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S. ALSETH ET AL

1,755,043

COMBINED ANTENNA SELECTOR AND SAFETY SWITCH

Filed Oct. 22, 1928

Fig. 1.

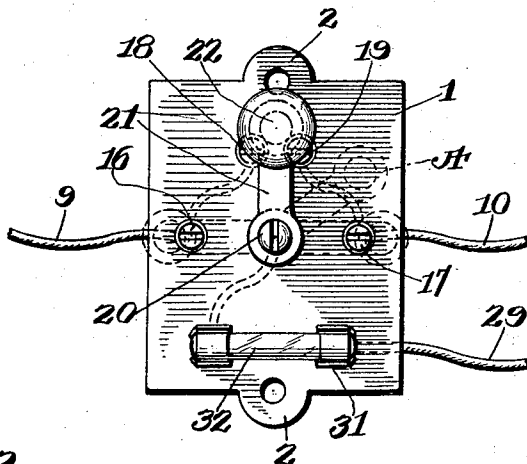


Fig. 2.

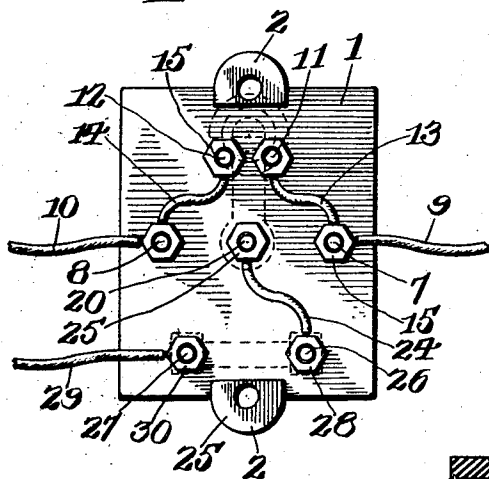


Fig. 3.

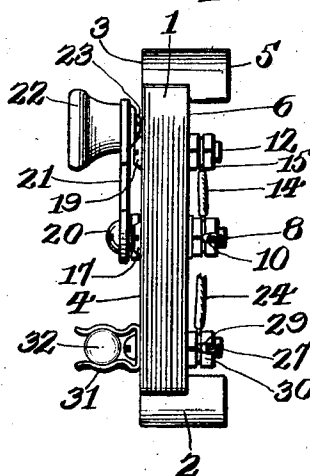
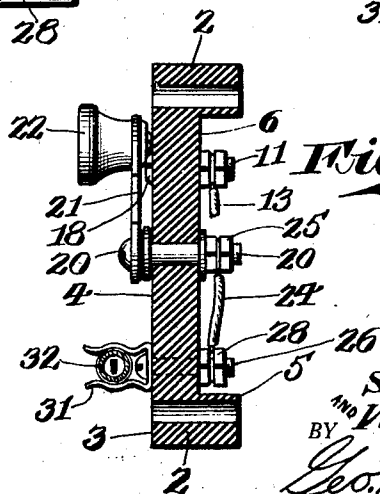


Fig. 4.



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COMBINED ANTENNA SELECTOR AND SAFETY SWITCH

Application filed October 22, 1928. Serial No. 314,192.

This invention relates to a combined antenna selector and safety switch and has for its primary object to provide, in a manner as hereinafter set forth, a device which is adapted for connection with a pair of right angularly disposed antennæ, whereby such antennæ may be selectively connected with a radio receiving set, thereby providing for the selection of that antenna best adapted to pick up the desired signals from any particular sending set, in accordance with the direction of the sending set with respect to the receiving set.

A further object of the invention is to provide a device as aforesaid, whereby a plurality of angularly disposed antennæ may be selectively connected with a radio receiving set, whereby, if desired, such antennæ may be concurrently connected with a receiving set when the air is comparatively free from interference, in order to increase the volume of the receiving set.

A further object of the invention is to provide a device as aforesaid, including as a part thereof, a circuit fuse by means of which the circuit leading from the antenna to the receiving set will be opened should the antenna be struck by lightning.

A further object of the invention is to provide a combined antenna selector and safety switch including a circuit fuse as aforesaid, in which that part of the circuit between the antenna and fuse may be opened when the set is not in use, thereby protecting the fuse during such period of non-use of the set.

With the foregoing and other objects in view the invention consists in the novel construction, combination and arrangement of parts as hereinafter more particularly described and illustrated in the accompanying drawings, wherein is shown the preferred embodiment of the invention, but it is to be understood that changes, modifications and variations may be resorted to which fall within the scope of the invention as claimed.

In the accompanying drawings in which like numerals are employed to designate like parts throughout the several views:—

Figure 1 is a top plan of a combined an-

tenna selector and safety switch constructed in accordance with this invention.

Figure 2 is a bottom plan thereof.

Figure 3 is a side elevation of the switch disposed in a vertical position.

Figure 4 is a central vertical section of the embodiment shown in Figure 1.

Referring to the drawings in detail, the numeral 1 designates a base which may be formed of any suitable insulating material, and which is provided on opposite sides with apertured bosses 2 for the reception of suitable holdfast devices, not shown, for securing the base in position. The bosses 2 are of elongated formation and each has one end 3 flush with the forward face 4 of the base 1 and its opposite end 5 projecting a substantial distance beyond the rear face 6 of the base 1.

Extending through the base 1 is a pair of binding posts 7 and 8 which are disposed in spaced relation and which are respectively spaced from the side edges of the base 1. Connected to the posts 7 and 8 respectively is a pair of lead-in wires 9 and 10 which are respectively adapted for connection with a pair of antennæ, not shown, and designed to be disposed in angular relation.

Extending through the base 1 and spaced from one end edge thereof, is a pair of spaced, adjacent binding posts 11 and 12 which respectively are connected with the binding posts 7, 8 by means of a pair of wires 13 and 14. The wires 9, 10, 13 and 14 are secured to the binding posts by means of suitable nuts 15 and the binding posts 7, 8, 11 and 12 are respectively formed with contacts 16, 17, 18 and 19 which project from the forward face 4 of the base 1.

Pivotaly connected to the base 1 by means of a suitable screw 20, is a switch arm 21, which is provided at its free end with a suitable knob 22 for the ready manipulation thereof. The pivoted end of the switch arm 21 is located centrally of the base 1 and the contacts 16, 17, 18 and 19 are disposed concentrically about said pivoted end. The free end of the switch arm 21, on the opposite face thereof from the knob 22, is provided with a contact 23, which, upon the rotation of the switch

arm 21 is adapted for selective engagement with the contacts 16, 17, 18 and 19. The screw 20 extends through the base 1 and provides a binding post to which is connected one end of a wire 24, the latter being held in position by means of a suitable nut 25.

Extending through the base 1, adjacent the end edge thereof opposite the binding posts 11, 12 is a pair of spaced binding posts 26 and 27. The binding post 26 has one end of the wire 24 connected therewith and held in position by a suitable nut 28 and the binding post 27 has connected therewith a wire 29 which is adapted for connection with a radio receiving set, not shown. The wire 29 is held in position on the binding post 27 by means of a suitable nut 30.

Secured to each of the binding posts 26 and 27 and projecting from the forward face 4 of the base 1 is a spring clip 31, the clips being connected together by means of a fuse 32 to provide a circuit therebetween.

When the switch arm 21 is positioned with the contact 23 thereof in engagement with the contact 16, a circuit is provided from the antenna with which the lead-in wire 9 is connected, through the binding post 7, switch arm 21, wire 24, binding post 26 and clip 31 therefor, fuse 32 and binding post 27 and clip therefor to the wire 29 leading to the receiving set. When the switch arm 21 is positioned with the contact 23 in engagement with the contact 17, a circuit is provided between the antenna with which the lead-in wire 10 is connected and the wire 29. When the switch arm 21 is positioned with the contact 23 in engagement with both contacts 18 and 19 as illustrated in Figure 1, a circuit is provided between both antennae with which the lead-in wires 9 and 10 are connected and the wire 29.

Each of the circuits aforesaid includes as a part thereof the fuse 32 which is adapted to burn out should a current of dangerous proportions, such as might be caused by lightning striking the antenna, be directed through circuits. When the receiving set is not in use, the switch arm 21 may be turned to the position indicated by dotted lines and designated A in Figure 1, thereby preventing any current from passing the binding posts 7, 8, 11 and 12 and protecting the fuse 32 from being burned out needlessly. The ends 5 of the bosses 2 project beyond the ends of the binding posts, thereby insulating such binding posts and preventing any current from passing therethrough to any foreign object should the base 1 be positioned on some object which is a conductor.

It is to be understood that the form of the invention herewith shown and described is to be taken as the preferred example of the same and that various changes in the details of construction may be resorted to without de-

parting from the spirit of the invention or the scope of the appended claim.

What we claim is:

A combined antenna selector and safety switch comprising, a base, a pair of remotely spaced binding posts adapted for connection with angularly disposed antennae, a pair of spaced, adjacent binding posts, means to provide circuits between the respective posts of one pair and the respective posts of the other pair, a contact for each post, a centrally disposed binding post spaced an equal distance from said pairs of binding posts, a terminal carried by the base and adapted for connection with a receiving set, means to provide a circuit between said terminal and the centrally disposed binding post, and a rotary switch arm pivoted on said centrally disposed binding post for selective engagement with each of the contacts of said remotely spaced binding posts and with the contacts of said adjacent binding posts concurrently for selectively completing a circuit between the receiving set and a selected antenna and between said means providing a circuit between the terminal and centrally disposed binding post including a fuse for protecting the receiving set when in active use, said switch arm being positionable out of connection with all of the contacts of said binding posts simultaneously to protect the fuse when the receiving set is inactive.

In testimony whereof, we affix our signatures hereto.

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