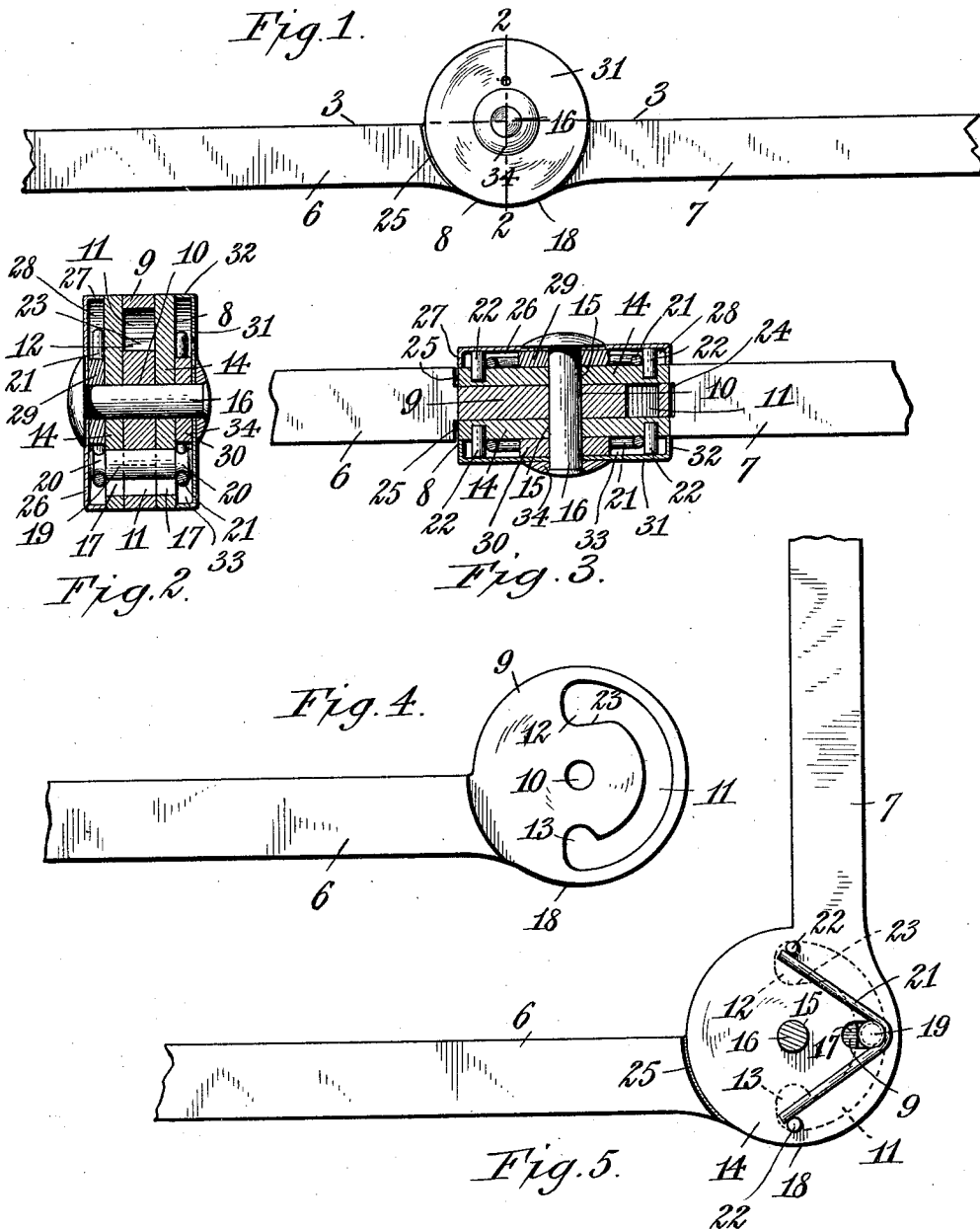


J. TEPPERT.
BRACE FOR VEHICLE TOPS.
APPLICATION FILED MAY 5, 1911.

1,036,164.

Patented Aug. 20, 1912.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOSEPH TEPPERT, OF BUFFALO, NEW YORK.

BRACE FOR VEHICLE-TOPS.

1,036,164.

Specification of Letters Patent.

Patented Aug. 20, 1912.

Application filed May 5, 1911. Serial No. 625,221.

To all whom it may concern:

Be it known that I, JOSEPH TEPPERT, a subject of the Emperor of Germany, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Braces for Vehicle-Tops and the Like, of which the following is a specification.

This invention relates to braces for vehicle tops or the like, and more particularly to a joint for a brace adapted to fold or break downwardly for folding the top, as described in my Patent No. 968,894, dated August 10, 1910, the advantages of which are therein noted.

One of the objects of my invention is the provision of a joint for braces of vehicle tops and the like having means to retain the brace in folded or broken position, and also to retain the same in open or extended position.

Another object of my invention is to provide a joint of this character which is simple in construction, comparatively inexpensive, and which is adapted for use on a brace which breaks or folds either downward or upward as may be desired, but is particularly adapted for use in braces folding downward.

With these and other objects in view, my invention consists in the construction, arrangement and combination of parts to be hereinafter described and particularly pointed out in the subjoined claims.

In the drawings,—Figure 1 is a side elevation of a brace constructed according to my invention. Fig. 2 is an enlarged transverse section taken on line 2—2, Fig. 1. Fig. 3 is a horizontal section taken on line 3—3, Fig. 1. Fig. 4 is a side elevation of one of the arms of the brace. Fig. 5 is a side elevation with one of the caps removed and the pivot pin shown in section.

Referring now to the drawings in detail, like numerals of reference refer to like parts in the several figures.

The reference numerals 6 and 7 designate the two arms of a brace and 8 the joint by means of which said arms are connected, parts of said joint being formed integral with said arms. The arm 6 has a single flat offset circular joint-member 9 provided with an axial pivot-hole 10 and a segmental slot 11 having its axis coincident with the axis of said pivot-hole and having opposite

ends enlarged or notched inwardly toward said pivot-hole, as at 12, 13, for a purpose to appear hereinafter.

The arm 7 has two flat circular joint-members 14 offset thereon and spaced apart so as to straddle the joint-member 9 and they also have axial pivot-holes 15 through which and the pivot-hole 10 of the joint-member 9 a pivot pin 16 is passed, thus pivotally connecting the two arms of the braces. The said circular joint-members have their peripheral edges extending slightly above the outer edge of the brace, as at 18, and the joint-member or members of each arm curve gradually into the upper edges of their respective arms so as to provide an outer smooth surface for the brace without projecting parts. The joint-members of the arms 7 also have aligned radial slots 17 through which and the segmental slot of the single joint-member 9, a stop-pin 19 is passed; said pin extending from opposite sides of the brace and having annular grooves 20 at its projecting ends. At the outer side of the joint-members 14 V-shaped springs 21 are arranged which have their bights fitting the grooves of said stop pin and their extremities in contact with studs 22 projecting from the sides of said joint-members. Said springs serve to retain the stop pin in place and also act to force said pin toward the axis of the joint so that upon opening the brace, the inner wall of the segmental slot travels in contact with the pin and upon the enlarged portion 12 of the slot being reached, the spring acts to draw the stop pin inward, thus causing a quick final movement of the two arms and assisting in stretching the vehicle top. When in open position, the pin is held against the inner wall of the said enlargements 12 by the springs 21 and assures the brace being retained in open position.

Upon breaking or folding the brace, sufficient manual force must be exerted to overcome the tension of the V-shaped springs so as to cause the pin to ride up the inclined wall 23 formed by the enlargement 12 of the segmental slot; and as the opposite end of said segmental slot is brought in line with the lock-pin, the V-shaped springs tend to force the lock-pin into the enlargement 13 at the opposite end of said segmental slot, thus retaining the brace in folded position. Between the arm 7 of the brace and the

peripheral edge of the single circular joint-member 9 a clearance space 24 is provided and between the arm 6 and the two circular joint-members 10 of the arm 7, clearance spaces 25 are also provided, thus permitting the brace to be painted, enameled, or otherwise coated and preventing one arm from injuring or scraping the coating from the other during the act of opening or closing the brace.

At one side of the brace, a cap 26 is placed thereagainst so as to cover the spring on that side and the studs co-acting therewith, also the adjacent projecting end of the stop-pin. Said cap has a peripheral rim 27 to provide an annular space 28 in which the adjacent V-shaped spring is confined. The pivot-pin 16, is also passed through said cap and a spacing collar 29 interposed between said cap and other joint-proper, and has a head bearing against the outer face of the cap. Said pivot-pin projects a suitable distance beyond the opposite side of the joint, and on it is placed a spacing collar 30 against which a second cap 31 is held which is passed over the opposite projecting end of the pivot pin, said cap having also a peripheral rim 32 providing an annular space 33 in which the spring on the same side of the joint is confined. A washer 34 is placed over the extremity of the pivot pin and bears against the outer face of said last-mentioned cap, and the pivot pin 16 is upset into the washer so as to securely connect the several parts of the brace.

Having thus described my invention, what I claim is,—

1. In a brace or the like, two parts pivotally connected together, one of said parts having a flat circular joint-member provided with a segmental slot and the other having a pair of flat circular joint-members spaced apart and straddling said first-mentioned joint-member, said pair of joint-members having radial slots alined with said segmental slot, a pivot pin axially connecting said joint members, a stop-pin passing through said segmental slot and said radial slots and projecting from opposite sides of the joint and a spring tending to force said stop pin toward the pivot of said joint-members.

2. A brace or the like comprising two arms, one of which has a flat circular joint-member off-set thereon and provided with a segmental slot having enlargements at opposite ends, and the other having a pair of spaced flat circular joint-members straddling said first-mentioned joint-member and having alined radial slots formed therein, a pivot-pin axially connecting said joint-members; a stop pin passing through said segmental and radial slots and projecting from opposite sides, and means acting against said stop pin to cause the same to

enter the enlargements of said segmental slot when the brace is in extended and in folded position.

3. A brace or the like comprising two arms, one of which has a flat circular joint-member off-set thereon and provided with a central pivot hole and a segmental slot having said pivot hole as its center and being provided with enlargements at opposite ends extending toward said pivot hole, and the other arm having a pair of flat circular joint-members straddling said first-mentioned joint-member and having central pivot holes and a pair of alined radial slots, a pivot pin passed through said pivot holes, a stop pin passed through said segmental and radial slots and projecting from opposite sides of the joint, springs acting against the projecting ends of said stop pin to cause the latter to enter the enlargements of said segmental slot when the arms are in extended and in folded position.

4. A brace or the like comprising two arms, one of which has a flat joint-member provided centrally with a pivot-hole and having a segmental slot with its center coincident with that of said pivot-hole, said slot having enlargements at its ends extending toward said pivot-hole, the other arm having a pair of spaced flat joint-members provided with radial slots, said spaced joint-members straddling said first-mentioned joint-member and having pivot-holes centrally therein alined with the pivot-hole of said first-mentioned joint-member, a pivot-pin extending through said pivot-holes, a stop pin passed through said segmental slot and said radial slots and projecting from opposite sides of the joint, a pair of studs at each side of the joint, one of each pair being arranged at opposite sides of said pivot-pin, and V-shaped springs having their bights in contact with the projecting ends of said stop pin and their extremities in contact with said studs.

5. A brace or the like comprising two arms, one of which has a flat circular joint-member provided centrally with a pivot hole and having also a segmental slot provided with enlargements at opposite ends extending toward said pivot hole and the other arm having a pair of flat spaced circular joint-members straddling said first-mentioned joint-member and having a pair of centrally arranged pivot holes and alined radial slots, a pivot-pin fitting the pivot-holes of said joint-members, a stop pin extending through said segmental slot and said radial slots and projecting from opposite side of the joint, said stop pin having an annular groove at each end, a pair of studs at each side of the joint with the studs of each pair on opposite sides of the pivot pin, and V-shaped springs having their bights fitting the grooves of said stop pin

and their extremities in contact with said studs.

5 6. A brace or the like comprising two arms, one of which has a flat circular joint-member provided with a segmental slot and the other having a pair of spaced flat circular joint-members straddling said first-mentioned joint-member and provided with radial slots, a stop pin passing through
10 said segmental slot and said radial slot and projecting from opposite sides of the joint, a spring at each side of the joint acting against the projecting ends of said stop pin, a cap at one side of the joint having a hub
15 and a peripheral rim separated from said hub by an annular intervening space, a pivot pin passed through said cap and said joint members and projecting from the opposite side of said joint, a spacing collar
20 surrounding the projecting end of said pivot pin, a cap fitting on the projecting end of said pivot pin and bearing against said collar and having also a peripheral rim providing an annular intervening space
25 between it and said collar, and a washer at the extremity of said pivot pin into which the pivot pin is countersunk, said springs being located in said annular intervening spaces.

30 7. In a brace or the like, two parts pivotally connected together, one of said parts

having a flat circular joint-member provided with a segmental-slot and the other having a cooperating flat circular joint-member provided with a radial-slot alined
35 with said segmental-slot, a pivot pin axially connecting said joint-members, a stop pin passing through said segmental slot and said radial-slot and projecting from opposite sides of the joint, and a spring tending
40 to force said stop pin toward the pivot of said joint-members.

8. In a brace or the like, two parts pivotally connected, one of said parts having
45 a flat joint member provided with a segmental slot and the other having cooperating flat joint member provided with a radial slot alined with said segmental slot, a pivot pin connecting said joint members, a stop pin passing through said segmental
50 slot and said radial slot, said segmental slot having a notch in one of its walls, and means to force said stop pin into said notch when the latter is brought in line with said radial slot.
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In testimony whereof I have affixed my signature in the presence of two subscribing witnesses.

JOSEPH TEPPERT.

Witnesses:

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