

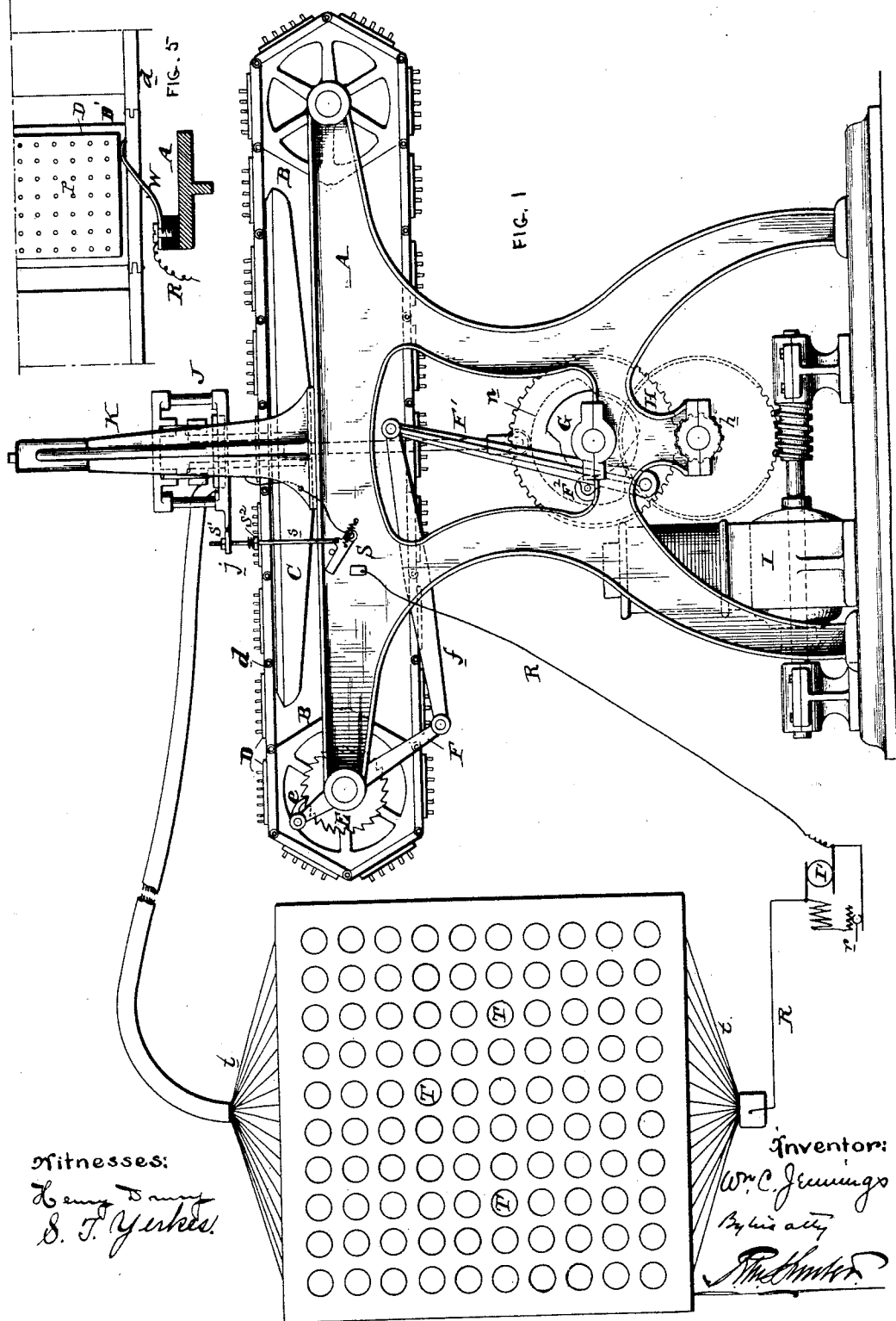
(No Model.)

2 Sheets—Sheet 1.

W. C. JENNINGS.
AUTOMATIC ADVERTISING APPARATUS.

No. 469,652.

Patented Feb. 23, 1892.



Witnesses:

Henry D. ...
S. F. Yerkes.

Inventor:

W. C. Jennings
By his atty
J. H. ...

(No Model.)

2 Sheets—Sheet 2.

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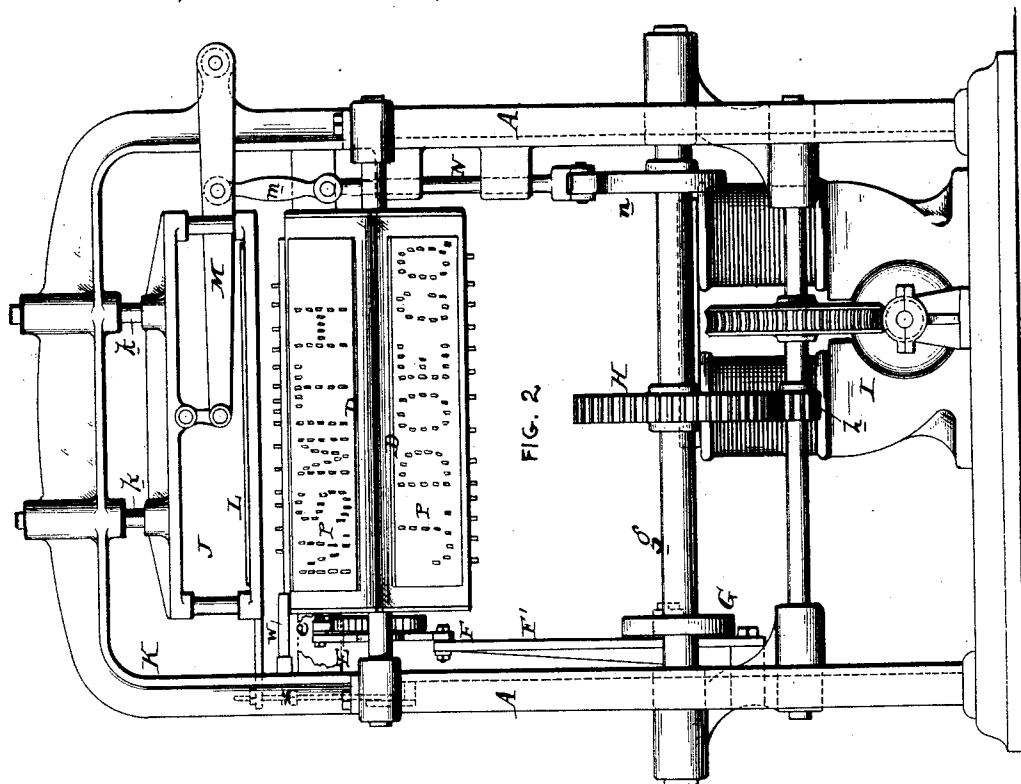


Fig. 2

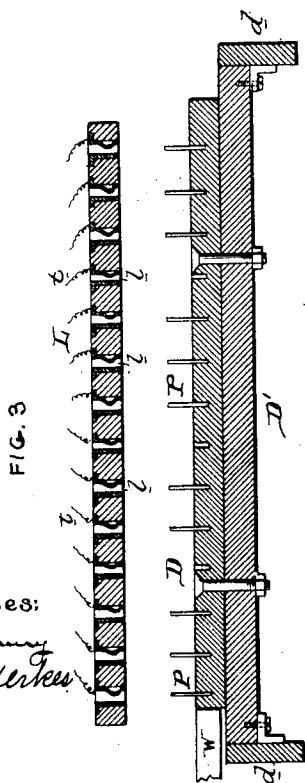


FIG. 3

Fitnesses:

Henry Brown

S. F. Yeis

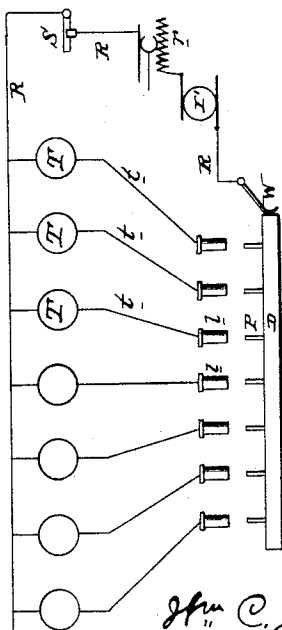


FIG. 4

inventor:

Mr C. Jennings

By his atty

The Grange

UNITED STATES PATENT OFFICE.

WILLIAM C. JENNINGS, OF CAMDEN, NEW JERSEY, ASSIGNOR TO THE
JENNINGS MACHINE COMPANY, OF NEW JERSEY.

AUTOMATIC ADVERTISING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 469,652, dated February 23, 1892.

Application filed May 20, 1891. Serial No. 393,385. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. JENNINGS, of Camden, in the county of Camden and State of New Jersey, have invented an Improvement in Automatic Advertising Apparatus, of which the following is a specification.

My invention has reference to automatic advertising apparatus; and it consists of certain improvements, which are fully set forth in the following specification and shown in the accompanying drawings, which form a part thereof.

The object of my invention is to employ electricity for operating indicators or signaling devices which shall convey to the observer certain meaning and shall be operated automatically by suitable devices which may be set in motion and continue to operate mechanically for an indefinite period.

In the operation of the device successive indications will be made in predetermined order and may indicate certain isolated ideas or a chain of connected thoughts.

My improvement is especially adapted to advertising purposes by the employment of a large number of electric indicators, such as lamps arranged close together and adapted to be energized in different orders or arrangements, whereby letters, words, or figures may be spelled or objects indicated rapidly.

In carrying out my invention I provide a large number of lamps arranged upon a board or otherwise suitably connected and held in a plane close together. An automatic device is arranged in an electric circuit, including the several lamps, which shall automatically and successively close the electric circuit through any of the lamps desired for the purpose of indicating letters, figures, words, or objects. The automatic device is arranged in a predetermined manner to produce the closing of any of the circuits desired at successive intervals of time.

It is immaterial to my invention what the particular details of the automatic device may be so long as they control the circuit of each lamp automatically.

Referring to the drawings, Figure 1 is a side elevation of an apparatus embodying my invention. Fig. 2 is an end view of same. Fig. 3 is a cross-section through the individual cir-

cuit-controlling contacts and their supports. Fig. 4 is a diagram illustrating the circuits, and Fig. 5 is a sectional plan view of a portion of the circuit-controlling device.

A is the main frame of the machine and supports at two distantly-located places the cylinders B, about which is arranged a chain of circuit-closing plates. These cylinders and chains are caused to intermittently travel by the means of a pawl e, operating upon a ratchet-wheel E (secured to one of the cylinders B) by means of a lever F, which is oscillated or rocked by a link f and lever F', having a roller F², and a cam G, working against the said roller F². This cam is so shaped that the wheel B is operated during a portion of a revolution, and then is allowed to remain at rest for a given period, and so on.

d are a series of links forming chains which pass about the cylinders B, and to these chains are secured transverse plates of insulating material D', Fig. 3. Secured to these insulating-plates D' are metallic plates D, having projecting pins P, arranged in different orders upon their faces. The cam G is secured to a shaft g, which is rotated by means of gearing H h from an electric motor or other power devices I.

J is a vertically-reciprocating frame having guides k working in the frame-work K, secured upon the upper part of the main frame A. This frame J is reciprocated vertically by means of a lever M, a link m, a reciprocating rod N, and a cam n, secured to the shaft G, the cam n and cam G being so arranged with respect to each other that when the parts operated by the cam G are at rest the frame J is reciprocated by the cam n, and vice versa. The frame J carries a plate of insulating material, in which are fixed a series of contacts l, made like tubes or in any other suitable manner, and corresponding in number to the number of lamps or signal devices which it is intended to control. This frame J, with its contact-plate, is adapted to be moved to or from the plates D, having the pins P, and the parts are so timed that when the plate L, with its contact l, is lowered it fits down upon the pins of the plate D, arranged below it, and whatever pins are arranged upon the said plate D will close the several circuits which

respectively connect with the tubular contact l , and thus energize the lamps or signal devices T , connecting with the respective tubular contacts l by the conductors t . The lamps T are arranged close together, as indicated in Fig. 1, and the circuits from one terminal of each of the lamps are led by a cable to the several contacts l . The other terminals of the respective lamps are connected to a single circuit R , which includes a current-generating device or source of electrical energy I' , and by a spring-contact W supplies current to that metallic plate D which may happen to be under the reciprocating frame J . (See Fig. 5.) If desired, this circuit may have a current-controlling device r , as shown in Fig. 4, which indicates a series-generator, or the regulator may be arranged in the field-coils of a shunt-wound generator, as indicated in Fig. 1.

S is a circuit-switch, which is automatically opened and closed, so that at the time the pins P enter the sockets or tubular contacts l there is no current flowing through the circuit R . Immediately after the contact has been made between the pins and tubular contacts the switch S is automatically closed and the current sent through the respective lamps. By this means there is no danger of burning out the delicate pins and the expensive contact-plate L , as all of the danger of burning is provided for at the main switch S , which may be of any of the well-known constructions which open and close rapidly to avoid danger of heating and burning. As shown, this switch S is operated by a vertically-reciprocating rod s , which is moved up or down by means of a projecting arm j , extending from the frame J and striking upon the collars $s' s^2$. There is a signal-plate between the collars $s' s^2$ to permit the pins P and the tubular sockets or contact l to be brought into contact before moving the switch S .

To prevent the downward thrust upon the pins P moving the plates D downward, the said chains or links and their plates are supported while passing below the reciprocating frame J by the guide or table C , which is secured to the main frame of the machine.

It is quite evident that in place of using the chain and contact-plates and two cylinders a single cylinder might be employed having the plates D or pins thereof arranged upon its periphery, in which case it would substantially correspond to one of the cylinders B , enveloped by the plates D .

The plates D are all perforated with a series of holes corresponding to the contacts l of the circuit-closing plate L , so that the pins P may be arranged in any or all of these holes for the purpose of closing any particular circuits of the indicating devices or lamps T . By this means the contacts are adjustable upon the plate.

While the construction herein set out is excellently adapted to the purpose, I do not limit myself to the mere details shown, as

they may be modified in numerous ways without departing from the principles of my invention, which are especially directed to means to mechanically control the energizing of a series of electrical devices in a predetermined order for any given purpose.

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

1. The combination of a series of electrically-actuated indicating devices, separate circuits for each of the said indicating devices, a source of electrical energy common to all of the circuits, a series of movable contact plates or surfaces having contacts arranged thereon and connecting with the source of electrical energy, a reciprocating circuit-closing plate having a series of contacts respectively connected with the several circuits, including the indicating device and movable to and from the contact plates or surfaces, and a power device for moving the series of contact plates or surfaces successively past and in contact with the circuit-closing plate for energizing the electric indicators in different predetermined orders.

2. The combination of a series of electrically-actuated indicating devices, separate circuits for each of the said indicating devices, a source of electrical energy common to all of the circuits, a series of contact plates or surfaces having contacts arranged thereon and connecting with the source of electrical energy, a circuit-closing plate having a series of contacts respectively connected with the several circuits and including the indicating devices, a power device for moving the series of contact plates or surfaces successively past and in contact with the circuit-closing plate for energizing the electric indicators in different predetermined orders, and an automatic switch in the main circuit for interrupting the flow of the current until after the contacts on the circuit-closing plate are in contact with the contacts of the contact plates or surfaces.

3. The combination of a series of electrically-actuated indicating devices, separate circuits for each of the said indicating devices, a source of electrical energy common to all of the circuits, a series of contact plates or surfaces having contacts arranged thereon and connecting with the source of electrical energy, a circuit-closing plate having a series of contacts respectively connected with the several circuits and including the indicating devices, a power device for moving the series of contact plates or surfaces successively past and in contact with the circuit-closing plate for energizing the electric indicators in different predetermined orders, a switch in the main circuit for interrupting the flow of the current until after the contacts on the circuit-closing plate are in contact with the contacts of the contact plates or surfaces, and automatic devices controlled by the relative movement of the contact and circuit-closing plates

for automatically closing and opening the main circuit after the contacts are brought into contact with each other to prevent fusing of the same.

5 4. The combination of a series of electrically-actuated indicating devices, a source of electrical energy, electric circuits including the respective indicating devices, a series of independent plates respectively provided with
10 contacts arranged thereon in different positions and moved successively one after the other past a given place and electrically connected with one terminal of the source of energy, a movable reciprocating circuit-closing
15 plate having a series of contacts respectively connected with the respective indicating devices and movable to or from the said plates, and power mechanism for intermittently causing a relative movement between the contact-plates and circuit-closing plate for bringing
20 the contacts into connection and energizing those indicating devices corresponding to the contacts upon the plates.

5 5. The combination of a series of electrically-actuated indicating devices, a source of electrical energy, electric circuits including the respective indicating devices, a series of plates respectively provided with contacts arranged thereon in different positions and
30 moved successively one after the other past a given place and electrically connected with one terminal of the source of energy, a movable circuit-closing plate having a series of contacts respectively connected with the respective indicating devices, power mechanism
35 for intermittently causing a relative movement between the contact-plates and circuit-closing plate for bringing the contacts into connection and energizing those indicating devices corresponding to the contacts upon
40 the plates, and an automatic switch for interrupting the main circuit prior to the separation of the contacts and closing the main circuit after the meeting of the contacts to prevent their fusing.

45 6. The combination of a series of indicating devices, a source of electrical energy, electrical circuits including said source of energy and the respective indicating devices, an intermittently-movable circuit-closing plate having contacts respectively connected with the respective indicating devices, an intermittently-actuated indicating moving surface
50 having contacts connecting with the source of electrical energy and relatively movable to and from the circuit-closing plate, whereby different indicating devices may be energized

in successive intervals of time, and power mechanism for alternately and intermittently operating the circuit-closing plate and contact-surface.

7. The combination of a series of electrically-actuated indicating devices, a source of electrical supply, circuits including the source of supply and the respective indicating devices, a reciprocating circuit-closing plate having
65 contacts respectively connected with the respective indicating devices, a series of contact-plates connected together and having contacts arranged upon the respective plates in different orders and connected with the source
70 of electric energy, and power mechanism for intermittently moving the contact-plates and circuit-closing plate alternately.

8. The combination of a series of indicating devices, a movable circuit-closing plate having a series of contacts respectively connected with one of the terminals of the respective
75 indicating devices, a contact-plate having a series of adjustable contacts adapted to work in connection with the contacts of the circuit-closing plate and electrically connected with a source of energy and the other terminals
80 of all the indicating devices, whereby a rearrangement of the contacts of the plate will cause a different order of the indicating devices to be energized, and means for intermittently reciprocating said plates to bring
85 them into relative contact.

9. The combination of a series of electrically-actuated indicating devices, circuits including the respective indicating devices and connecting them with a source of electric energy, an endless chain of plates electrically
90 connected with the source of electrical energy, a series of contact-plates supported upon said endless chain of plates and electrically connected therewith but having their contacts arranged in different orders, means for intermittently moving the said chain of plates in
95 one direction, an intermittently-reciprocating circuit-closing plate having a series of contacts respectively connected with the other terminals of the electrically-actuated indicating devices, and power mechanism for reciprocating the said circuit-closing plate when
100 the chain of contact-plates is at rest.

In testimony of which invention I have hereunto set my hand.

WM. C. JENNINGS.

Witnesses:

JAMES E. HAYS,
C. WESLEY WEYGAND.