No. 804,365. PATENTED NOV. 14, 1905.

W. L. G. APPLEBY.

DEVICE FOR PREVENTING CONTACT IN TELEGRAPH LINE WIRES.

APPLICATION FILED OCT. 7, 1904.

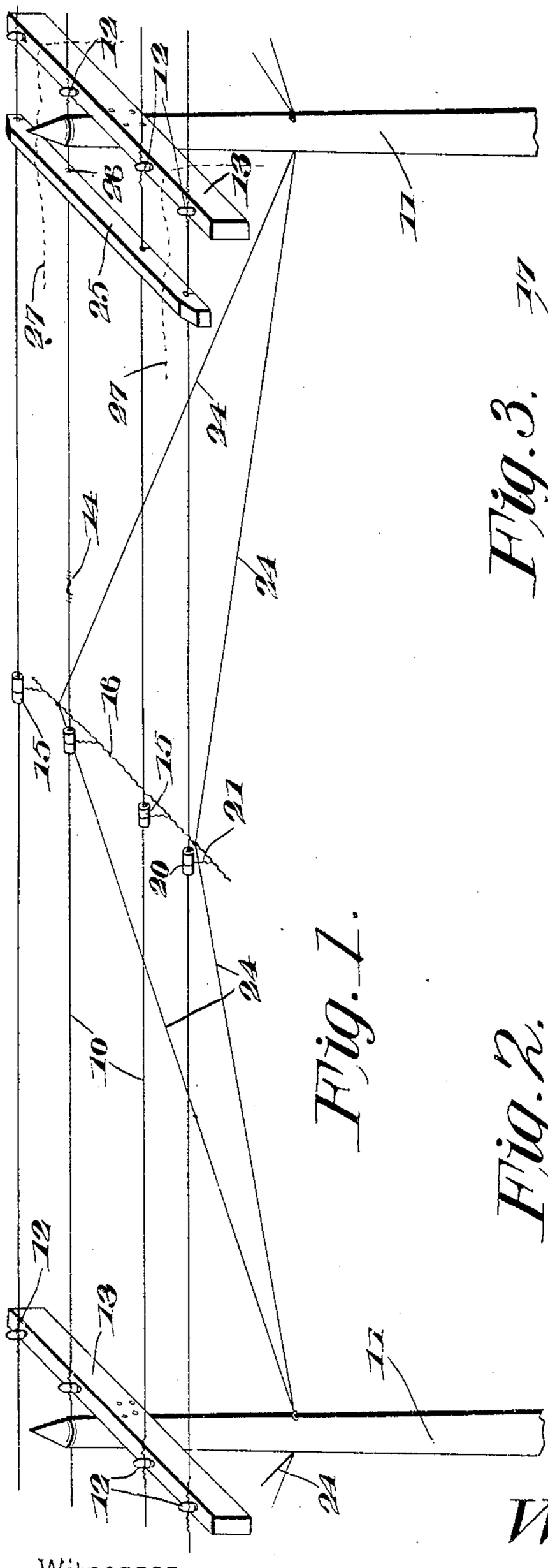

Fig. 1.

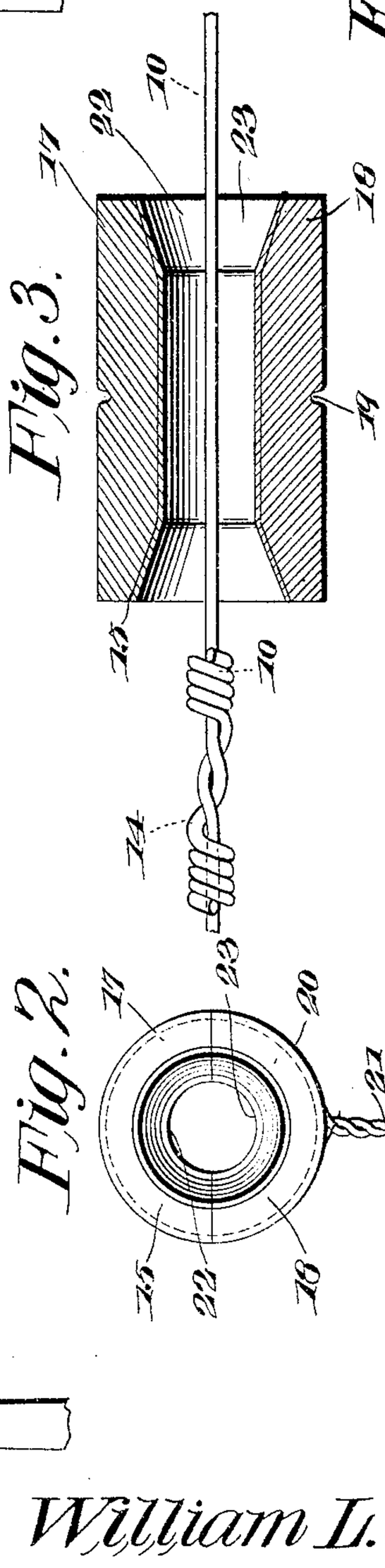

Fig. 3.

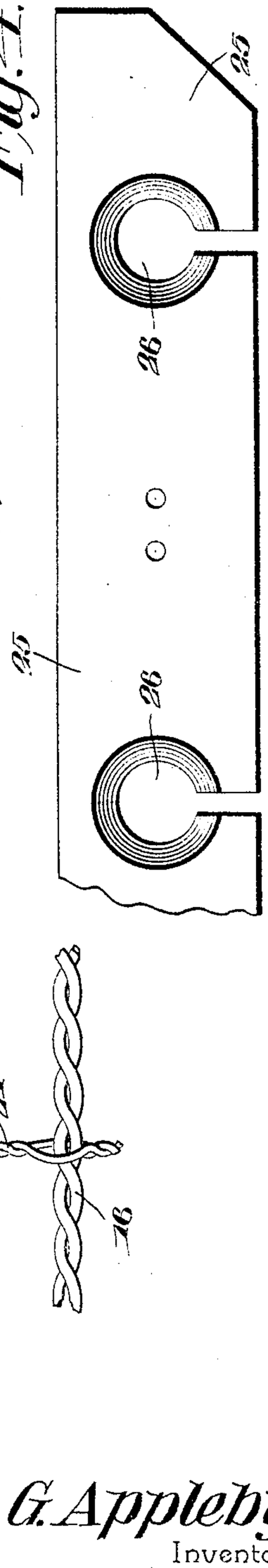

Fig. 4.

Fig. 2.

William L. G. Appleby,
Inventor

by Chas. Brown & Co.
Attorneys

Witnesses
E. F. Stewart
C. N. Woodward.

UNITED STATES PATENT OFFICE.

WILLIAM L. G. APPLEBY, OF GERMANTOWN, MARYLAND, ASSIGNOR OF ONE-HALF TO ISAAC N. SIMPERS, OF GERMANTOWN, MARYLAND.

DEVICE FOR PREVENTING CONTACT IN TELEGRAPH LINE-WIRES.

No. 804,365. Specification of Letters Patent. Patented Nov. 14, 1905.

Application filed October 7, 1904. Serial No. 227,583.

To all whom it may concern:

Be it known that I, WILLIAM L. G. APPLEBY, a citizen of the United States, residing at Germantown, in the county of Montgomery and State of Maryland, have invented a new and useful Device for Preventing Contact in Telegraph Line-Wires, of which the following is a specification.

This invention relates to the line-wires of telegraph, telephone, and similar systems, and has for its object to provide a simply-constructed and easily applied and operated attachment whereby lateral contact between the several wires disposed between spaced poles or other supports is effectually prevented.

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 the 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 perspective view of a section of a telegraph or telephone line with the improved device applied. Fig. 2 is an end view, enlarged, of one of the separating members together with a portion of its spacer-bar. Fig. 3 is a longitudinal section, enlarged, of one of the spacer members. Fig. 4 is a side view, enlarged, of a portion of the bar for adjusting the spacer members longitudinally of the line-wires.

In telegraph, telephone, and similar structures, the line-wires extending between spaced poles or other supports and disposed relatively near together, much annoyance is experienced from the tendency of the stretched wires when swayed laterally by wind or from other causes to come in contact and short-circuit the lines or otherwise destroy their usefulness. To hold these spaced line-wires in a uniformly separated or spaced position, no matter how strong the lateral force exerted against them may be, is the object of the present invention, which consists, primarily, in members for engaging the several line-wires intermediately of the posts or other supporting means and connected by spacer members for maintaining the same spaced apart at all times.

The wire-engaging members will preferably be readily attachable to the line-wires near the supporting-posts and slidable by suitable means longitudinally of the wires to a point midway between the posts and provided with means for holding them in this position. The wire-engaging members will also preferably be of insulating material, as will be obvious.

The preferred form of the separating members is short tubular sections divided longitudinally to enable them to be readily attached to the wires, provided with suitable clamping means for binding thereon, the interior area of the tubular members being large enough to readily pass over the splice of the line-wires. The tubular sections will also be preferably lined with sheet metal to receive the wear and prevent abrasion of the necessarily softer separating members.

For the purpose of illustration a plurality of line-wires are represented at 10, extending in the usual manner between supporting-posts 11 and connected by the usual insulators 12 to the cross-arms 13, a splice in one of the line-wires being diagrammatically indicated at 14. The separating members are indicated as a whole at 15, one for each line-wire, and connected to a spacer-bar 16. The separating members and their spacer-bar are preferably located midway between the posts 11, and one set of the improved devices, it will be understood, will be located between each pair of the posts or other supports.

An approved construction of the separating member and connecting-bar is illustrated in Figs. 2 and 3, consisting of semitubular sections 17 18, forming a complete tube when united and provided with an encircling groove 19 to receive the binding-wire 20, which is twisted, as at 21, tightly around the tubular sections and likewise twisted around the spacer-bar 16, as in Fig. 2. The interior area of the united sections is large enough to enable them to readily pass over the splice 14, and to facilitate this passage the interior will be flared at the ends, as shown in Fig. 3. The semitubular sections are also lined with sheet metal, as at 22 23, to receive the wear and prevent undue abrasion of the softer material of the por-

tions 17 18, which will be of insulating material, such as wood, vulcanite, or the like or other suitable composition or material. After being positioned upon the line-wires the device will be connected by guy-wires 24 to the post 11 to prevent displacement.

In attaching the device the divided sections 17 18 are placed over the several line-wires near one of the cross-arms in convenient position for the lineman and the clamp-wires 20 and spacer-bar 16, attached as above described.

Means are provided for moving the connected members longitudinally of the line-wires to the requisite central position, and an approved form of this adjusting means is shown, consisting of a bar 25, having spaced notches 26, corresponding to the line-wires and enlarged at their inner ends to enable them to readily pass the splices and preferably flaring at the outer sides to facilitate the passage. By placing one of these notched bars over the line-wires between the connected members 15 and the cross-arms 13 and drawing along the line-wires by one or more ropes (indicated at 27) it will be obvious that the separating device will be carried thereby to any desired point. The guy-wires 24 are then attached and the member 25 drawn back again to the post 11 and removed and preserved for future use. One of the members 25 can thus be employed for the whole line, if required; but a number will generally be furnished to facilitate the operation.

It will thus be obvious that a simply-constructed and easily-applied device is produced which may be adapted to all of the telegraph, telephone, fire-alarm, and similar structures wherein a plurality of line-wires are employed and disposed in relatively close proximity between spaced posts or other supports and which will effectually prevent all lateral contact between the line-wires.

If required, two or more sets of the separating devices may be arranged between each pair of posts.

It will be obvious that the device may be arranged with equal advantage where a large number of wires are arranged both in vertically and horizontally spaced relations, as is commonly the practice; but this would not be a departure from the principle of the invention, as it would merely be a multiplication of the separator members 15 and their connecting spacer-bars 16.

Having thus described the invention, what is claimed is—

1. As a new article a device for preventing lateral contact between telegraph and similar line-wires, consisting of tubular members of insulating material for engaging the line-wires and lined with metal wear-plates and having connecting means to maintain them spaced apart.

2. As a new article a device for preventing lateral contact between telegraph and similar line-wires, consisting of tubular members divided longitudinally for engaging the line-wires between the supports of the same and having encircling grooves for receiving binding-wires for uniting the divided members and likewise provided with connecting means for maintaining the same spaced apart, said tubular members being of interior diameter sufficient to enable them to pass over splices upon the line-wires, and provided with flaring ends to facilitate the passage over such splices.

3. As a new article a device for preventing lateral contact between telegraph and similar line-wires, consisting of tubular members divided longitudinally for engaging the line-wires between the supports of the same and having encircling grooves for receiving binding-wires for uniting the divided members by entwisting the ends of the same, the free ends of said binding-wires in turn entwisted about a transverse spacer member.

4. As a new article a device for preventing lateral contact between telegraph and similar line-wires, consisting of members for engaging the line-wires between the supports of the same, means for connecting and spacing apart the said members, and guy-wires connecting the ends of said connecting and spacing means with the supports of the line-wires.

5. As a new article a device for preventing lateral contact between telegraph and similar line-wires, consisting of tubular members for slidably engaging the line-wires between the supports of the same, said tubular members being adapted for passage over splices upon the wires and connecting means between said slidable members, and means operative upon said line-wires for adjusting said slidable members longitudinally of the same.

6. As a new article a device for preventing lateral contact between telegraph and similar line-wires, consisting of tubular members internally flaring at the ends and slidably engaging said line-wires and having means for maintaining said members spaced apart, said tubular members being of internal diameter sufficiently greater than the diameter of the wires to admit of the passage of splices upon the latter.

7. A device for preventing lateral contact between telegraph and similar line-wires consisting of divided tubular members for slidably engaging the line-wires between the supports of the same and twisted wires for connecting the parts of the divided tubular members with each other and with a transverse connecting and spacing member.

8. A device for preventing lateral contact between telegraph and similar line-wires consisting of members for slidably engaging the line-wires between the supports of the same and having connecting means for maintaining

the same spaced apart and guys connecting said members to the adjacent line-wire supports.

9. A device for preventing lateral contact between telegraph and similar line-wires consisting of members for slidably engaging the line-wires between the supports of the same and having connecting means for maintaining the same spaced apart, an adjusting member consisting of a bar having open slots for movably engaging the line-wires and means for moving said bar longitudinally of the line-wires.

10. A device for preventing lateral contact between telegraph and similar line-wires consisting of members for slidably engaging the line-wires between the supports of the same and having connecting means for maintaining the same spaced apart, an adjusting member consisting of a bar having transverse apertures for receiving the line-wires and each aperture provided with a contracted aperture leading through the side of the bar, and means for moving said bar longitudinally of the line-wires.

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

WILLIAM L. G. APPLEBY.

Witnesses:

ISAAC N. SIMPERS,

JAMES E. TRUNDLE.