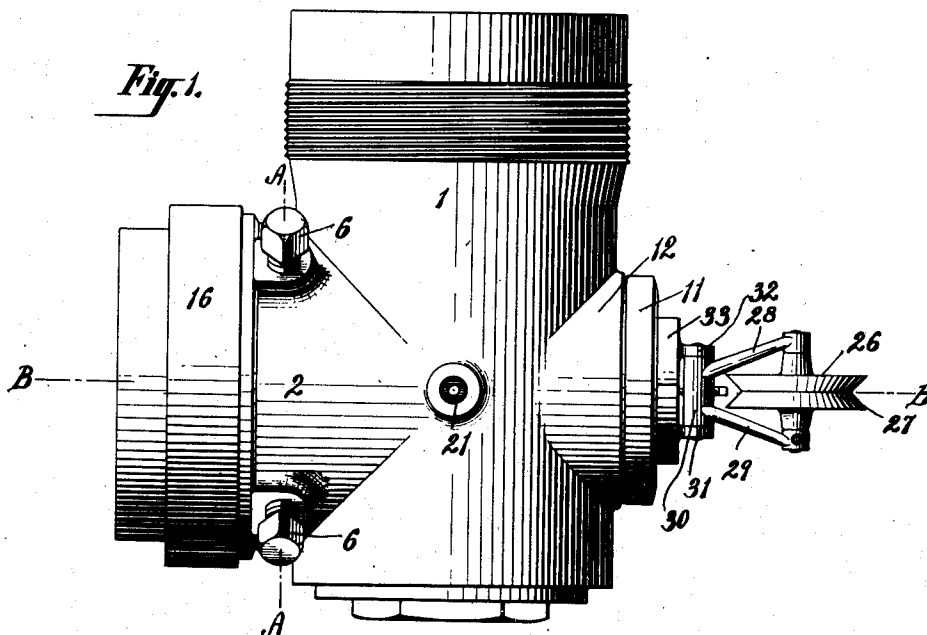
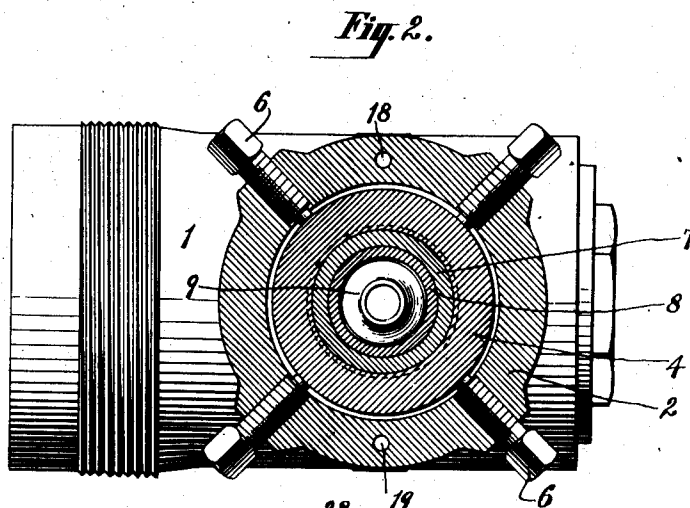


No. 893,939.

PATENTED JULY 21, 1908.

V. ROYLE.
HEAD FOR INSULATING MACHINES.
APPLICATION FILED DEC. 30, 1904.

2 SHEETS—SHEET 1.



Witnesses:
J. S. Hochberg.
Henry Thieme.



Inventor:
Vernon Royle
By Brown & Wood
his Attorneys

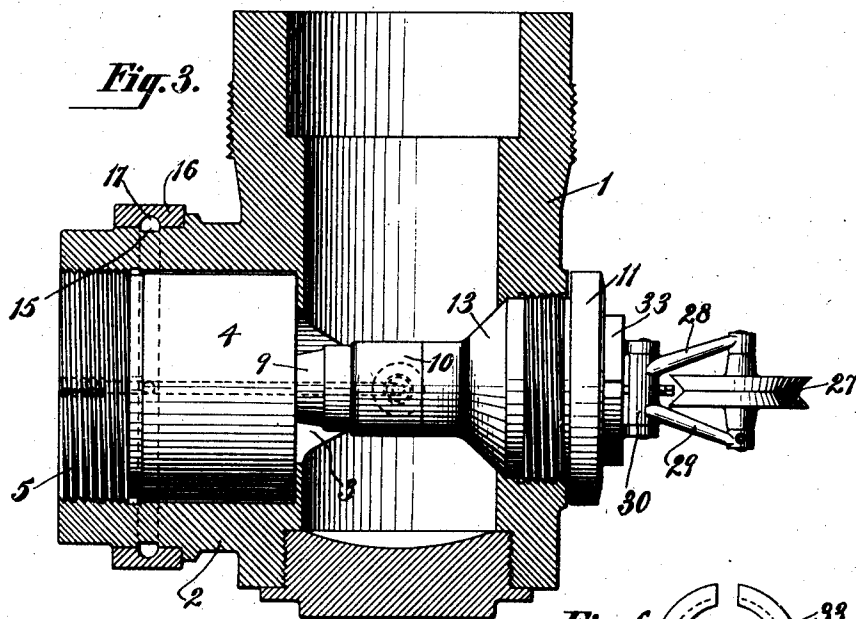
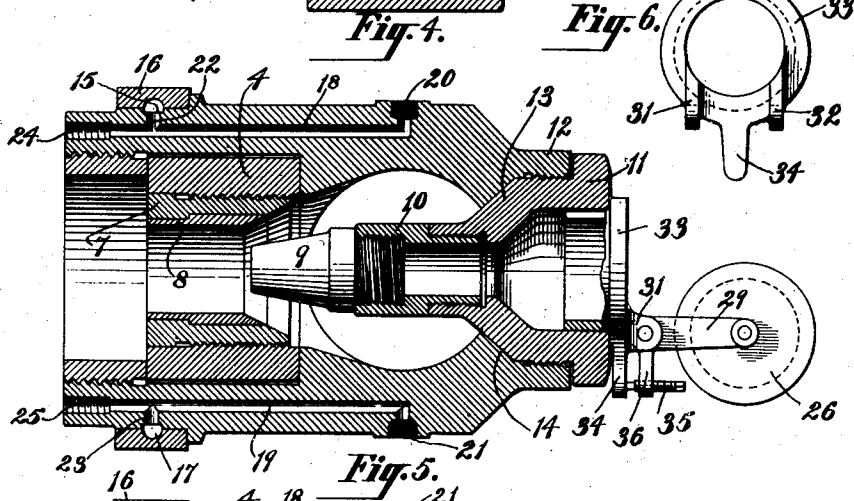
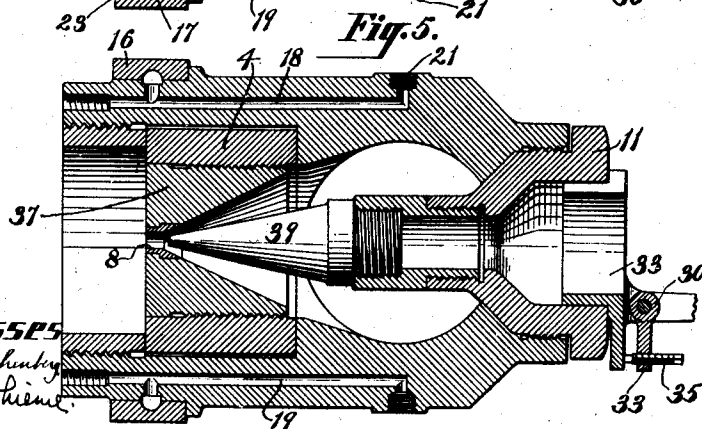
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Witnesses

J. G. Wackenberg
Henry Thiem

Inventor:

Vernon Royle
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his attorney

UNITED STATES PATENT OFFICE.

VERNON ROYLE, OF PATERSON, NEW JERSEY.

HEAD FOR INSULATING-MACHINES.

No. 893,939.

Specification of Letters Patent.

Patented July 21, 1908.

Application filed December 30, 1904. Serial No. 238,941.

To all whom it may concern:

Be it known that I, VERNON ROYLE, a citizen of the United States, and resident of Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Head for Insulating-Machines, of which the following is a specification.

My invention relates to a head for insulating machines, the object being to provide for locating the inlet and outlet pipes for the cooling medium back from the face of the head; to provide for interchanging the cores and dies to suit different sizes of wire or cable and for directing the wire or cable centrally along the interior of the core.

In the accompanying drawings, Figure 1 is a top plan view of the head, Fig. 2 is a vertical section in the plane of the line A—A of Fig. 1, Fig. 3 is a horizontal central section, Fig. 4 is a vertical section in the plane of the line B—B of Fig. 1, Fig. 5 is a similar view showing a core and die suitable for a small wire or cable, Fig. 6 is an end view in detail of the removable support for the wire guide, and Fig. 7 is a sectional view in detail of a modified form of die.

The tube into which the plastic insulating material is forced by well known or approved means, not shown, is denoted by 1 and the die chamber 2 extends at right angles to the tube 1 and may be formed integral therewith. The interior of the tube 1 is in open communication with the interior of the die chamber, the interior wall of the tube 1 being preferably tapered toward the interior of the die chamber as shown at 3. The die holder consists of a ring 4 held in position within the die chamber 2 by an annular nut 5 screwed into the chamber and pressing the holder 4 against the base of the chamber and radial screws 6 seated in the wall of the chamber and bearing against the periphery of the holder. The holder 4 carries within it the die 7 with its liner 8.

The core (Figs. 1 to 4) is denoted by 9. It is hollow and is screwed into a hollow holder 10 which in turn is screwed into a hollow support 11 seated in the wall of the tube 1 opposite the die chamber. The outer portion of the support 11 overlaps the face of the boss 12 on the tube 1 and the said support is tapered inwardly intermediate of the inner and outer ends, as shown at 13, to form a tight joint with the tapered portion 14 of its seat. The exterior face of the wall of the die chamber is provided with an annular

groove 15, which is covered by a ring 16 snugly engaged with the exterior of the chamber, the ring 16 being provided with a groove 17 on its interior which is made to register with the groove 15 in the wall of the chamber to complete a conduit extending entirely around the chamber.

At the top and bottom of the die chamber its wall is tapped lengthwise of the chamber to form conduits 18 and 19 extending from its outer end to points preferably about centrally opposite the interior of the tube 1 where the said conduits connect with screw threaded sockets 20, 21, in the wall of the tubes 1 for the attachment of inlet and outlet pipes of any well known or approved form for conducting the cooling medium to and from the head. The conduits 18 and 19 also communicate with the annular passage around the die chamber through branch passages 22, 23, tapped in the bottom of the groove 15 before the ring 16 is placed in position. The outer ends of the conduits 18 and 19 are screw threaded, as shown at 24, 25, to receive stop plugs when the cooling medium is being circulated and for removal to clean the conduits when required.

The location of the inlet and outlet sockets 20, 21, back from the die chamber, leaves the latter free from exterior obstruction and convenient for the manipulation of the insulated wire or cable passing from it, while the structure described provides for gaining access to every portion of the cooling medium conduit. To lead the wire or cable centrally to the interior of the core 9 free from kinks, I provide a guide pulley 26 having a V-shaped groove 27 in its periphery and mounted to rotate freely between the arms 28, 29, projecting from a hub 30. The hub 30 is hinged between lugs 31, 32, projecting outwardly from the end of a split ring 33 fitted to be crowded into the hollow base of the core support 11. The split ring 33 has a depending portion 34 against which an adjusting screw 35 bears, the said screw being seated in an arm 36 depending from the hub 30. By turning the screw 35 in and out, the pulley 26 is raised and lowered to adjust the wire or cable precisely along the axis of the core.

By providing different dies of the same maximum diameter but with interiors of various sizes, (see, for example, the die 37, Fig. 5, and the die 38, Fig. 7,) and cores to correspond (see the long tapered core 39, Fig. 5) with its base corresponding to the base of the

core 9, the same die holder 4 and same core holder may be used in insulating wires or cables of varying sizes and for varying the thickness of the insulating coat. A change in the thickness of the die lining (see the thick lining 40, Fig. 7) may also be resorted to to vary the relation of the interior wall of the die to the exterior wall of the core; without changing the body of the die. It is obvious that a warming medium might be circulated through the conduits instead of a cooling medium, if so desired.

What I claim is:—

1. An insulating head having a passage around its die chamber for a circulating medium, a removable ring forming a cover for said passage and conduits leading from the face of said insulating head back to said passage for the circulating medium and thence rearwardly along the wall of said chamber to suitable inlet and outlet pipes.

2. An insulating head having a passage around its die chamber for receiving a circulating medium, conduits tapped in the face of the head and extending along the wall thereof to and connecting with the said passage for the circulating medium and thence extending longitudinally back along the chamber, the said insulating head being provided with branch conduits tapped therein to connect the said longitudinal conduits with suitable inlet and outlet pipes.

3. An insulating head having a passage around its die chamber for a circulating medium, a removable ring forming a cover for said passage, conduits tapped in the face of said insulating head and extending back along its wall, the said insulating head being provided with branch conduits tapped therein to connect the said longitudinal conduits with the said passage for the circulating medium and with branch conduits tapped therein to connect the said longitudinal conduits with suitable inlet and outlet pipes.

4. The combination with the insulating head provided with a die and hollow core, of a guide pulley removably supported in the base of the hollow core and means for adjusting the pulley toward and away from the axis of the core.

5. The combination with the insulating head provided with a die and hollow core, of a guide pulley adjustably supported at the base of the core, and a screw for adjusting the pulley.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this 9th day of December 1904.

VERNON ROYLE.

Witnesses:

ELIAS BROWN KING,
HEBER ROYLE.