A. B. DISS.

CASTER FOR PIANOS, &c.

APPLICATION FILED NOV. 12, 1915.

1,186,296. Patented June 6, 1916.

Fig. 1,

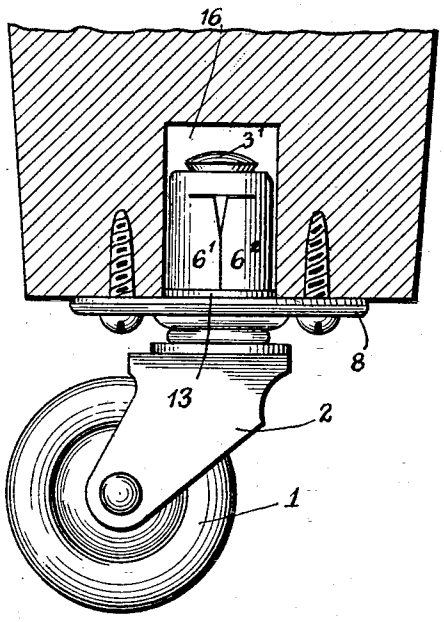


Fig. 2,

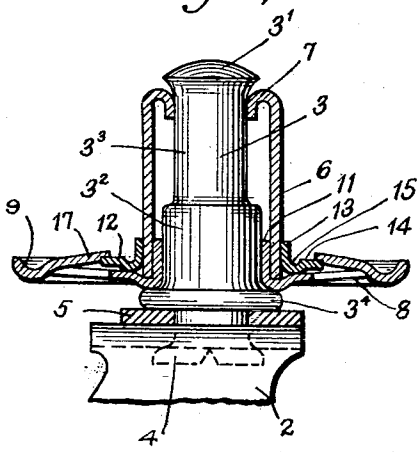
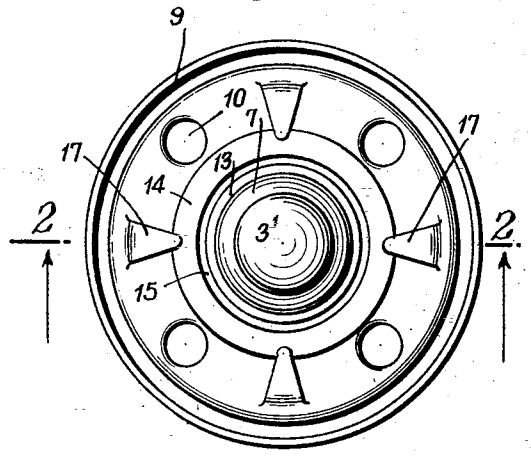


Fig. 3,



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CASTER FOR PIANOS, &c.

1,186,296. Specification of Letters Patent. **Patented June 6, 1916.**

Application filed November 12, 1915. Serial No. 61,005.

To all whom it may concern:

Be it known that I, ALBERT B. DISS, 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 for Pianos, &c., of which the following is a specification.

My invention relates to casters of a type particularly suitable for pianos and other heavy furniture, my invention being an improvement upon the construction disclosed in my application Serial No. 3208, filed January 20, 1915, entitled casters for pianos and other uses. In my said prior application a caster pintle is mounted for rotation in a sleeve which is secured to a leg-supporting or carrying plate. In said construction, the sleeve is inturned at its upper end, to form a journal-bearing for the upper part of the pintle, a journal bearing being formed at the lower end of the pintle by causing the central portion of the leg-supporting plate to extend beneath the lower end of the sleeve and to be upwardly flanged within the lower end of the sleeve. The construction is also provided with a superimposed plate or ring which lies upon the face of the carrying plate and fits about the lower portion of the sleeve, preferably with a tight fit. In said construction described, the superimposed plate or ring aids in relatively centering the sleeve and also serves to secure the sleeve to the carrying or leg-supporting plate. I have found, however, that the superimposed plate or ring is liable to rise about the sleeve and become separated from the leg-supporting plate.

My present invention is intended to overcome this difficulty, by providing means for firmly securing the leg-supporting plate and superimposed ring referred to firmly together, such means preferably being formed by striking up radial tongues from the metal of the leg supporting plate and pressing the same down over the outer edge of the superimposed ring.

In order that a clearer understanding of my invention may be had, attention is hereby directed to the accompanying drawings forming part of this application and illustrating preferred embodiments thereof.

In the drawings, Figue 1 represents my caster in side elevation, applied to an article to be supported shown in section, Fig. 2 is a vertical section taken on line 2—2 of Fig. 3, the pintle being shown in side elevation, and Fig. 3 is a top plan view of the caster structure comprising the pintle, sleeve, leg-supporting plate and superimposed ring.

Referring to the drawings, the caster wheel 1 is pivotally mounted between the jaws 2 of the usual horn. The pintle 3 is rigidly secured to the horizontal portion of the horn, as by extending the lower end of the pintle through an opening in the horizontal portion of the horn, and upsetting the lower end of the pintle, as shown at 4. The pintle is preferably formed with an enlarged or upset upper end 3′, a lower portion 3^2 of greater diameter than the upper portion 3^3, and a collar 3^4 which is adapted to rest on a washer 5 laid upon the horizontal portion of the horn.

The sleeve 6 is formed of rigid metal with its upper end inwardly turned, as shown at 7, to form a U-shape in cross-section, the inner, shorter legs of the U-shape forming a journal bearing for the upper part of the pintle immediately below the upset top end 3′ thereof. The two semi-cylindrical sleeve members 6′ and 6^2 extend downwardly from the continuous collar or bearing 7, the parts 6′, 6^2 and 7 constituting the sleeve.

The carrying plate 8 is preferably circular, and formed of steel. It is preferably corrugated adjacent its periphery, as shown at 9, to form an upwardly extending edge flange with an annular groove immediately inside the same, for purposes of stiffness. The plate is provided with screw holes 10 by means of which the leg-supporting plate can be screwed to the furniture. The plate is provided with an axial opening, the plate extending beneath the lower end of sleeve 6 and being provided with an upturned flange 11 inside the lower end of the sleeve. The outer surface of this flange bears against and fits the inner surface of the sleeve, the inner surface of flange 11 bearing against the surface 3^2 of the pintle and forming a journal bearing therefor. The angle between the flange 11 and the surrounding portion of the plate 8 is mounted to bear against the collar 3^4 of the pintle, and the upper surface of plate 8, at the junction of the same with flange 11, is given an annular indentation to form a seat for the lower end of sleeve 6. It is obvious that flange 11 may

either be integral with the leg-supporting plate 8, or may comprise a flanged ring, the cross-section of which is L-shaped, and the horizontal flange of which is welded or otherwise secured to the bottom of a leg-supporting plate adjacent the central opening therein.

The superposed ring 12 is placed about the lower end of sleeve 6, ring 12 having a vertical annular flange 13 which contacts tightly with the periphery of the sleeve 6. The ring has an annular horizontal flange 14 which rests upon the top surface of plate 8 with a hollow groove 15 between flanges 13 and 14. It is understood that the furniture has an opening 16 bored or otherwise formed therein, in which the sleeve and pintle are mounted, and the lower edge of the furniture adjacent to this opening is adapted to rest in the groove 15.

Ring 12 is firmly held in position by means of the tongues 17 which are struck up from the metal of plate 8, surrounding ring 12, and then pressed downwardly, so that their inner ends lie upon and tightly press the horizontal flange 14 of member 12. By this means the lower end of the sleeve is secured between flanges 11 and 13 and relatively centered thereby, and member 12 is firmly secured to member 8. The upper surface of flange 12 and the upturned outer edge of disk 8 are substantially in the same plane to form a bearing surface for the bottom of the furniture. The pointed inner ends of the tongues 17 lie slightly above this plane and are pressed slightly into the bottom of the furniture leg when the screws by which the supporting plate 8 is secured are tightened. Tongues 17 are integral with the leg-supporting plate 8, being joined thereto at their outer ends. By this means, a strong and rigid device is obtained with economical manufacture, the ring 12 being so firmly secured to the plate 8 as not to be separable therefrom during the use or transportation of the caster.

Having now described my invention, what I claim as new therein and desire to secure by Letters Patent is as follows:—

In a caster, the combination of a rotary pintle, a sleeve forming a journal bearing for the upper end of the pintle, a plate surrounding the lower end of said sleeve, having a short upturned flange closely contacting the sleeve, and a horizontal flange, and a supporting plate extending beneath said sleeve with an upturned flange within the sleeve, said supporting plate having a portion surrounding said sleeve on which the horizontal flange of said first plate rests, and tongues struck up from an outer portion, pressed into engagement with said horizontal flange, to rigidly secure the same to said supporting plate, substantially as set forth.

This specification signed and witnessed this 11th day of November, 1915.

ALBERT B. DISS.

Witnesses:
DYER SMITH,
I. MCINTOSH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."