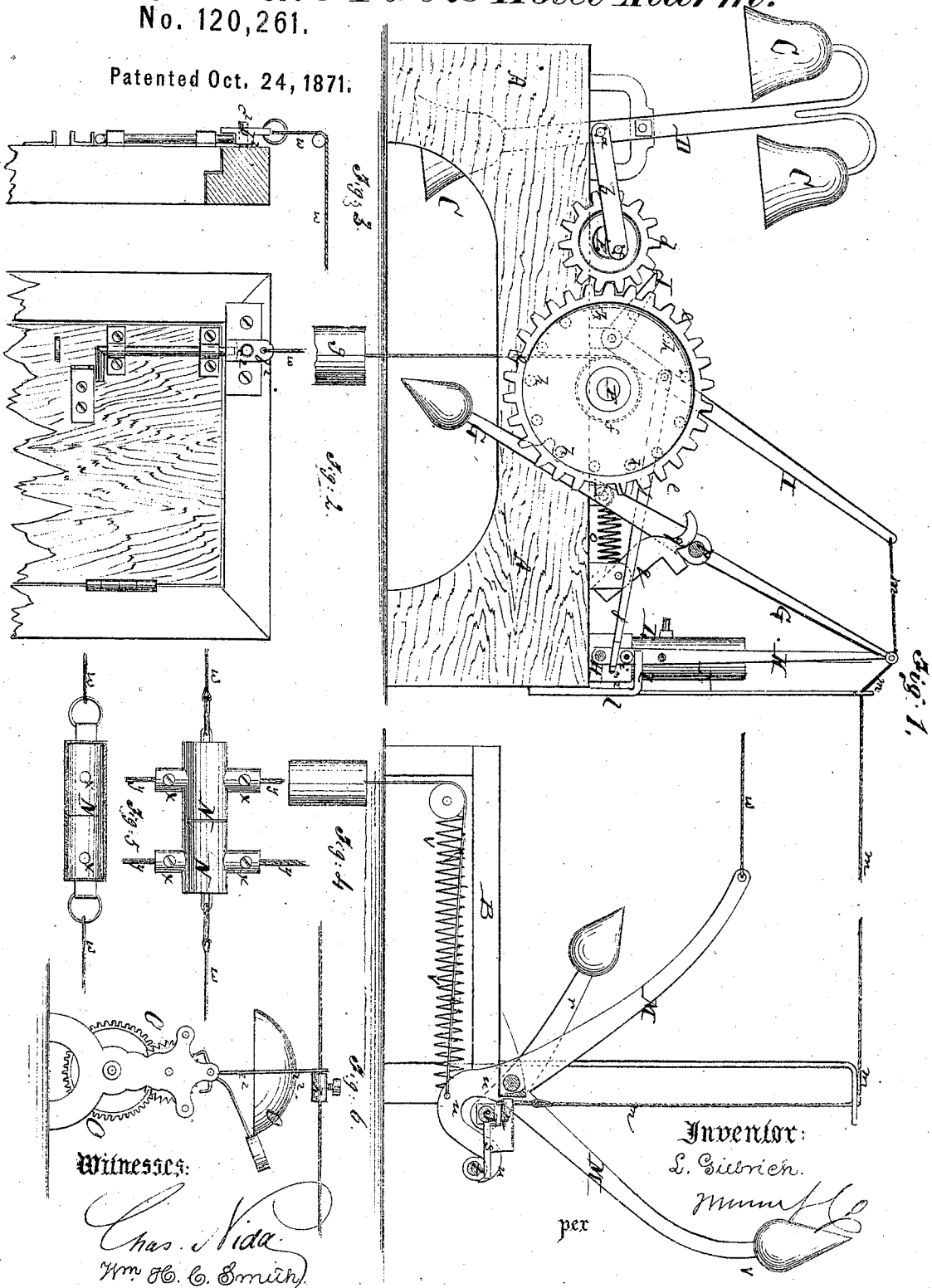


L. Ciebrich's Fire & Hotel Alarm.
No. 120,261.

2 Sheets--Sheet 1.

Patented Oct. 24, 1871.



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L. Giebrick's Fire & Hotel Alarm.

No. 120,261.

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Fig. 7.

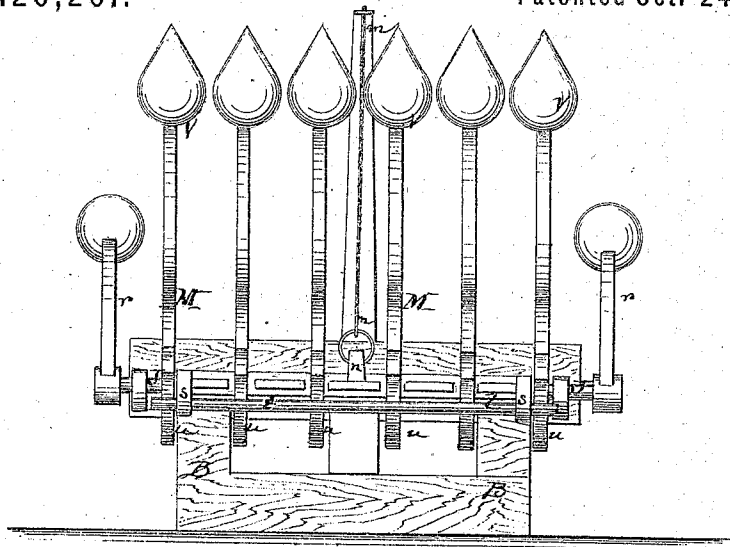


Fig. 9.

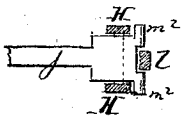
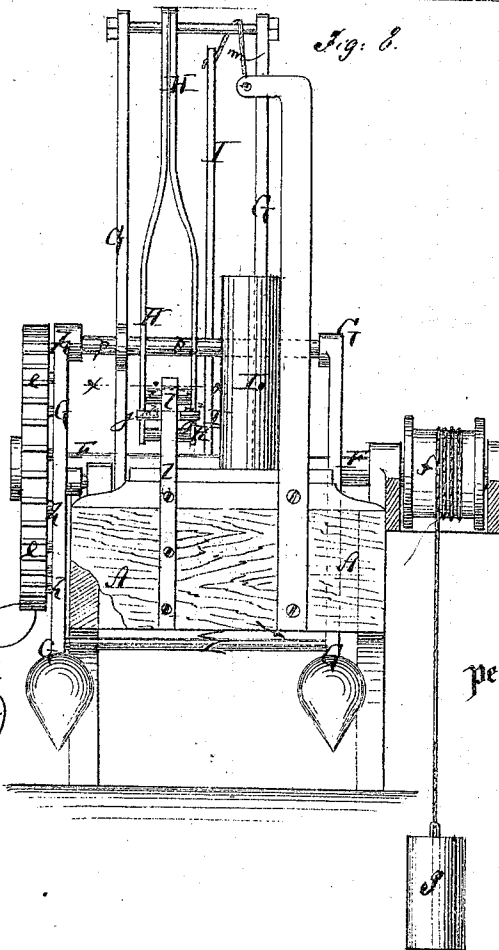


Fig. 8.



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UNITED STATES PATENT OFFICE.

LOUIS GIEBRICH, OF OTTUMWA, IOWA.

IMPROVEMENT IN COMBINED BURGLAR AND FIRE-ALARMS.

Specification forming part of Letters Patent No. 120,261, dated October 24, 1871; antedated October 13, 1871.

To all whom it may concern:

Be it known that I, LOUIS GIEBRICH, of Ottumwa, in the county of Wapello and State of Iowa, have invented a new and Improved Fire and Hotel-Alarm; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 represents a side elevation, partly in section, of my improved alarm. Fig. 2 is a detail face view of the burglar-alarm attachment. Fig. 3 is a detail transverse section of the same. Fig. 4 is a detail side view of the fuse-holders. Fig. 5 is a longitudinal section of the same. Fig. 6 is a side elevation of the interior alarm. Fig. 7 is an end elevation of the alarm-discharging apparatus. Fig. 8 is an end elevation of the alarm-setting apparatus. Fig. 9 is a detail horizontal section of the setting-lever taken on the line *x x*, Fig. 8.

Similar letters of reference indicate corresponding parts.

This invention relates to a new apparatus for sounding an alarm in case fire breaks out in any part of a building within which it is set up. The apparatus may also be connected with a burglar-alarm, if desired. The invention consists in a new arrangement of alarm-setting; also, in a novel alarm-discharging apparatus, as well as in further combinations and novel arrangements of parts, as hereinafter more fully described.

In the drawing, A represents the frame of the alarm-setting apparatus. B is the frame of the alarm-discharging apparatus. These frames can be wholly or in part dispensed with if the several devices are secured to the ceilings or walls of the building in which the alarm is set up. The outer alarm—that is to say, the one to be heard in the street—consists of a series of bells, C C, of greater or less size, suspended from a pivoted frame, D, whose cross-arm *a* is, by rods *b b*, connected with crank-pins *c c* of a shaft, E. This shaft carries a pinion, *d*, meshing into the teeth of a gear-wheel, *e*, which is mounted upon another shaft, F. The shaft F carries a drum, *f*, and weight *g*, which can be wound up, and which in unwinding, if the shaft is not otherwise held, rotates the same and E, thereby causing the frame D to vibrate and the bells C to be sounded. The unwinding of the

shaft F is prevented by a lever, G, which enters between pins *h h* that project from the wheel *e*. From the upper end of the lever G is suspended a forked lever, H, carrying a transverse roller, *i*. The forked lever straddles a T-rod, *j*, which projects from a bell-crank, I, when the lever G is set inclined, so that the roller *i* of H fits under a fixed hook, *l*, as indicated in Fig. 1, while the lever H, catching against projecting hooks *m² m²* of the rod *j*, as in Fig. 9, will also hold the bell-crank inclined as the apparatus is set; but as there are powerful springs connected with the levers G and I, they will be speedily withdrawn from said position by such springs if the cord *m*, attached to the upper end of I, is not held tense. This cord is, with one end, secured to a hook, *n*, of a rock-shaft, J, which hangs in the discharging apparatus. Whenever the cord *m* is slackened the levers G and I will be carried out of their inclined positions by their respective springs in such manner that the lever G will be withdrawn from between the pins *h* and the shaft F released to swing the bells C. A cross-bar, *p*, of the lever G may also be utilized for holding a hammer, *q*, away from a barrel, L, which is loaded with powder, so that when the cord *m* is slackened the said hammer will be released and forced by a spring, *o*, against the nipple of said barrel to explode the charge within the same. The rock-shaft J holds its hook *n* up by weighted cranks *r r*. It is, by arms *s s*, connected with a horizontal rod, *t*, over which hooks *u*, that project from elbow-levers M M, are fitted. The levers M are connected each with a powerful spring or weight, *v*. The upper arm of each lever M is connected with a cord, *w*, which is stretched. When the cord *w* is separated the lever M is brought under the influence of the spring V in such manner that it will fall back, and catching over the rod *t* will swing the shaft J, so as to withdraw the hook *n* from the cord *m* and thereby set the alarm in action, as above set forth. The cords *w w* from the several levers M M are stretched within the several rooms of the building, and each cord *w* carries a fuse-holder, N, shown in Fig. 4. This is a metal cylinder, made in two parts, surrounding the cord, secured to the ends of and held together by strings passing through cross-tubes *x x* that project from the cylinders. Powder is through these cross-tubes brought into the fuse-holder N. Fuses lead also

to the holder. Whenever in any part of the building fire breaks out the nearest fuse will be speedily ignited, and will rapidly burn toward the case N, where it reaches the powder, causing the same to explode and to separate the parts of the cylinder, and also the cord *w*, releasing one of the levers M, which swings the shaft J to disengage the cord *m*, swing the lever G, rotate the shaft F, vibrate the bells C, and also discharge the cannon L. Thorough alarm is thus immediately sounded. A knot, *z*, on one or each cord, *w*, may also be applied to hold back a projecting arm, *a*², from a clock-alarm, O, shown in Fig. 6, so that when the cord *w* is separated, as aforesaid, the alarm O will be set free to be sounded by the power of its spring. The fuses *y* may be utilized to ignite lamps, with which they are connected, so as to strike light at night. The device may easily be converted into a burglar-alarm by connecting the cords *w*, or some of them, with blocks *b*², which are fitted upon pins *c*² on door-cases, as in Fig. 2, in such manner that when the doors are opened they will push the blocks *b*² off the pins *c*² and thereby discharge the cords *w*, releasing the levers M and sounding the alarm, as stated.

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

1. The bells C C, pivoted frame D, and shaft F, combined as described, and for the purpose specified.

2. The combination of the pins *h h* on the wheel *e* with the levers G, H, and I, all arranged to operate substantially as herein shown and described.

3. The T-head rod *j*, combined with the bell-crank I, forked lever H, lever G, hook *l*, and cord *m*, all arranged substantially as herein specified.

4. The barrel L and hammer *q*, combined with the alarm-setting apparatus G H I, substantially as herein shown and described.

5. The cord *m*, secured with one end to the lever I, and with the other to the hook *n* of the rock-shaft J to operate the alarm whenever said rock-shaft is turned, as set forth.

6. The levers M M, combined with the cords *w*, springs *v*, rod *t*, and rock-shaft J, to constitute the alarm-discharging apparatus, as specified.

7. The alarm O, arm *a*², and knob *z*, combined with a cord, *w*, operated by the levers M M and rock-shaft J, in the manner specified.

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(24)