No. 632,166. Patented Aug. 29, 1899.

# E. O. BERNINGHAUS & B. KOCHS.

## CASTER.

(Application filed Jan. 30, 1899.)

(No Model.)

Fig. I.

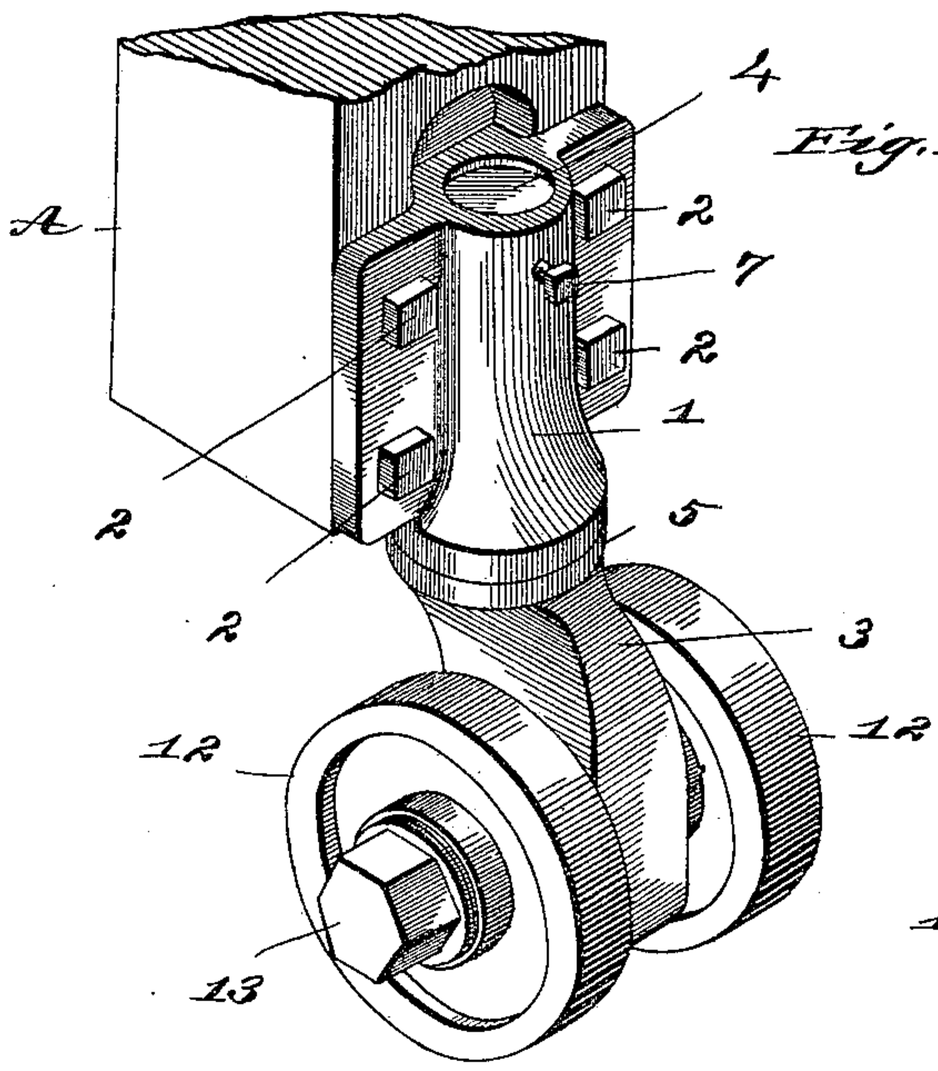



Fig. V.

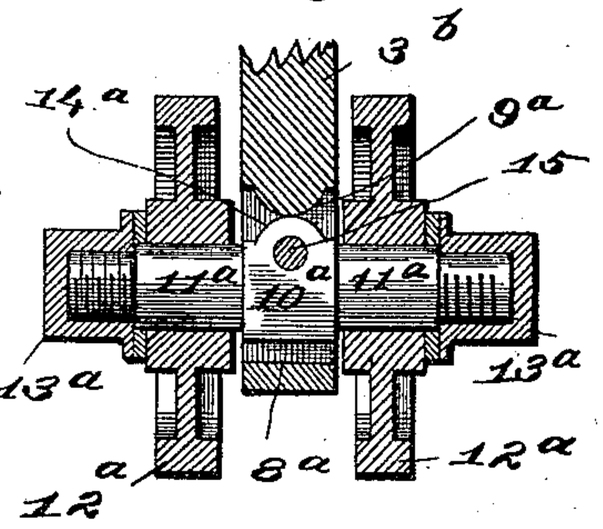
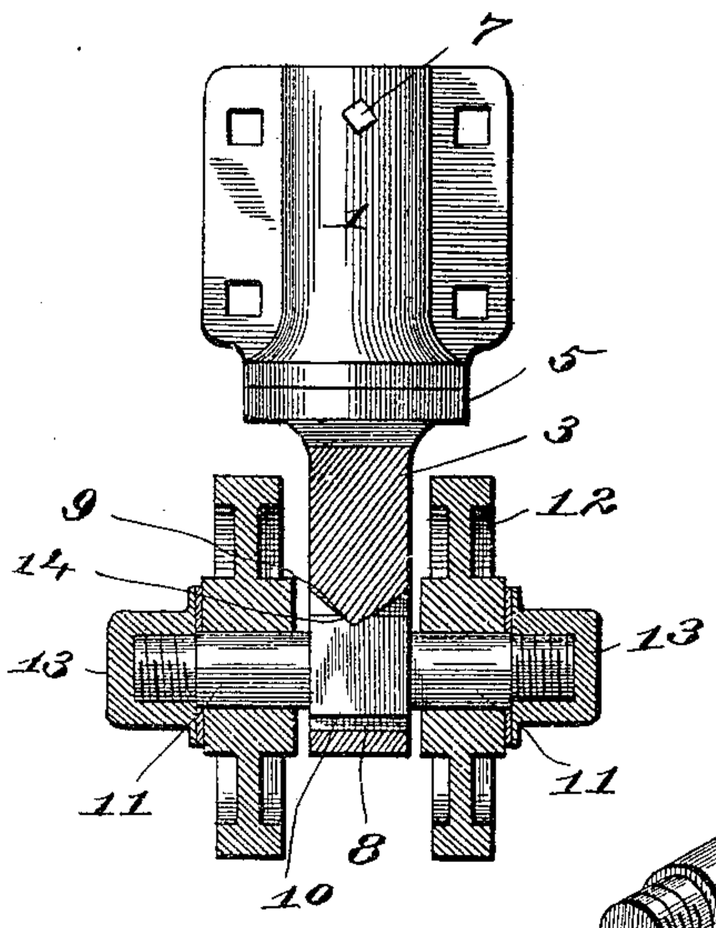



Fig. IV.

Fig. II.



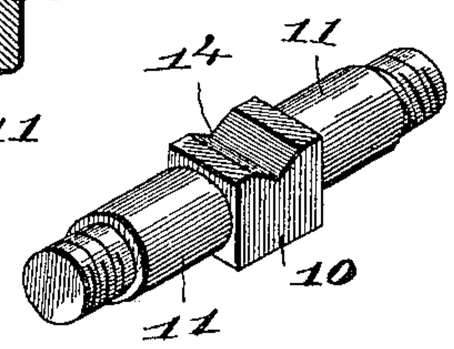
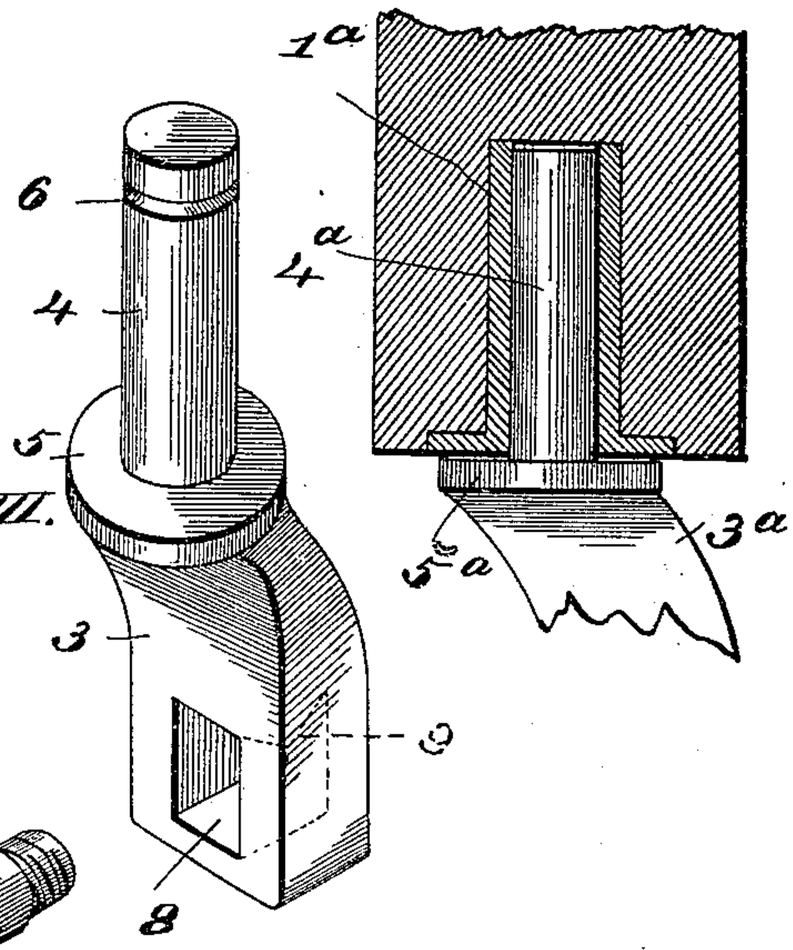




Fig. III.

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# UNITED STATES PATENT OFFICE.

EDMUND O. BERNINGHAUS AND BENJAMIN KOCHS, OF ST. LOUIS, MISSOURI.

## CASTER.

SPECIFICATION forming part of Letters Patent No. 632,166, dated August 29, 1899.

Application filed January 30, 1899. Serial No. 703,843. (No model.)

*To all whom it may concern:*

Be it known that we, EDMUND O. BERNINGHAUS and BENJAMIN KOCHS, citizens of the United States, residing at the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Two-Roller Casters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Our invention relates to casters for trucks, furniture, or other articles commonly supported on casters, the object of the invention being to provide a two-roller caster in which the axle is capable of swiveling when either of the rollers passes over an obstruction, whereby an oscillation of the rollers and axle is obtained to obviate the occurrence of strain upon the axle.

Our invention consists in features of novelty hereinafter fully described, and pointed out in the claim.

Figure I is a perspective view of a two-roller caster constructed in accordance with our invention. Fig. II is a view, partly in elevation and partly in section, through the caster-leg and rollers. Fig. III is a perspective view of the caster leg and shank and the axle detached. Fig. IV is a view, partly in elevation and partly in section, of the caster-shank and a varied form of sleeve thereon. Fig. V is a vertical sectional view of a modified construction of the swivel connection between the caster-leg and axle.

1 designates a sleeve which may be affixed to the supported article A by bolts or screws 2.

3 designates the caster-leg, having a shank 4 and shoulder 5. The shank is provided with a groove 6 and when seated in the sleeve 1 is held therein by a set-screw 7 in the sleeve, extending therethrough and seating in the groove 6, while the shoulder 5 at the base of the leg-shank bears against the bottom of the sleeve to turn thereagainst. The leg 3 is provided with a rectangular aperture 8, extending therethrough. Within the aperture 8 the leg is formed with a pendent knife-edge projection or V-shaped portion 9. (See full lines, Fig. II, and dotted lines, Fig. III.)

10 designates the rectangular body of the axle, having straight sides fitting between the side walls of the aperture 8, but of lesser height, so that a vertical play of the said body is allowed within the aperture. The axle has spindles 11, on which the two rollers 12 are mounted and secured by nuts 13 or other suitable means. The top of the body 10 of the axle is formed with a V-shaped groove 14, that receives the knife-edge projection or V-shaped portion 9 of the leg 3, so that the axle is capable of swiveling against the said portion 9 without displacement.

In the use of this caster when either of the rollers 12 pass over an obstruction that causes it to be raised out of the plane on which its companion roller is moving the axle swivels within the aperture 8, permitting the elevated roller to rise, while the other roller swings inwardly to accommodate the movement of the obstructed roller, and as a consequence there is no resultant strain on the axle by which the rollers are carried.

In Fig. IV we have shown a sleeve $1^a$, adapted to be inserted within the supported article to receive the shank $4^a$ of the caster instead of attaching it to the exterior of the supported article.

In Fig. V we have shown a modification of the swivel connection between the caster-leg $3^b$ and axle. In this form of the device the swivel portion $9^a$ of the caster-leg is rounded instead of tapering and bears upon a coincident rounded portion $14^a$ on the upper side of the axle-body, so that the axle swivels against the portion $9^a$. The axle is held in place in the leg-aperture $8^a$ by a pivot-pin 15, that prevents the endwise displacement of the axle.

We claim as our invention—

A caster comprising a pair of rollers, a leg formed with a transverse rectangular aperture, and with a knife-edge pendent projection within the rectangular aperture, and located between the rollers and a fixed axle formed with a rectangular body located within the rectangular aperture and with a V-shaped recess in the top of the body in which the knife-edge has bearing to support the leg between the rollers; substantially as described.

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In presence of—
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