

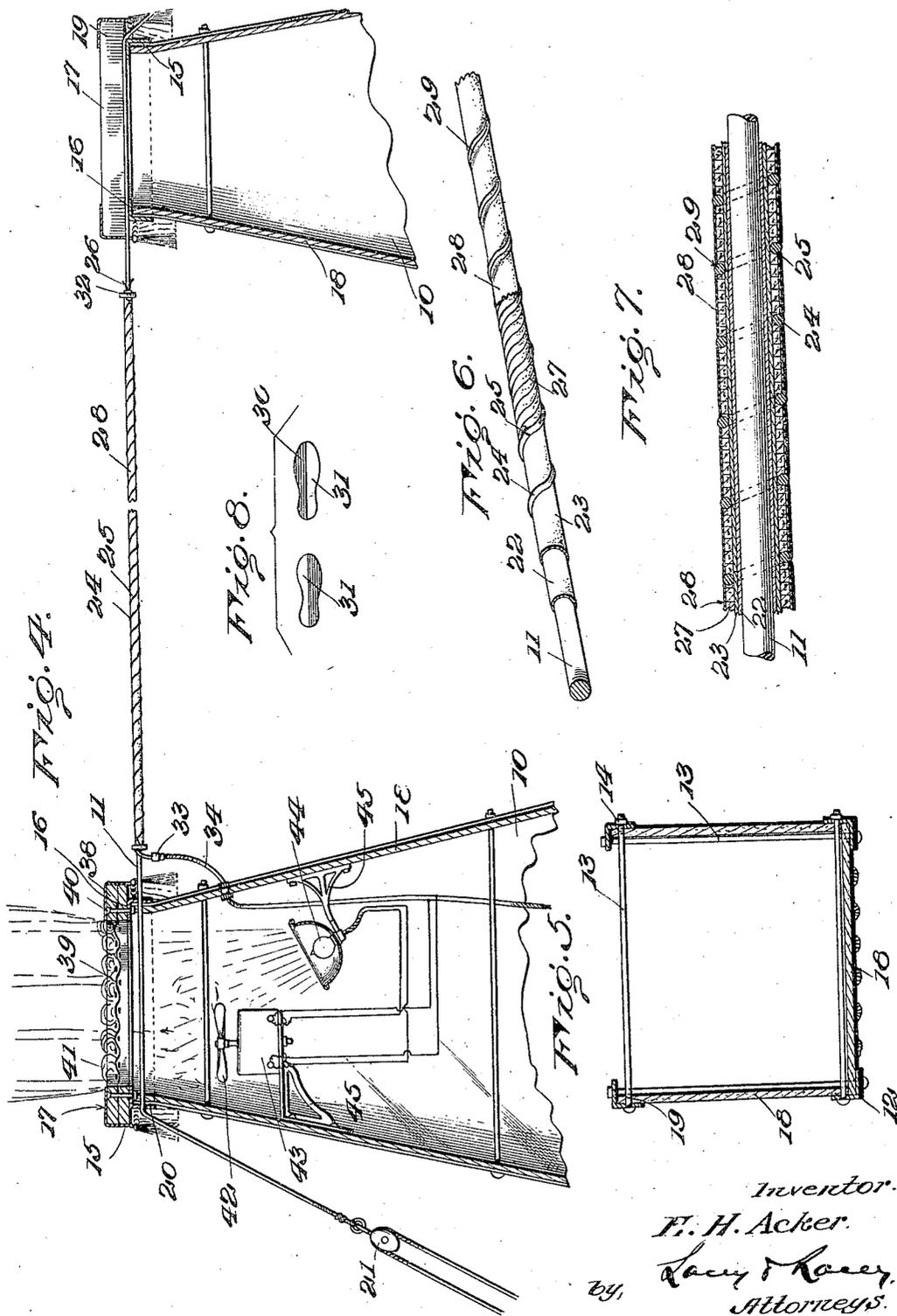


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 THEATRICAL APPLIANCE.  
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# UNITED STATES PATENT OFFICE.

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## THEATRICAL APPLIANCE.

1,419,191.

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*To all whom it may concern:*

Be it known that I, EDNA H. ACKER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Theatrical Appliances, of which the following is a specification.

This invention relates to theatrical appliances and more particularly to appliances for use by performers upon tight or slack wires for producing new and attractive scenic effects, the primary object in view being the provision of an apparatus for creating an electrical display which will add materially to the beauty of the performance and give it an increased appearance of daring and skill.

Generally stated, this is accomplished by providing an apparatus of such character that sparks or electrical flashes will fly from the feet of the performer as they are brought into or out of contact with the wire as the artist walks, dances or otherwise performs thereon.

In this connection, therefore, one of the principal objects of the invention is the provision of a novel form of tight rope or wire including supply and return electrical conductors connected in circuit with an induction coil, means being provided for increasing or decreasing the resistance of said circuit thereby to vary the length or intensity of the spark or flash produced by the intermittent opening or closing of the circuit as the artist performs on the wire.

The invention further aims to provide a theatrical apparatus including a pair of pedestals or towers of novel construction for supporting the tight rope or wire in elevated position, one of said pedestals being provided with means whereby the effect of a raging fire may be produced at will without injury to the surroundings or to the performer standing on the pedestal and apparently in the midst of said flames.

The invention further contemplates the provision of a theatrical apparatus capable of being quickly set up for use and compactly stored for transportation or shipment, the construction of the device being such as to produce a novel and attractive pyrotechnic display without liability of injury to the performer or damage to the stage or other setting on which the apparatus is installed.

Other and incidental objects will appear as the description proceeds. In the drawings wherein I have illustrated the preferred embodiment of the invention:

Figure 1 is a perspective view of a theatrical appliance embodying the present invention showing the device set up for use;

Fig. 2 is a plan view of the supporting wire showing the electrical conductors in position thereon and operatively connected with an energized circuit including a fan and incandescent light;

Fig. 3 is a bottom plan view of the contact plates for attachment to the soles of either or both of the shoes of the performer.

Fig. 4 is a vertical sectional view of Figure 1;

Fig. 5 is a transverse sectional view of one of the towers or pedestals;

Fig. 6 is a detail perspective view of a portion of the supporting wire showing the manner of wrapping or coiling the electrical conductors thereon;

Fig. 7 is a longitudinal sectional view of Figure 6;

Fig. 8 is a plan view showing a modified form of contact for the shoe or shoes.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Broadly stated, the invention includes a pair of supporting towers or pedestals which may be quickly set up for use upon a stage or in a ring, a tight rope or supporting wire of novel construction arranged to be stretched between the towers or pedestals and certain flame-producing mechanism on one or both of said pedestals, which will be later described in detail.

Each tower is preferably in the form of a truncated pyramid, substantially square in horizontal section and comprising inclined corner bars connected at predetermined intervals by transverse rods or braces. The corner bars are preferably formed of angle-iron and the rods are extended through suitable openings in the flanges of the corner bars for engagement with clamping bolts whereby to permit the towers to be quickly set up for use and knocked down compactly stored for transportation or shipment. The upper ends of the corner bars of each tower or pedestal are connected by a reinforcing

frame 15, also preferably formed of angle-iron, the outer flanges of the frame bearing against the outer faces of the corner pieces 12 and the inner flanges 16 of the frame 5 extending partially over the upper ends of the towers to form a support for a cap piece or platform 17.

Fitting between the flanges of the corner pieces 12 are removable side pieces or panels 10 18 which may be formed of compo board or other light material and which serve to enclose three sides of the pedestal, as best shown in Fig. 5 of the drawings. The panels 18 are provided with openings to permit 15 the passage of the adjacent bolts 13 so that said bolts 13 not only serve to hold the corner bars in assembled position but also serve to retain the panels in position on the pedestal. The exterior faces of the 20 panels may be painted or otherwise ornamented to present a neat attractive appearance, but it is preferred to cover the outer faces of said panels with strips of satin or like material upon which may be em- 25 broided or otherwise represented an initial or other suitable design.

The towers or pedestals 10 form a support for the tight rope or wire 11 and, as illustrated in Figure 1 of the drawings, one 30 end of the supporting wire 11 is extended through a slot 19 formed in one of the platforms 17, while the other end of the wire extends through aligned slots 20 formed in the depending flanges of the top frame of 35 the other pedestal. The opposite ends of the supporting wire 11 are provided with hooks to permit the attachment of a block and tackle 21 which latter extends to a floor plate or other suitable anchor so that by 40 adjusting the block and tackle the tension of the supporting wire 11 may be regulated at will.

That portion of the supporting wire 11 between the towers or pedestals is preferably 45 enclosed in a sleeve or wrapped with a strip of cotton friction tape 22 and surrounding the tape 22 is a layer of rubber tape, indicated at 23. Coiled around the supporting wire 11 and bearing against 50 the rubber tape 23 are spaced conductors 24 and 25, preferably formed of relatively soft iron wire with their terminals spaced apart at 26 and insulated from each other and from the wire so as to form an open 55 circuit. Interposed between the convolutions of the conductors 24 and 25 and bearing against the rubber tape 23 are strips of asbestos tape 27 and extending over the asbestos 27 and also over the con- 60 ductors 24 and 25 is an outer covering of rubber, indicated at 28. The outer rubber covering 28 is scraped or otherwise removed from the conductors 24 and 25, as indicated at 29, so as to expose said conductors 65 and thus permit the circuit to be opened

and closed in the manner hereinafter referred to. The outer covering 28, therefore, not only serves to retain the coils of the conductors 24 and 25 in proper spaced relation but also serves to prevent 70 displacement of the asbestos tape. The convolutions or coils of the conductors 24 and 25 are preferably spaced a sufficient distance apart to permit the circuit to be 75 intermittently closed by suitable contact plates 30 mounted on the soles 31 of either or both of the shoes of the performer. These contact plates are shown in Fig. 3 80 of the drawings and may extend either transversely of the shoe or shoes or longitudinally thereof, as shown in Fig. 8 of 85 the drawings. The soles of the shoes may be covered with rubber or asbestos and, if desired, each shoe may be provided with an insole of asbestos.

The opposite ends of the conductors 24 and 25 are anchored in any suitable manner 85 to the supporting wire 11 as by strips of tape of insulating material 32 so as to prevent displacement of the conductors and 90 prevent them from coming in contact with each other. As before stated, the conductors 24 and 25 are separated at a point adjacent one of the pedestals, while the 95 said conductors at a point adjacent the other pedestal are operatively connected with a socket or plug, indicated at 33. Leading from the socket 33 is a conductor 34 terminating in a wall plug 35 so that by in- 100 serting the plug 35 in a wall switch or connecting said plug to a battery or other source of electrical energy current will flow through the conductors 24 and 25 when the 105 latter are bridged by the contact plates on the shoe or shoes of the performer in the act of walking or otherwise performing on 110 said wire. Connected in circuit with the plug 33 are a plurality of spark or induction coils 36 and arranged near said coils is a rheostat 37 so that by operating the 115 rheostat the resistance in the line may be increased or decreased at will and the length or intensity of the spark or flash governed accordingly. The coils 36 are included in the circuit for the purpose of in- 120 creasing the intensity of the sparks and thereby produce visible disruptive electrical flashes and cause the performer to have the appearance of walking on a live wire.

The cap piece or platform 17 of one of the 120 towers is hollow and preferably formed of upper and lower sections 38 between which is interposed a metal grating 39, as best shown in Fig. 4 of the drawings, the sections being 125 united so as to clamp the grating against accidental displacement by bolts or similar fastening devices 40. The grating 39 is substantially rectangular in shape and secured in any suitable manner to the outer edges of 130 the bars forming the grating are strips of

chiffon, muslin or other light fabric 41 adapted to be distended or forced upwardly under the action of a blast from a fan 42 for the purpose of simulating flames. The fan 42 is operated by a motor 43 which is connected in multiple with the conductor leading to the plug 35 and is also connected with a Mazda or other light, indicated at 44. The motor 43 and incandescent lamp 44 are supported on suitable brackets 45 extending within the adjacent pedestal or tower and as said tower is enclosed on three sides by the panels 18 the lamp and fan will be hidden from view. The lamp 44 will be provided with suitable color slides (not shown) for the purpose of throwing the desired light on the waving fabric strips 41 and thus cause said strips of fabric to simulate tongues of flames. The rear of the pedestal containing the fan is preferably left open so as to permit the entrance of an operator for the purpose of directing the rays of light from the lamp onto the strips or fabric to produce the desired effect.

A ladder 45 is also preferably arranged at the rear of the pedestal containing the light to permit the performer to conveniently reach the supporting wire 11 and also to permit the performer to gradually descend at the rear of the tower or pedestal as the flames produced by the action of the light on the fabric strips ascend and thereby produce an impression in the mind of the audience that the performer is being entirely consumed by the flames. The wire grating 39 will be of sufficient strength to support the weight of the performer so that after the performance on the supporting wire has been completed the artist may stand on the grating while the imitation flames are being projected upwardly under the influence of the blast of air from the fan. It will, of course, be understood that the motor 43 and light 44 will be provided with suitable switches (not shown) so that said parts will not be affected during the performance of the act on the tight rope or wire, it being the purpose of the invention to utilize the flame effect as the "grand finale" of the performance.

The cap pieces or platform 17 preferably project laterally a short distance beyond the adjacent side faces of the pedestals to form overhanging portions from which may be suspended a strip of fringe or the like.

If desired one or more fuses (not shown) may be inserted in the circuit in order to protect the performer against possible injury in case the wires of the supply circuit should become too highly charged, either through being crossed with power wires or by electrical storms. In operation the performer walks, dances or otherwise performs upon the wire 11 in the usual manner with the result that whenever the circuit is closed or bridged between the conductors 24 and 25,

because of engagement of the shoe carrying contacts with such conductors, sparks or flashes will fly from either or both feet of the performer and thus produce a very attractive scenic effect. After the aerial act on the main wire is completed, the performer stands on the grating 39 and the operator or attendant, in the adjacent tower, turns on the fan switch to project the fabric strips upwardly and at the same time manipulates the slides across the light so as to direct the desired rays of light onto the strips to simulate tongues of flames. As the flames ascend the operator gradually descends on the ladder 45 at the rear of the pedestal so that to all appearances the operator is consumed by the action of the flames.

It will, of course, be understood that the supporting towers or pedestals may be made in any desired size and shape and that the main supporting wire and electrical conductors carried thereby may be anchored in any other suitable manner without departing from the spirit of the invention.

It will also be understood that while the contacts are shown and will preferably be used on the shoe or shoes of the performer, said contacts may, if desired, be fastened to a glove or other hand covering to enable the performer to walk with his hands on the wire and produce intermittent electrical flashes or the supporting wire with the conductors thereon may be made relatively thick and used as a climbing pole, horizontal bar or trapeze bar for producing electrical flashes or sparks when the contacts are on the gloves and the artist is performing different kinds of aerial acts.

Having thus described the invention, what is claimed as new is:

1. In theatrical appliances, a supporting wire, insulating material covering a portion of the wire, spaced conductors wound around the wire, insulating material interposed between the conductors, other insulating material extending over the conductors and having portions thereof cut away to expose said conductors, the conductors being spaced apart at one end of the wire to form an open circuit, and an energized circuit operatively connected with the conductors at the opposite end of the wire and adapted to be closed when the conductors are bridged.

2. In theatrical appliances, a supporting wire friction tape surrounding a portion of the wire, rubber tape bearing against the friction tape, spaced conductors surrounding the wire and bearing against the rubber tape, strips of asbestos interposed between adjacent conductors, a strip of rubber tape bearing against the asbestos and extending over the conductors, a portion of the rubber tape cut away to expose said conductors, said conductors being operatively connected with a source of electrical energy to produce

an open circuit, and a contact carried by the shoe of the performer and adapted to bridge the conductors for closing the circuit and producing a spark.

5 3. In theatrical appliances, hollow spaced pedestals forming platforms and providing a concealing means for theatrical paraphernalia, a cable tensioned across said pedestals to form a bridge for a performer traveling  
10 therebetween, an energized circuit carried by said cable between the pedestals whereby danger of short circuit on the pedestals is eliminated, and performer carried contact means for bridging the circuit at different  
15 points therealong to produce an electrical display.

4. In theatrical appliances, spaced pedestals, a cable tensioned across said pedestals to form a bridge for a performer  
20 traveling therebetween, an energized circuit including a covering on said cable and having contacts located between the pedestals whereby danger of short circuit on the pedestals is eliminated, and performer carried

contact means for bridging the previously 25 mentioned contacts to provide an electrical display.

5. In theatrical appliances, spaced pedestals, a cable anchored across said pedestals, a current-carrying circuit supported by said  
30 cable and having exposed contacts terminating short of the pedestals, and performer-carried contact means for bridging the exposed circuit contacts to provide an electrical display. 35

6. In theatrical appliances, spaced pedestals, a cable anchored across said pedestals to form a bridge for a performer traveling  
40 therebetween, a high tension circuit including contact members carried by said cable between the pedestals whereby danger of short circuit on the pedestals is eliminated, and performer-carried contact means for bridging said contact members to provide an  
45 electrical display.

In testimony whereof I affix my signature.

EDNA H. ACKER [L. s.]