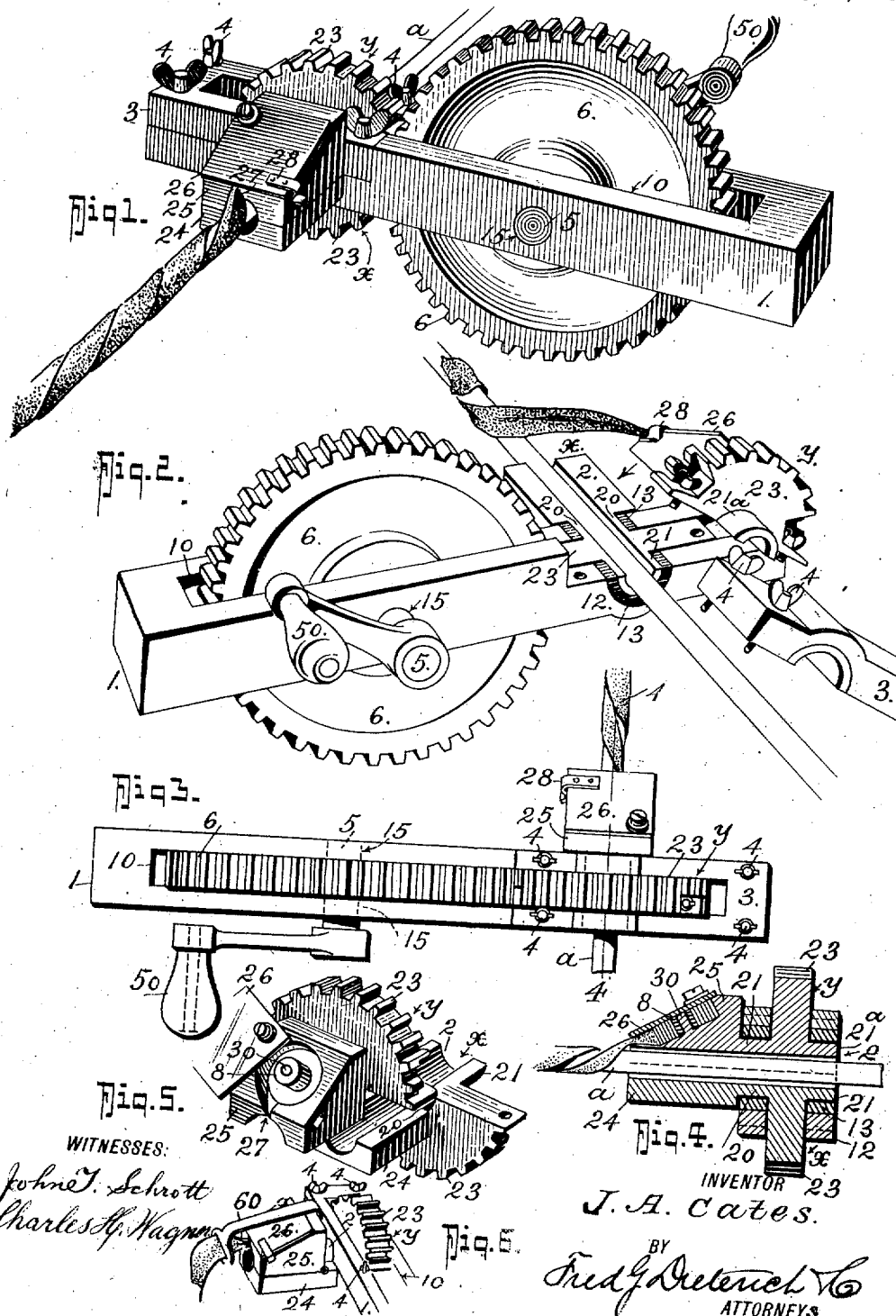


969,599.

J. A. CATES.
INSULATION APPLYING DEVICE.
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Patented Sept. 6, 1910.



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JOSEPH A. CATES, OF MASON, TEXAS.

INSULATION-APPLYING DEVICE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH A. CATES, residing at Mason, in the county of Mason and State of Texas, have invented a new and

5 Improved Insulation - Applying Device, of which the following is a specification.

My invention, which relates generally to means for insulating electric wires, more particularly is in the nature of a tool or im-

10 plement readily carried by the lineman for insulating (re-taping) worn out or weather beaten insulated electric wires, without the necessity of cutting or replacing the worn wire portions, and without access to either

15 end of the wire.

My invention comprehends, in its generic nature, a frame having means for conveniently mounting it to embrace and slide on the wire to be retaped, having a tape or

20 winder material holding bobbin, and means that cooperate with the bobbin whereby the tape or winding material can be conveniently played from the bobbin and wound upon the insulator worn part of the wire.

In its more subordinate features my invention consists in certain details of construction and peculiar combination of parts, all of which will be hereinafter fully described, specifically pointed out in the ap-

30 pended claims and illustrated in the accompanying drawing, in which:

Figure 1, is a perspective view that shows my invention as applied upon an insulator worn electric wire. Fig. 2, is a similar view and shows how the sectional frame and tubular spindle is applied to the wire. Fig. 3, is a plan view thereof. Fig. 4, is a transverse section on the line 4-4 on Fig. 3. Fig. 5, is a detail view of the tape holder and the divided tubular spindle, the parts being separated. Fig. 6, is a detail view of a slightly modified arrangement of my invention hereinafter specifically referred to.

In its practical arrangement and in the simplest form of my invention, the same comprises a frame 1 of suitable material that has a longitudinal slot 10 which extends nearly its full length. At one end, the frame 1 is off-set to provide a fixed bearing

45 portion 12 that has transversely disposed half circle bearings 13-13 for the journal portions 20-21 of a hollow spindle 2 formed of two half sections, a lower section *x* that seats in the bearings 20-21 and an upper

50 section *y* that has its journal portions 20^a-21^a engaged by the detachable bearing

box 3, which forms a filler for the off-set part of the frame 1 to which it is secured by set screws or bolts 4-4, as clearly shown in Figs. 3 and 4, by reference to which it will

60 be also noticed the spindle half sections each have half cog gear members 23-23 that turn in the slotway of frame 1 and which also hold the spindle 2 from endwise movement in its bearings. At the other or solid end, 65 frame 1 has registering apertures 15-15 parallel with respect to the spindle 2, in which is mounted a shaft 5, one end of which has a crank handle 50. On this shaft is mounted, to turn therewith, a pinion gear 70 6 that meshes with the two part gear 23 and imparts motion to it and the spindle 2. At one end the lower spindle member is formed with a widened or head portion 24 and the like end of the other or upper spindle member is similarly widened and formed with a housing 25 normally closed by a pivoted cap plate 26. Within the housing or chamber 25 is a bobbin 8 on which the covering material, preferably tape, is wound, the said

80 bobbin being mounted on a spindle 30 in the housing, as shown. Bobbin 8 is projected at an angle of approximately forty-five degrees to the wire passage of the spindle, to provide for a straightway outfeed of the tape

85 through the slot 27 in the outer end of the housing 25, and such arrangement insures a direct transverse and flatwise winding of the tape around the wire *x* when the housing and spindle are rotated by turning the crank

90 shaft. Housing has a hinged cover plate 26 held to its closed position by a spring clip lock 28 or other suitable means.

In Fig. 6 is shown a slightly modified arrangement of my invention and in this form 95 the housing that contains the tape bobbin is hinged at the end of spindle and a slotted member 60 is fastened on the back of the housing so that the tape may be projected through the slotted member and by bending 100 the slotted member the slotted end may be held at the desired angle with relation to the wire so that a smooth and regular winding of the tape will be effected.

From the foregoing, taken in connection 105 with the drawing, the complete construction, the manner in which my invention is used and its advantages will be readily apparent. The same being of a simple character, it can be cheaply made, carried by the lineman and readily mounted on the wire to be repaired, 110 it being understood the same is held steady

on the wire and fed lengthwise thereon with one hand as the crank is operated with the other hand to rotate the housing about the wire as the tape is fed and from the bobbin through the slot in the end of the housing and wound around the wire.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:—

10 1. In an implement of the character described, a two-part spindle, mountable and slidable on an endless wire, an insulation carrier on one of the spindle parts, a frame mounted on the spindle and means on the
15 frame for rotating the spindle and the carrier to wind the insulation on the wire.

2. In an implement of the character stated, a two part spindle, an insulation carrier on one of the spindle parts, a two-
20 part frame mounted on the spindle and crank actuated means on the spindle and the frame for turning the spindle and the insulation carrier to wind the insulation on the wire.

25 3. In an implement of the character stated, a two-part spindle mountable and slidable on an endless wire, an insulation carrier hingedly mounted on one of the spindle parts, having a slotway through which
30 the insulation passes to the wire and means for turning the spindle and the carrier on the wire to wind the insulation on the said wire.

35 4. In an implement of the character stated, a two-part spindle mountable and slidable on an endless wire, an insulation

carrier hingedly mounted on one of the spindle parts, having a slotway through which the insulation passes to the wire and means for turning the spindle and the carrier on the wire to wind the insulation on the said wire, and a slotted guide at the discharge end of the carrier for directing the insulation onto the wire.

45 5. In an implement of the character stated, a two-part spindle mountable and slidable on an endless wire, said two-part spindle including a gear segment on each part, thereby forming a complete gear, said spindle having bearing portions at each side
50 of said gear, a frame having bearings to receive said bearing portions of said spindle, said frame including a removable section at said bearings, and a crank driven gear carried by said frame to mesh with said spindle
55 gear and an insulation carrier mounted on one of said spindle parts.

6. In an implement of the character stated, a two-part spindle mountable and slidable on an endless wire, a gear section
60 on each spindle part, said spindle having bearing portions at each side of said gear, a two-part frame having bearings for receiving said bearing portions and straddling said gear, and a driving gear carried by said
65 frame in mesh with said two-part gear, and an insulation carrier mounted on one of said spindle parts.

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Witnesses:

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