

No. 809,601.

PATENTED JAN. 9, 1906.

E. L. BAKER.
TROLLEY WIRE CLAMP.
APPLICATION FILED FEB. 24, 1905.

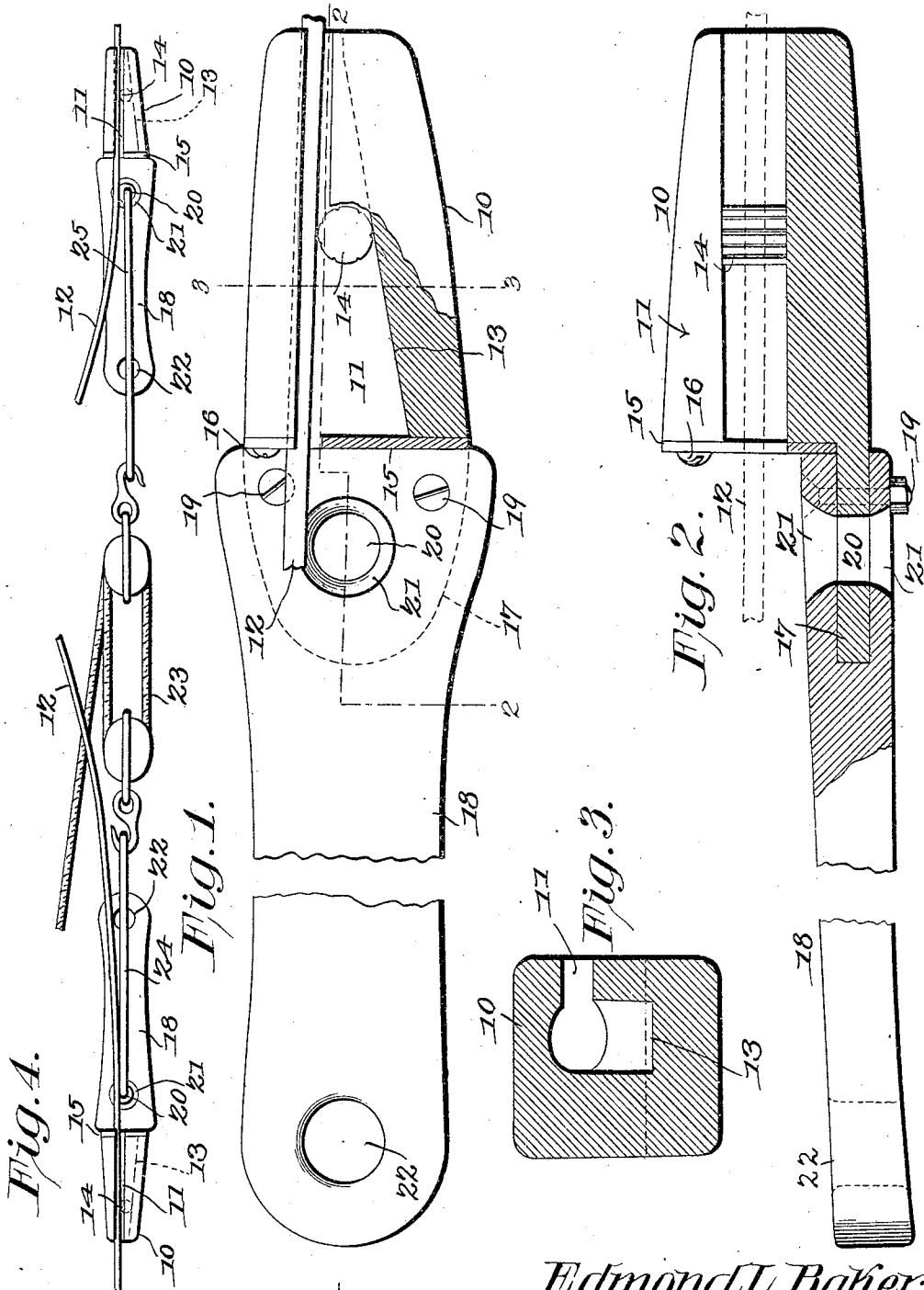


Fig. 4.
Witnesses
E. J. Stewart
C. N. Woodward

Edmond L. Baker
Inventor
by *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

EDMOND L. BAKER, OF ROANOKE, VIRGINIA.

TROLLEY-WIRE CLAMP.

No. 809,601.

Specification of Letters Patent.

Patented Jan. 9, 1906.

Application filed February 24, 1905. Serial No. 247,183.

To all whom it may concern:

Be it known that I, EDMOND L. BAKER, a citizen of the United States, residing at Roanoke city, in the county of Roanoke and State of Virginia, have invented a new and useful Trolley-Wire Clamp, of which the following is a specification.

This invention relates to safety devices for handling broken trolley-wires, and has for its object to provide a simply-constructed and efficient clamping device whereby the broken ends of an electrically-charged trolley-wire or similar electric conductor may be grasped without danger to the operator.

Another object of the invention is to provide a clamping device whereby the broken ends of a trolley-wire or similar electrically-charged conductor may be grasped and strained into welding position without danger to the operator.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in the shape, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of its advantages.

In the drawings thus employed, Figure 1 is a plan view, partially in section, of one of the improved clamping devices. Fig. 2 is a side elevation in section on the line 2 2 of Fig. 1. Fig. 3 is a transverse section on the line 3 3 of Fig. 1. Fig. 4 is a plan view, on a reduced scale, illustrating one means of using the improved device.

In the operation of overhead trolley-lines great danger exists of fatal injury to operators in attempting to repair the heavily-charged conductor-wires when broken, and to enable such broken wires to be handled and repaired without danger to the operatives is the object of the present invention, which consists of a suitably-constructed clamping device for firmly gripping the broken con-

ductor-wire and provided with a handle of non-conducting material to protect the operatives from contact with the highly-charged conductor while handling and operating the gripping device.

The improved device comprises a head member 10, having a longitudinal channel 11 to receive the trolley-wire, (represented at 12,) the channel being inclined on one side, as at 13, and with a gripping-roller 14 supported therein for bearing against the trolley-wire. The straight side of the channel will be concaved transversely to form a "bed" for the trolley-wire, and the inclined side of the channel will overhang to prevent the displacement of the gripping-roller laterally, and the larger end of the channel will be provided with a partial closure-plate 15, secured in position, as by screws 16. By this means the gripping-roller, while free to move longitudinally within the channel, cannot be displaced either laterally or longitudinally. By this simple means it is obvious that the head member 10 may be engaged with the trolley-wire by its channel 11 and firmly "gripped" thereon when strain is applied to the head in the direction of the arrow, the gripping-roller automatically adapting itself to the size of the wire. The roller 14 is preferably provided with spaced longitudinal grooves to increase the "gripping" force. The head member 10 is formed with a lug 17, projecting from its larger end and fitting into a socket in a handle 18, of wood or other non-conducting material, the non-conductive handle secured to the lug, as by bolts or screws 19. The lug 17 is provided with a transverse aperture 20, registering with similar transverse apertures 21 in the handle member 18, the handle member also having an aperture 22 near its free end. The lug 17 and handle member 22 are inclined to the longitudinal plane of the head member 10, so that the free end of the handle will be spaced away from the line of the channel 11 and the trolley-wire held therein, so that the operator can grasp the handle without danger of contact with the trolley-wire. A drag-rope will generally be connected to the aperture 22 in the handle member to enable the broken wire to be elevated to any desired point.

When the broken ends of the conductor-wire are to be drawn together for welding, two of the improved devices will be employed and clamped to the broken wire at a

suitable distance from the ends, and a straining means, such as a "block and tackle" 23, connected, as by links 24 25, to the apertures 20 in the lugs 17. By this simple means the operator can readily apply the device to the conductor-wire without coming in contact with any portion except the non-conducting handle 18 and be thereby effectually protected from injury, as will be obvious.

10 The head member 10 will preferably be of malleable iron or steel, and the grip-roller will be of hardened steel.

It will thus be obvious that a simply-constructed, inexpensive, strong, and durable 15 "pick-up" device is produced which may be carried upon trolley-cars ready for instant use when required and may be easily operated and will effectually protect the operator from injury from the highly-charged conductor-wires while using the same.

20 Having thus described the invention, what is claimed is—

1. A wire-clamp having a head comprising a single casting provided with a longitudinal 25 channel which is tapered forwardly and intersects opposite ends of the head, one side of the head being provided with a longitudinal slot intersecting the channel throughout its length and forming an entrance-opening 30 thereinto, a plate secured to the rear end of the head to close the channel and provided with a slot intersecting one edge of the plate and communicating with the entrance-slot of the channel, and a loose clamping-roller working in the channel.

2. A wire-clamp comprising a head and a handle, the head consisting of a single casting having a longitudinal channel intersecting opposite ends of the head and tapered toward 40 the outer end thereof, one side of the head being provided with a longitudinal slot intersecting the ends of the head and one side of the channel throughout its length, the other side of the head being provided with a longitudinal extension having a handle connected thereto and offset at one side of the channel, a plate secured to the rear end of the head and closing the channel and provided with a slot communicating with the channel and the en-

trance-opening thereof, and a clamping-roller 50 working loosely within the channel.

3. In a clamping device, a rigid head member having a longitudinal channel with walls diverging rearwardly and with one wall provided with a longitudinal concavity and a 55 constricted longitudinal opening, a cylindrical member mounted loosely in said cavity and in opposed relation to the groove and a plate covering the rearward end of the cavity and provided with an opening registering 60 with the groove.

4. In a clamping device, a head member having a rearwardly-projecting lug and with a longitudinal cavity with the walls diverging toward the rear end, a contracted channel communicating with said cavity at one 65 side through one wall of the head member, a stop-plate detachably connected to said head member and extending over the larger end of said cavity and with a recess of less size than said larger end and coinciding with said channel, a cylindrical member operative in said cavity and retained therein by said stop-plate for bearing upon a wire inserted into said cavity through said channel and coinciding recess, a handle member of non-conductive material and provided with a socket bearing over said lug and against said stop-plate, and means for securing said handle member to said lug. 80

5. As a new article, a clamping device comprising a head member having means for detachable coupling to a conductor-wire and provided with a projecting lug with a transverse aperture through the same, and a handle member of non-conductive material and provided with a socket fitting over said lug and secured thereto and having transverse apertures in alinement with the aperture in said lug. 85

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses. 90

EDMOND L. BAKER.

Witnesses:

W. C. ALLEN,
M. D. MOSS.