

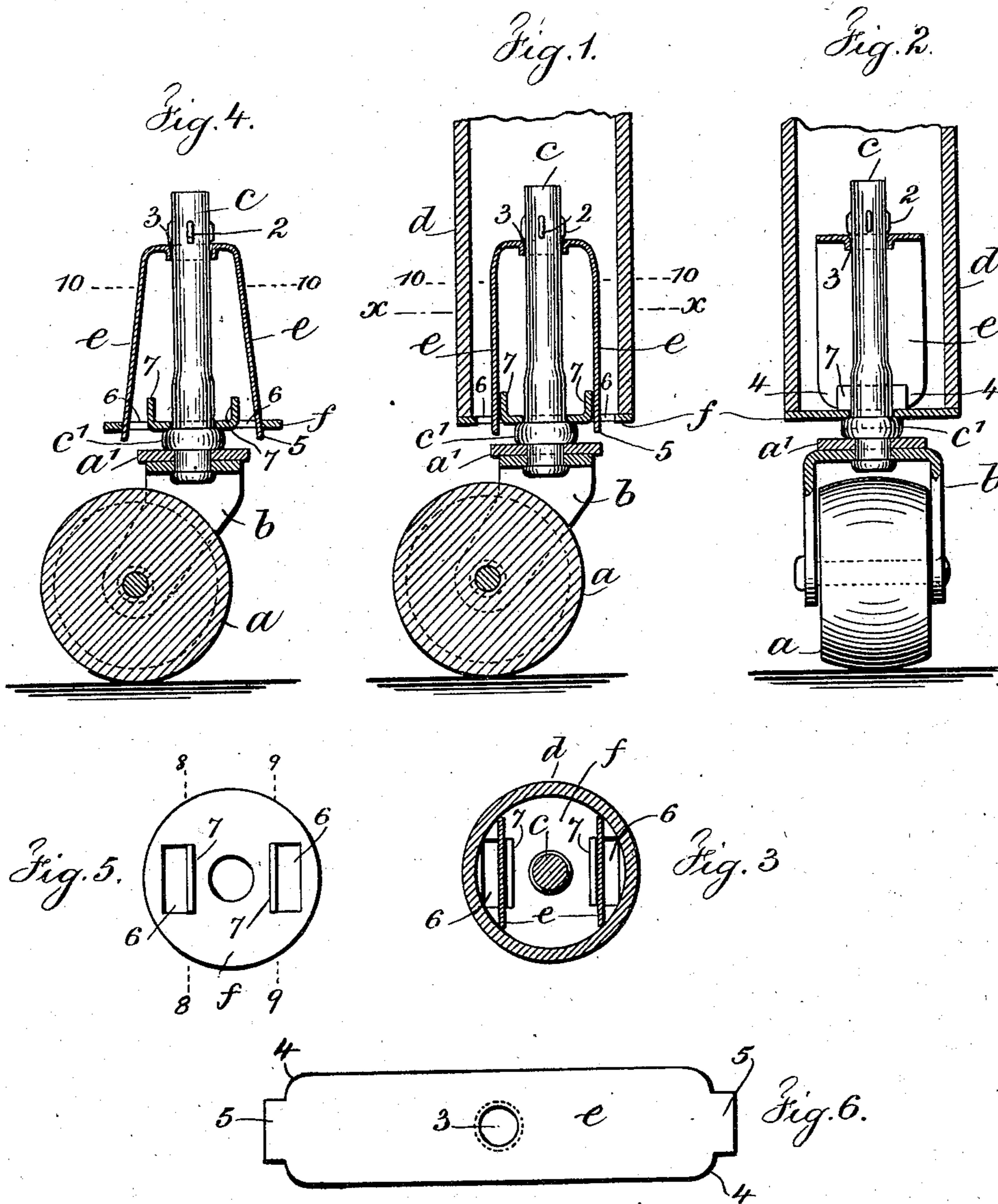
No. 725,325.

PATENTED APR. 14, 1903.

A. B. DISS.
CASTER.

APPLICATION FILED MAY 24, 1902.

NO MODEL.



Witnesses

Chas. H. Smith
J. Staib

Inventor

Albert B. Diss.

for L. W. Lurell & Son
attys

UNITED STATES PATENT OFFICE.

ALBERT B. DISS, OF BROOKLYN, NEW YORK.

CASTER.

SPECIFICATION forming part of Letters Patent No. 725,325, dated April 14, 1903.

Application filed May 24, 1902. Serial No. 108,751. (No model.)

To all whom it may concern:

Be it known that I, ALBERT B. DISS, a citizen of the United States, residing in the borough of Brooklyn, in the county of Kings, city and State of New York, have invented an Improvement in Casters, of which the following is a specification.

My invention relates to the class of casters formed mainly of stamped-up parts of sheet metal adapted to be received and held frictionally in place within the tubular leg, usually of metal, of a bedstead or other article of furniture, the object of my invention being to simplify the structure, reduce the cost and the number of parts.

In carrying out my invention and in combination with the caster-wheel, jaws, and the pintle I employ a spring-frame of peculiar form spanning the pintle and having an aperture through which the pintle passes and a disk surrounding the pintle and through an aperture in which the pintle passes and resting above the enlarged part or collar of the pintle at the point of attachment thereto of the jaws. This disk is provided with means for stiffening the same to prevent distortion under the weight supported and means for receiving the reduced free ends of the spring-frame and for limiting the compressive movement thereof. I prefer that this means consist of flanges stamped out of the sheet metal of the disk at opposite sides of the central aperture and which are bent upward at right angles to the plane of the disk and are parallel to one another. These flanges both stiffen the disk and act as stops to limit the compressive movement of the free ends of the spring-frame, which are received and guided in the mortises of the disk made thereby.

In the drawings, Figures 1 and 2 are vertical sections and partial elevations representing my improvement, the one being taken at right angles to the other. Fig. 3 is a sectional plan at xx of Fig. 1. Fig. 4 is a vertical section representing my improvement, but without the tubular leg. Fig. 5 is a plan of the disk alone, and Fig. 6 is a view representing the spring-frame as laid out flat.

The caster-wheel a , the jaws b , the pintle c , the pintle-collar or enlarged portion c' , and the washer a' at the point of connection of

the pintle with the jaws b are all of usual and well-known construction and do not require further description.

The spring-frame e has a central aperture 3 receiving the pintle, and this spring-frame spans the pintle within the tubular leg d , and lugs 2 of usual construction and formed upon the pintle are employed for holding the spring-frame e to the pintle. The disk f has a central aperture for the pintle, and the same surrounds the pintle and rests upon the pintle-collar c' , and upon this disk f the tubular leg d rests and is supported.

The spring-frame e and the disk f are of peculiar construction—that is to say, the spring-frame e is provided with rounded corners 4 and with reduced ends 5, and except for these parts the edges of the spring-frame are parallel to one another. This spring-frame is bent upon imaginary lines at either side of the central aperture 3, which lines are at right angles to the edges, so that the frame assumes the shape shown in Fig. 4 when in a normal position.

The disk f is provided with mortises 6 and flanges 7, the mortises being upon either side of the central aperture which receives the pintle, and they are of rectangular form and are substantially parallel, and they are formed by cutting out of the metal of the disk the flanges 7, and these flanges are bent up into parallel vertical planes at right angles to the plane of the disk, and the flanges are preferably parallel with one another at opposite sides of the central aperture of the disk receiving the pintle.

As the parts are assembled the reduced ends 5 of the spring-frame e are received in the mortises 6, and the flanges 7 of the disk f come within the conformation of the spring-frame and parallel to the adjacent parts thereof. In the normal position of the spring-frame the reduced ends 5 of the spring-frame contact with the outer edges of the mortises to limit the outward expansibility of said frame, and the flanges 7, when the tubular leg is forced over the spring-frame, come into proximity with the lower free ends of the spring-frame and limit any sidewise movement of the parts under tension. When the caster is out of the tubular leg, said flanges limit the compressive movement of the spring-

frame caused by applying pressure by hand or otherwise thereto. The flanges 7 perform the further and important function of stiffening the disk *f*, so as to enable the same to

5 carry its proportional weight of the bedstead or other article of furniture.

Upon reference to Fig. 5 it will be apparent that the stiffening function of the flanges 7 with reference to the disk *f* is between the

10 dotted lines 8 and 9 and that these opposite points of the disk substantially carry the entire weight upon the disk without reference to the periphery of the disk embraced by the arc outside of these lines, these latter parts

15 serving to maintain the integrity of the disk to serve as parts in which the rectangular mortises are formed and limit the expansibility of the spring-frame.

In practice it is intended that as the caster

20 is slipped to place the tubular leg shall commence its compressive action on the spring-frame at about the dotted line 10 and that the respective edges of the said spring-frame from this point down to the rounded corners

25 4, adjacent to the disk *f*, shall all bear upon and contact with said tubular leg, thus insuring the centering of the pintle within the tubular leg and ample frictional contact of the spring-frame therewith to prevent the

30 caster accidentally falling out of the tubular leg. The round corners 4 of the spring-frame have a function peculiar to themselves in that they prevent the caster being locked in the tubular leg because of any burs or roughened

35 edges that may have been produced in sawing off the lengths of tubular legs at the end receiving the caster, these round corners passing over such obstructions and permitting the ready removal of the caster whenever de-

40 sired.

I claim as my invention—

1. The combination with the caster-wheel, jaws and pintle, of a disk surrounding the

45 flanges formed integral with the disk at opposite sides of the pintle for stiffening the said disk to enable it to act more perfectly as a support for the tubular leg, a spring-frame spanning the pintle within the tubular leg

50 and acting outwardly against the inner surface of the tubular leg to maintain the same centrally in position and the caster frictionally in the tubular leg, substantially as specified.

55 2. The combination with the caster-wheel, jaws and pintle, of a disk surrounding the pintle and upon which the tubular leg rests, means for stiffening the said disk to enable it to act more perfectly as a support for the

60 tubular leg, a spring-frame spanning the pintle within the tubular leg and acting outwardly against the inner surface of the tubular leg to maintain the same centrally in position and the caster frictionally in the tubular leg, said spring-frame having parts coacting

65 with the said disk to limit both the ex-

pansive and the compressive movements of said spring-frame, substantially as set forth.

3. The combination with the caster-wheel, jaws and pintle, of a disk surrounding the

70 pintle and upon which the tubular leg rests, a spring-frame spanning the pintle within the tubular leg and acting outwardly against the inner surface of the tubular leg to maintain the same centrally in position and the caster

75 frictionally to the tubular leg, said spring-frame having reduced free ends and adjacent rounded corners, and means coacting therewith and with the disk for limiting the compressive movement of the spring-frame, sub-

80 stantially as set forth.

4. The combination with the caster-wheel, jaws and pintle, of a spring-frame spanning the pintle within the tubular leg and acting

85 outwardly against the inner surface of the tubular leg to maintain the same centrally in position and the caster frictionally to the tubular leg, and a disk having a central aperture for the pintle and surrounding the same and having apertures upon opposite sides of

90 the center, and integral flanges formed by stamping up the metal out of the disk to form the apertures and turning the same up at right angles to the disk, whereby said flanges are substantially parallel to one another and

95 come at opposite sides of the center of the disk and act to stiffen the disk so as to adapt the same to support the tubular leg without distortion.

5. The combination with the caster-wheel,

100 jaws and pintle, of a spring-frame spanning the pintle within the tubular leg and acting outwardly against the inner surface of the tubular leg to maintain the same centrally in position and the caster frictionally to the

105 tubular leg, and a disk having a central aperture for the pintle and surrounding the same and having mortises 6 upon opposite sides of the center and of substantially elongated rectangular form, and integral flanges formed

110 by stamping the metal out of the disk to form the mortises and turning the same up at right angles to the disk whereby said flanges are substantially parallel to one another and come at opposite sides of the center of the disk

115 and act to stiffen the disk so as to adapt the same to support the tubular leg without distortion and together with the mortises limit both the compressive and expansive movements of the spring-frame, substantially as

120 set forth.

6. The combination with the caster-wheel, jaws and pintle, of a disk having a central aperture and surrounding the pintle resting upon the collar thereof and upon which the tubular leg rests, said disk having elongated sub-

125 stantially parallel mortises upon opposite sides of the center, and integral flanges formed therewith by cutting the metal of the disk to form the mortises and turning the

130 same up at right angles to the plane of the disk whereby said flanges are substantially

parallel to one another upon opposite sides of the center of the disk, and a spring-frame spanning the pintle within the tubular leg and acting outwardly against the inner surface of the tubular leg to maintain the same centrally in position and the caster frictionally in the tubular leg, said spring-frame having reduced ends 5 received in the mortises of the disk and adjacent round corners 4, substantially as and for the purposes set forth. 10

Signed by me this 20th day of May, 1902.

ALBERT B. DISS.

Witnesses:

GEO. T. PINCKNEY,
S. T. HAVILAND.