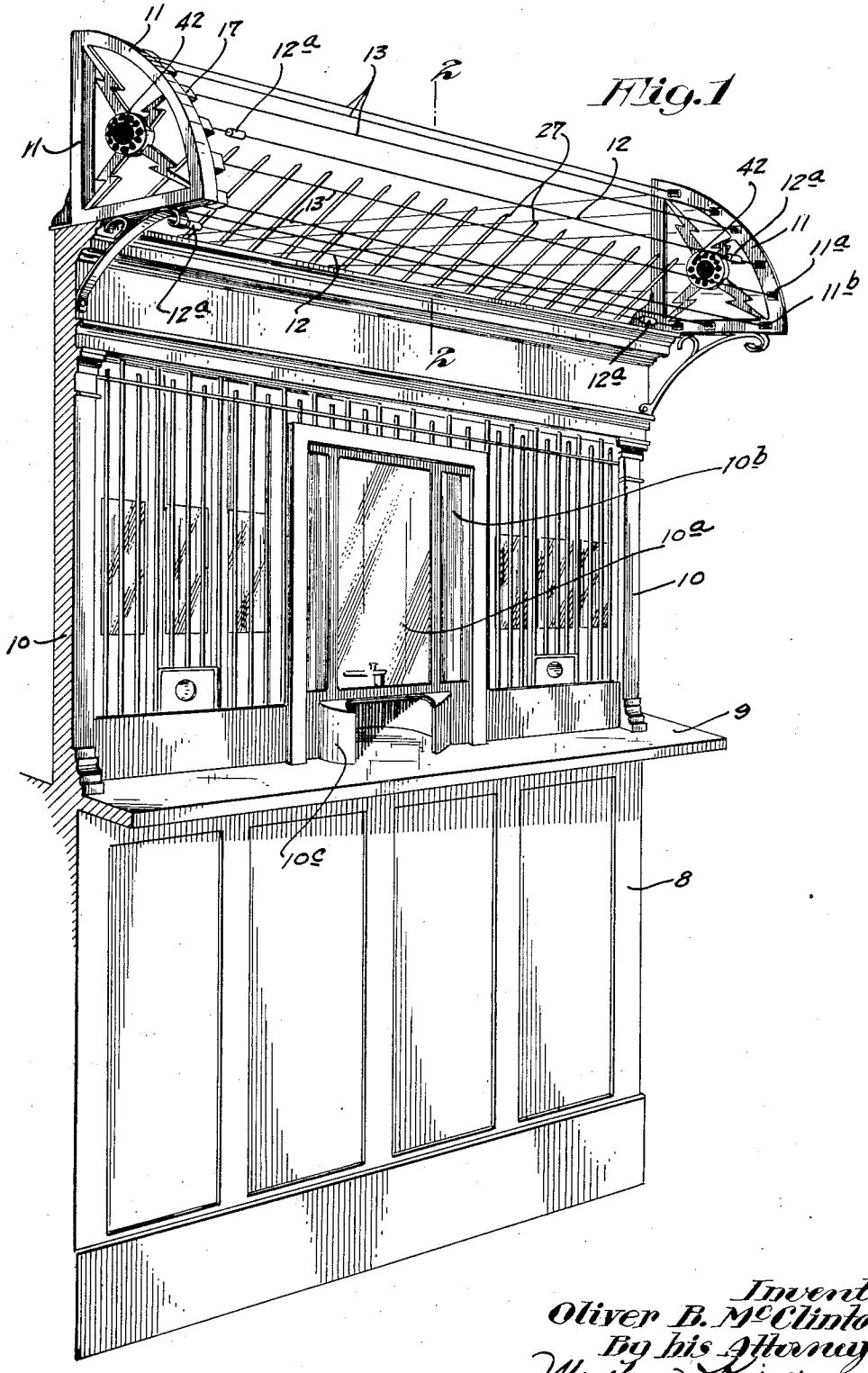
Aug. 6, 1935. O. B. McCLINTOCK 2,010,603

BANDIT BARRIER SYSTEM

Filed March 13, 1931 3 Sheets-Sheet 1

Fig. 1



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Fig. 2

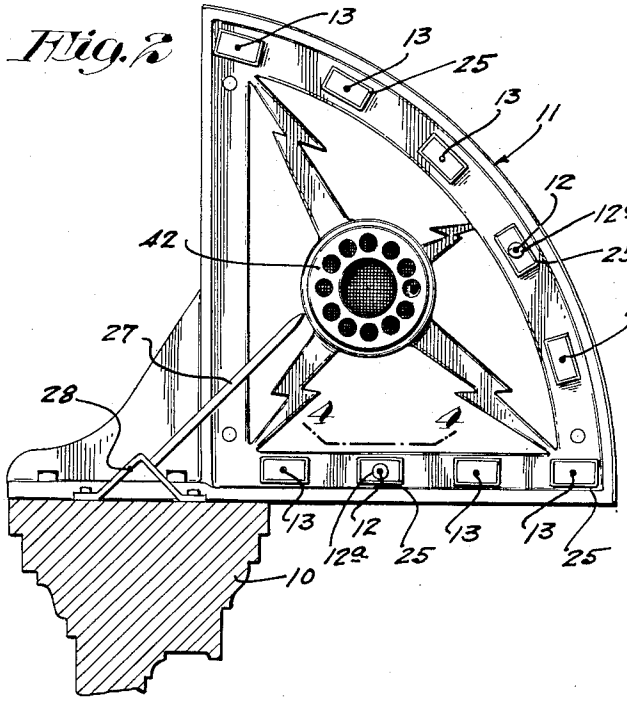


Fig. 3

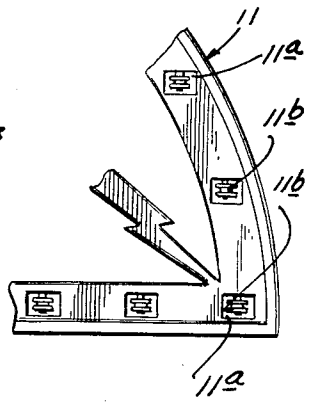


Fig. 4

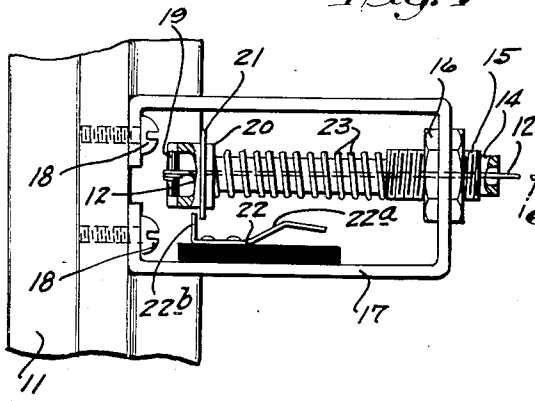


Fig. 5

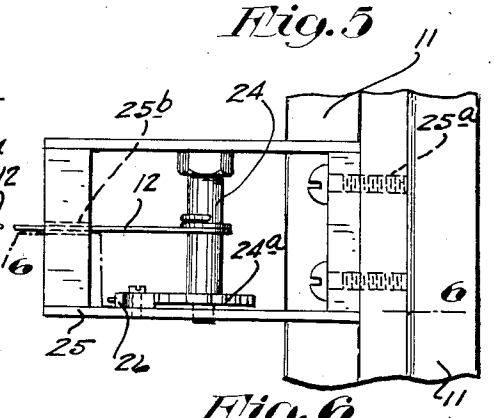
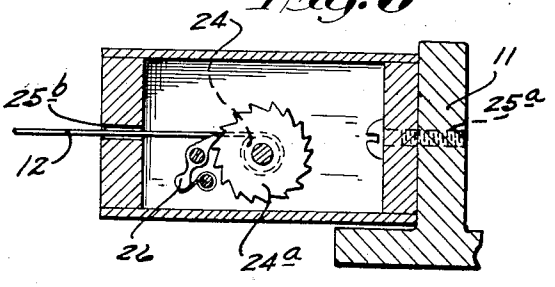


Fig. 6



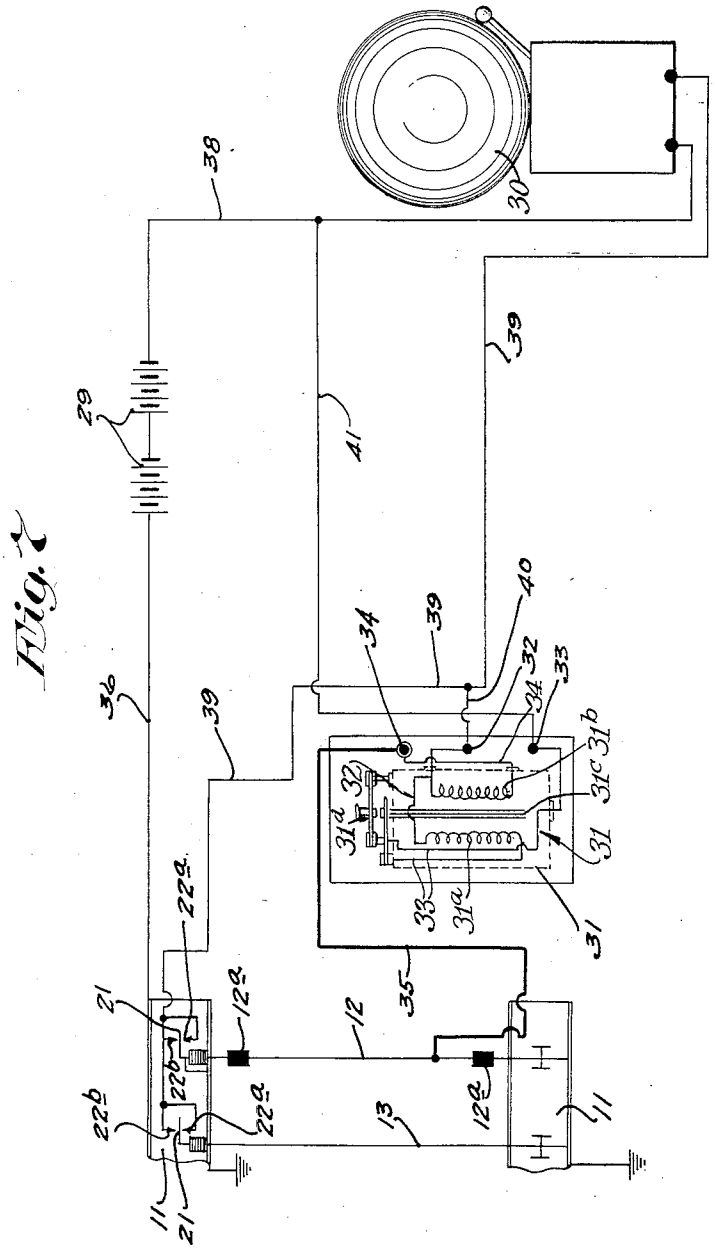
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BANDIT BARRIER SYSTEM

Filed March 13, 1931 3 Sheets-Sheet 3

Fig. 2



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2,010,603

UNITED STATES PATENT OFFICE

2,010,603

BANDIT BARRIER SYSTEM

Oliver B. McClintock, Minneapolis, Minn., assignor to O. B. McClintock Company, Minneapolis, Minn., a corporation of Minnesota

Application March 13, 1931, Serial No. 522,260

4 Claims. (Cl. 177—314)

This invention relates to means for protecting banks and like places for the deposit of valuables against desperados generally designated as bank robbers. The present invention provides what is designated as a bandit barrier system and is especially designed to prevent the robber from climbing over the counter structure and getting into the vault-containing compartment of the bank. This improved device comprises barrier cables or wires which, if broken, pressed or displaced, will cause the sounding or other operation of an alarm or alarms and other barrier cables or wires which, if broken, pressed or displaced, become connected to high tension current, and also cause the sounding or other operation of an alarm device, all as will hereinafter more fully appear in connection with the drawings and description of a preferred arrangement of said devices.

The invention is illustrated in the accompanying drawings wherein like characters indicate like parts throughout the several views.

Referring to the drawings:

Fig. 1 is a perspective view showing a portion of the counter and its super-structure with the novel devices herein disclosed and claimed applied at the top of the super-structure;

Fig. 2 is a transverse section taken in a vertical plane indicated by the lines marked 2—2 on Fig. 1;

Fig. 3 is a fragmentary side elevation of one of the barrier brackets;

Fig. 4 is a fragmentary plan view showing a wire-anchoring device at one end of one of the wires or cables;

Fig. 5 is a plan view showing one of the cable-anchoring devices at the other end of the cable;

Fig. 6 is a section taken on the line 6—6 of Fig. 5; and

Fig. 7 is a diagrammatic view illustrating the wiring system of the complete device.

The structure illustrated in Fig. 1 includes a counter 8 of the usual or any suitable structure such as found in banks provided with a counter top 9 on which is mounted a super-structure indicated as an entirety by the numeral 10. This counter super-structure so far as the present invention is concerned, may take various different forms, but preferably and as shown includes a glazed bullet-resisting wicket 10^a with voice panels 10^b and rotary dial tray 10^c.

The barrier structure is supported on the top of the framework of the counter super-structure 10 and it includes barrier brackets 11 arranged to support the high tension cables or wires 12 and alarm circuit cables or wires 13. These wires may vary in number, but as shown, are two high tension wires 12 and seven alarm circuit wires 13. These wires are extended in parallel arrangement properly spaced from each other by the brackets 11. In Figs. 4, 5 and 6, there is illustrated anchoring devices shown as used to anchor the ends of the high tension wires 12, but the same devices are used to anchor the ends of the alarm circuit wires 13. These barrier wires 12 and 13 will be extended over the entirely exposed upper portion of the super-structure portion 10 and in some instances they will be extended around the corner thereof through a corner bracket and which corner bracket 11 will be like the other brackets 11 except that it will be provided with cable passages 11^a in which are located roller-equipped cable or wire guides 11^b best shown in Fig. 3.

In the high tension wires 12, near the ends thereof are interposed insulating couplings 12^a. To one of the end barrier brackets 11, as shown, the left-hand member, the adjacent ends of the wires 12 and 13 are anchored; and preferably this is accomplished by means best shown in detail in Figs. 4, 5 and 6. By reference to these views, it will be seen that the said cables are extended through anchoring tubes 14 that work slidably through short externally threaded sleeves 15 which, by nuts 16, are adjustably anchored to anchor brackets 17. These brackets 17 are shown as directly anchored to said left-hand end bracket 11 by means of screws 18. The extreme ends of the said wires 12 and 13 are shown as attached and securely anchored to pins or short shafts 19, the square ends of which are seated in the pronged heads 20 of the tubes 14. As shown, and for an important purpose, the heads 20 are provided with projecting switch contacts 21. The said parts 14, 17, 19, 20 and 21 are, of course, of metal and hence are conductors of electricity. Mounted on the brackets 17 but insulated therefrom are metallic switch contacts 22 having raised contact points 22^a and 22^b between which the movable contact 21 is normally positioned for co-operation in a manner that will appear in the description of the operation. Quite strong coiled springs 23 are placed around the tubes 14 and are compressed between the co-operating sleeves 15 and the heads 20.

Where the cables 12 and 13 are passed around a corner and hence through a corner bracket 11, they will be passed over the guide rolls 11^b, but at their extended ends they are secured to short windlass shafts or small drums 24 rotatably mounted in metallic anchor brackets 25, shown

as rigidly secured to the adjacent barrier bracket 11 by screws 25a. Windlass shafts 24 carry ratchet wheels 24a that are normally engaged by spring pressed lock dogs 26 pivoted on the sides of the brackets 25. The brackets 25 are of box-like form and their outer end walls are provided with wire or cable passages 25b through which the wires 12 or 13, as the case may be, are passed. In setting the barrier wires for action, the windlass shafts 24 will be turned and secured in such positions as to hold the wires 12 and 13 under tension that will position the movable switch contacts 21 between the contact points 22a and 22b of the co-operating switch contacts 22.

The numeral 27 indicates sharp-pointed protecting barbs shown as projected from an anchoring bar 28 secured on the top of the counter super-structure 10. In the diagram view, Fig. 7, a battery or source of electrical energy is indicated by the numeral 29; an alarm or signal device in the form of electrically actuated gong is indicated by the numeral 30; and an induction coil of the vibrator type such as are similar to the "Model T" Ford ignition coil, as indicated by the numeral 31. The primary of this coil or transformer 31 is indicated by 31a, the secondary by 31b, the core by 31c, and the vibrator or circuit interrupter by 31d.

This transformer is of any suitable well-known construction and has primary leads 32—33, the latter having interposed therein the vibrator 31d, and high tension secondary leads 34 and 34a. The high potential end of the secondary is connected by lead 34 and a lead 35 to the main central or intermediate portions of high tension wires 12, as shown in diagram view Fig. 7, and the low potential end of the secondary is connected directly to the primary lead 32. One side of battery 29 is grounded through one of the metallic brackets 11 through a lead wire 36. Gong 30 is connected by a lead wire 38 to the other side of battery 29 and by a lead wire 39 to the several switch contacts 22, which latter, it will be remembered, have the spaced contact points 22a and 22b. The primary lead 32 of the high tension transformer 31 is connected by wire 40 to the lead 39 and the other primary lead 33 is connected by wire 41 to lead wire 38. It will be seen that the low potential end of the secondary 31a is connected by leads 32, 40 and 39 to the several switch contacts 22.

In the design of the barrier brackets 11 illustrated, they are provided with central portions 42 made in imitation of a microphone receiver and which, for that matter, might in some instances actually be an active microphone receiver.

Operation

The operation of the device described is as follows:

Normally and as already stated, the intermediate main portions of the high tension wires 12 will be dormant, that is, not charged with current, because the supply circuit to the primary of the high tension coil or transformer is normally open as is also the circuit to the alarm gong 30. If, however, one or more of the alarm wires 13 be broken, the co-operating spring 23 which is grounded through bracket 11 and electrically connected to movable switch contact 21, will move switch contact 21 into engagement with contact point 22b, thereby closing the circuit to gong 30 through battery 29 and wires 39 and 38, causing sounding of the alarm.

This will also close the circuit to primary of the high tension coil or transformer 31 through the said wires 36, 39, 40, 41 and 38, causing the main intermediate portions of high tension wires 12 to be charged with high tension current, such as would give serious shock to any person coming in contact therewith. If one of the said alarm circuit wires 13, instead of being broken, be pressed against, it would compress spring 23 causing movable contact 21 to engage contact point 22a, thereby closing the circuits in the same manner as just described, resulting in the sounding of the alarm and energizing of the high tension wires 12 with high tension current.

If one of the high tension wires 12 be pressed against to any considerable extent, the co-operating movable contact 21 will be moved into engagement with contact point 22a with the result just above noted, to wit: that the alarm gong will be sounded and the wires 12 will be energized with high tension current. If, however, one of said wires 12 be broken, its spring 23 will cause engagement of the co-operating contact 21 with contact point 22b, thereby causing the alarm gong 30 to be sounded and the lead wire 35 and connected portion of broken wire 12 and also the other unbroken high tension wire 12 to be charged with high tension current.

From the above, it is thought to be obvious that it will be impossible for any person to climb over the top of the counter super-structure including the barrier, without coming into contact with more or less and, in fact, all of the wires 12 and 13, which will not only cause sounding of the alarm, but will give the intruder very severe electrical shocks. Of course, the barbs 27 afford further obstruction to the person climbing over the barrier, but these are minor features.

The above described device therefore affords a barrier of highest possible efficiency and the maintenance of which is practically nil since normally there is no current flow through the circuits of the protecting system. A preferred and commercial form of the device has been described, but it will, of course, be understood that such device is capable of large modification as to construction and arrangement of parts without departing from the spirit of the invention herein disclosed and broadly claimed.

What is claimed is:

1. The combination with a barrier structure, of a source of high potential, spaced normally dead barrier conductors extending from the high potential source and being exposed across a portion of the barrier, normally open switch means operative, when closed, to cause charging of one of said barrier conductors from said source, and means operative by serious disturbing movements of one of said conductors to cause closing of said switch means.

2. The combination with a barrier structure, of a source of high potential, spaced normally dead barrier wires extending from the high potential source and being exposed across a portion of the barrier, a normally open switch operatively connected to control charging of one of the barrier wires from said source and connected to be closed by serious disturbing movements of one of the barrier wires, and means for electrically charging one of said barrier wires.

3. The combination with a barrier structure, of a source of relatively low potential and a potential step-up transformer, said transformer having its primary connected in circuit with the low potential source and a circuit interrupter in cir-

cuit with the primary, a pair of spaced barrier wires extending from the transformer secondary and exposed across the barrier, normally open switch means controlling the transformer primary circuit, and means operative by serious disturbing movements of either of said barrier wires to close said switch means and cause charging one of the high potential barrier wires.

4. The combination with a grounded barrier structure, of a normally inactive source of high potential, spaced co-operating barrier wires exposed across a portion of the barrier, one of said barrier wires being grounded and the other thereof being connected to the high potential source, switch means operative to simultaneously render the high potential source active and to connect the grounded barrier wire to said source, and means operative under serious disturbing movements of at least one of said barrier wires to operate said switch means.

OLIVER B. McCLINTOCK.