Sept. 16, 1969 R. BROOKS ET AL 3,467,115

UMBRELLA

Filed Feb. 9, 1968 2 Sheets-Sheet 1

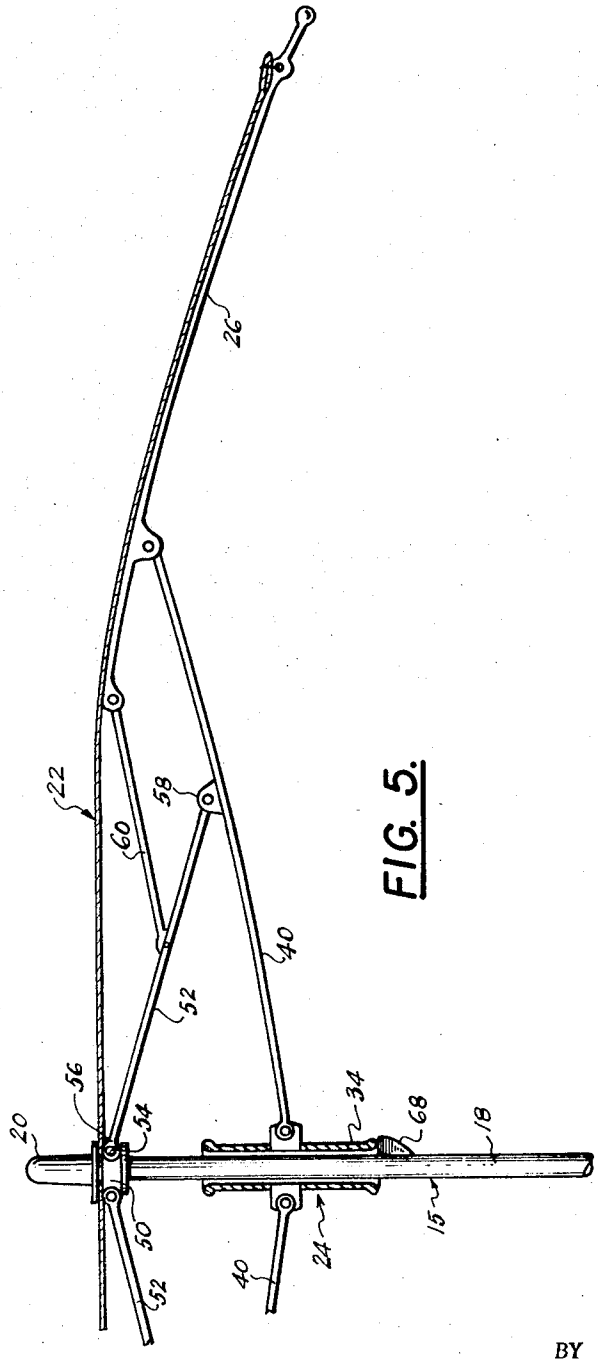

FIG. 5.

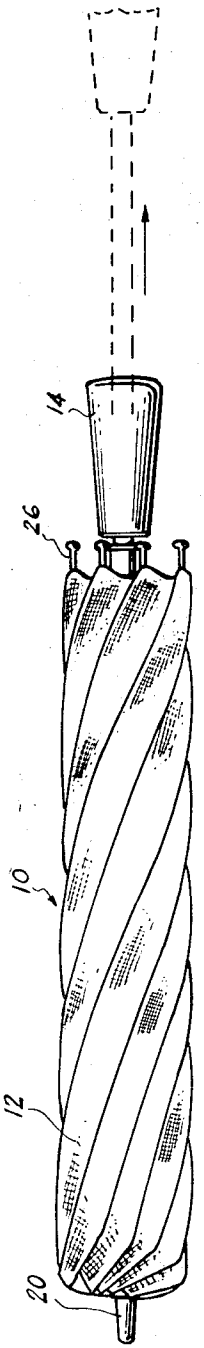

FIG. 1.

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FIG. 4.

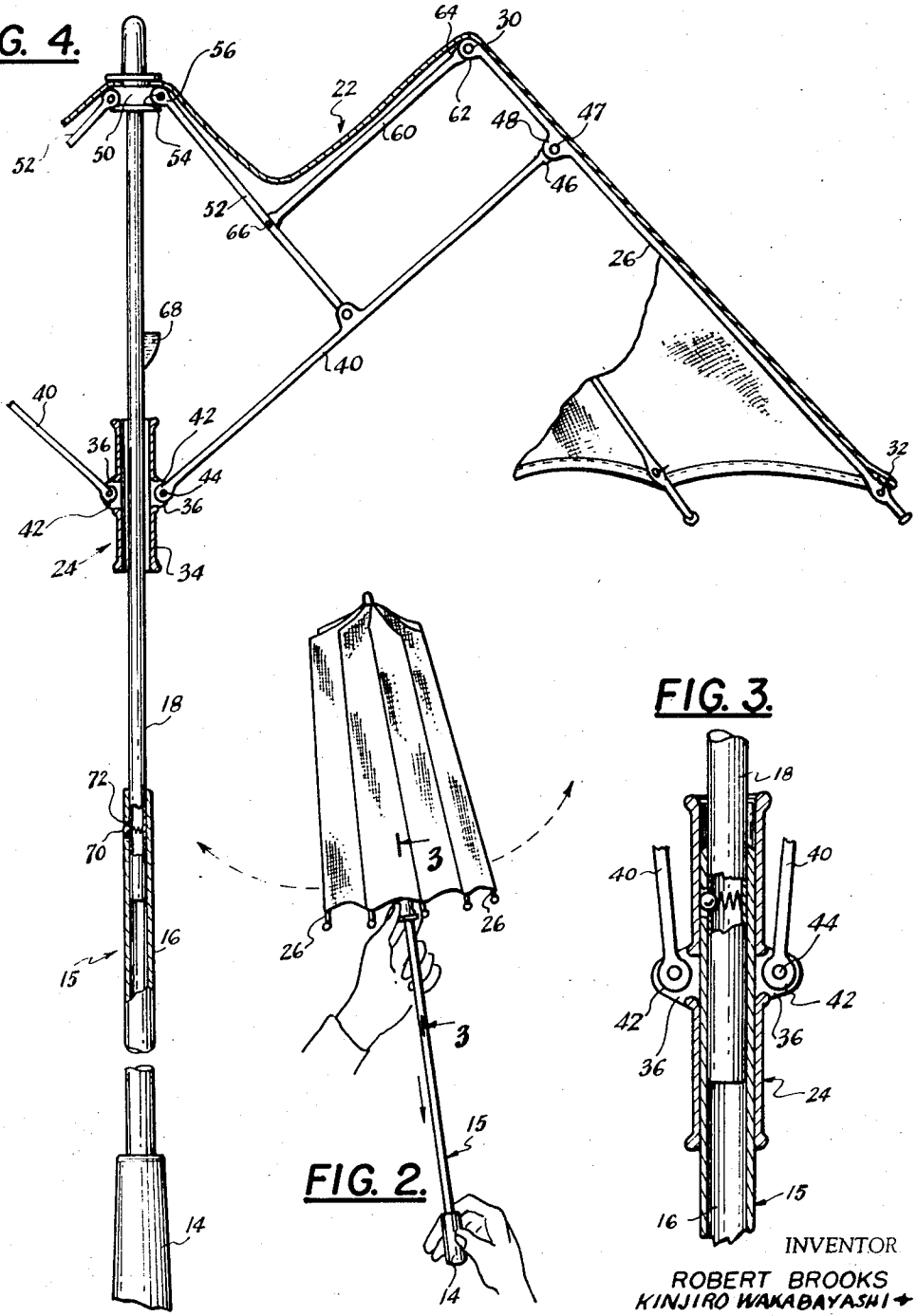

FIG. 2.

FIG. 3.

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UMBRELLA

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U.S. Cl. 135—25 1 Claim

ABSTRACT OF THE DISCLOSURE

An umbrella construction having a shaft with a cover fixed at the top thereof and with a handle at the bottom thereof. Main ribs and links are provided for extending and collapsing the cover, and a slidable runner is mounted on the shaft for actuating the ribs and links through interposed auxiliary links.

This invention relates generally to umbrellas and more particularly to a golfer's umbrella construction.

A principal object of the instant invention is to provide an umbrella construction that is adapted to be carried inside the golfer's bag and is adapted to be converted so that it can be carried on the outside of the golfer's bag.

Another object of the invention is to provide an umbrella construction that is convertible and compact and economical to manufacture.

BRIEF DESCRIPTION OF THE VIEWS OF THE DRAWINGS

FIG. 1 is a front elevational view of an umbrella construction embodying the invention, in closed position, with a cover thereon, and showing the handle in extended position in dash lines.

FIG. 2 is a perspective view of the umbrella construction with the handle extended, shown preparatory to opening by the user.

FIG. 3 is a vertical sectional view of the rib actuating runner.

FIG. 4 is an enlarged fragmentary sectional view showing the umbrella's construction partly opened.

FIG. 5 is a similar view showing the umbrella's construction fully opened.

Referring now in detail to the various views of the drawings, an umbrella construction embodying the invention is shown in FIG. 1 and designated generally at **10**. A fabric removable cover **12** envelopes the body of the umbrella construction, the handle **14** being exposed.

The umbrella construction **10** comprises a sectional metal rod or shaft **15** including a lower section **16** and an upper section **18** as viewed in FIG. 4. The elongated wooden handle **14** is fastened to the bottom end of the lower section **16**. The lower section is telescopically arranged on the upper section **18** in the usual manner. A hollow cylindrical socket member or cap **20** finishes off and receives the top end of the upper section **18** of the rod. A cover **22** is carried at the top of the upper section **18**.

An actuating runner **24** is slidably mounted on the rod or shaft for moving the cover from a closed position as shown in FIG. 1 to an open position as shown in FIG. 5 by means of the improved arrangement of main ribs **26**. It will be seen from FIGS. 3 and 5 that the runner **24**, when the umbrella is closed, is in lower position on the rod or shaft **15** as shown in FIG. 3, while when the umbrella is open, as shown in FIG. 5,

the runner has been moved upwardly on the rod or shaft **15**.

The radiating ribs **26** are secured to the cloth cover **22** by stitches **30** at the inner ends of the main ribs and by stitches **32** at the outer ends thereof.

The actuating runner **24** comprises a cylindrical tubular body **34** having a plurality of segmental elements **36** disposed in equally spaced relationship about the periphery of the body **34** midway the ends of the body. Each element **36** has a transverse hole. A plurality of spaced auxiliary links **40** connect the runner **24** with the main ribs **26**, each auxiliary link having an eye portion **42** at one end pivotally connected to a segment element **36** by a wire **44** and having an eye portion **46** at its other end pivotally connected by a wire **47** to a perforated ear **48** on the adjacent main rib **26** inwardly from its inner end.

A slotted annular ferrule **50** is fixed on the top end of the upper section **18** of the rod or shaft **15** and secured in the spaced slots thereof is a plurality of round links **52** by means of a wire **54** extending through eyelets **56** formed on the adjacent ends of the links and through an annular notch formed in the ferrule **50**. The other ends of the links **52** are pivotally connected to perforated ears **58** formed on the auxiliary links **40**. Other links **60** are pivotally connected at one end to eyelets **62** formed on the inner ends of the main ribs **26** by means of wires **64** and the links **60** at the other end are similarly pivotally connected to the links **52** midway the ends thereof, as indicated at **66**. The links **52** and **60** are not attached to the cover **22**.

A spring pressed detent **68** is movably mounted on the rod or shaft **15** for holding the sliding runner **24** in its uppermost position when the cover **22** is in fully open position as shown in FIG. 5. A spring pressed ball detent **70** is mounted on the upper section **18** of the rod or shaft **15** adjacent its bottom end adapted to cooperate with a hole **72** in the lower section **16** to hold the sections against accidental relative movement.

In use, to open the umbrella the lower section **18** is pulled outwardly of the inner section **16** by means of the handle **14** so as to extend said lower section. With the lower section extended, the actuating runner **24** is pushed upwardly along the shaft **15** whereupon the auxiliary links **40** push against the main ribs **26** spreading out the fabric cover **22** and continued upward pushing or sliding of the runner extends the auxiliary links **40** horizontally and at the same time extends the links **52** and **60** as will be seen in FIG. 5. When the runner **24** rides above the detent **68**, said detent automatically moves outwardly to the position shown in FIG. 5 holding the runner and associated parts in moved position, when pressure is removed therefrom.

In order to close the umbrella, the runner **24** is manually pulled downward against the detent **68** moving the detent inwardly and continued downward pull on the runner collapses the auxiliary links **52** and **60** to collapsed condition as shown in FIGS. 1 and 3.

When the umbrella closes, the material of the cover **22** drops down into the top opening of the frame structure and the links **52** and **60** come down and close over the shaft **15**. In other words, the umbrella length becomes the length of the ribs **26** when the umbrella is folded. The material of the cover **22** is not attached to the links **52** and **60** at the top as with the standard umbrella.

In order to make the umbrella still shorter and within the length of the ribs **26**, the handle section **16** telescopes upwardly into the cover material. Thus you get a wide umbrella which can be folded to a very short length. The protective cover **12** may be readily slid over the closed umbrella.

When the umbrella is collapsed with its cover **12** thereon, it can readily be inserted inside of a golf bag and transported during the game of golf. However, the lower section **16** of the shaft **15** may be extended and when so extended the umbrella may be mounted on the outside of the golf bag, with the cap **20** inserted in the strap socket provided on all golf bags, the handle being secured by a strap at the top of the bag provided for this purpose.

What is claimed is:

1. An umbrella construction comprising a collapsible shaft; a frame carried upon the shaft; a ferrule fixed at the top of the shaft; a fabric cover extended over the frame and fixed to the ferrule; a runner slidable on the shaft; main ribs secured along the inside of the fabric from the periphery thereof radially inward to a point substantially short of the center of the cover; and linkage means between the runner and the intermediate ends of the ribs constituting an extension of the ribs for forcing the cover to the open position and for closing the cover upon the shaft when collapsed; auxiliary links pivotally connected at one end to said ferrule and at the other end to said linkage means intermediate the ends thereof; other auxiliary links pivotally connected at one end to said first-named auxiliary links, intermediate the ends thereof, and at the other end to the inner ends of said ribs, whereby movement of the runner is imparted to the main ribs, linkage means and auxiliary links, for extending the cover and for collapsing the cover; the shaft being sectional; and a detent member movably mounted on one section of the shaft in the path of movement of the runner whereby the runner is releasably held in uppermost position for holding the cover in open extended position, a spring-pressed ball detent movably mounted in one section of the shaft, said other section of the shaft having a hole therein coacting with said ball detent to releasably hold the sections against relative movement; and a handle on the bottom end of said other section.

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