

(No Model.)

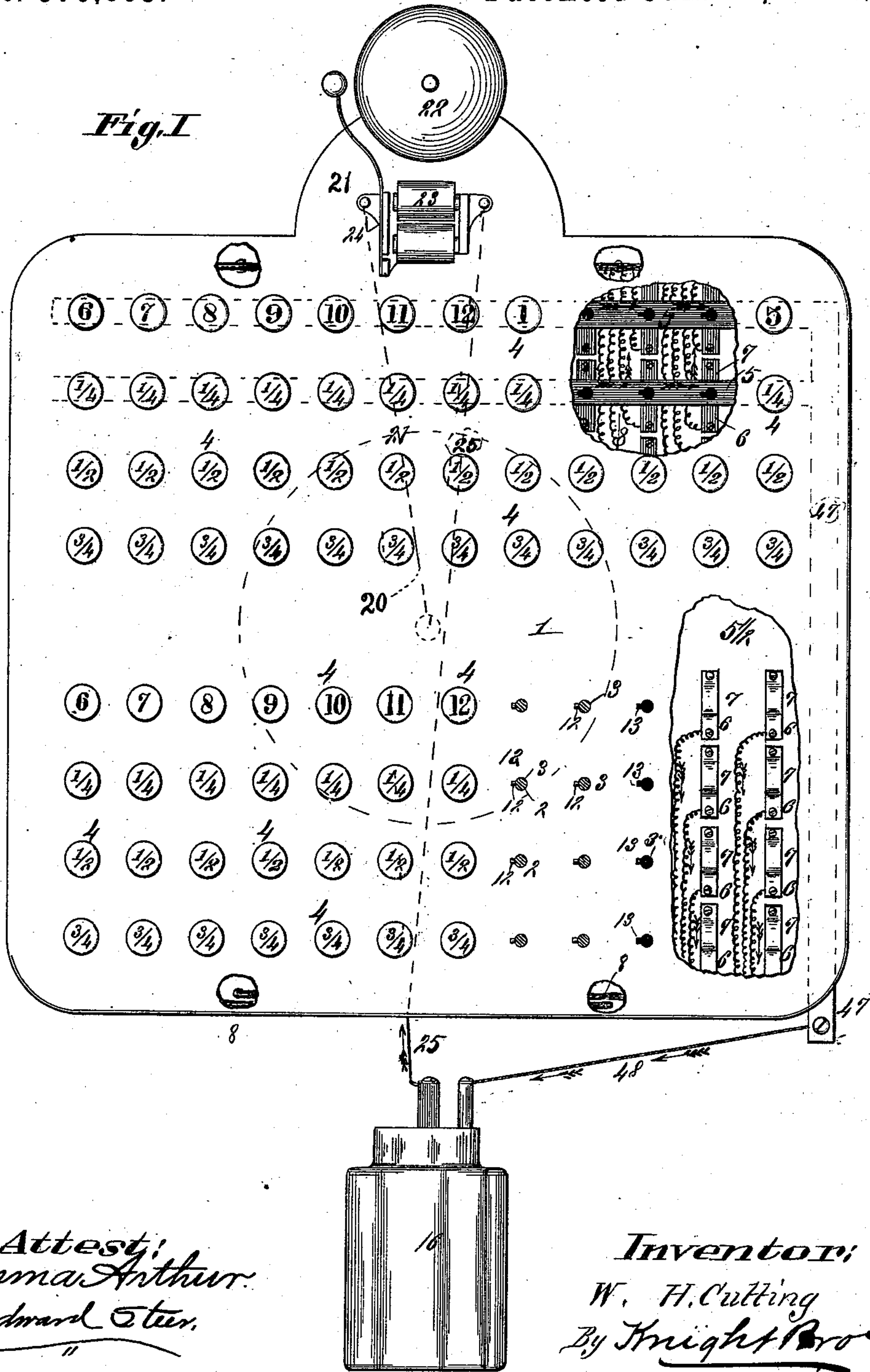
2 Sheets—Sheet 1.

W. H. CUTTING.

ELECTRIC CALL.

No. 376,863.

Patented Jan. 24, 1888.



Attest:
Emma Arthur.
Edmund Steer.

Inventor:
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(No Model.)

2 Sheets—Sheet 2.

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Fig. II

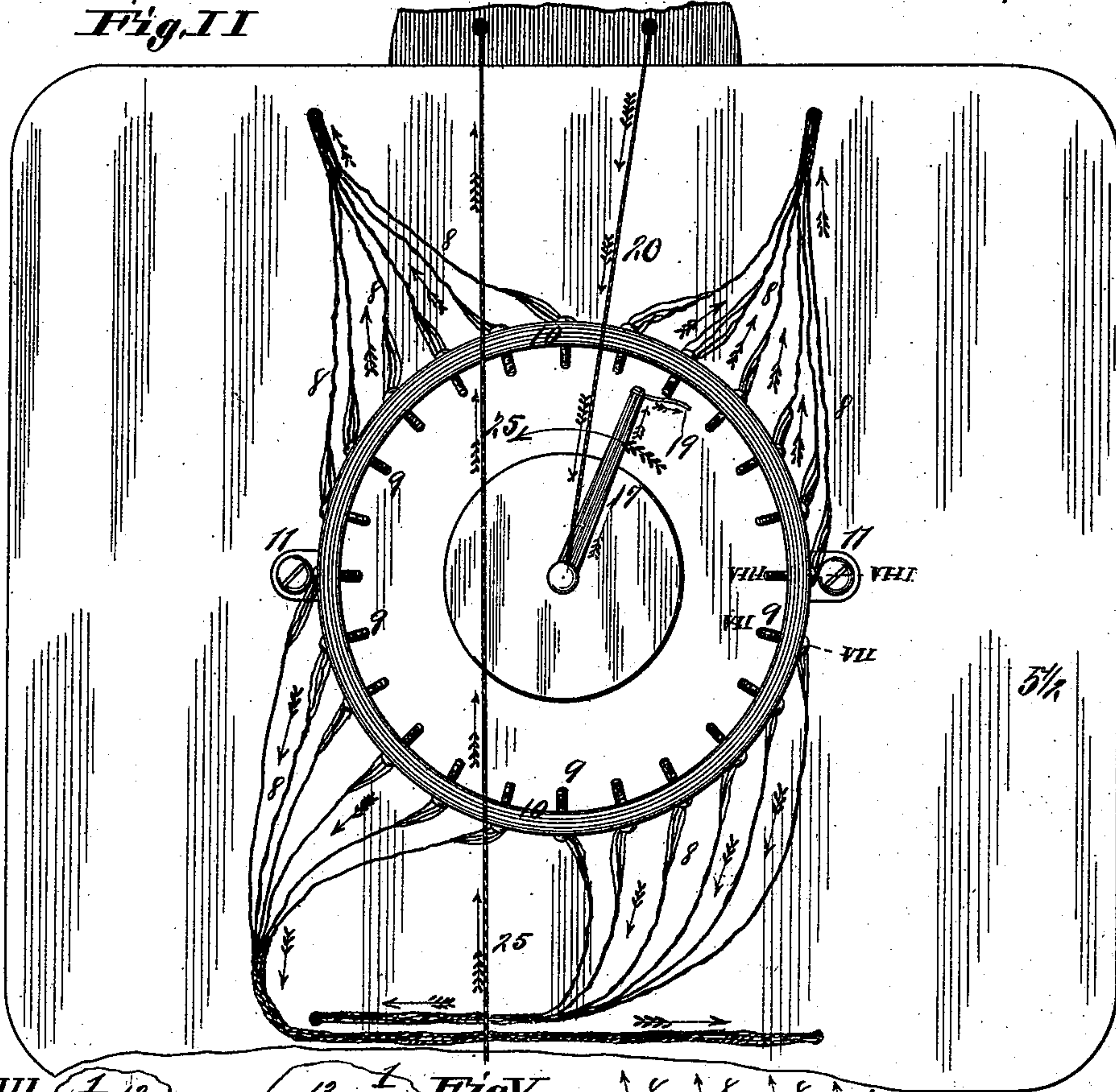


Fig. III

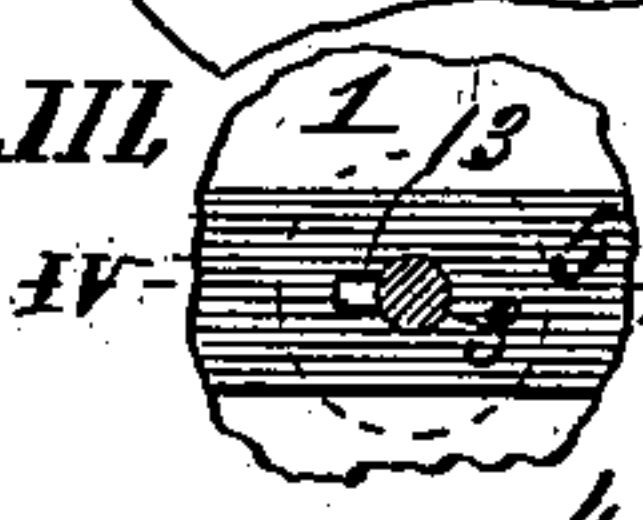


Fig. V

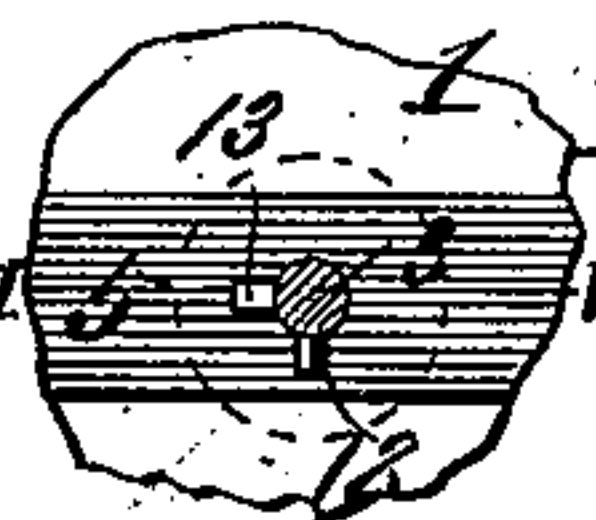


Fig. VII

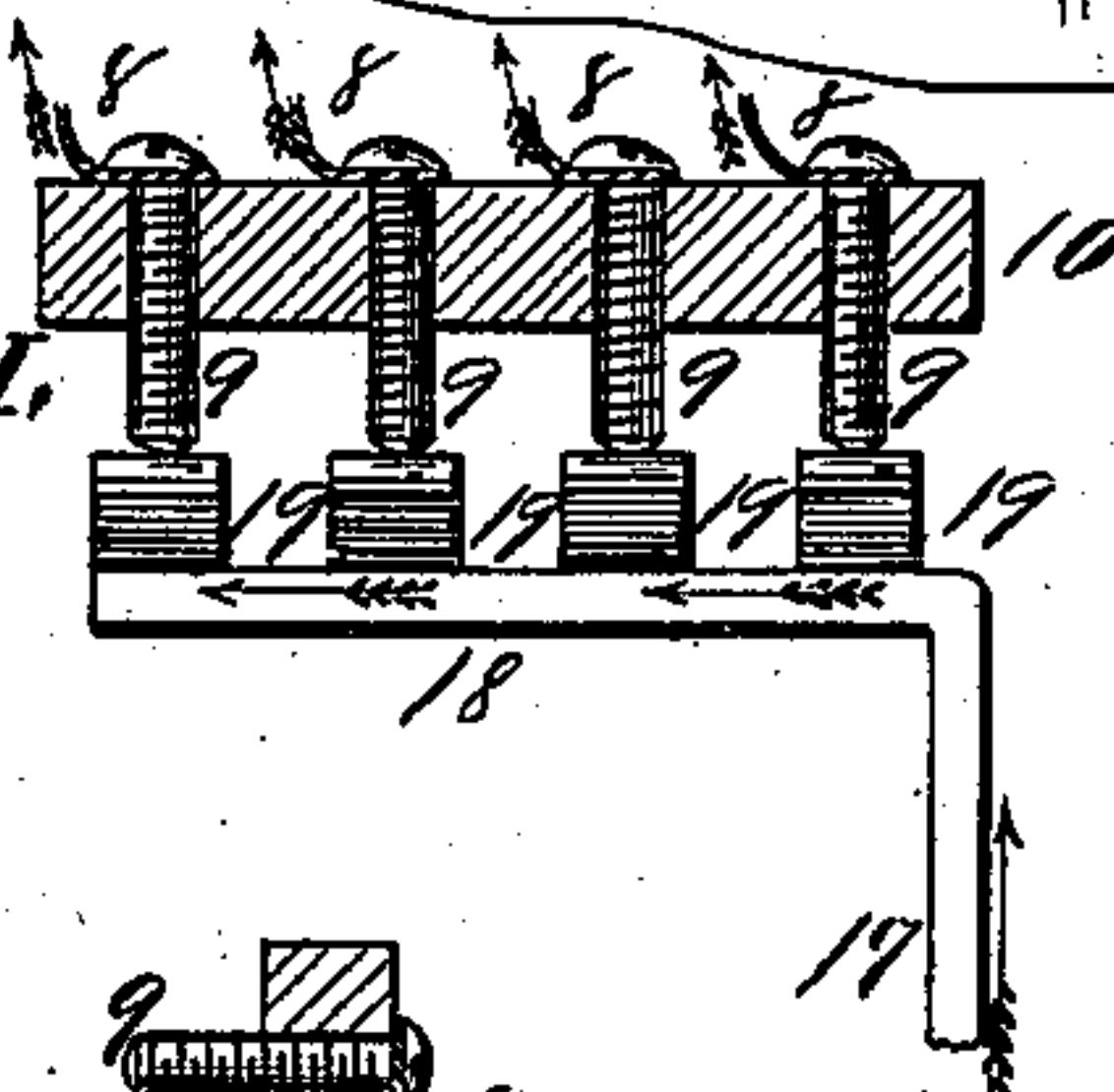


Fig. IV

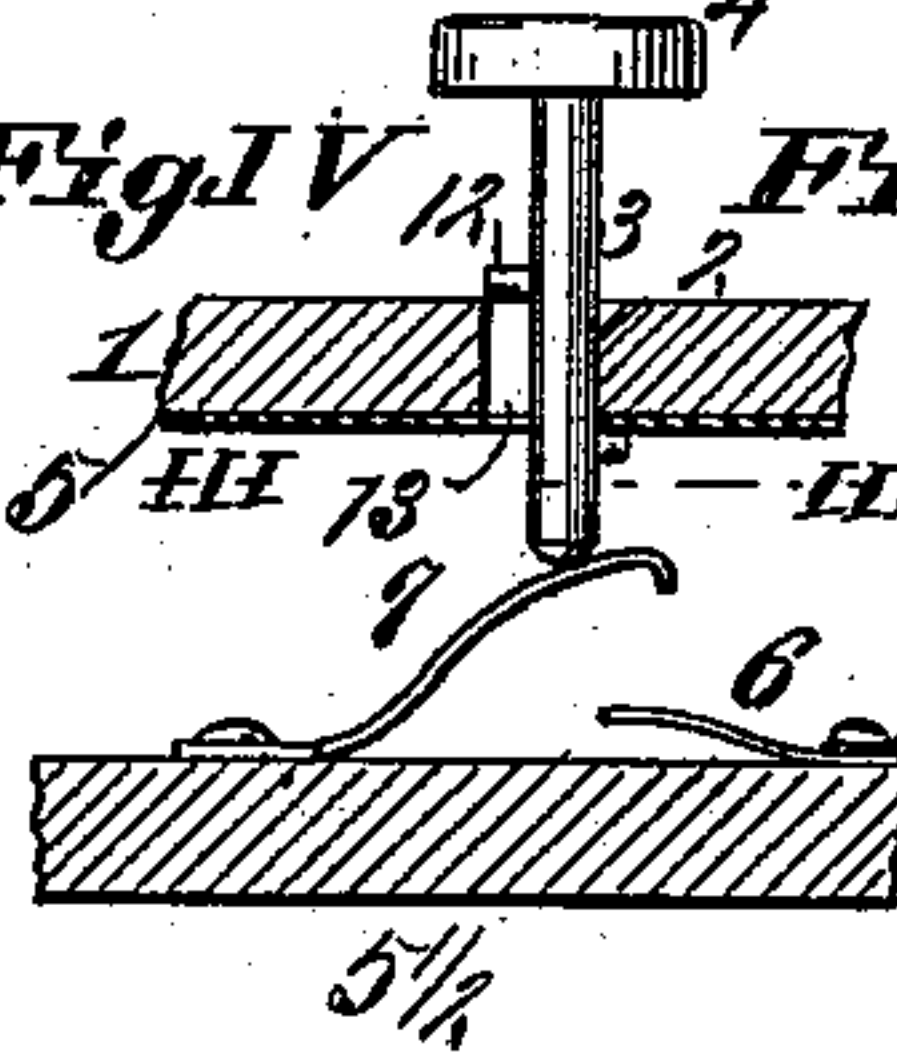


Fig. VI

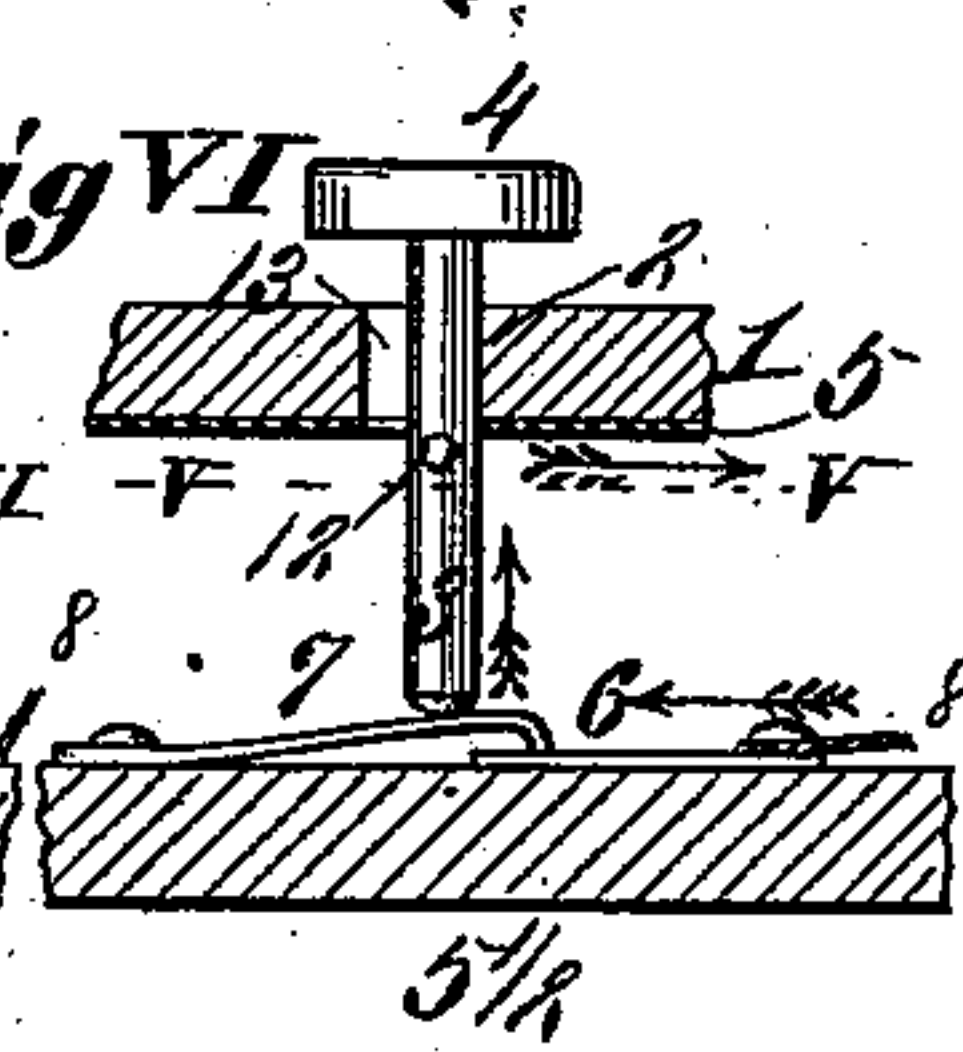


Fig. VIII

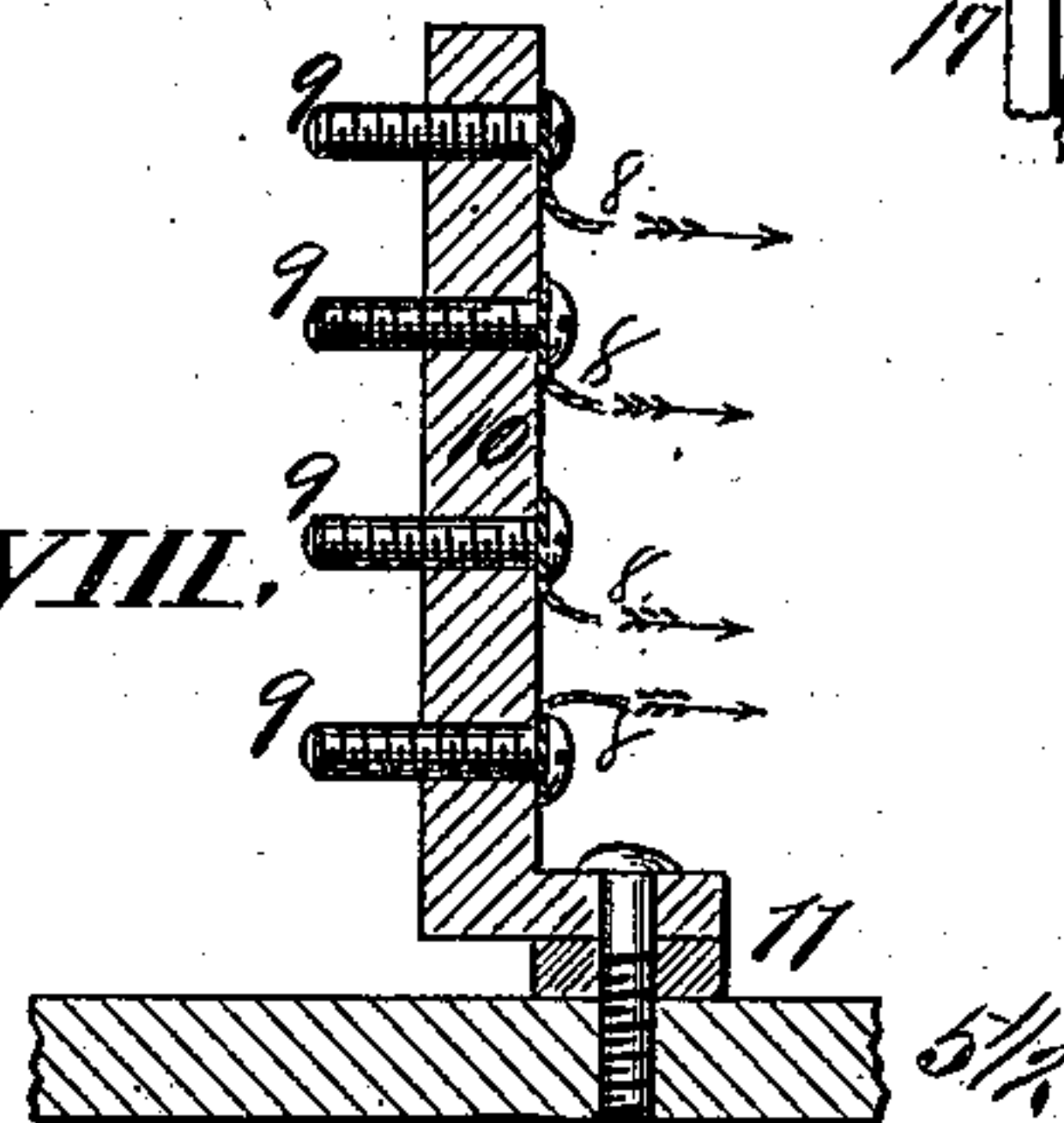
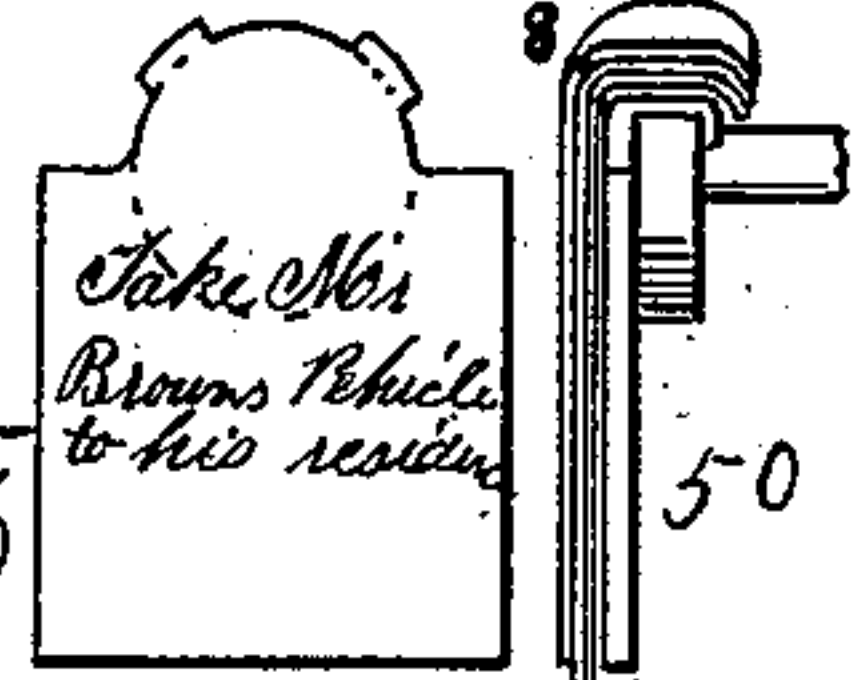


Fig. IX

Fig. X



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UNITED STATES PATENT OFFICE.

WILLARD H. CUTTING, OF ST. LOUIS, MISSOURI.

ELECTRIC CALL.

SPECIFICATION forming part of Letters Patent No. 376,863, dated January 24, 1888.

Application filed June 14, 1887. Serial No. 241,271. (No model.)

To all whom it may concern:

Be it known that I, WILLARD H. CUTTING, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful
5 Improvement in Electric Calls, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

10 Figure I is an elevation of my improved call system, showing part of the face-board broken away. Fig. II is a rear view. Fig. III is an enlarged detail section taken on line III III, Fig. IV. Fig. IV is a similar view taken on
15 line IV IV, Fig. III. Fig. V is a similar view taken on line V V, Fig. VI. Fig. VI is a similar view taken on line VI VI, Fig. V. Fig. VII is an enlarged section taken on line VII VII, Fig. II; and Fig. VIII is a similar view
20 taken on line VIII VIII, Fig. II. Figs. IX and X are detail views.

My invention relates to an improved electric call device, intended more particularly for use in livery-stables and like places, but which
25 may be used for other purposes; and my invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, 1 represents a
30 board or plate which has a number of perforations, 2, to receive the stems 3 of buttons 4. I have shown the buttons arranged in an upper and lower series. They are marked on their faces with numerals indicating the hours and
35 the fractions thereof, the top row of the upper series preferably having the numerals running from six o'clock in the evening to five o'clock in the morning, and the top row of the lower series preferably running from six o'clock in
40 the morning to five o'clock in the evening. The lower rows of each series are divided up into quarter, half, and three-quarter hours.

Secured to the back of the board 1, behind each row of buttons, is a strip, 5, and behind
45 these strips is a back board, 5½, to which are secured arms 6 and springs 7. Secured to each arm is a wire, 8, these wires passing through the board 5½ and connecting with pins 9, arranged in a number of vertical series in a ring,
50 10, of insulation secured to the board. (See Figs. II, VII, and VIII.) The ring is secured

to the board, as shown at 11. As already stated, the arms 6 and springs 7 are located behind the buttons, and when either button is forced from the position shown in Fig. IV to
55 that shown in Fig. VI the spring is forced down on the arm to close the electric circuit between the wires 8 and the buttons. The stems of the buttons are provided with projections 12, which pass through slots or enlarge-
60 ments 13 of the holes 2, and when they are through the buttons may be turned to move the projections away from the slots, and the buttons will then be held in their inner position, as shown in Fig. VI, until they are turned
65 back to bring the projections in line with the slots. When any one button is thus forced in, the electric circuit is closed between the wires 8 and the stems of the buttons, and it passes through the latter to the metallic strips 5 on
70 the back of the board 1, against which the projections 12 bear, and thus the current is allowed to pass from the wires 8 to the strips 5, that connect with the battery 16 through a plate, 47, and a wire, 48, all of the plates 5
75 connecting with the plate 47.

17 represents a hand or arm, which is made to revolve once in twenty-four hours by means of suitable clock mechanism. It carries on its
80 outer end, 18, brushes 19, that bear against the inner ends of the pins 9 as the hand turns; and each pin being provided with a wire, 8, communicating with the buttons by means of the arms 6 and springs 7, it will be seen that when
85 any button is pressed in a current of electricity will be caused to pass through the hand 17, to which is connected a wire, 20, made fast to the hammer 21 of an electric bell, 22. The hammer is provided with an armature, 24, that
90 acts in conjunction with a magnet, 23, and to the magnet is connected a wire, 25, which is connected at its other end to the battery 16. This completes the circuit, so that each time
95 a button is shoved in an alarm will be given when the hand comes in contact with the pin of that button.

Thus, if in a livery-stable, for instance, a conveyance should be ordered in the evening for 8.15 in the morning, the button 30, Fig. I, would be forced in at the time the order is
100 given. The alarm would not ring until the contact-brush of the hand 17 came against the

pin 9 of this button, when the alarm would be sounded, which would be at 8.15, as stated. So it would be with any other hour desired, all that is required to be done being to shove
5 in the proper button.

In Figs. IX and X, I have shown a tablet, 50, adapted to be hooked over any one of the buttons, and upon this may be inscribed a notice to the party in attendance, as shown in
10 Fig. IX. Such tablets may also be used where more than one call is given for the same hour, thus indicating to the man in attendance that two orders are to be filled, and directing his attention to his order-book if the instructions
15 are not on the tablet, as stated.

As shown in Fig. X of the drawings, any number of tablets may be arranged over a button by making the fingers on the stems of said tablets increasing in size, so that they may fit
20 one over another.

I claim as my invention—

1. The combination of the hand provided with a contact-brush, alarm having electrical connections with the hand and with a suitable

supply, a number of series of pins against 25 which the contact-brush bears, and push-buttons interposed in a connection between the pins and the supply, as set forth.

2. The combination of the hand, alarm, electrical connection between said hand and alarm 30 and between the alarm and battery, a ring or cylinder in which are arranged longitudinal series of pins, push-buttons interposed in the connection between the pins and the battery, and a contact-brush on the hand adapted to 35 bear on each of the pins in the series by means of a series of projections on the brush, substantially as described.

3. In a call system, substantially as herein shown and described, the combination of the 40 buttons and removable tablets having bent fingers on their stems for fitting over the buttons, substantially as and for the purpose set forth.

WILLARD H. CUTTING.

In presence of—

GEO. H. KNIGHT,

EDW. S. KNIGHT.