

No. 631,032.

Patented Aug. 15, 1899.

M. VESTER.

ELECTRIC ALARM AND REGISTERING OR CONTROLLING APPARATUS.

(Application filed Oct. 29, 1897.)

(No Model.)

2 Sheets—Sheet 1.

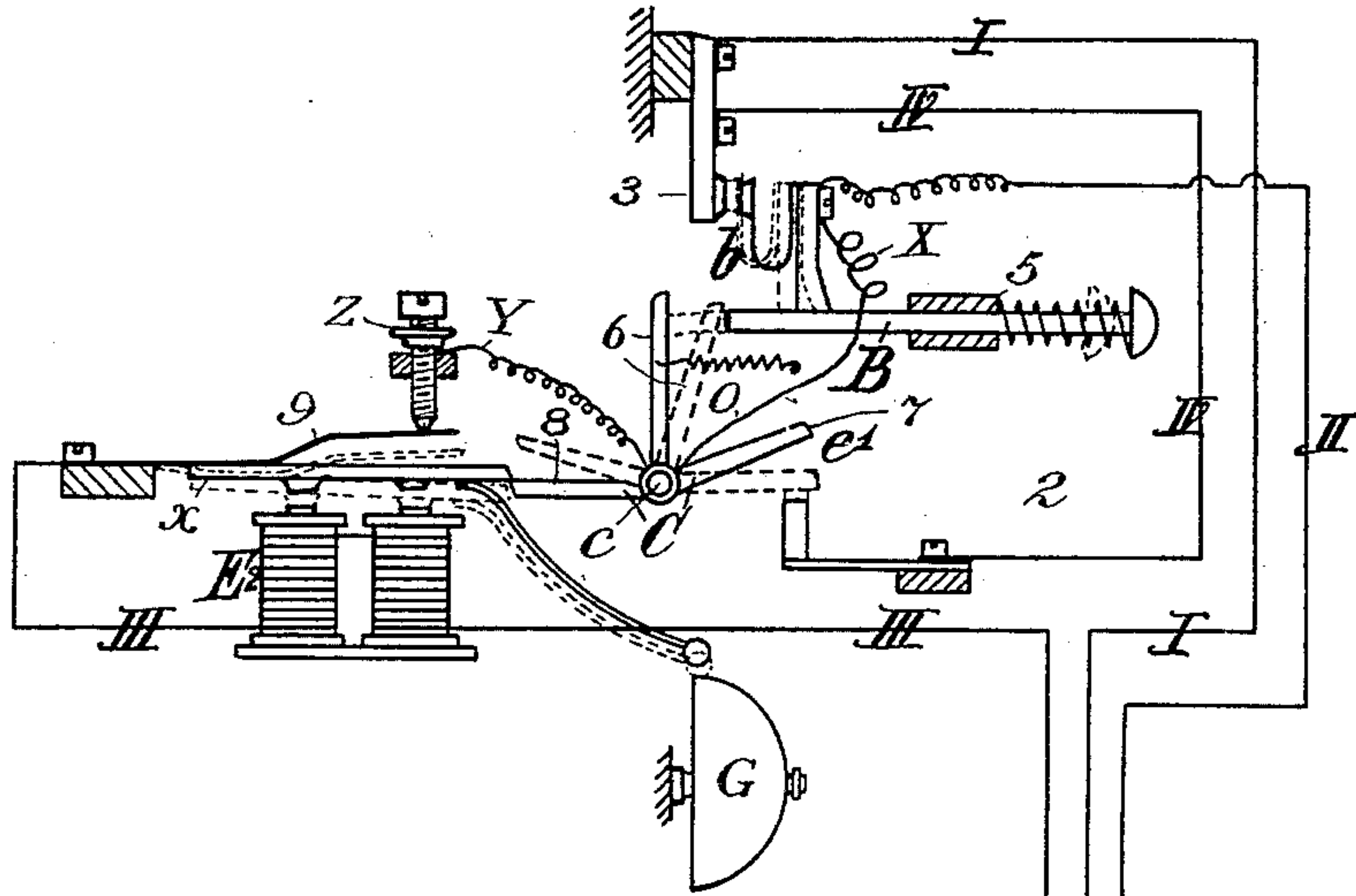
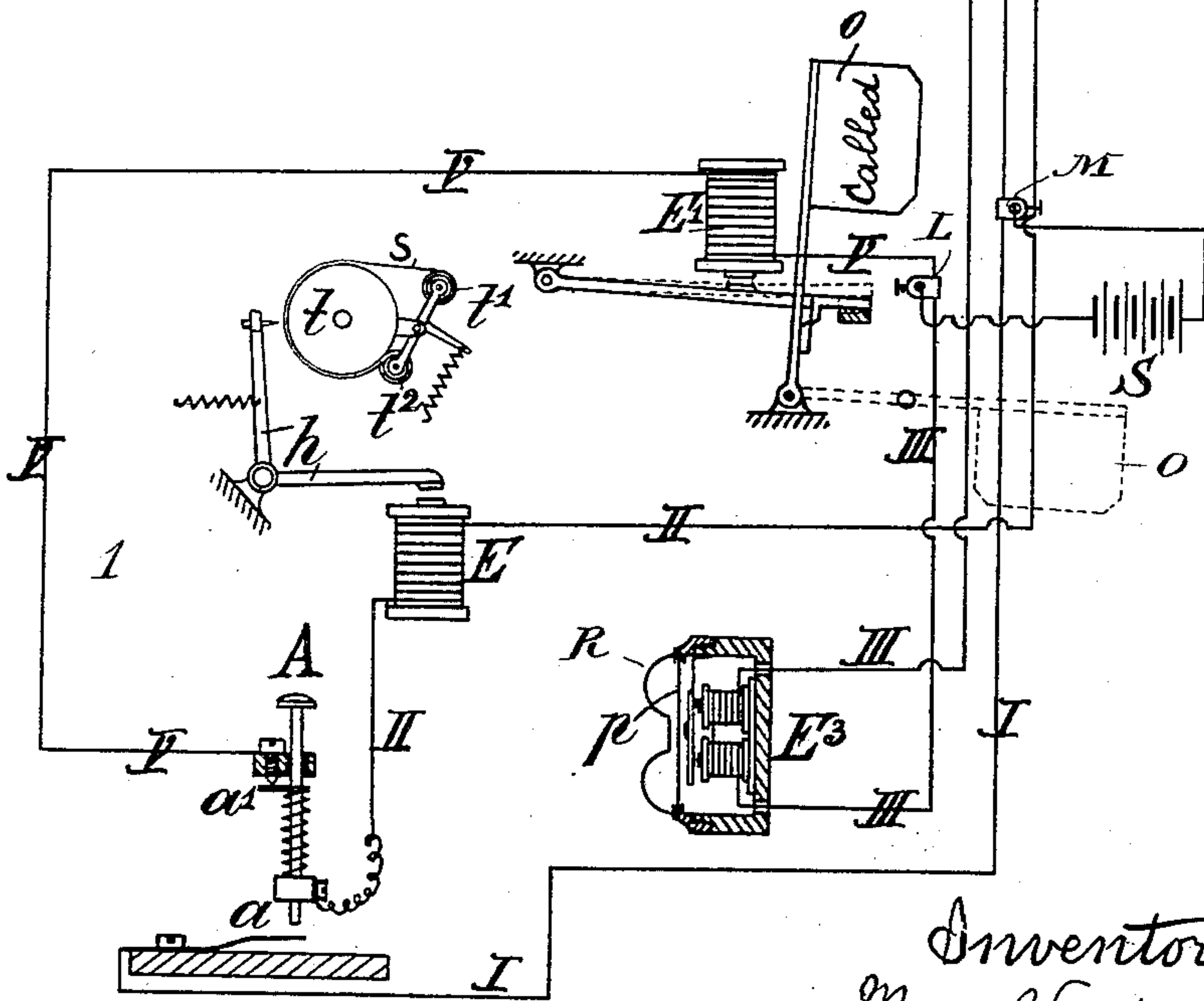


Fig. 1.



Witnesses.
J. Chebret.
O. Block.

Inventor.
Max Vester.
By H. A. de Vos.
Attorney.

No. 631,032.

Patented Aug. 15, 1899.

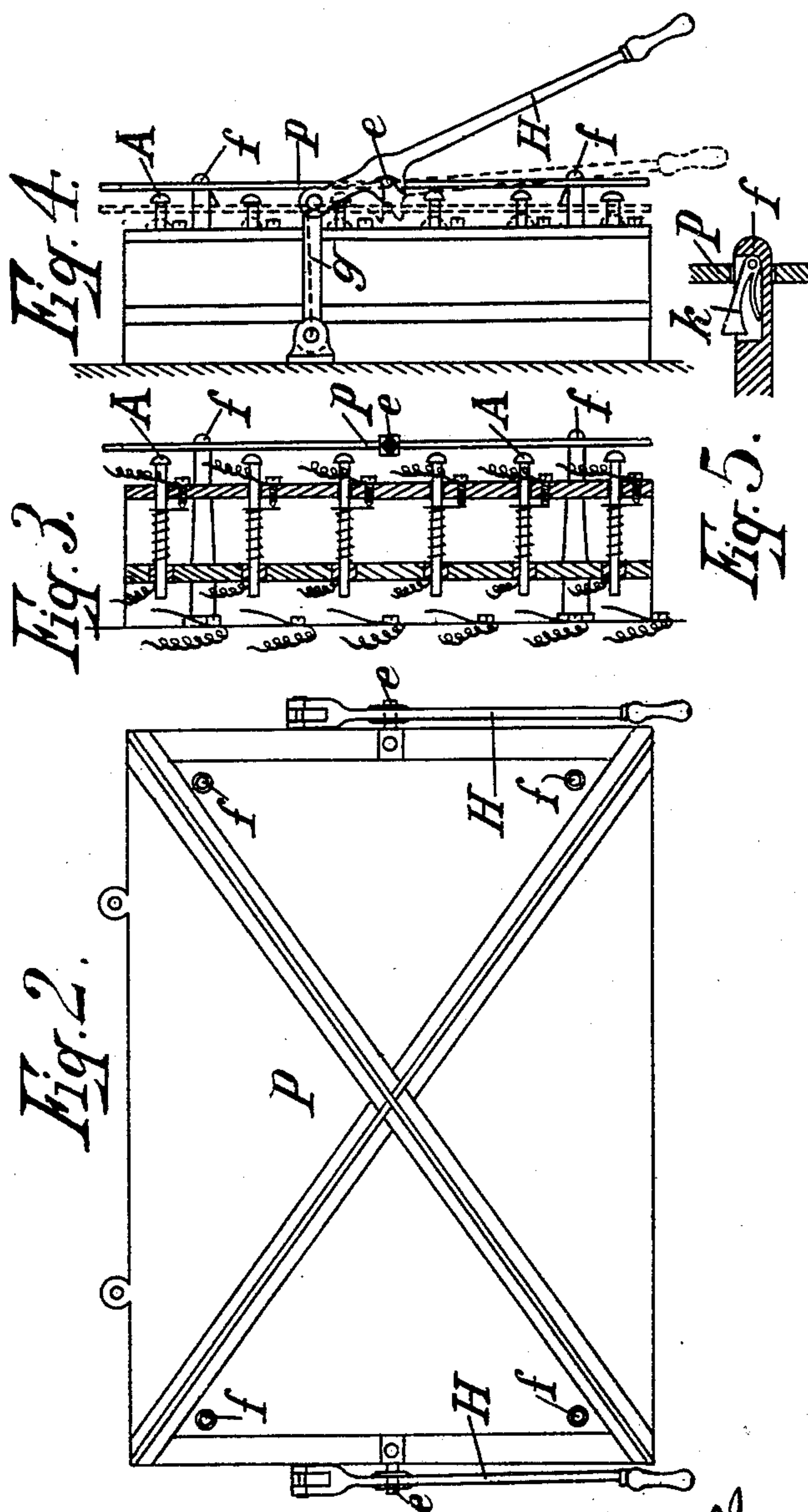
M. VESTER.

ELECTRIC ALARM AND REGISTERING OR CONTROLLING APPARATUS.

(Application filed Oct. 29, 1897.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses.
J. Chebet.
O. Block.

Inventor.
Max Vester,
By *H. H. de Vos.*
Attorney.

UNITED STATES PATENT OFFICE.

MAX VESTER, OF LEIPSIC, GERMANY.

ELECTRIC ALARM AND REGISTERING OR CONTROLLING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 631,032, dated August 15, 1899.

Application filed October 29, 1897. Serial No. 656,745. (No model.)

To all whom it may concern:

Be it known that I, MAX VESTER, a subject of the Emperor of Germany, and a resident of 24 Schenkendorff street, Leipsic, in the Empire of Germany, have invented certain new and useful Improvements in and Relating to Electric Alarm and Registering or Controlling Apparatus, of which the following is a full and clear specification.

10 The objects of my invention are, first, to provide a simple and cheap form of electrical signaling apparatus by which signals may be transmitted from a central signaling-station to one or more local or receiving stations, by
15 which the sending of such signals will be recorded at the sending-station, by which the receiving of such signals will be made known and recorded at the sending-station upon acknowledgment by the recipient, by which
20 signals may at any time be transmitted from the local stations to the sending central station, by which a failure of the signal to sound at the local or signal stations will be evident at the central or sending station at once, and
25 by which each of the signal-stations may be simultaneously signaled from the central station.

While not limited to such use, my apparatus is more particularly adapted for use in
30 hotels, &c., for the purpose of signaling from guests to the office, and vice versa, and, as is shown, is particularly adapted for awakening guests at desired hours, keeping a permanent record of the time they were called and the
35 time at which they acknowledged the call, and at the same time providing a signal for notifying the operator at the central station whether or not the line is working, and also calling each room in the house in case of fire.
40 All this I accomplish in the simple manner set forth in the following specification, of which the accompanying drawings form a part, wherein similar letters or figures of reference designate like or equivalent parts, and in
45 which—

Figure 1 is a diagrammatic view of the mechanism at the central or sending station and of the mechanism at the local or receiving station connected therewith, showing the various
50 electric circuits, the central or sending station (designated by the numeral 1) being located at the bottom and the receiving-station being

located at the top and designated by the numeral 2. Fig. 2 is a front view of the board carrying the signaling-buttons at the central station as it appears when covered by the
55 universal signaling-board, by which all stations are signaled simultaneously and continuously. Fig. 3 is a side view of Fig. 2 in central vertical section. Fig. 4 is a side view
60 of Fig. 2, and Fig. 5 is a detail view of one of the catches for holding the universal signaling-actuating board in place upon the buttons.

Referring to the drawings, arranged in any suitable manner at the sending or central station 1 are a plurality of electrobuttons A, preferably supported in a rectangular frame, as shown in Figs. 2, 3, and 4. These buttons A are preferably of the forms shown and made of suitable conducting metal, such as brass,
65 and the inner ends thereof are normally out of contact with a suitable contact *a*, from which a suitable electric conductor I runs to a contact 3 at the receiving-station 2, which contact 3 is adapted to contact with a suitable contact-piece *b*, carried by a push-button B, similar to the button A, which contact-pieces 3 and *b* are kept normally out of contact one with the other by a suitable spring
70 5. Connected with the contact *b* is an electric conductor II, connected at the central station 1 with the button A, which button is connected, when out of contact with the contact *a*, with an electric conductor V through a contact-piece *a'*. The conductor II has included in its line the magnet E of an ordinary Morse recording-receiver, consisting of the lever *h*, carrying the indenting-pin, the platen-roller *t*, and the tape *s*, carried by the wheels *t'* and *t''*, and the conductor V has included in its line the magnet E', which when energized allows the visual signal O to drop into sight. The conductors I and V are connected one to the positive and one to the negative pole of a battery S, and connected to the
80 same pole as is the line V is a conductor III, connected with and energizing the actuating-magnets E³ of a bell or other audible signal R at the central sending-station 1 and at the receiving-station 2 connected with and actuating a magnet E², actuating a bell or other
85 audible signal G.

Connected at one end to the contact 3 and at the other to a contact *e'* at the station 2 is

a conductor IV, and adjacent to the contact e' is a switch C, pivoted upon a suitable pivot pin or shaft c , which switch C is provided with the upwardly-extending arm 6, the contact-piece 7, adapted to contact with the contact e' , and the catch 8, adapted to act as a holding-catch to keep the bell-ringing armature of the magnet E^2 away from such magnet. The contact-piece 7 is in electrical connection by means of a conductor X with the contact b , carried by the button B, and by means of a conductor Y with an adjusting-screw Z, which screw Z when the armature x of the magnet is held in the upward position by the catch 8 is in contact with the contact-spring 9 of the conductor III.

The operation of the device is as follows: The parts being in the position shown in full lines in Fig. 1, if the button A is pressed down so as to make a contact with the contact a this will cause a current to close the circuit, so as to pass from a along the wire or conductor II, X, and Y, through screw Z, contact 9, conductor III to the point L, thence through the battery S to the point M in the conductor I, thence back along the line I to a , when the circuit is completed. As the magnets E, E^2 , and E^3 are included in this circuit, and therefore energized, this will cause an actuation of the Morse recorder of E, of the buzzer, bell, or other audible signal of E^3 at the central station, and of the bell G at the receiving-station 2. As long as the button A contacts with a the contact at a' between the lines II and V is broken; but the moment pressure is taken from the button A its retracting-spring forces it back, so as to make such contact, and the magnet E is at once deenergized. The action of the armature x of the magnet E^2 at station 2 has, however, released the catch 8, so as to bring such catch and other parts into the position shown in dotted lines, and the spring 10 having instantly forced the contact-lever 7 into contact with e' a new circuit is formed from e' through conductors IV, contact 3, and conductor I to M, thence through battery S to L, thence along III, 9, Z, Y, and 7 to e' , when the circuit is complete, and as long as 7 and e' remain in contact the bells G of E^2 and that of E^3 will of course continue to sound.

It will be seen that the bell G will continue to sound so long as the circuit last described is closed and that it can only be broken by the person signaled at station 2 pressing upon the button B, so as to separate the contacts 7 and e' , and consequently lock the armature x in the upward position by the lever or catch 8, and as this movement brings the contacts 3 and b together, as shown in dotted lines in Fig. 1, a new circuit is set up from b through 3, I, M, battery S, L, V, and II back to b , whereby the magnets E' and E will be energized and the Morse recorder and visual signal O at station 1 will be actuated, as shown in dotted lines, and the operator at station 1 consequently be notified that his signal has

been heard; otherwise he will investigate. It is also evident that by pressing on the button B at any time, so as to make the contact between 3 and b , the station 1 may be signaled by the signal O and the Morse recorder included in the last-traced circuit.

In order to provide means for calling every one of the stations 2 at the same time, I provide the frame holding the buttons A with pins f , upon which may be placed a board or plate P of such size as to cover all the buttons A, which plate P is provided with end pins e , against which may be forced levers H, pivoted as shown at g , and when such board is forced inward by such levers H it will be seen that the first-traced circuit will be closed and that in such case the signaled person, as it will be then impossible for him to stop the ringing of his bell G, will know that it is a fire-signal and act accordingly, while at the same time if any of the signals O fail to fall the persons therein will be known to be unawakened and must be otherwise aroused.

In order to keep the plate P pressed hard upon the buttons A, so as to contact the same with a when once such plate is forced fully back, the pins f are preferably provided with spring-catches k , which spring up when the front of the plate passes beyond the ends thereof, so as to rest against the front of such plate and hold the same in such position until such catches are released.

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

1. In a device of the class described, the combination with suitable signaling devices, of electromagnets E, E' , E^2 , and E^3 each actuating its particular signaling device when energized, a contact-button A adjacent to E, a contact-button B adjacent to E^2 , a battery or source of electric supply S, a compound circuit or circuits of conductors I, II, III, IV and V, and mechanism for changing the circuits so as to change the path traversed by the electric current or to break the circuit entirely, substantially as shown and described, and for the purposes set forth.

2. In a device of the class described, the combination with suitable signaling devices, of electromagnets E, E' , E^2 and E^3 , each actuating its particular signaling device when energized, a contact-button A adjacent to E, a battery or source of electric supply S, a compound circuit or circuits of conductors I, II, III, IV and V, a contact-button B having the contact b located adjacent to E^2 , a pivoted switch C having a contact-lever 7 adapted to engage with a contact e' connected with a conductor, a lever 6 carried by the switch C, and retracted by means of a spring 10, a lever or catch 8 adapted to be forced down past the end of the armature of the magnet E^2 when the lever 6 is pushed back by the button B so as to lock 7 out of contact with e' and to be released therefrom by the movement of the armature upon the energizing of such magnet

E^2 , substantially as shown and described and for the purposes set forth.

3. In a device of the class described, the combination with suitable signaling devices, 5 of electromagnets E , E' , E^2 and E^3 each actuating its particular signaling device when energized, a contact-button A adjacent to E , a battery or source of electric supply S , a compound circuit or circuits of conductors I , II , 10 III , IV and V , a contact-button B having the contact b located adjacent to E^2 , a pivoted switch C having a contact-lever 7 adapted to engage with a contact e' connected with a conductor, a lever 6 carried by the switch C , and 15 retracted by means of a spring 10 , a lever or catch 8 adapted to be forced down past the end of the armature of the magnet E^2 when the lever 6 is pushed back by the button B so as to lock 7 out of contact with e' and to be released therefrom by the movement of the armature upon the energizing of such magnet E^2 , a conductor X connecting the contact b 20 with the contact 7 , a conductor Y connecting

7 with contact Z connecting with 9 , and an armature α locked by the catch 8 so as to keep 25 9 in contact with Z when 7 and e' are disconnected, substantially as shown and described and for the purposes set forth.

4. In an electric alarm or signaling system, the combination of a series of signaling-cir- 30 cuits, a series of push-buttons at a central station to complete the several signaling-circuits, a movable plate covering all of the push-buttons, one or more levers connected to said plate to move the same to actuate all of said 35 push-buttons, and spring-actuated pawls attached to a fixed support, said pawls automatically engaging the plate when it is pushed inward, to lock all of the push-buttons in closed position. 40

Signed at Leipsic, Germany, this 23d day of August, 1897.

MAX VESTER.

Witnesses:

RUDOLPH FRICKE,
PAUL METZGER.