Jan. 2, 1923. 1,440,419

D. STITT.
TROLLEY WIRE GUARD.
FILED MAY 19, 1922.

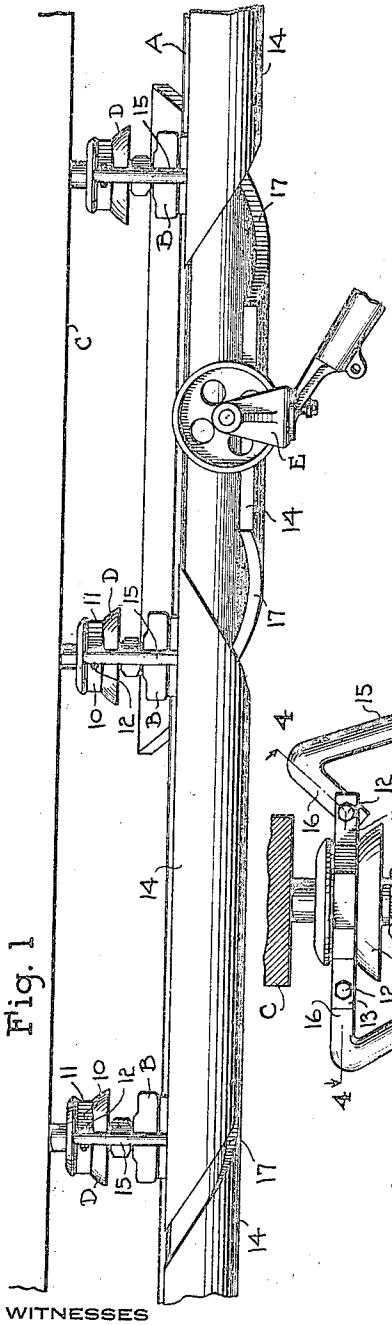

Fig. 1

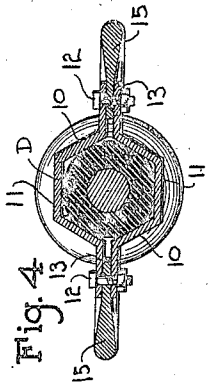

Fig. 4

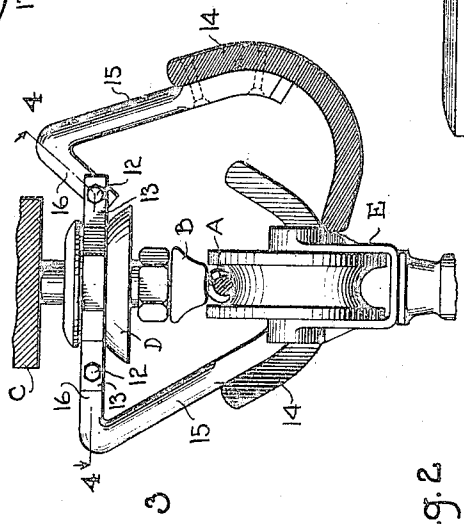

Fig. 3

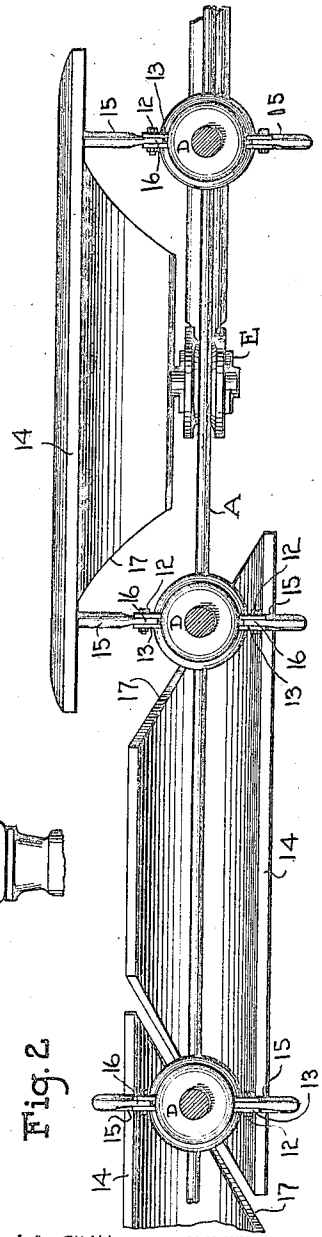

Fig. 2

WITNESSES
Frank B. Cook

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Patented Jan. 2, 1923. 1,440,419

UNITED STATES PATENT OFFICE.

DAVID STITT, OF MORGANTOWN, WEST VIRGINIA, ASSIGNOR OF ONE-HALF TO JAMES SNEDDON, OF MORGANTOWN, WEST VIRGINIA.

TROLLEY-WIRE GUARD.

Application filed May 19, 1922. Serial No. 562,177.

To all whom it may concern:

Be it known that I, DAVID STITT, a citizen of the United States, residing at Morgantown, in the county of Monongalia and State of West Virginia, have invented a new and useful Improvement in Trolley-Wire Guards, of which the following is a specification.

This invention relates to safety devices and has for its object the provision of a novel guard for trolley wires in mines and other places which will operate to prevent persons or animals from coming in contact with the trolley wire.

It is well known that miners and also animals working in mines and similar places are electrocuted by accidentally touching the trolley wire which supplies current to the mining locomotives, and this danger is always present and aggravated by the fact that the trolley wire is very low. Some States have recognized the gravity of this condition and have enacted laws requiring that some form of protection be furnished. It is with these facts in view that I have designed the present device.

An important and more specific object is the provision of a guard which normally extends below the trolley wire to prevent a workman from coming in contact with the wire itself, the construction of the guard being such that it will automatically swing out of the way to permit passage of the trolley pole and head and subsequently return by gravity to normal position.

Another object is the provision of a guard of this character which is supported from the ordinary trolley hangers, an advantageous feature of this arrangement being that the guard may be manufactured and sold as a complete and separate entity adapted for attachment to the existing structure.

To the attainment of the foregoing and other objects and advantages, my invention consists in the details of construction and arrangement to be hereinafter more fully described and claimed, and illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of my device applied to a trolley line, the figure showing one of the guard sections as swung to permit passage of the trolley pole and head;

Figure 2 is a plan view of the structure shown in Figure 1;

Figure 3 is a cross sectional view showing the mounting of the guards; and

Figure 4 is a detail section on the line 4—4 of Figure 3.

Referring more particularly to the drawings, the letter A designates a trolley wire suspended from the ordinary hangers B which depend from a stationary structure C. Mounted on the hangers are the usual insulators D.

In carrying out my invention I provide a bracket 10 mounted upon each hanger, and formed preferably of similar clamping sections 11, embracingly engaging the insulator D in the groove thereof, and clamped together by bolts 12 passing through lateral extensions 13.

The guard proper preferably consists of a plurality of substantially U-shaped sections 14, which are preferably curved transversely as shown, and which may be constructed of wood or fiber or other suitable material. Each section 14 has secured thereto at opposite ends, a pair of arms 15, which have their upper ends 16 extended at an acute angle and pivoted on the bolts 12 of adjacent brackets 10, these ends 16 being disposed between the extensions 13. Each section 14 is thus supported from two hangers, one at each end, and each hanger serves to support the adjacent ends of two successive guard sections, it being noted that the successive sections are arranged with their supporting arms 15 at opposite sides of the trolley.

In order to provide for automatic movement of the guard sections into non-obstructing position to permit the trolley head E to pass along the wire, I form the sections 14 with inclined ends 17, which when engaged by the trolley head, will cause a lateral wedging action resulting in swinging of the sections laterally away from their normal position below the trolley wire. It is to be noted that the ends of each section are inclined in opposite directions, so as to permit the alternate sections to have an interfitting relation which will leave no part of the trolley wire exposed.

Ordinarily all the sections hang in a line below the trolley wire, so that a person or animal will strike the guard sections instead of the trolley wire itself, and be thus protected against electrocution. The guard

does not in any way interfere with the passage of the trolley, as the sections automatically swing out of the way, one after another successively when the trolley head engages against the inclined ends 17. Figures 1, 2 and 3 show the normal position of parts, and also show one section as swung out of the way to permit the trolley head to pass by.

From the foregoing description and a study of the drawings, it will be apparent that I have thus provided a simply constructed and consequently inexpensive guard device, which may be manufactured and sold as a separate entity adapted to be mounted upon already existing trolley hangers without necessitating any alterations in their structure, the operation of installing the device being simple and being capable of accomplishment without employing special tools.

While I have shown and described one embodiment of the invention which will operate with great efficiency, it is to be understood that the specific details are merely an exemplification of the possibilities, and that I reserve the right to make such changes in the form, construction and arrangement of parts as will not be a departure from the salient features of the invention or the scope of the subjoined claims.

What is claimed is:—

1. A trolley guard comprising a plurality of guard sections pivotally mounted and depending below a trolley wire gravitationally, the ends of the sections having means for exerting a lateral wedging action to swing the sections out of obstructing relation when said ends are engaged by the trolley head.

2. In a trolley wire guard, the combination with an overhead conductor supported by hangers, of a plurality of guard sections pivotally supported from said hangers and depending gravitationally below the conductor to form a protection therefor, the ends of said sections having inclined parts engageable by the trolley head whereby to swing the sections out of obstructing relation to the passage thereof along the trolley.

3. A trolley wire guard, the combination with the trolley and its supporting hangers, of brackets detachably mounted upon the hangers, guard sections pivotally suspended from said brackets and normally extending below the trolley wire to form a protector therefor, the ends of said sections being inclined for exerting a lateral cam action for swinging the sections out of obstructing relation when engaged by the trolley head.

4. A guard for trolley wires comprising brackets secured upon the hangers of the trolley wire, a plurality of guard sections suspended from said brackets and normally disposed immediately below the trolley wire, the ends of the sections being diagonal with respect to the trolley wire, whereby to exert a lateral pressure for swinging the sections when engaged by the trolley head.

5. A trolley guard, the combination with a trolley wire and its hangers, of brackets detachably clamped upon said hangers, arms pivoted upon said brackets and suspended therefrom, and U-shaped guard sections carried by said arms and having means for exerting a wedging action when engaged by the trolley head to effect lateral swinging of the arms to bring the sections into non-obstructing relation to the wire.

6. A trolley guard, the combination with the trolley and its supporting hangers, of brackets detachably mounted upon the hangers, U-shaped guard sections pivotally suspended from said brackets and normally extending below the trolley wire to form a protector therefor, the ends of said sections being inclined for exerting a lateral wedging action for swinging the sections out of obstructing relation when engaged by the trolley head, the successive sections having their confronting inclined ends parallel and slightly spaced apart.

7. A trolley guard, the combination with the trolley and its supporting hangers, of brackets mounted upon the hangers, downwardly extending arms pivotally mounted on the brackets and carrying guard sections having means engageable by the trolley head, the arms of the successive sections extending from opposite sides of the brackets, whereby successive sections will be swung in opposite directions during the passage of the trolley pole head along the trolley.

8. A guard for trolley wires, comprising brackets adapted to be clamped upon the hangers for the trolley wire, arms pivoted upon said brackets, and guard sections carried by said arms and normally depending below the trolley wire, the ends of the sections having means engaged by the trolley head during the passage thereof along the trolley wire and being formed to exert lateral pressure resulting in the swinging of the sections into non-obstructing relation during such passage.

9. A guard for trolley wires, comprising sectional brackets adapted to be clamped upon the trolley hangers in embracing relation thereto, and guard sections carrying arms pivoted between the sections of the brackets and normally depending below the trolley wire, the ends of the sections being diagonal for effecting lateral swinging of the sections when said ends are engaged by the trolley head, the successive sections being arranged to swing in opposite directions.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

DAVID STITT.