Aug. 2, 1938. L. SEGUIN 2,125,653

SCRAPING TOOL

Filed Feb. 8, 1937

Fig. 1

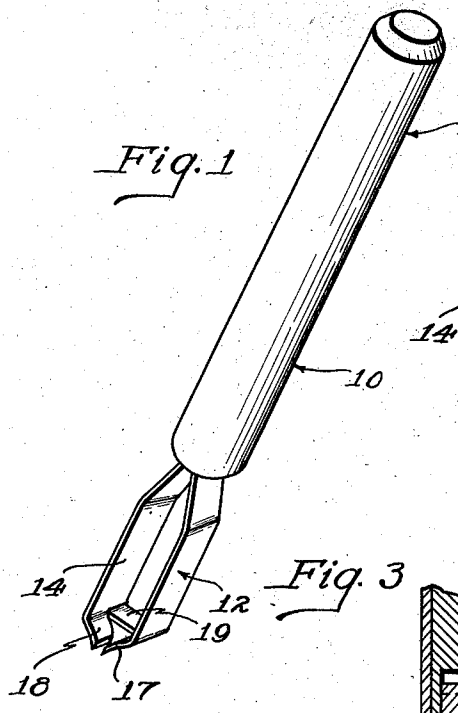


Fig. 5

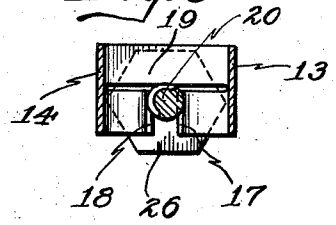


Fig. 2

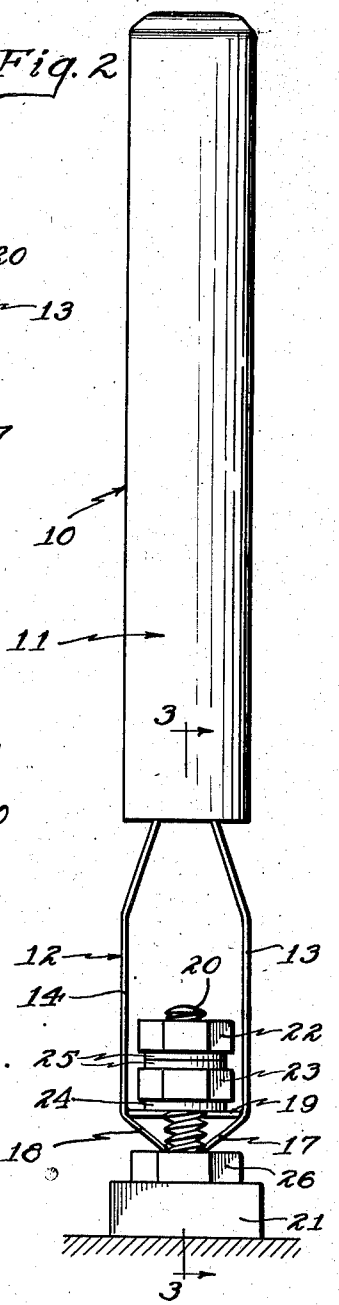


Fig. 3

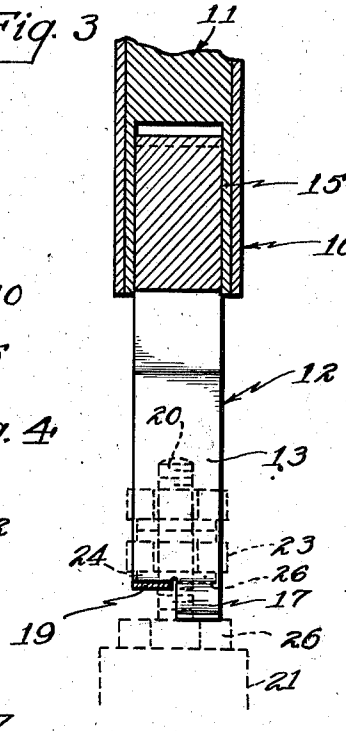
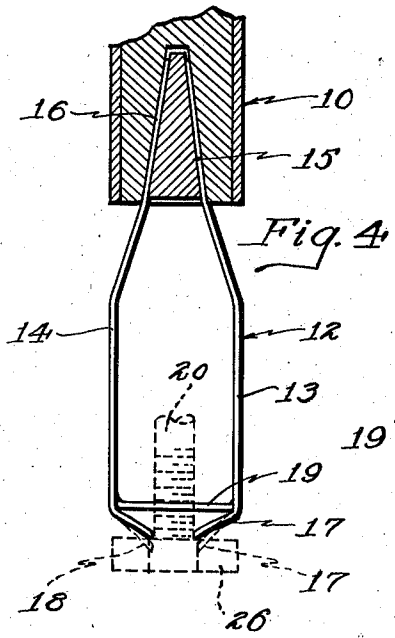


Fig. 4



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2,125,653

SCRAPING TOOL

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Application February 8, 1937, Serial No. 124,641

4 Claims. (Cl. 15—236)

This invention relates to a scraping tool.

It is an object of this invention to provide an improved scraping tool which is relatively simple and inexpensive in construction and efficient in use.

Considerable difficulty is experienced by telephone linemen, and other electrical workers, in providing a good electrical contact or connection between telephone lead wires, or analogous electrical conductors and the exposed surfaces of binding posts or terminals to which they are attached, because of the fact that the exposed surfaces of these binding posts or terminals, and the fixed binding nuts mounted thereon, are often corroded and covered with an electrically non-conductive film which prevents making a good electrical connection or contact between the exposed surface of the fixed binding nut and the lead wire or conductor which is electrically connected thereto. Heretofore the customary practice among telephone linemen has been to scrape the film or accumulation of corroded material off from the exposed surface of the fixed binding nut by means of a screw driver or analogous tool, this being accomplished by first loosening the lock nuts and washer of the binding post assembly and then scraping the inner or exposed surface of the fixed binding nut so as to provide a clean, bright inner surface on the same. However, this is a somewhat difficult and laborious task and it is difficult, with an ordinary tool, such as a screw driver, to scrape the inner or exposed surface of the fixed binding post nut clean enough to form a good bright surface on the same and thus effect a good electrical connection between the inner or exposed surface of the fixed binding post nut and the lead wire or conductor which is in contact therewith. This is especially important in connection with telephone work, because the absence of a good electrical connection will cause undesirable noises in the telephone receiver. However, good electrical connections are, of course, equally important and desirable in other types of electrical work, and hence the new tool is of general use and application.

Another and major object of the present invention, therefore, is to provide a scraping tool or scraper by the use of which the above-mentioned and other difficulties experienced in the use of the prior art tools, such as screw drivers and the like, are eliminated.

An additional major object of the present invention is to provide a simple, inexpensive, and efficient scraping tool for removing the film or corrosion from the exposed surfaces of fixed binding post nuts or other analogous electrical parts, so as to provide a clean, bright surface thereon and thus enable the workman to form a good electrical connection between the same and the lead wires or other analogous conductors which are electrically connected thereto.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing showing the preferred form of construction, and in which:

Fig. 1 is a perspective view showing a typical embodiment of the new scraping tool;

Fig. 2 is a side elevational view of the scraping tool which is shown in Fig. 1 and illustrating how the same is used for cleaning the exposed or inner surface of a fixed binding post nut;

Fig. 3 is a fragmentary longitudinal sectional view of the scraping tool which is shown in Figs. 1 and 2 and is taken on line 3—3 in Fig. 2;

Fig. 4 is a view partly, in section and partly in elevation, showing one manner of mounting the body of the tool in the handle of the same; and

Fig. 5 is a transverse sectional view illustrating the construction and formation of the scraping jaws of the new scraping tool and also showing the arrangement of the cross bar or stop which extends between the scraping jaws at the axially inner ends of the same.

A typical embodiment of the new scraping tool or binding post scraper is shown in the drawing, is therein generally indicated at 10, and comprises a handle 11, which is shown as being cylindrical but may be of any other suitable design and shape, and to which is attached, in any suitable manner a scraping jaw member, which is generally indicated at 12.

The scraping jaw member 12 is preferably formed as one piece of metal, for which a good grade of slightly resilient steel is well suited, and comprises a pair of complementary and spaced arms or members 13 and 14 which include shank or attaching portions 15 and 16, respectively, and these shank portions 15 and 16 may be attached to and anchored in the handle 11 in any suitable manner, as, for example, in the manner which is illustrated in Figs. 3 and 4.

The arm 13 of the member 12 includes, or has formed thereon, at its axially outer end, a scraping jaw or lip 17, and the arm 14 includes or has formed thereon, at its axially outer end, a corresponding and complementary scraping jaw or lip 18. The jaw member 12 also includes a cross bar

or stop 19 which extends between, and bridges, the arms 13 and 14 of the same, immediately above the scraping jaws 17 and 18, that is, at the axially inner ends of the latter; this cross bar 19 being preferably formed integrally with the arms 13 and 14 and acting both as a bridge and stop, in a manner to be described hereinafter.

In order better to illustrate the use of the new scraping tool or binding post scraper a conventional binding post assembly is shown in full lines in Fig. 2 of the drawing, (and in dotted lines, Fig. 4), and is shown, for the purpose of illustration, as including a binding post 20 which is mounted on a block or support 21. The binding post assembly also includes a fixed binding post nut 26 and lock nuts 22 and 23 which are threadedly mounted on the binding post 20, together with suitable washers 24 and 25.

In the use of the new scraping tool or binding post scraper the same is arranged in position of use on the binding post 20 by loosening, that is, partially unscrewing, the movable lock nuts 22 and 23 and the washers 24 and 25, then retracting or withdrawing the washer 24 from its normal position, in engagement with the fixed binding nut 26, toward the nut 23, so as to expose the inner surface of the fixed binding nut 26. The scraping jaws 17 and 18 are then slipped onto the body of the binding post 20, between the washer 24 and the fixed binding nut 26, so that the binding post 20 is received between the jaws 17 and 18, as shown in Figs. 2 and 4; it being noted that for this purpose the scraping jaws 17 and 18 are preferably made slightly resilient or yieldable so that they will spread slightly when inserted onto the binding post 20, as indicated in Fig. 4, and will thus frictionally grip the external surface of the binding post 20. It will also be noted, in this connection, (Fig. 4) that when the scraping jaws 17 and 18 are in their normal position (as in full lines, Fig. 4) the space between the same is slightly less than the diameter of the binding post 20. It will further be noted, that the cross bar or stop 19 is offset, that is, it is located at one side of the longitudinal or axial center of the tool so that when the scraping jaws 17 and 18 are inserted onto the binding post 20 they will be stopped, in embracing relationship relative to the binding post 20, by engagement of the cross bar or stop 19 with the said binding post 20, and the latter and the lock nuts 22 and 23 and the washers 24 and 25 arranged thereon will then be disposed between the arms 13 and 14 of the member 12. The scraping jaws 17 and 18 are also preferably made slightly yieldable axially of the tool so that they will yield slightly when pressure is applied upon the tool axially thereof (downwardly as seen in Figs. 2 and 4) during the scraping operation which will be described presently.

Accordingly, in order to complete the operation of scraping the inner or exposed surface of the fixed binding nut 26, and which it is the principal object of the present invention to accomplish, the new scraping tool 10, being arranged in the position described above and as shown in Figs. 2 and 4, is then moved in an oscillatory twisting movement, about its long axis, during which operation the scraping jaws or lips 17 and 18 will frictionally engage and bear against the exposed or inner surface of the fixed binding nut 26, thereby removing from the latter, as well as from the external surface of the binding post 20 itself, the corrosion or film accumulated thereon, thus providing a clean, bright surface on the same and enabling the workman to make a good electrical connection or contact between the exposed surface of the fixed binding nut 26 and the lead wire or conductor which is in contact therewith, as well as between the binding post 20 and the conductor, and thereby eliminating the noises caused, in the case of telephone work, by a poor electrical connection between the lead wire and the exposed surface of the fixed binding nut, as well as between the binding post and the conductor.

It will thus be seen that the present invention provides a new binding post scraper or scraping tool by the use of which the exposed or inner surfaces of the fixed binding nuts in telephone binding post assemblies, as well as other electrical terminals may be scraped clean to provide a good bright surface and a good electrical contact in a quick, efficient, and time and labor-saving manner, and without the use of such inefficient tools, for this purpose, as screw drivers and the like.

It is to be noted that while the new tool has been described and illustrated as being especially adapted for use by telephone linemen in scraping clean the exposed or inner surfaces of the fixed binding nuts of telephone binding post assemblies, as well as the external and corroded surfaces of the binding posts themselves, it may also be used in the electrical arts in general wherever it may be desired to scrape from the corroded surface of a binding post or analogous terminal or part the film which has accumulated thereon due to corrosion or oxidation, so as to provide a clean bright surface and a correspondingly good electrical contact between the fixed binding post nut or other part and the conductor which is electrically connected thereto.

It will also be noted that the member 12 and the scraping jaws or lips 17 and 18 may be made in various sizes so as to accommodate the new tool for use in cleaning the inner or exposed surfaces of the fixed binding nuts of binding post assemblies or other analogous electrical terminals or parts of various sizes and diameters.

It is also to be noted in connection with the new scraping tool that the same may be used to accomplish its intended object and purpose without removing the lock nuts 22 and 23 and the washers 24 and 25 from the binding post 20 since during the scraping operation the lock nuts 22 and 23, the washers 24 and 25, and the binding post 20 of the assembly are disposed between the arms 13 and 14 of the member 12 and it is merely necessary to loosen or partially unscrew the lock nuts 22 and 23 and the washers 24 and 25 in order to effect the operation of scraping the inner or exposed surface of the fixed binding nut 26.

It will further be noted that the cross bar 19 not only acts as a stop to engage the binding post 20 and thus center the scraping jaws 17 and 18 on the binding post 20, and relative to the fixed binding nut 26, when the same are inserted thereon but it also acts as a bridge between the two arms 13 and 14 to prevent the latter from being spread apart and in the use of the tool it engages the lower surface of the washer 24 during the scraping operation and thus prevents the tool from being pulled off from the binding post 20 during the scraping operation since if it were not for the cross bar or stop 19 any pull which might be exerted by the operator on the handle (upwardly, Fig. 2, outwardly, in actual practice) during the scraping operation, would cause the scraping jaws or lips 17 and 18 to spread apart and pass over the lock nuts 22 and 23 and wash-

ers 24 and 25 and off from the binding post 20. This is, however, prevented by the cross bar or stop 19 since when the operator moves the scraping jaws 17 and 18 axially along the binding post 20 (upwardly, Fig. 2) the cross bar 19 will engage the lower washer 24 and thus prevent the jaws 17 and 18 from spreading and passing over the lock nuts 22 and 23 and washers 24 and 25 and off from the binding post 20.

It is to be observed that while the binding post assembly is shown in Figs. 2 and 4 as being disposed in a vertical position this has been done solely for the purpose of illustration since in actual practice the binding post assembly is disposed horizontally, that is, with the long axis of the binding post 20 extending horizontally rather than vertically as shown in the drawing, so that the new tool 10 when in use will generally be arranged in a horizontal position with the scraping jaws or lips 17 and 18 bearing against the exposed inner surface of the fixed binding nut 26, and being forced against the same, by a slight pressure of the operator so as more effectively to perform the intended scraping operation.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification, without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:

1. A scraping tool comprising a handle and a pair of spaced and substantially parallel members carried thereby each having a scraping jaw formed thereon at its outer end and said jaws being cooperable with and spaced from each other to receive therebetween a member having thereon an object to be scraped, said tool including a cross bar or bridge formed integrally with and extending between the said first-named members at one lateral side of said jaws and adjacent the outer ends of said members.

2. A scraping tool comprising a member including a pair of spaced and substantially parallel arms each having a scraping jaw formed thereon at its outer end said member including a cross bar immovably mounted on and extending between the said arms at one lateral side of the said scraping jaws and adjacent the outer ends of said arms.

3. A scraping tool comprising a member having a handle and including a pair of spaced and substantially parallel arms each having a slightly yieldable or resilient scraping jaw formed thereon at its outer end and said scraping jaws being cooperable with each other and having a space therebetween for the reception of a member having thereon an object to be scraped, said first-named member including a cross bar formed integrally with and extending between the said arms at one lateral side of the said scraping jaws.

4. A scraping tool comprising a member having a handle and including a pair of spaced and substantially parallel arms each having a scraping jaw formed thereon at its outer end and said scraping jaws being cooperable with each other and having a space therebetween for the reception of a member having thereon an object to be scraped, said first-named member including a cross bar immovably mounted on and extending between the said arms at one lateral side of the said scraping jaws and adjacent the outer ends of the said arms.

LLOYD SEGUIN.