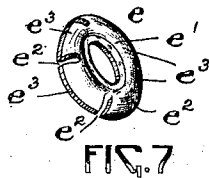
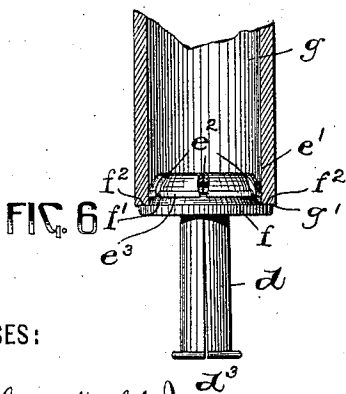
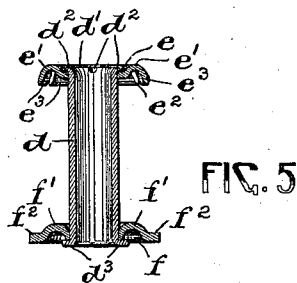
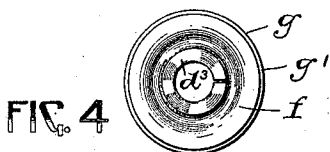
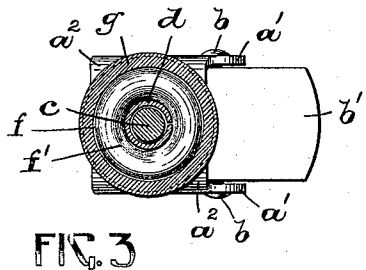
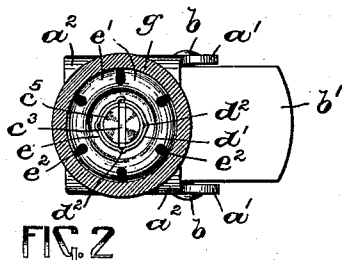
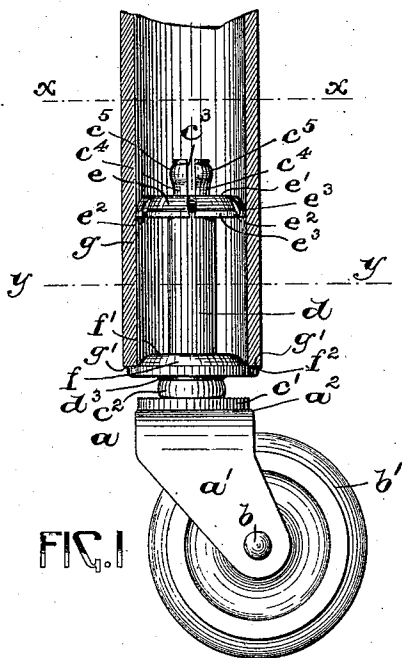


(No Model.)

H. ILL.
CASTER.

No. 576,675.

Patented Feb. 9, 1897.



WITNESSES:

Wm. H. Campfield Jr.
Atty. in Gen.
[Signature]

INVENTOR:

HENRY ILL.

BY

Frederic Fraentzel,
ATTORNEY

UNITED STATES PATENT OFFICE.

HENRY ILL, OF NEWARK, NEW JERSEY.

CASTER.

SPECIFICATION forming part of Letters Patent No. 576,675, dated February 9, 1897.

Application filed November 17, 1896. Serial No. 612,435. (No model.)

To all whom it may concern:

Be it known that I, HENRY ILL, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Casters; 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My present invention has reference to improvements in casters, and has for its primary object to provide an inexpensive and simple construction of caster-socket adapted for use in the tubular posts or supports of iron or other like furniture.

The invention therefore consists in the novel construction of caster hereinafter set forth, comprising a caster-socket, a disk having spring-tongues adapted to hold the socket by frictional engagement in the tubular support of the piece of furniture, and a centering or guiding disk movably arranged on the socket, said parts being arranged in the manner and for the purposes to be hereinafter fully specified.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a caster made according to my present invention, illustrating the same in position in a tubular support of a piece of furniture, said support being represented in vertical section. Figs. 2 and 3 are horizontal cross-sections taken on lines *x* and *y*, respectively, in Fig. 1. Fig. 4 is a bottom view of the caster-socket, and Fig. 5 is a vertical section of the same. Fig. 6 is a view similar to that represented in Fig. 1, illustrating the relative positions of the disk provided with the spring-tongues and the centering-disk when the socket is about to be forced into its operative position in the end of the tubular support of the piece of furniture. Fig. 7 is a perspective view of the disk provided with the spring-tongues.

Similar letters of reference are employed in all of the above-described views to indicate corresponding parts.

In said views, *a* indicates the usual form of

caster-frame provided with the downwardly-extending brackets or horns *a'*, which are perforated to receive a pin *b*, on which is rotatively arranged the usual form of roller or wheel *b'*, as clearly illustrated in Fig. 1.

On the top plate *a*², connecting the two brackets or horns *a'*, is an upwardly-extending post or pintle *c*, provided with the known form of washer *c'* and a collar *c*². The upper end of said post or pintle *c* is provided with a saw-cut or slot *c*³ and two oppositely-arranged portions *c*⁴, formed with suitable enlargements *c*⁵, for the purposes to be more fully set forth hereinafter.

The caster-socket comprises therein a tubular shank *d*, which is provided at the top with a slightly-turned-over edge *d'* and suitable indentations *d*² therein to securely hold a disk *e* in a fixed position upon the top of said shank, as clearly illustrated in Fig. 5. Said disk *e*, which is made from sheet metal, is formed with an upwardly and then downwardly extending edge portion *e'*, having any desirable number of cut-away portions or slots *e*² to form the spring-tongues *e*³, substantially as shown. The lower end of said shank *d* has its edge *d*³ turned over to form a bead, and movably arranged on said shank, between said bead and the disk *e*, is a washer or disk *f*, provided with the upwardly-curved projection *f'* and a flat part *f*² surrounding the same, substantially as illustrated in the several figures of the drawings.

The maximum diameter of the disk *e* is normally slightly greater than the inner diameter of the tubular post or support *g* of the piece of furniture, whereby when said disk *e* is forced into said support or post the spring-tongues *e*³ will become slightly depressed and will firmly grip the inner cylindrical surface of the said support or post *g* and hold the socketed shank *d* by friction in its operative position therein. To insert these parts into the support or post *g*, the washer or disk *f* is slipped upon said shank *d* against the under side of the disk *e* and the parts forced into the hollow post or support *g*, as indicated in Fig. 6. The upwardly-curved projection *f'* on said washer or disk *f* being of the same diameter as the inner diameter of the tube *g*, the surrounding flat part *f*² will be caused to firmly bear against the surrounding edge *g'*

of the tubular support *g*, and in driving the shank and its disk *e* up into said support said washer *f* will act as a guide to cause the central arrangement of the shank and disk *e* in said tubular support *g*, and hence will prevent the jamming of the said parts in the said hollow post or support *g* and will prevent the inoperative arrangement of said parts therein, and the pintle or post *c* in said socket or shank *d* will be perfectly centered and rotatively arranged therein. When the said pintle or post *c* is forced into said tubular shank *d*, the portions *c*⁴ are compressed as they slide through said shank and will open out as soon as they have passed the upper edge of the shank *d*, the enlargements *c*⁵ on said portions *c*⁴ becoming arranged above the upper edge *d'* of the shank, which secures the post or pintle *c* in its operative and rotative position in the said hollow shank *d*, as will be clearly understood from an inspection of Fig. 1. The collar *c*² on said post or pintle *c* is rotatively arranged against the lower edge *d*³ of the shank *d*.

The operation of the device will be apparent. From an inspection of Fig. 1 it will be evident that the caster and its post or pintle can be readily withdrawn from the hollow socket *d* when desired by a sudden pull on the wheel or roller *b* and the caster-frame *a*.

Having thus described my invention, what I claim is—

1. In a caster, the combination, with a tubular shank, of a washer or disk, as *f*, movably arranged thereon, said washer or disk having an upwardly-extending projection *f'*, and a disk on the upper end of said shank, having spring-tongues, substantially as and for the purposes set forth.

2. In a caster, the combination, with a tubular shank, of a washer or disk, as *f*, movably arranged thereon, said washer or disk having an upwardly-extending projection *f'*, and a disk on the upper end of said shank, having an upwardly and downwardly extending edge *e'* provided with cut-away portions *e*², and spring-tongues *e*³, substantially as and for the purposes set forth.

3. In a caster, the combination, with a tubular shank *d* having a bead *d*³, of a washer or disk *f*, having an upwardly-extending projection *f'* and the surrounding flat part *f*², and a disk on the upper end of said shank, having an upwardly and downwardly extending edge *e'* provided with cut-away portions *e*², and spring-tongues *e*³, substantially as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 13th day of November, 1896.

HENRY ILL.

Witnesses:

FREDK C. FRAENTZEL,
WM. H. CAMFIELD, Jr.