

No. 653,164.

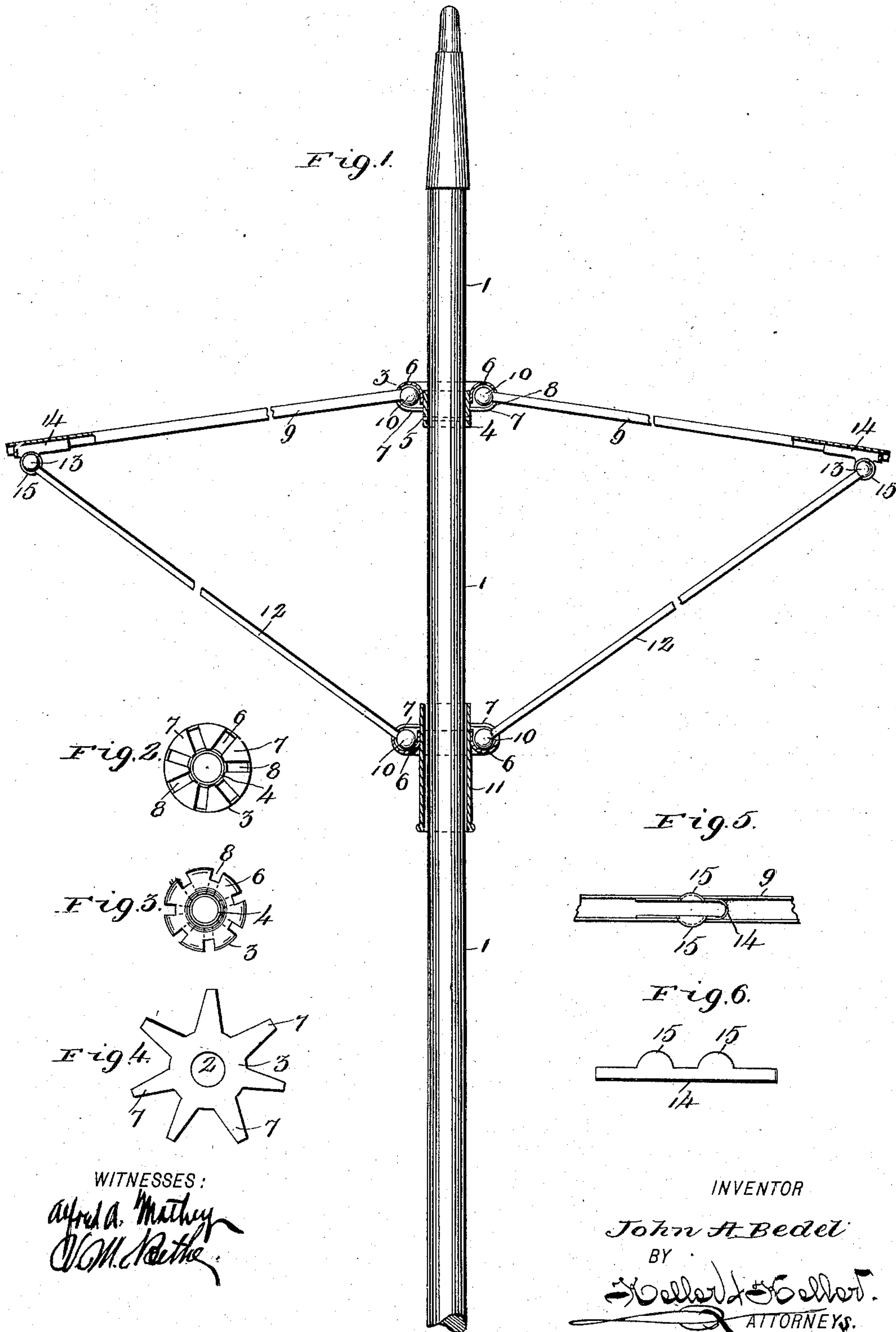
Patented July 3, 1900.

J. A. BEDEL.

JOINT FOR UMBRELLA RIBS AND STRETCHERS.

(Application filed Aug. 7, 1899.)

(No Model.)



UNITED STATES PATENT OFFICE.

JOHN A. BEDEL, OF BELLEVILLE, ILLINOIS.

JOINT FOR UMBRELLA RIBS AND STRETCHERS.

SPECIFICATION forming part of Letters Patent No. 653,164, dated July 3, 1900.

Application filed August 7, 1899. Serial No. 726,432. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. BEDEL, a citizen of the United States, residing at Belleville, in the county of St. Clair and State of Illinois, have invented certain new and useful Improvements in Umbrellas; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
10 pertains to make and use the same.

My invention relates to improvements in umbrellas; and it consists in the novel combination and arrangement of parts, as will be hereinafter more particularly described and
15 claimed.

In the drawings, Figure 1 is a combined side elevation and sectional view of an umbrella or parasol frame constructed according to my invention. Fig. 2 is a plan view of
20 one side of the socket which I employ in carrying out my invention. Fig. 3 is also a plan view of the socket, showing the opposite side of the same. Fig. 4 is the blank from which the socket is formed. Fig. 5 is a plan view
25 of the bearing which I employ for connecting the ribs and stretcher members, and Fig. 6 is a plan view of the blank from which the last-named bearing is formed.

One object of my invention is to construct
30 a simple, practical, and durable umbrella or parasol frame; and it consists in providing the pivotal ends of the stretcher members and the inner ends of the ribs of said frame of the umbrella or parasol with specifically-
35 constructed ball-bearing sockets, whereby the frame can be easily closed or opened with a minimum amount of friction.

A further and very important object of my invention is the durability of the frame—that
40 is, one that cannot possibly get out of order or the parts become separated through wear, as is a very common annoyance and expense with umbrella or parasol frames of the usual construction—thereby materially prolonging
45 the life of the umbrella or parasol.

Referring to the drawings, 1 represents the umbrella or parasol rod, which is of the usual or well-known construction and to which my invention is readily applied, and secured to
50 said rod at a suitable distance from the ferrule end of the same is a specially construct-

ed socket, the construction of which will now be described.

The socket previously referred to consists, practically, of one piece of metal formed in
55 the desired shape and provided with an opening 2, the flat metal on one side of the plate 3 being flanged surrounding said opening and secured in any suitable manner to the thim-
60 ble 4, the latter being rigidly fixed to the rod 1 by a pin 5 or in any suitable manner. The plate thus formed and secured to the thimble 4 as described is suitably bent to form a continuous semicircular groove 6, which forms
65 one wall of the socket, and forming an integral part of said plate and a continuation of said grooved portion are a series of radially-arranged tapering tongues 7, which are bent
70 in such a manner as to form a complete annular socket surrounding the thimble 4, the ends of said tongues being brought in contact with the
75 latter, thereby forming spaces 8, arranged at regular intervals apart for receiving the ribs 9, within which the latter move, and secured to the inner ends of said ribs are balls 10, which
80 are snugly received by the socket thus formed. The runner 11, which is movable upon the rod 1, is of any well-known construction and carries the usual locking device, (not shown,) and secured to and surrounding the same is
85 a similar socket or notch to that previously described but reversed in position, which socket is adapted to receive the balls 10, secured to or otherwise formed on the lower
90 ends of the stretcher members 12, the opposite ends of said members being likewise provided with balls 13, which are received by specially-constructed bearings secured to and
95 carried by the ribs 9 at a suitable position along the length of the same, the construction of which socket will now be described. The sockets or bearings last referred to are
also formed of one piece of metal, the blank of which is shown in Fig. 6 of the drawings
100 and consists of a strip of metal 14, having two semicircular extensions 15 projecting from one side of the same and arranged at a suitable distance from one another, the said semicircular extensions being properly de-
pressed to form two cup-shaped walls for re-
ceiving between them the balls 13, carried at the upper end of the members 12. The strip

after being depressed or formed in the manner previously described is bent about its medial portion or is U-shaped, whereby a suitable space is left between the cup-shaped extensions 15 for the movement of the members 12, the said U-shaped bearing being secured to the ribs 9 with its connecting portion pointing toward the ends of said ribs, the said bearings being located within the ribs and arranged in a longitudinal direction with the same, whereby the strip 14 is held in its proper position and the bearing formed by the same is prevented from spreading.

15 I do not limit myself to the precise construction and arrangement of the parts here in shown and described, as the same may be slightly varied without departing from the nature of my invention, the principal object
20 being to construct a ball-bearing for the specific purpose described which can be readily attached to the umbrella and form a perfect bearing, together with the balls carried by the various members of the umbrella-frame.

25 It will readily be seen from the foregoing description that the parts comprising the frame can be readily and conveniently united, and when the tongues 7 of the plates 3 are bent into position to form the complete bearings

the parts will be rigidly and permanently held together. 30

Having fully described my invention, what I claim is—

An umbrella-frame, comprising a suitable rod, a bearing secured to the latter, suitable ribs, balls forming the ends of the said ribs, and adapted to be received by said bearing, bearings secured within the ribs in a longitudinal direction with the latter, and consisting of a strip of metal bent transversely about its medial portion, semicircular cup-shaped extensions projecting from each side of said strip, and located opposite one another, whereby a suitable space is left between said extension, and a ball carried by one end of the stretcher members, and adapted to be received between the cup-shaped extensions, said strip being secured to the rib with its bent portion thereof pointing toward the free end of the same, whereby the bearing thus formed is prevented from spreading, substantially as described. 45 50

In testimony whereof I affix my signature in presence of two witnesses.

JOHN A. BEDEL.

Witnesses:

ALFRED A. MATHEY,
C. F. KELLER.