May 3, 1955 J. E. CLEMENS 2,707,476

UMBRELLA

Filed May 6, 1954

2 Sheets-Sheet 1

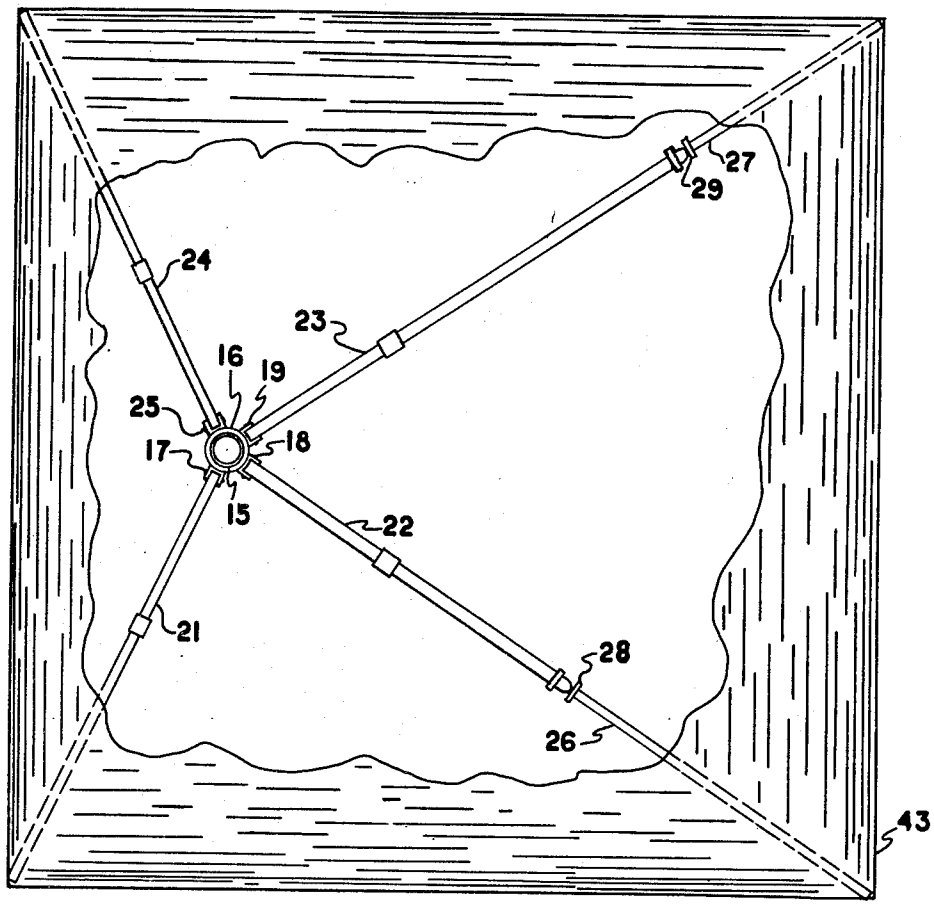


Fig. 1

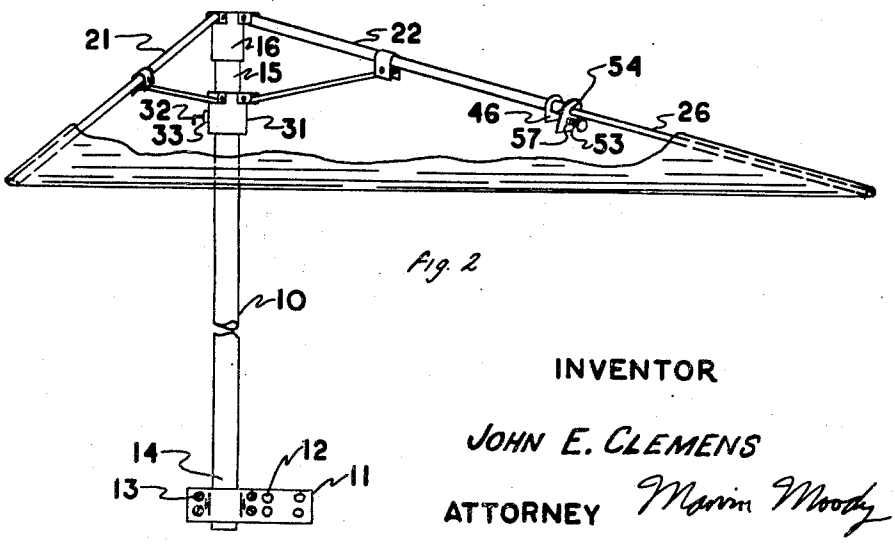


Fig. 2

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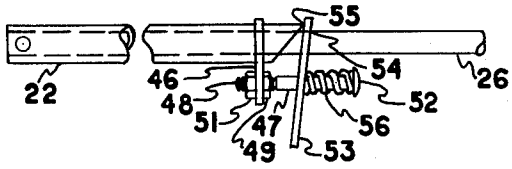


Fig 4

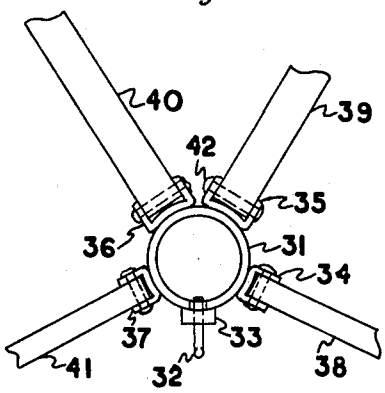


Fig 5

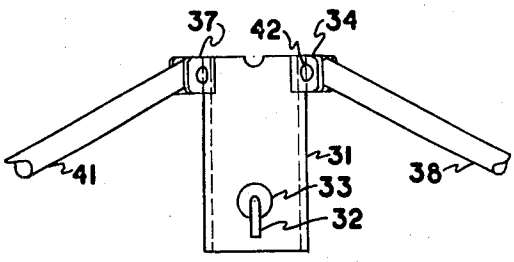


Fig 6

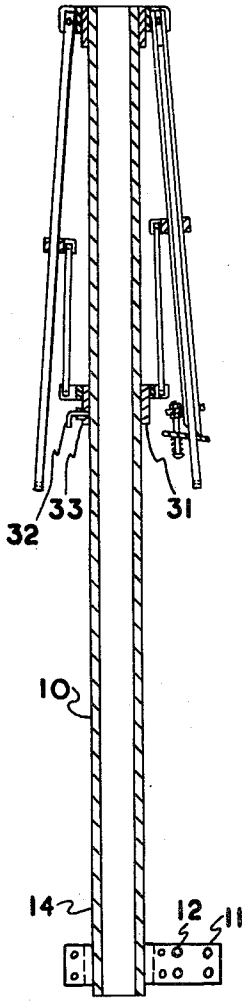


Fig 3

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2,707,476

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UMBRELLA

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Application May 6, 1954, Serial No. 427,918

2 Claims. (Cl. 135—20)

This invention relates in general to umbrellas and in particular to an offset umbrella which has legs of different lengths and which may be independently adjusted.

It is oftentimes desirable when working on a tractor to have a shade over the driver's head to protect him from the hot sun. Conventional umbrellas are unsuitable for this purpose because the center supporting pole interferes with the driver and only about one third of the umbrella is used effectively. Certain offset umbrellas have been developed which have certain legs that vary in length as the umbrella is opened or closed, however, these umbrellas would have to be removed each time they were opened or closed and this would be time consuming.

It is an object of this invention, therefore, to provide an offcenter umbrella wherein the length of the legs may be varied independently.

Another object of this invention is to provide an umbrella which may be opened or closed while mounted on a vehicle.

Yet another object is to provide a simple offset umbrella that may be cheaply and easily constructed.

A feature of this invention is found in the provision for an off-center umbrella in which the extensible legs may be adjusted independently of the opening and closing mechanism.

Further features, objects and advantages of this invention will become apparent from the following description and claims when read in view of the drawings, in which:

Figure 1 is a top view of my umbrella with a portion of the canvas removed.

Figure 2 is a side view of the umbrella.

Figure 3 is a side view of the umbrella in the collapsed position.

Figure 4 is a detail view of the telescoping locking device.

Figure 5 is a top view of the slide bracket; and

Figure 6 is a side view of the slide bracket.

Figure 2 illustrates a main supporting pole **10** which may be supported by its lower end **14** in a suitable holding bracket **11**. A plurality of openings **12** are formed in the bracket **11** and bolts **13** or other holding means may be used to attach it to the pole **10** and to a vehicle or other structure upon which it is desired to mount the umbrella.

A ferrule **16** is firmly attached to the top **15** of pole **10** and has a group of four pivot brackets **17**, **18**, **19**, and **25** attached thereto. The pivot brackets pivotally support arms of the umbrella **21**, **22**, **23** and **24**. The arms may be formed from hollow tubing and a pair of telescoping extensions **26** and **27** are mounted in arms **22** and **23** and may be locked in any desired position by the locking means **28** and **29**.

A sleeve **31** is slidably mounted on the pole **10** below the ferrule **16**. It has a threaded portion **33** that receives a set screw **32** therethrough to lock the sleeve in any desired position on the pole **10**.

As best shown in Figures 5 and 6 sleeve **31** has four pivot brackets **34**, **35**, **36** and **37** attached to the top thereof which pivotally support the braces **38**, **39**, **40** and **41**. The opposite ends of the braces are pivotally attached to the brackets shown in Figures 1 and 2 that are mounted on legs **21**, **22**, **23** and **24**. The braces **38**, **39**, **40** and **41** are attached to brackets **34**, **35**, **36** and **37** by pins **42**.

A canvas cover **43** is mounted over the umbrella frame as shown in Figures 1 and 2.

A detail of locking means **28** and **29** appears in Figure 4. The ends of legs or arms **22** and **23** are beveled as shown by numeral **55**. A first plate **46** is attached to leg or arm **22** and a bolt **47** extends therethrough as shown. One end of bolt **47** is threaded and is designated as **48**. A first nut **49** is received on the bolt on one side of the plate **46** and a second nut **51** is received on the other side of plate **46** to firmly lock the bolt in place.

A locking plate **53** is formed with two openings **54** and **57** and the extension **26** is received through opening **54** and the bolt **47** is received through opening **57**. Opening **57** is loose with bolt **47** so that cocking action may be obtained to lock extension **26** in any desired position relative to leg **22**. A spring **56** is received over bolt **47** between plate **53** and the head **52** of the bolt.

It is to be realized that the locking means **28** and **29** are the same and serve the function of making it possible to lock the extensions **26** and **27** in any position relative to arms **22** and **23**.

In operation, the umbrella of this invention may be mounted on a tractor or other device. The advantages of my invention are that it may be mounted permanently on a tractor and may be opened or retracted without removing from the holding bracket. This is true because the extensions **26** and **27** may be retained in the extended or retracted positions as the umbrella is opened or closed.

To open the umbrella, the set screw **32** is loosened and sleeve **31** is pushed up pole **31** thus causing the braces **38**, **39**, **40** and **41** to push the arms out from the pole. When the arms are raised completely, the set screw **32** may be tightened and locked in place. Then the extensions **26** and **27** may be extended by loosening the locking means **28** and **29**. The locking means may be released by moving plate **53** away from plate **46**.

If the umbrella is mounted on a tractor the driver's head can remain under the umbrella near the center and the pole will not interfere or bump his head.

It is to be noted that the arms do not have the same lengths in that arms **21** and **24** are somewhat longer than arms **22** and **23**. However, the extensions **26** and **27** within arms **22** and **23** make it possible for their combined lengths to be greater than that of legs **21** and **24**. The angle between arms **22** and **23** might be 65 degrees and the angle between arms **21** and **24** might be 135 degrees. This requires that the angles between arms **21** and **22**, and arms **23** and **24** be 80 degrees, respectively.

The pole **10** may be mounted from about $15/54$ to $27/54$ of the overall length behind the center line. As shown in Figure 1 it is mounted about one-fourth the distance across the umbrella.

It is seen that this umbrella has many features that make it unique. Although it has been described with respect to a preferred embodiment, it is not to be so limited as changes and modifications may be made which are within the full intended scope as defined by the appended claims.

I claim:

1. An umbrella comprising, a pole, four arms pivotally attached to the pole at the top thereof, said arms mounted asymmetrical about the pole, a first pair of arms sepa-

rated by an angle less than ninety degrees, a pair of extensions attached to the first pair of arms and movable from a first retracted position to a second extended position independent of the position of the arms relative to the pole, locking means for locking said extensions in the first or second positions, and a canvas cover attached to the arms and extensions.

2. In apparatus according to claim 1 wherein said locking means comprises, a first plate mounted on the end of an arm, a second plate loosely mounted on an extension, a bolt extending through said first and second plates and firmly attached to the first plate, and loosely

connected to the second plate, a spring biasing said plates apart, and the end of the arm beveled so that the second plate may cock to lock the extension.

References Cited in the file of this patent

UNITED STATES PATENTS

1,208,097	Collins et al.	Dec. 12, 1916
2,493,121	Ellis	Jan. 3, 1950

FOREIGN PATENTS

170,930	Great Britain	Oct. 31, 1921