March 25, 1947. S. A. WOHLER 2,418,105

FAIRLEAD

Filed March 29, 1944

FIG.1

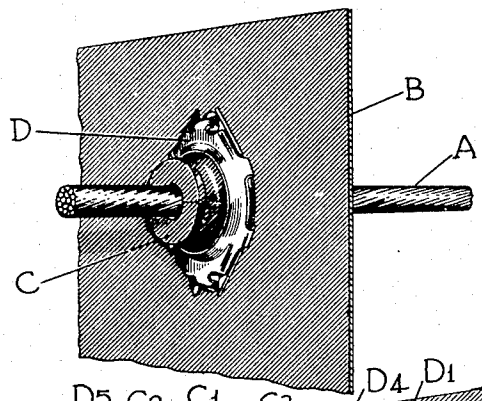
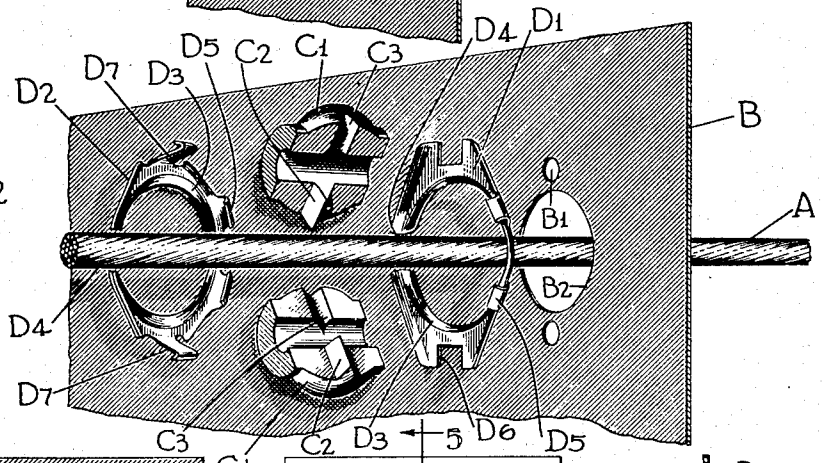


FIG.2



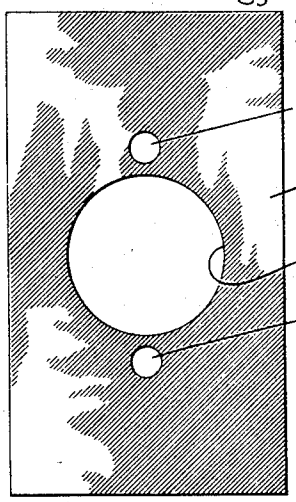


FIG.3

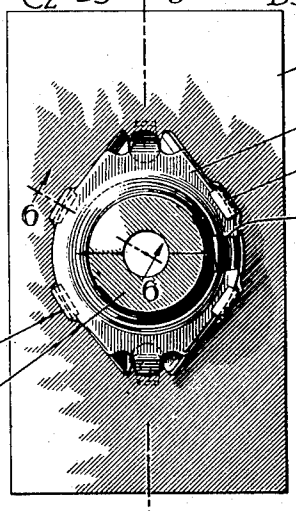


FIG.4

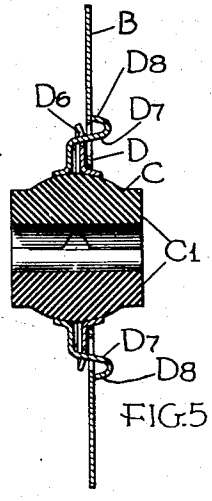


FIG.5

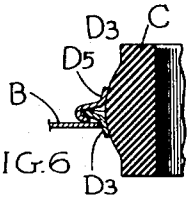


FIG.6

5

INVENTOR
Stanley A. Wohler.

BY John P. Tarbox
ATTORNEY

Patented Mar. 25, 1947 2,418,105

UNITED STATES PATENT OFFICE

2,418,105

FAIRLEAD

Stanley A. Wohler, Lansdale, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania

Application March 29, 1944, Serial No. 528,578

8 Claims. (Cl. 254—190)

1

This invention relates to fairleads and anchorages therefor and has for an object the provision of improvements in this art.

Where control cables of aircraft, watercraft and other structures pass through walls, such as bulkheads, ribs, spars, and the like, it has been common to provide for them fixed guides or fairleads which were initially aligned as near as possible with the cable. If later the cable got out of alignment or whipped about it was worn by the edges of the fixed fairleads and, moreover, interposed friction against the free operation of the subject parts. Another difficulty has been that the fairleads had to be threaded over the cables from one end, often an inconvenient procedure.

According to the present invention a fairlead is provided which is self-aligning to take any direction required by the cable. A fairlead core is split so as to be quickly slipped on the cable laterally at any point therealong, and an anchorage therefor is likewise formed to be introduced laterally upon the cable and secured upon the core. The anchorage is then fastened to a support, if a wall to one side thereof, without requiring access to the other side. The parts of the anchorage can be quickly secured together upon the core and secured to the support by elements provided thereon, thus dispensing with screws, nuts, bolts and other usual accessories.

The objects and advantages of the invention will be apparent from the following description of an exemplary embodiment thereof, reference being made to the accompanying drawings, wherein:

Figure 1 is a perspective view of a fairlead, its anchorge, and a supporting wall;

Figure 2 is an exploded perspective of the same;

Figure 3 is an elevation of a portion of a plate or wall upon which the fairlead is mounted;

Figure 4 is an elevation of the fairlead and mounting;

Figure 5 is a vertical section on the line 5—5 of Figure 4; and

Figure 6 is a section on the line 6—6 of Figure 4.

Referring to the drawings, a cable A passes through a wall B and is guided in its movements therethrough by a fairlead guide or core C retained by its mounting or anchorage D.

The fairlead guide C, which is made of a wear-resisting and low-friction material such as plastic, porcelain, metal or the like, is split longitudinally into halves so as to be readily applied to the cable laterally at any point therealong. The parts C1 may be made identical and provided with projections C2 and recesses C3 therefor to hold the parts in proper relative position.

2

The fairlead mounting D comprises mating half-shells D1, D2 provided with spherical shaped sockets D3 adapted to embrace the spherical outer mid-surface of the guide. The shells are recessed on the side, as at D4, to permit them to be placed on the cable from the side at any point therealong. Considered with reference to final assembly position, the recesses or notches D4 are on opposite sides of the cable so as to form together a complete annular enclosure therefor.

Also the shells D are provided with oppositely disposed projections or fingers D5 which are adapted to engage the edge of the mating shell to hold the shells together on the guide core.

One of the shells D is provided with end notches D6 and the other with mating projections D7 adapted to enter these end notches and in conjunction with the rim projections D5 to hold the half-shells together upon the guide core.

All of the half-shell projections are resilient and the long projections D7 are provided with inclined hooks D8 which are adapted to engage behind the wall B when the projections are pushed through openings B1 in the wall. The openings B1 are disposed on each side of the larger opening B2 through which the cable passes and in which the end of the guide core and the spherical socket end of one of the half-shells are disposed.

The fairlead is very easy to install. Referring to Figure 2, the guide core halves are brought laterally together upon the cable at a short distance from the wall B. On each side of the guide core the half-shells D are laterally introduced upon the cable, the half-shell with the notches D6 being disposed on the side of the guide core toward the wall B and the half-shell with the retaining projections D7 and hooks D8 being disposed on the other side of the guide core. The half-shells are brought together upon the guide core by moving them axially of the cable. The half-shells snap together upon the guide core, there being enough resiliency and taper of parts to provide this action.

The entire assembly is now moved axially along the cable and the projections or fingers D7 are snapped into the wall openings B1. The parts are now held together and upon the wall against all chance of accidental removal. The rim projections D5 hold the rims on the side on which they are cut through by the recesses or notches D4 against expansion sufficient to release the spherical-surfaced guide core.

The assembly can be quickly removed, however, if desired by pressing the spring finger hooks D8 back through the openings B1 and then pulling the half-shells apart by suitable manipulations.

It is thus seen that the invention provides an improved fairlead, including guide core and mounting shell which can be very quickly applied at one side of a partition wall without requiring access to the other side; also that the fairlead can be applied after the cable has been threaded through the wall. Certain features of the device can be used without other features but all work together for greater convenience and facility of manipulation when used together. Also while the fairlead has been described for power cables, it can be used as well for electrical cables, pipes, and other purposes, if desired.

While one embodiment of the invention has been illustrated and described by way of example, it is to be understood that there may be various embodiments within the limits of the prior art and the scope of the subjoined claims.

What is claimed is:

1. A fairlead comprising a longitudinally divided apertured cable-embracing core provided with interfitting projections and recesses at the meeting surface and having a spherical outer central surface and cylindrical ends, a transversely divided apertured core-embracing shell provided with interconnecting projections and having a spherical socket embracing the spherical outer surface of said core, said shell parts having oppositely disposed cable-passing slits, and means for securing said assembly to a support.

2. A fairlead as set forth in claim 1 in which said shell projections are oppositely disposed for the shell parts.

3. A fairlead as set forth in claim 1 in which said securing means includes resilient projections between shell and support.

4. A fairlead as set forth in claim 1 in which said securing means includes resilient hooked projections on one shell part passing through apertures in the other shell part and in said support.

5. A cable fairlead comprising a longitudinally divided core having a spherical outer surface and a guide opening for the cable, and a transversely divided anchorage for said core including two mating shells, providing inter-fitting inter-engaging means to secure the shells together with said core between them and with a spherical socket for said core, and said shells being side-recessed for introduction laterally upon the cable.

6. A cable fairlead, comprising an axially divided core having a central opening adapted to embrace a cable and having a spherical enlargement between its ends, a transversely divided shell including two mating shell parts provided with central spherical recesses adapted to receive said core, and said shell parts having side notches to said recesses to adapt the parts to be slipped laterally upon a cable, and inter-fitting inter-engaging means on said shell parts for holding them together upon the core and thus hold the core parts together upon the cable.

7. A cable fairlead comprising a longitudinally divided core, a transversely divided annular resilient shell including two mating shell parts with oppositely disposed cable-passing slits through the annular mating parts, and means on the shell parts securing them together upon the core.

8. A cable fairlead comprising a longitudinally divided core, a transversely divided annular resilient shell including two mating shell parts with oppositely disposed cable-passing slits through the annular mating parts, and means on the shell parts securing them together upon the core and securing the shell and core assembly to a support.

STANLEY A. WOHLER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,329,529	Gwinn	Sept. 14, 1943
1,286,964	Elia	Dec. 10, 1918
1,453,426	Williams	May 1, 1923
973,568	Russell	Oct. 25, 1910
618,607	Murray	Jan. 31, 1899
1,456,093	Carlson	May 22, 1923
1,132,651	Clermont	Mar. 23, 1915
503,778	Trimble	Aug. 22, 1893