

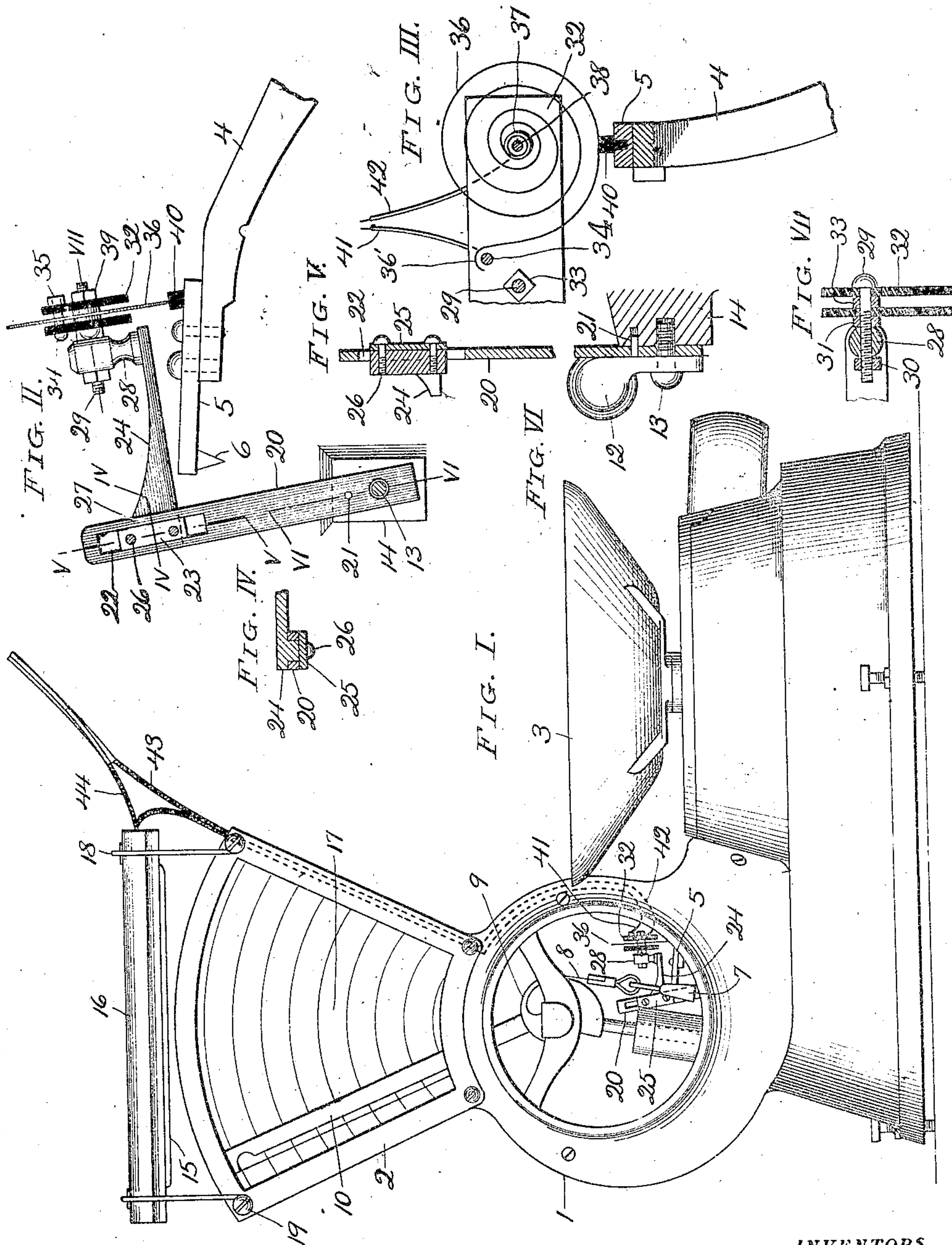
W. J. FREEMAN & S. G. CRANE.

SCALE LIGHT.

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988,702.

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SCALE-LIGHT.

988,702.

Specification of Letters Patent.

Patented Apr. 4, 1911.

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To all whom it may concern:

Be it known that we, WILLIAM J. FREEMAN and SAMUEL G. CRANE, both citizens of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Scale-Lights; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our invention relates to illuminating devices for scales, and has for its object to provide means whereby an electric lamp may be automatically lighted when the scale pan is depressed, and automatically extinguished when the substance weighed has been removed from the scale pan. This object is accomplished by the construction herein described, claimed, and illustrated in the accompanying drawings, in which:—

Figure I is an elevation of a scale provided with an illuminating device constructed according to our invention, the interior parts being seen through a glass plate. Fig. II is a detail and partly sectional view of the circuit opening and closing device. Fig. III is a detail view of parts shown in Fig. II, the spring being in elevation and other parts in section. Fig. IV is a detail section on the line IV—IV of Fig. II. Fig. V is a detail section on the line V—V of Fig. II. Fig. VI is a detail section on the line VI—VI of Fig. II, showing also the lower pendulum stop. Fig. VII is a broken section on the line VII of Fig. II.

In the scale shown in Fig. I, 1 designates the main housing; 2, the chart frame, and 3, the pan. 4 designates an arm to which movement is communicated from the pan 3 and on which is attached a "nose iron" 5 having a point 6 which engages an insulated stirrup 7, which actuates a ribbon 8, a cam 9, and the pointer 10. 12 designates the lower pendulum stop, which is secured by a screw 13 to a lug 14 cast in the housing 1.

The parts so far mentioned are well known and therefore are not described in detail.

In accordance with our invention, an electric lamp 15, carried by a reflector 16, is mounted preferably above the chart 17 and

at one side thereof so that the light emitted by the lamp 15 may shine upon said chart. The reflector 16 is provided with supports 18 which are attached to the frame 2 by the usual screws 19 or in any preferred manner. The chart that is so illuminated is the one that is faced by the salesman, and hence is in shadow in a majority of shops.

The electrical circuit opener and closer to be described is supported by an arm 20 which is secured to the lug 14 by means of the screw 13; the arm being inserted between the lug and the stop 12, and being prevented from turning upon the screw 13 by a pin 21 or any preferred device. The upper portion of arm 20 is provided with a slot 22, in which a lug 23, carried by a lateral arm 24, is slidably mounted. A binding plate 25 is secured to lug 23 by screws 26, and bears tightly upon the parts 27 of the arm 20.

Fixed upon arm 24 is a post 28, through which a screw 29 is projected and provided at opposite sides of the post, with nuts 30, 31. Said screw passes through a pair of insulating plates 32, which are spaced apart by a collar 33; and are firmly secured in place by the screw head.

34 designates a contact screw which passes through plates 32 and is provided with a nut 35.

36 designates a spiral of resilient wire, (preferably of brass) the inner end of which is secured to a collar 37, mounted between plates 32 on a screw 38, which has a nut 39 for binding the collar 37 between the plates and preventing rotary movement of the spiral wire 36. The inner end of the spiral wire may touch either of the plates 32, but the main body of said wire stands clear of the plates, as shown, so that it is very easily movable in its own plane. The outer end 36' of the wire 36 is positioned over the contact screw 34, and in the normal or free condition of the wire 36, touches the same. The "nose iron" 5 passes below the center of the spiral, and has attached thereto an insulating button 40, which touches the bottom of the spiral 36 and bears upwardly thereon so as to hold the end 36' out of contact with screw 34. This object is effected by adjusting the arm 24 vertically on arm 20, while the scale pan is empty and in balance. Contact screw 34 is connected by a wire 41 with the lamp 15, and the screw 38 is connected by a wire 42 with the lamp cord

strand 43, the other strand 44 of which is connected with the lamp, the latter thus being in series with the wire spiral 36.

When the scale pan 3 is depressed, the arm 4 descends, permitting the end 36' of spiral wire 36 to drop into contact with screw 34, when current will pass through lamp 15 and light same, so that the chart 17 can be easily read by the salesman. As soon as the goods are removed from the pan, the pan and arm 4, ascend, insulation 40 strikes spiral wire 36, and its end 36' moves away from screw 34, breaking the circuit and stopping the use of current. This operation reduces the cost of current for lighting the lamp 15 to almost nothing.

We wish to emphasize the fact that the parts to which the wires 41, 42 are connected are positively insulated from all other metallic parts of the scale, so that it is impossible for a person to receive a shock by touching the scale.

Having thus described our invention, what we claim as new therein and desire to secure by Letters-Patent is:—

1. In combination with a weighing scale, having a dial or chart and movable platform parts, of an electric lamp arranged to light said dial or chart, a fixed contact member having connection with said lamp, a spiral spring having connection with said lamp and arranged to bring its outer convolution into engagement with said fixed contact when unrestricted, and an insulated member on one of the platform parts engag-

ing the outer convolution of said spring and normally retaining same out of engagement with said fixed contact.

2. In combination with a weighing scale, having a dial or chart and movable platform members, of an electric lamp arranged to light said dial or chart, a fixed contact member having connection with said lamp, a spiral spring, the inner end of which is connected to said lamp and the outer end of which is curved to fit over the fixed contact member, and an insulated button on one of the platform members normally pressing against said spiral spring and retaining the hooked end thereof out of contact with the fixed contact member, substantially as and for the purpose set forth.

3. In combination with a scale, having a frame lug and a movable part 5, an arm secured to said lug, a second arm attached to said arm, insulating plates supported by the second arm, a spiral resilient wire mounted between said plates, a contact member carried by one of said plates in close proximity to said wire, an insulating button mounted on said part 5, beneath said resilient wire; an electric lamp, and an electric connection between said lamp and said contact.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM J. FREEMAN.
SAMUEL G. CRANE.

Witnesses:

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