Feb. 25, 1930. E. M. LAING 1,748,354

GREENS WHIP

Filed Aug. 1, 1928

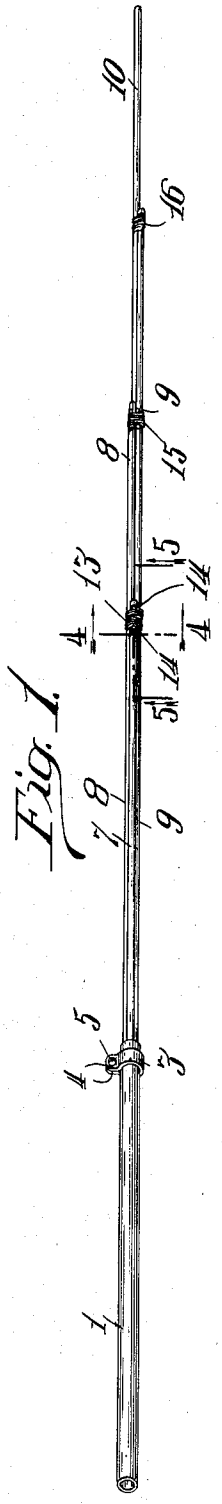


Fig. 1.

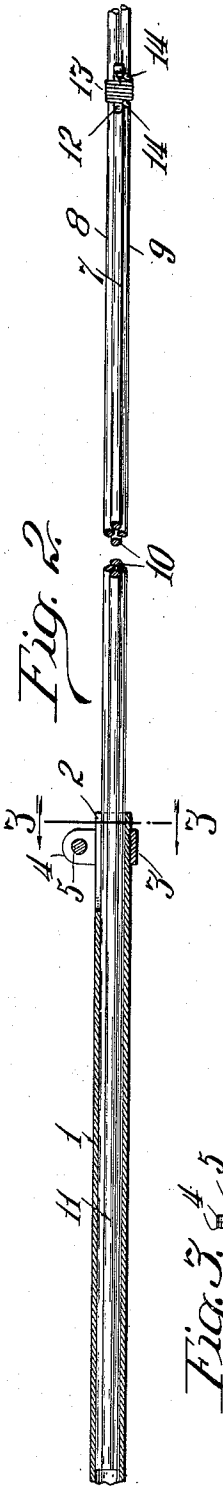


Fig. 2.

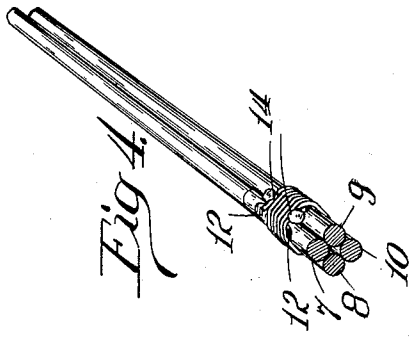


Fig. 4.

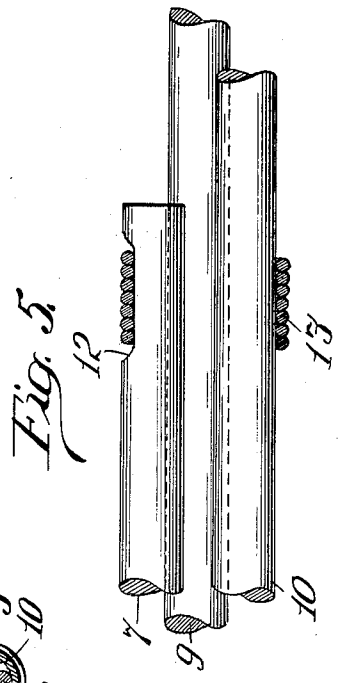


Fig. 5.

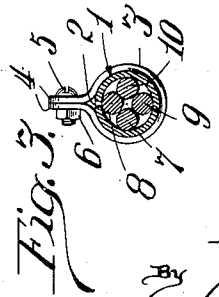


Fig. 3.

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UNITED STATES PATENT OFFICE

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GREENS WHIP

Application filed August 1, 1928. Serial No. 296,827.

This invention relates to a new and improved greens whip, and more particularly to a built up metallic whip for removing dew and worm-casts from golf greens.

For the purpose of removing dew and worm-casts from golf greens, it is customary to employ a flexible whip of considerable length, which is swung back and forth through the grass adjacent the ground and parallel thereto. For this purpose, a bamboo fishing rod, or other similar pole, is ordinarily used. Such rods are rather fragile and soon wear out and must be replaced. They are also apt to become broken if left lying around the course.

The object of the present invention is to provide a metallic greens whip which is practically indestructible, is economical to manufacture, and efficient in service.

Other objects and advantages of the invention will be more apparent from the following detailed description of one approved form of the device.

In the accompanying drawings:

Fig. 1 is a perspective longitudinal view of the improved whip.

Fig. 2 is a plan view, on a larger scale, of a portion of the whip, the handle section being shown in central section.

Fig. 3 is a transverse section, taken substantially on the line 3—3 of Fig. 2.

Fig. 4 is a perspective view of a portion of the whip, looking substantially from the line 4—4 of Fig. 1.

Fig. 5 is a longitudinal central section on an enlarged scale, taken substantially on the line 5—5 of Fig. 1.

In the example here shown, the handle portion of the whip consists of a length of steel tubing 1, which is split or slotted at one end, as indicated at 2. A clamping device is mounted about the slotted end of the tube, this clamp comprising a metal strap 3, having perforated ears 4 which are drawn together by a screw bolt 5 and nut 6.

The flexible portion of the whip consists of a plurality of small flexible steel rods 7, 8, 9 and 10. While four rods are here shown, it will be obvious that more or less of these rods could be used without departing from the principles of this invention.

While the rods here shown are of circular cross-section, any other cross section might be used, although sharp edges should be avoided. These rods are of different lengths, the links successively increasing from the shortest rod 7 to the longest rod 10.

The rods are grouped together and arranged with one end of each rod terminating substantially adjacent the corresponding ends of the other rods, and this end portion 11 of the assembled group is inserted within the tubular handle 1 and clamped therein by tightening up the screw bolt 5 so that strap 3 will contract the split end of the handle into binding engagement with the grouped rods, all as shown in Figs. 2 and 3.

The outer end of each rod, except the longest rod, is recessed on its outer surface as indicated at 12 in Fig. 5 in the case of the shortest rod 7, and a length of soft metal wire 13 is wrapped tightly about the group of rods passing through recess 12 in rod 7, and soldered in place, as indicated at 14. A similar binding member 15 is secured about the rods 8, 9 and 10, adjacent the end of rod 8, and a similar binding member 16 is secured about the rods 9 and 10 adjacent the end of rod 9. It will be apparent that the whip will increase in flexibility toward its outer end, as the number of constituent steel rods is decreased. As the whip is flexed the rods will slide longitudinally over one another to some extent, through the bindings 13, 15 and 16, but the recess 12 in the rod which terminates at the binding will serve to hold the binding from movement lengthwise of the whip. A crimped sleeve, or other suitable binding member could be substituted for the soldered wire 13.

This whip is very effective for the purpose for which it is designed, is easy to assemble, and quite economical, considering its long life as compared with the whips heretofore used for this purpose. The whip is practically indestructible, and may be left lying about the course without danger of being broken by persons stepping thereon or vehicles running

thereover, and will suffer little damage from exposure to the weather.

I claim:

1. A greens whip comprising a rigid metal handle portion, and a group of flexible metal rods of different lengths, one end of each rod being secured to the handle portion, and means for securing the outwardly projecting portions of the rods together at spaced intervals.

2. A greens whip consisting of a rigid handle portion, a group of flexible rods of different lengths, one end of each rod being secured to the handle portion, and a plurality of spaced binding means for securing the outwardly projecting portions of the rods together adjacent the termination of each of the shorter rods.

3. A greens whip comprising a rigid handle portion, and a group of flexible rods of different lengths, one end of each rod being secured to the handle portion and a binding means secured about the group of rods adjacent the termination of each of the shorter rods and means for anchoring the binding means to the end portion of the shorter rod, the longer rods being permitted sliding movement through the binding means.

4. A greens whip comprising a rigid handle portion, and a group of flexible rods of different lengths, one end of each rod being secured to the handle portion, the free outer end portion of each of the shorter rods being recessed, and a binding means secured in this recessed portion and about the other rods of the group.

5. A greens whip comprising a hollow metal handle portion, a group of metal rods of different lengths assembled with one of the ends of each rod within the hollow handle, means for securing these portions of the rods within the handle, and a wire wound around the group of rods and secured to the shortest rod adjacent the outer end of the shortest rod.

6. A greens whip comprising a hollow metal handle portion, a group of metal rods of different lengths assembled with one of the ends of each rod within the hollow handle, means for securing these portions of the rods within the handle, and means for binding the projecting portions of the rods together at spaced intervals.

7. A greens whip comprising a tubular metal handle portion, a group of metal rods of different lengths assembled with one of the ends of each rod within the tubular handle, means for securing the rods within the handle, the free outer end of each of the shorter rods being recessed, and a wire wound about the group of rods and passing through the recess, the ends of the wire being soldered to the adjacent wire coils.

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