

L. B. FISH.
ANCHORING DEVICE.
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1,351,845.

Patented Sept. 7, 1920.

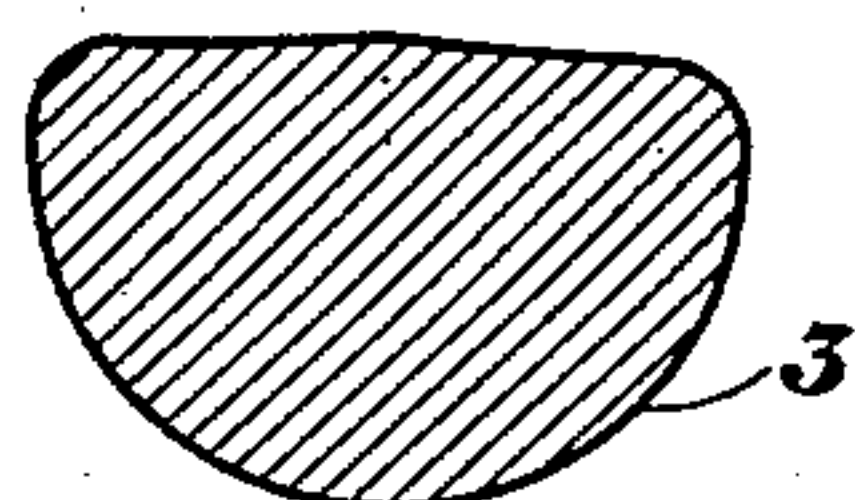


Fig. 2

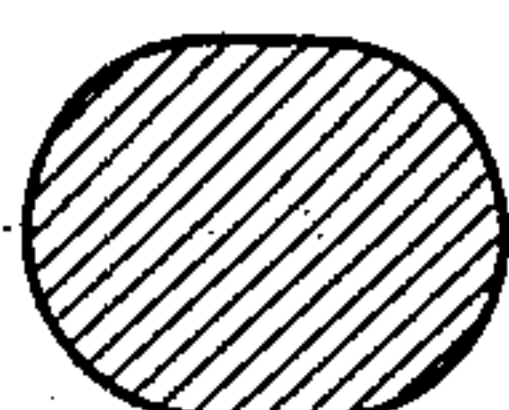


Fig. 3

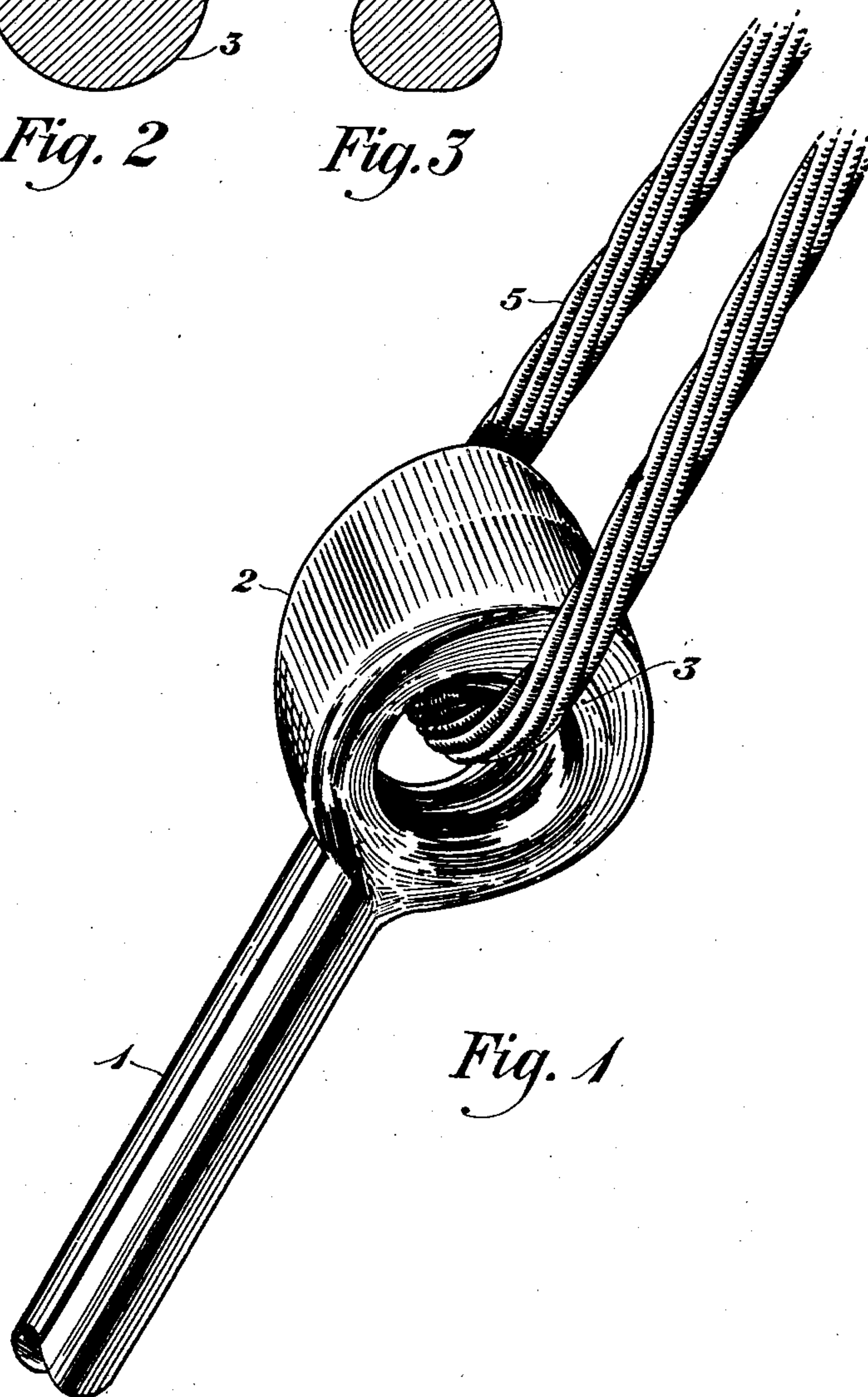


Fig. 1

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ANCHORING DEVICE.

1,351,845.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LEWIN B. FISH, residing at East Orange, in the county of Essex and State of New Jersey, have invented certain Improvements in Anchoring Devices, of which the following is a specification.

This invention relates to anchoring devices, and more particularly to improvements in the eyes of said devices through which a guy or other supporting stay may be looped whereby the strains arising from the bending or looping of the said guys or stays through the said eyes may be minimized.

In the construction of electrical transmission lines it is customary to reinforce the strength of the poles of these lines at points which are or may be subjected to excessive strains by extending a guy from a pole to an anchor buried in the ground, or to some other anchorage. One end of the guy, which usually consists of steel wires stranded together is made fast to the pole, and the other end is looped through the eye or ring of the anchoring device. After the guy has been pulled to the desired tension the free end is fastened to the standing portion of the guy. In order to avoid injury to the strands of the guy at the point where it passes through the eye of the anchoring device, while the guy is being pulled up, and after the guy has been made fast, it has been customary to insert a thimble in the eye of the anchor rod and to place the guy in the groove of this thimble prior to pulling the guy taut.

The thimble generally used heretofore consisted of a grooved strip of metal bent into the shape of a horseshoe or a ring and adapted to be linked with the eye thereby encircling, either partly or entirely, the rod forming the eye. The radius of curvature of the groove of the thimble is substantially the same as that of the guy, and the radius of curvature of the bend of the thimble is greater than the radius of a cross-section of the rod or bar forming the eye, at the point where the guy will normally rest when pulled taut. In practice it has been found difficult to prevent the thimble from becoming dislocated when the necessary tension was being applied to the guy, thereby permitting the guy to be bent around the rod forming the eye and subjecting the strands of the guy to severe bending stresses. This

has necessitated releasing the tension on the guy and again re-adjusting it in the groove of the thimble. In my invention the difficulty heretofore experienced due to the dislocation of the thimble during the installation of the guy has been avoided by combining in a single device the functions heretofore performed separately by the eye of the anchoring device and by the thimble.

This invention will be more clearly understood by referring to the accompanying drawing in which Figure 1 represents the improved anchor rod with a guy attached thereto, and Figs. 2 and 3 represent cross-sections at different points of the ring or eye of the said anchor rod.

In Fig. 1 a shank member 1 is connected, preferably integrally, with a ring 2, having substantially the form shown in the said figure. That portion 3 of the ring opposite the point where the ring joins the shank is designed to afford an adequate continuous bearing surface for the guy 5 which, when looped through the said ring and subjected to required tension, will be drawn in contact with and will rest upon said bearing surface. This bearing surface is designed to have a radius of curvature sufficiently large to minimize the bending stresses in the guy and consequently to avoid injury to said guy when looped through the ring and subjected to the required tension. Since a bearing surface having a large radius of curvature is required only in that part of the ring with which the guy will be in contact when subjected to tension, the ring has been designed so as to effect the greatest economy in manufacture by gradually diminishing the cross-sectional area from the bearing surface portion of the ring to the point of attachment of the ring with the shank. This is made clear by Figs. 2 and 3 which represent respectively a cross-section of the bearing surface portion of the ring at the point of greatest curvature, and a cross-section of one side of the ring at a point approximately midway between the point of greatest curvature and the point of attachment of the ring to the shank.

In the manufacture of this anchoring device the desirable practice is to upset one end of the anchor rod so as to afford sufficient mass of metal to permit the formation of the bearing surface 3 having the large radius bend shown in Figs. 1 and 2. Since

the usual practice is to attach only one or two guys to a single anchoring device, the bearing surface having the large radius of curvature is preferably limited to that portion of the ring which constitutes approximately the quadrant opposite the point of attachment of the ring to the shank. It is apparent, however, that the bearing surface of the ring may be increased or diminished in extent, depending upon the number of guys to be attached to the said anchoring device, and therefore it is to be understood that the invention is not to be limited to the bearing surface shown in Fig. 1.

It will be seen that this invention affords an anchoring device to which guys or stays may be attached by looping them through the eye or ring of said anchoring device, the eye or ring being so designed as to afford an adequate continuous bearing surface having a large radius of curvature which tends to minimize the bending stresses set up in the said guys or stays and consequently to avoid injury to said guys looped through the said eye or ring and subjected to the required tension. Furthermore, by combining in a single device the functions heretofore performed by two devices, namely, the eye of the anchor rod and the thimble associated therewith, it is possible to avoid the difficulty heretofore experienced due to the instability of the thimble when the guy was being subjected to tension.

Although the invention has been shown as described as embodied in a particular form, it is evident that it is not restricted or limited to such form and that it is capable of embodiment in other forms within the scope of the appended claims.

What is claimed is:

1. In an anchoring device, the combination with a shank of a ring connected therewith adapted to receive and to provide a continuous bearing surface for a guy, the radius of curvature of a cross-section of said ring perpendicular to the plane of said ring, and through that part of said ring which provides a bearing surface for said guy being greater than the radius of curvature of any similar cross-section of said ring.

2. In an anchoring device, the combination with a shank of a ring connected therewith adapted to receive and to provide a continuous bearing surface for a guy, the cross-sectional area of said ring being greatest in that part of the ring providing the bearing surface for said guy, and diminishing substantially uniformly along both sides of said ring from the bearing surface portion of the ring to the point where the said ring joins the said shank whereby is obtained the required radius of curvature and strength with the greatest economy of material.

3. In an anchoring device the combination of a rod and a ring integrally connected therewith adapted to provide a continuous bearing surface for a guy, the radius of curvature of a cross section of the ring through said bearing surface being greater than the radius of curvature of any other cross section of said ring.

In testimony whereof I have signed my name to this specification this 25th day of March 1918.

LEWIN BENJAMIN FISH.