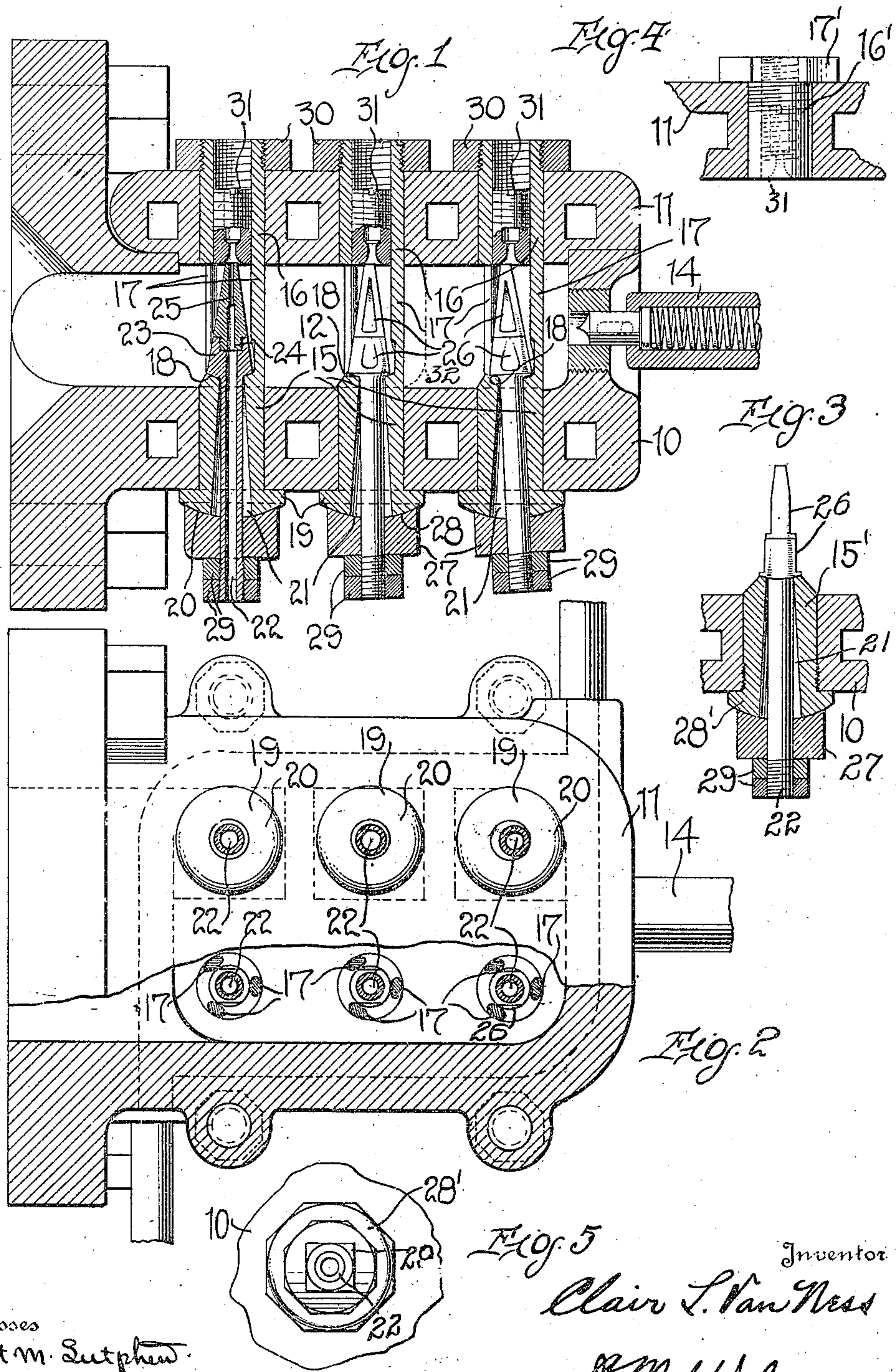


C. L. VAN NESS.
INSULATING HEAD.
APPLICATION FILED MAY 16, 1914.

1,154,674.

Patented Sept. 28, 1915.



Witnesses
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CLAIR L. VAN NESS, OF AKRON, OHIO.

INSULATING-HEAD.

1,154,674.

Specification of Letters Patent. Patented Sept. 28, 1915.

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To all whom it may concern:

Be it known that I, CLAIR L. VAN NESS, a citizen of the United States, and residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Insulating-Heads, of which the following is a specification.

This invention relates to certain new and useful improvements in insulating heads, and is an improvement upon the type of insulating head shown, described, and claimed in my Patent #1,100,002, June 16, 1914, the present invention, like the one just referred to, being preferably, though not necessarily, of the multiple form.

The present invention has for its main object to provide means in an insulating head, for adjusting the wire guider or guiders so as to compensate for the side pressure within the insulating chamber against the wire being insulated, and thereby absolutely eliminate danger of an eccentric insulating of the wire.

Another object is to provide, in an insulating head, an adjustable guider, access to which for adjustment purposes is readily had from the exterior of the head, and the adjustment of which may be easily and quickly effected.

Another object of the invention is to provide, in an insulating head, a wire guider having a detachable point or nipple, whereby different sized nipples may be used with the same guider-spindle, obviating the necessity of changing guiders for different sized wires, and effecting a considerable saving in cost.

Other objects of the invention will appear as the same is hereinafter more fully described and claimed, and in describing the invention in detail, reference will be had to the accompanying drawings illustrating preferable embodiments of my invention, it being understood that although herein illustrated as a multiple form of insulating head, I do not limit or confine myself to such construction or arrangement, as the forms of guider and die shown may be used singly in an insulating head.

In the drawings: Figure 1, is a longitudinal sectional view of an insulating head showing a preferred form of guider and die construction, the relief valve of the insulating head being partly broken away, Fig. 2, is a view of the same form of insulating head, the view being partly in elevation,

partly broken away, and partly in longitudinal section, Fig. 3, is a horizontal fragmentary view of part of an insulating head, illustrating a modified form of wire guider and mounting therefor, Fig. 4, is a similar view showing the die which is used with the form of guider shown in Fig. 3, and Fig. 5, is an end view of the guider shown in Fig. 3, the insulating head being broken away.

Insulating heads of the type here shown are known generally as "side delivery" type, that is, a type in which the material with which the wire is coated is fed to the side of the wire instead of in line with the wire, the latter type of devices being generally known as "straight delivery" devices. The insulating head here shown, like in my patent referred to, is adapted to be attached to a suitable compressor from which the material is fed into the insulating head. As the construction of the insulating head *per se*, and the relief valve therefor are fully shown and described in my patent, they will be referred to and described only generally herein.

The insulating head, like in my patent, is shown as consisting of a main member 10, and a cap-plate 11, the two members forming an insulating chamber 12, for which a relief valve 14, (fully shown and described in my prior application) is provided.

As stated, the present invention relates particularly to the wire guider, and the manner in which the same may be adjusted.

As shown in Figs. 1 and 2, the construction embodies a mounting in which both the wire guider and the die are received, such mounting comprising a guider-sleeve 15, and a die-sleeve 16, mounted respectively in the main member 10, and cap-plate 11, and connected together by tie-bars 17, spaced equi-distant, and having their inner edges rounded off so as not to interfere with the passage of the plastic material onto the wire.

The guider-sleeve is provided at its inner end with a seat 18 and at its outer end has a head 19 which abuts against the outer face of the main member 10, and has a rounded or convex outer face forming an external seat 20. This guider-sleeve 15 has its bore 21 tapering, being widest at the outer end of the sleeve, and through this tapering bore is received the hollow-spindle 22 of the wire-guider. The said spindle of the guider is formed at its inner end with a head 23 rounded for seating engagement with the

seat 18 and having a threaded socket for the reception of the threaded shank 24 of the guider-point or nipple 25. The head 23 and nipple 25 are each preferably provided with flat surfaces 26, or their equivalent, in order to enable gripping by a wrench or like implement.

Outside the guider-sleeve 15, the guider-spindle carries a pillow-block 27, which has a concave inner face 28 that seats upon the convex outer face 20 of the sleeve head 19, being held in any position thereon to which it may have been adjusted by lock-nuts 29.

The mounting or connector for the guider and the die is locked at the other end by a lock-nut 30, threaded onto the outer end of the die-sleeve 16, said sleeve being also interiorly threaded to receive the die 31.

In the construction shown in Figs. 3, 4, and 5, the same principle of guider adjustment is maintained, the guider and die being identical in construction, the mounting sleeves for the guider and die however being independent of each other, the tie-bars 17 being omitted.

In this construction, the guider-spindle extends through a guider-sleeve 15' that is secured in the main member 10 by threading as shown. This sleeve, like the sleeve 15 afore described is provided with an interior and an exterior seat, and has a tapering bore which receives the guider-spindle, and the same reference numerals have been used on all those parts which are identical with the construction of Figs. 1 and 2.

The die 31 in this construction is mounted in a die-sleeve 16' threaded into the cap-plate 11, and for this purpose provided at its outer end with a head 17'. In order that the sleeves 15' and 16' may be threaded into the members 10 and 11 respectively, the peripheries thereof will be flat-faced as shown for the head 28' of the sleeve 15', that they may be readily gripped by a wrench.

In Figs. 1 and 2, the three upper guiders are shown in different adjusted positions, the one at the left being shown with the guider point or nipple perfectly alined with the die, the one in the center shown slightly adjusted so as to somewhat off-set the nipple point with respect to the die, and the one at the right hand side of the figure shown adjusted to the full limit permitted.

The adjustment of the guider is effected by a slacking of the nuts 29 and then delivering a side blow upon the pillow block 27. The guider it is to be observed is clamped between two curved seats that have a spherical movement on a common center. When a blow is delivered on the pillow block 27, it reverses the nipple point, since the seat center is within the limits of the length of the guider member.

By this simple and effective adjustment it will be noted that I am enabled to readily and quickly adjust the wire guider nipple with respect to the die, so as to compensate for the side pressure within the chamber 12 against the wire being insulated, as with a rigidly held guider, it has been found that the pressure of material against the wire will throw it out on a curve through the die, causing eccentric insulating of the wire, which is, by this construction, wholly eliminated, simply by moving the guider point or nipple over at an opposing angle to the side pressure delivered.

In practice, any one or more of the openings may be blanked as shown in my prior application, or a filler block may be inserted in the chamber 12 as shown by dotted line 32, Fig. 1, the inactive guiders being of course removed.

What I claim is:

1. An insulating head comprising a wire die and a wire guider, the opposed terminals of which are disposed in parallelism, and means whereby the longitudinal axis of one member may be shifted bodily and swingingly with respect to the like axis of the other member whereby to displace both ends of the first member.
2. An insulating head comprising a wire die and a wire guider, the opposed terminals of which are disposed in parallelism, means whereby the longitudinal axis of one member may be shifted bodily and swingingly with respect to the like axis of the other member, and means for maintaining the two members in fixed relation to each other whereby to displace both ends of the first member.
3. An insulating head comprising a wire die, and a wire guider bodily and swingingly adjustable relative to the die whereby to displace both ends of the guider.
4. An insulating head comprising a relatively fixed wire die, and a wire guider arranged for bodily and swinging adjustments relative to the die whereby to displace both ends of the guider.
5. In an insulating head, a body having an insulating chamber therein, a wire-guider and a die mounted in the body at opposite sides of the chamber, and means for bodily and swingingly adjusting the guider independently of the die to compensate for side pressure against the same within the chamber whereby to displace both ends of the guider.
6. In an insulating head, a body having a chamber therein to receive plastic material under pressure, a guider mounted in the body at one side of the chamber, and a die mounted in the body at the opposite side of the chamber, the guider being capable of bodily swinging adjustment of both ends

independently of the die to compensate for side pressure against the same within the chamber.

7. In an insulating head, a wire guider and a wire die disposed opposite to each other, an interior and an exterior seat for the guider, and means for securing the guider in adjusted position on its seats.

8. In combination in an insulating head, a body having a chamber therein to receive plastic material under pressure, a die mounted in the body at one side of the chamber, a guider mounted in the body at the opposite side from the die, and aligned mountings for said guider and die, the guider being bodily and swingingly adjustable independently of the die to compensate for side pressure against the same within the chamber, whereby to displace both ends of the guider.

9. In an insulating head, a wire guider and a wire die disposed opposite to each other, mountings for said guider and die, a connector between said mountings, a seat carried by the guider-mounting on which said guider is bodily and swingingly adjustable independently of the die whereby to displace both ends of the guider, and means for securing the guider in adjusted position.

10. In an insulating head, a body having a chamber to receive plastic material under pressure, a wire-guider mounted in the body and extending into said chamber, a sleeve in which said guider is mounted and having a seat at its inner end engaged by said guider, and adjusting means at the outer end of the sleeve for securing the guider in adjusted position on said seat.

11. An insulating head comprising a guide sleeve having a partly straight and

partly tapered bore, a die disposed within the straight portion of the bore, a wire guider having a shank disposed within the tapered portion of the bore, and means for holding the shank at any desired adjustment within the bore.

12. An insulating head comprising a guide sleeve having a rounded head and a partly straight and partly tapered bore, a die disposed within the straight portion of the bore, a wire guider having a shank arranged within the tapered portion of the bore, a concaved pillow block carried by the shank and arranged to engage the guider sleeve head, and locking means carried by the shank to hold the pillow block in fixed adjustment relative to the guider sleeve head.

13. An insulating head adapted for more than one set of guider and die members, one set being adjustable independently of the others, each of the adjustable members being bodily and swingingly adjustable independently of the remaining adjustable members.

14. An insulating head comprising a plurality of wire dies and complemental wire guiders, and means whereby the longitudinal axes of one series of members may be independently shifted relative to the like axes of the other series of members, each of the adjustable members being bodily and swingingly adjustable independently of the remaining adjustable members.

In testimony whereof I affix my signature in presence of two witnesses.

CLAIR L. VAN NESS.

Witnesses:

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FERN BRAIKLOW.