

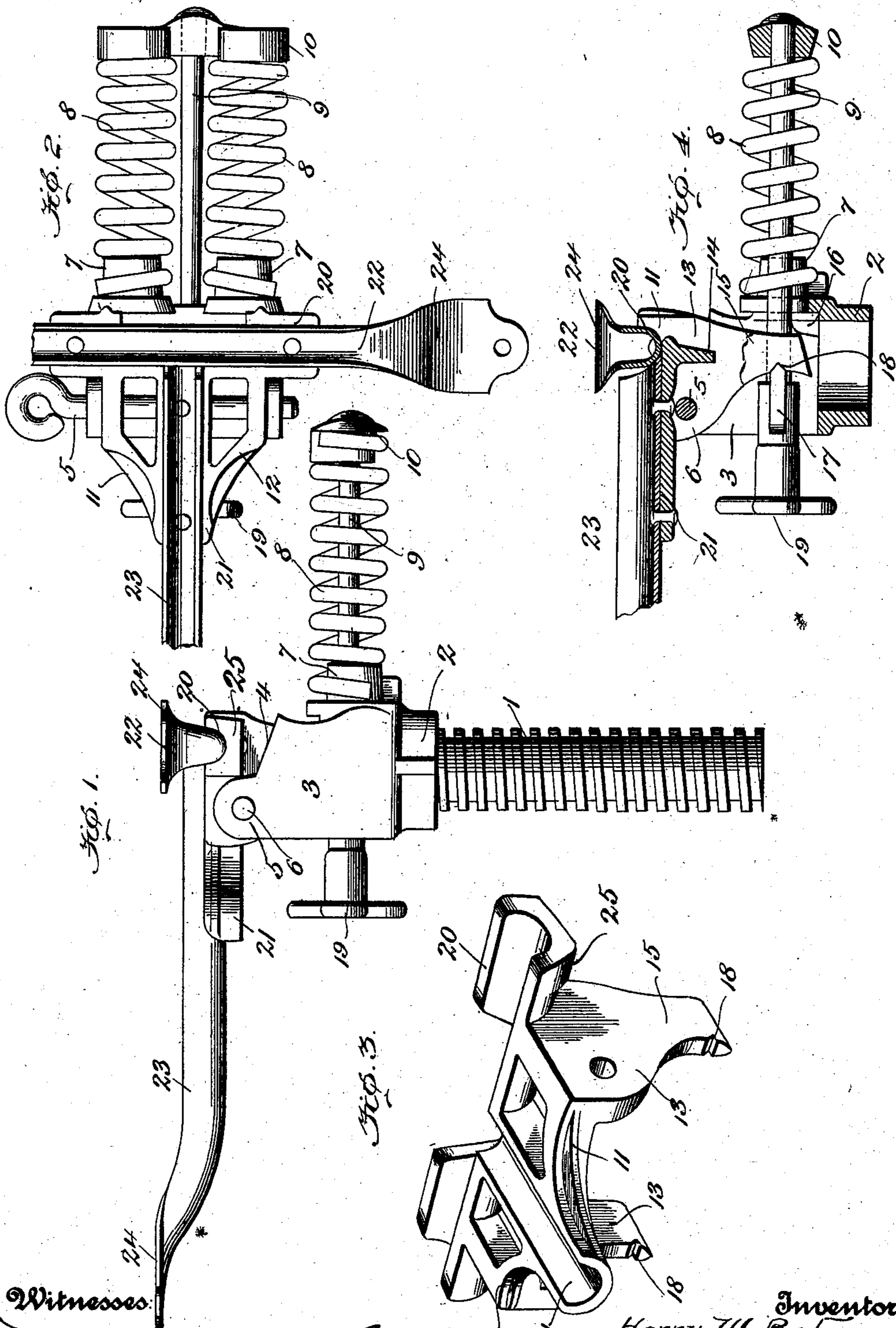
No. 702,769.

Patented June 17, 1902.

H. W. BOLENS.  
CHAIR SPIDER.

(Application filed Mar. 7, 1902.)

(No Model.)



Witnesses:

*C. F. Duwall*

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# UNITED STATES PATENT OFFICE.

HARRY W. BOLENS, OF PORT WASHINGTON, WISCONSIN.

## CHAIR-SPIDER.

SPECIFICATION forming part of Letters Patent No. 702,769, dated June 17, 1902.

Application filed March 7, 1902. Serial No. 97,060. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY W. BOLENS, a citizen of the United States, residing at Port Washington, in the county of Ozaukee and State of Wisconsin, have invented new and useful Improvements in Chair-Spiders, of which the following is a specification.

This invention relates to improvements in chair-spiders, the objects of the invention being to improve the general details thereof, whereby the spider-arms, although formed of sheet metal and independent of the spreader, yet may be supported thereby in the same horizontal plane, and finally to so construct the said spreader is to adapt the seats for the spider-arms to serve as the limiting means for arresting the tilting of the spreader, and consequently the chair-seat.

With these objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a side elevation of a chair-spider embodying my invention. Fig. 2 is a plan view thereof. Fig. 3 is a perspective view in detail of the spreader. Fig. 4 is a central vertical sectional view of the spider.

Similar numerals of reference indicate similar parts in all the figures of the drawings.

The threaded seat-post 1 may be of any desired construction, and formed on or secured to the upper end thereof is the U-shaped yoke or base of the spider. This yoke-shaped base is preferably cast and may comprise the boss 2, from the opposite sides of which rise the side standards 3, having at their upper corners cut-away recesses or stop-notches 4, in advance of which the usual transverse apertures 5 are formed for the reception of the usual pintle 6. Between the rear edges of the standards 3 tubular bosses 7 may be formed, as usual, for the accommodation of the inner ends of the helical return-springs 8. These bosses are spaced apart, and located therebetween is the adjusting or tension bolt or rod 9, the outer end of which is engaged by the cross-piece 10, that engages or receives the outer ends of the said springs. The spreader or spreader-frame 11 is also preferably cast, and comprises, preferably, a substantially triangular flat base 12, from which depends

at opposite sides a pair of apertured ears 13, the same being such distance apart as will adapt them to readily fit between the standards 3 of the spider. To give proper strength to this spreader, a web 14 may connect the rear edges of the depending ears. The ears may furthermore be reduced and extended down in the yoke of the spider to a point adjacent the transverse portion thereof, as at 15, so that when said spider, and consequently the seat, is in a horizontal position the extensions of the ears abut against superficial lugs 16, formed on the rear faces of the two spring-receiving bosses of the yoke. An apertured cross-piece 17 bears in shallow notches 18, formed in the front edges of the extensions 15, and through the aperture of this piece extends the front threaded end of a hand wheel or nut 19, through a manipulation of which the aforesaid springs may be put and maintained under proper tension.

Along the back or rear edge of the spreader-frame is formed a trough-like or other shape of spider-arm seat 20, the same being either continuous or interrupted to save "dressing," as preferred, and from the center of this seat in the same plane and at right angles thereto there projects forwardly a companion spider-arm seat 21, corresponding in shape with the seat 20.

The seats 20 and 21 are perforated and support spider-arms 22 and 23, respectively. These spider-arms are formed of sheet metal and are semitubular or substantially U shape in cross-section, thereby conforming to the shape in cross-section of the seats in the spreader. The spider-arm 22 at its opposite ends is flattened and perforated to form attaching ends 24, while the front end only of the arm 23 is thus provided. By this arrangement there is therefore produced a three-arm spider, the same possessing substantially all of the advantages of that style of spider wherein the spider-arms intersect or cross each other, terminating in opposite attaching ends.

It will be observed that the seat 20 may at its opposite ends project a short distance beyond the vertical planes of the depending pivot-ears of the spreader, thus forming stop-lugs 25, designed to abut against the stop-recesses 4, and thereby limit the rearward tilt

of the spreader on its pintle and the chair-seat, and consequently limit the degree to which the springs may be compressed. The spider-arms being supported in the same horizontal plane also terminate in a corresponding plane, thus avoiding the necessity of producing arms with greater curve to enable the one to pass under the other, as in instances where intersecting spider-arms have been employed.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a seat-spider, of a spreader provided with a pair of spider-arm seats located in the same horizontal plane and at an angle to each other, and spider-arms located in said seats and terminating in the same plane in attaching ends.

2. The combination, in a seat-spider, of a spreader provided with a pair of right-angularly-disposed spider-arm seats located in the same horizontal plane and substantially U-shaped in cross-section, and spider-arms lo-

cated in the seats, said arms being semitubular or substantially U shape in cross-section and conforming to their seats and at their extremities terminating in attaching ends.

3. The combination, in a chair-spider, of a substantially U-shaped yoke, the opposite side standards of which are provided with stop-notches, a spider-frame having depending ears pivoted between the standards, said spider-frame having a rear longitudinally-disposed seat extending beyond the ears and opposite the recesses on their under sides forming stop-lugs for limiting the backward tilt of the spider, a transverse seat intersecting the said longitudinal seat of the spider, and spider-arms mounted upon and fitting the seats.

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

HARRY W. BOLENS.

Witnesses:

T. A. BOERNER,  
ALBERT D. BOLENS.