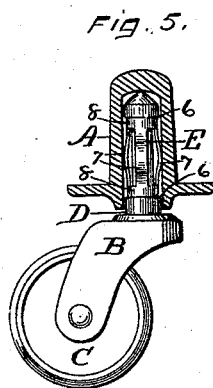
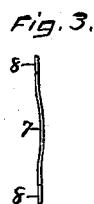
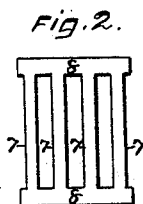
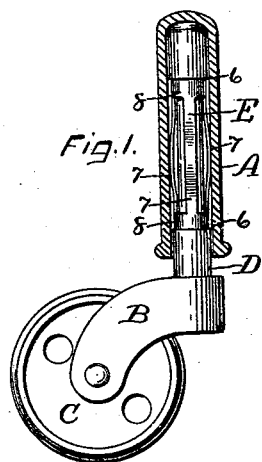


(No Model.)

D. W. PERKINS.  
CASTER.

No. 455,353.

Patented July 7, 1891.



WITNESSES.  
John Edwards Jr.  
W. H. Whiting.

INVENTOR,  
Dwight W. Perkins  
By James Shepard ATT'Y.

# UNITED STATES PATENT OFFICE.

DWIGHT W. PERKINS, OF HARTFORD, ASSIGNOR TO THE FOSTER, MERRIAM & COMPANY, OF MERIDEN, CONNECTICUT.

## CASTER.

SPECIFICATION forming part of Letters Patent No. 455,353, dated July 7, 1891.

Application filed February 24, 1891. Serial No. 382,417. (No model.)

*To all whom it may concern:*

Be it known that I, DWIGHT W. PERKINS, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Casters, of which the following is a specification.

My invention relates to improvements in casters; and the objects of my improvements are cheapness and simplicity of construction and efficiency in operation, especially with reference to holding the spindle in its socket and its working therein.

In the accompanying drawings, Figure 1 is a view of my caster with the socket in vertical section and the other parts in side elevation. Fig. 2 is a plan view of the blank for forming the spring-collar. Fig. 3 is an edge view of the same. Fig. 4 is a detached side elevation of the spindle, and Fig. 5 is a view corresponding with Fig. 1 of another style of caster made in accordance with my invention.

A designates the socket, B the horn, and C the wheel, all of which may be of any ordinary form.

D designates the spindle on which the horn and wheel are supported. On the portion that enters the socket I form a reduced or grooved portion, with a shoulder 6 at each end. Within the space between said shoulders I place a spring-collar E for holding the spindle from accidentally falling out of the socket, but at the same time permitting it to rotate freely within said collar and socket. I form this spring-collar of spring-steel or other spring metal, and blank it out in the form shown in Fig. 2 with openings which leave longitudinal bars or springs 7 at its middle portion and cross bands or ties 8 at its upper and lower ends. These bars, when cut out or by subsequent swaging or bending, are given a curve, as shown in Fig. 3. The blank is then rolled up around the spindle into the form of a skeleton tube by bending in the cross bands or ties 7 7 only, taking care to leave the curve of the bars projecting outwardly, as shown in Figs. 1 and 5. This collar may first be bent into U shape and then slipped upon the spindle and its bending completed. The shoulders

66 prevent the collar from slipping off the spindle. At the same time the collar should be large enough at each end to permit the spindle to freely rotate therein. It is evident that if the middle portion of the collar were not slit to divide it into bars or springs that it could not be rolled after the middle portion is bent, or if rolled would have such a bracing form as to prevent its sides from springing. The spindle, with its spring-collar, is slipped into the socket, as shown, when the middle portion of the spring-arms press firmly on the inner wall of the socket and hold the spindle against accidental withdrawal. It can, however, be readily removed from said socket when desired by pulling upon it with sufficient force. The spring-collar and spindle in Fig. 5 are the same as in the other figures, only they are shorter to adapt them to a little different style of caster.

I am aware that a plain short friction-band has been placed on a neck of a caster-spindle to hold it within the socket; also, that a grooved or recessed spindle has been used in a caster having a spring formed integral with the socket itself, the end of which spring entered the socket and engaged the upper shoulder on the spindle; also, that a prior patent shows and describes a caster consisting of a wheel, horn, spindle, or shank having a groove, a socket recessed on its periphery for nearly its whole length, and a sheet-metal ferrule having longitudinal slits and made convex in form and provided with a finger, said socket being encircled by said convex sheet-metal ferrule, while the finger passes through an aperture in the socket and lies in the groove in the shank of the caster to prevent the same from dropping out. All of said prior art is hereby disclaimed.

By my invention the ordinary cast-metal socket may be used, the spring-collar is cheaply formed and applied, thereby producing the caster at a small cost. When produced, the spindle is surely held within its socket and at the same time it is free to rotate evenly and easily within said collar and socket. The spindle is supported within the socket at both ends thereof in the ordinary manner, while the spring-collar bears against the socket only

at its middle portion, each end having a close fit on the spindle, and the ends of said collar abut against the shoulders on the spindle both at the top and bottom.

5 I claim as my invention—

The herein-described caster, consisting of the socket A, the horn B, wheel C, the spindle D, having the two shoulders 6 6, the parts immediately above and below said shoulders  
10 having bearings in said socket and substantially filling the same, and the spring-collar having a swelled middle portion and contracted ends seated between said shoulders

on said spindle and within said socket, with its middle portion bearing on the walls thereof, while each end closely fits said spindle, one end abutting against the confronting shoulder at the top and the other end abutting against the confronting shoulder at the bottom, substantially as described, and for  
15  
20 the purpose specified.

DWIGHT W. PERKINS.

Witnesses:

WM. H. WOOD,  
JAMES J. SYNVER.