

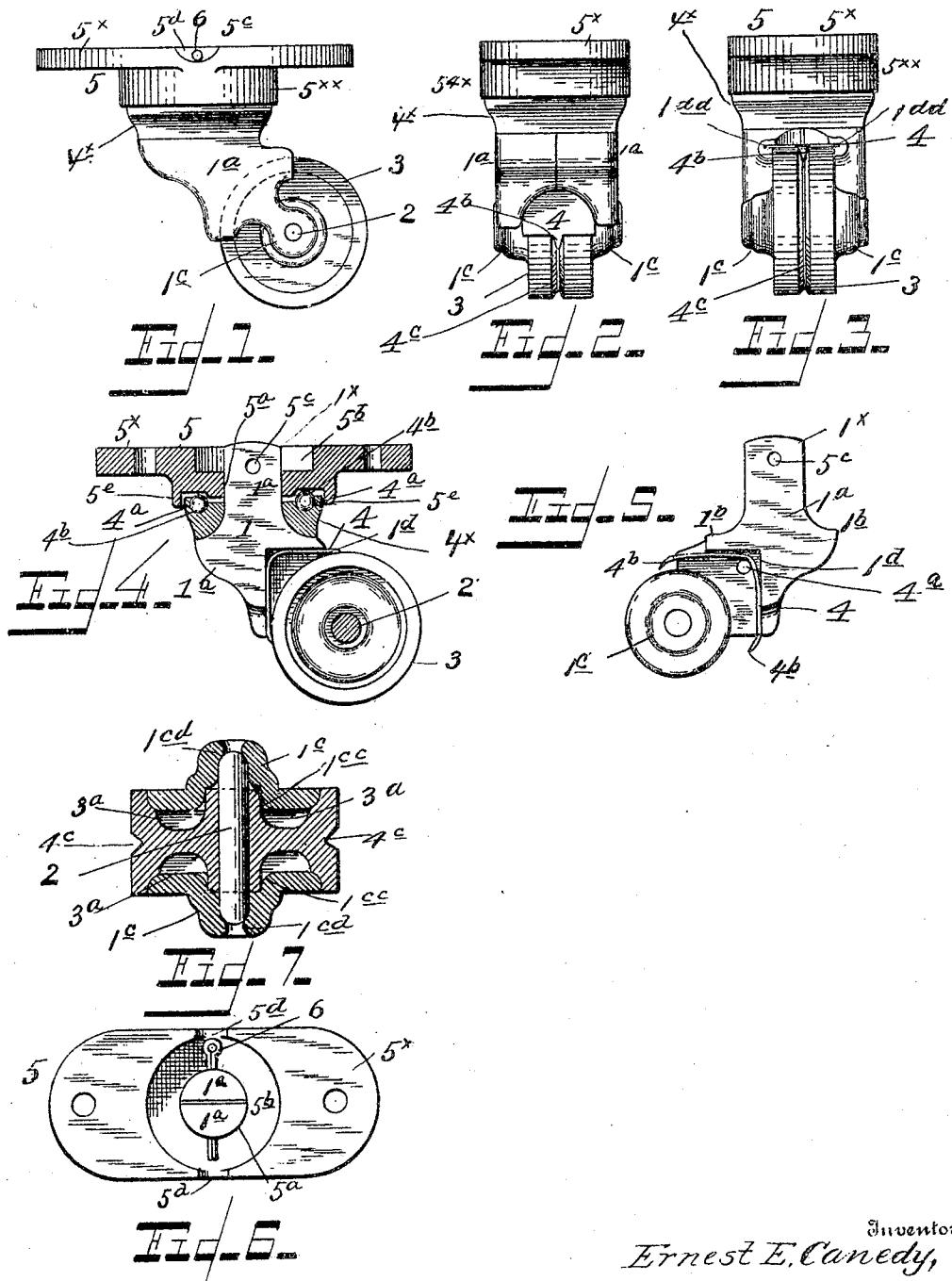
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E. E. CANEDY.

CASTER.

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UNITED STATES PATENT OFFICE.

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CASTER.

No. 798,564

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ERNEST E. CANEDY, a citizen of the United States, residing at North Adams, in the county of Berkshire and State 5 of Massachusetts, have invented new and useful Improvements in Casters, of which the following is a specification.

My invention relates to improvements in casters for furniture which are equally applicable to trucks for general use and in all factories and warehouses.

Said invention has for its object, among other things, to provide for the ready assembling and separating of the parts, as in putting the 15 caster wheel or roll in position in its spindle or removing it, as circumstances may require, and to effect the retention in place of the axle or journal of said wheel or roll without the aid of pins or like additional means; to provide for the automatic lubrication of said axle or journal; to exclude fine particles or other substances, as well as pieces of string, lint, and the like, from the journal of the roll or wheel and its bearings which may adhere to the roll 25 or wheel in its rotation, and to reduce frictional contact between said parts.

Said invention consists of certain structural features and combination and arrangement of parts substantially as hereinafter fully disclosed, and particularly pointed out by the 30 claims.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is a side or end view thereof. Figs. 35 2 and 3 are what may be termed "front" and "rear" views of the same, respectively. Fig. 4 is a vertical section taken in a plane produced through the line of separation between the members or sections of the caster-wheel 40 spindle, with the wheel or roll and the guard applied thereto shown in side view. Fig. 5 is an inside view of one of the caster-wheel-spindle sections or members with the wheel-guard in position thereon. Fig. 6 is a plan view of the caster. Fig. 7 is an axial section produced through the caster-wheel and its 45 axle or journal bearings.

In the carrying out of my invention I provide a caster-wheel post or spindle 1 of the 50 usual construction in general exterior outline, but formed in two sections or members 1^a 1^b, uniting along a line extending through the longitudinal or vertical center of the spindle.

Said spindle members or sections have their diagonal portions forming, at their conjunction with the upper cylindric portions 1^x of said members, shoulder members 1^b and terminating at their lower ends in preferably disk-like or circular terminals or bearings 1^c for the axle or journal 2 of the caster-wheel 60 or roll 3, said journal being separate from the latter. Upon the inside each diagonal portion 1^x is recessed, as at 1^d, preferably angularly, to provide for the reception of a corresponding plate or guard 4, suitably held therein by 65 a dowel 4^a or otherwise and arranged tangentially to the periphery of the caster-wheel or roll 3, and having centrally projecting from its forward and rear edges slightly downward deflected tapering projections or studs 4^b, entering a central circumferential groove 4^c, produced or formed in said roll or wheel to provide for the effective exclusion of pieces of string, lint, and the like which may adhere to said roll in its rotation from the journal or 75 axle of the latter and its bearings, as also to scrape or remove from the wheel or roll periphery any fine particles or substances adhering thereto. Said angular recessed portions 1^d of the spindle members are further 80 recessed or grooved, as at 1^{dd}, along the upper horizontal lines of said recessed portions to receive the corresponding lateral edges of the angular plate or guard 4 to further aid the holding of the latter in place. The disk-like 85 portions or bearings 1^c are recessed or hollowed out internally, as 1^{ee}, for holding or receiving an absorbent material saturated with a lubricant for automatic application or feeding to the caster-wheel axle or journal. Said 90 recessed or hollowed-out portions 1^{ee} are tapered or contracted laterally and terminate in cylindric sockets 1^{ed} to conform to and form the bearings proper for the journal or axle of the caster roll or wheel, the openings in the 95 extreme outer ends of said sockets being reduced, so that annular flanges or surfaces are provided at those points to prevent the endwise or outward movement or displacement of said journal or axle and yet the ends of said 100 axle or journal are caused to close the said reductions of the sockets or bearings 1^{ed} to exclude dust, &c., at those points.

The caster wheel or roll 3, preferably having a broad periphery or tread, is recessed or 105 reduced from each side inward near said pe-

periphery, as at 3^a, to provide for the setting of the disk portions or terminals 1^c of the spindle members within the plane of said roll or wheel or its periphery, thus effecting the compact and otherwise desired assembling of the parts, the recesses 1^d of said spindle members also providing for the partial reception of said wheel at its peripheral edges to aid in securing the aforesaid result.

10 A collar 4^x, encompassing or fitting around the cylindric portion of the spindle and resting upon the shoulder members 1^b thereof, primarily holds the spindle members or sections together and has in its upper surface an 15 annular groove or race 4^a, containing anti-friction or ball bearings 4^b, presently again referred to.

16 A bracket 5, having an upper oblong flat portion 5^x and a lower tubular portion 5^{xx} and 20 adapted to provide, as later more fully disclosed, for the application or attachment of the caster to the article of furniture, trunk, or other object, has a central opening 5^a therethrough for the reception of the upper end 25 of the spindle, it also having preferably above said opening a radially-enlarged circular recess or depression 5^b communicating therewith. Through alined apertures 5^c, produced in the spindle members or sections at a point 30 above the base or bottom of said depression or recess, is inserted a locking pin or key 6, by the projecting of whose ends from said spindle the latter is retained in place and so as to axially pivot it in said bracket or plate, 35 as required in swiveling the caster-wheel in position for a purpose which is apparent. Said pin or key is preferably of the well-known split spring-metal type, as shown, to provide, as readily understood, for the automatic locking or retention thereof in place in 40 said spindle. To facilitate the insertion and removal of said pin or key, the plate 5^x of the bracket 5 may be laterally notched or recessed, as at 5^d, the recesses or notches thus formed 45 having their bottom edges about flush with the bottom of the depression 5^b, and with which notches are in practice alined or disposed the pin or key receiving openings in the spindle members by accordingly turning 50 the latter by hand when inserting said pin or key in said openings. Said bracket-plate also has upon its under side a circular flange or projection 5^e, extending below the upper edge of the collar 4^x, to confine the ball-bearings 4^b in place in the latter and yet so as not 55 to permit of frictional contact between the parts. It will be noted that the spindle members or sections may also be provided with engaging spurs and recesses upon their meeting 60 surfaces to aid in holding the same together.

Latitude is allowed as to details herein, as they may be changed as circumstances suggest without departing from my invention and the latter still be protected.

I claim—

1. A caster of the character described, employing a dirt-guard, consisting of an angular plate held in place in the spindle members and arranged tangentially to the periphery of the caster-wheel, said wheel having a circumferential groove and said guard having its terminals entering said groove. 65

2. A caster of the character described, employing half-spindle members, each consisting of a semicylindric upper end portion having a diagonally-extended lower end disk portion provided with an inner concaved surface and a cylindric bearing-socket extending laterally therefrom, means holding said members together, a wheel or roll laterally recessed to receive said lower end disk portions and having a tubular hub with its ends seated in said concaved surfaces, and a loose axle for said wheel, extending beyond said hub bearing in said cylindric sockets, at its ends, within the 85 plane of said lower end disk portions.

3. A caster of the character described, employing spindle members having disk-like terminals provided with sockets, a wheel carried by a separate journal-bearing in said sockets 90 and guarded thereby against endwise displacement, a collar coupling together said spindle members and having a race containing ball-bearings, and a bracket adapted to permit the application of the caster for use, and having 95 a flange encompassing the upper edge of said race.

4. A caster of the character described, employing spindle members having terminals provided with laterally-tapered recesses to 100 contain a lubricant, said recesses terminating in cylindric sockets, with partially-closed outer ends, and a wheel carried by a journal or axle bearing in said sockets.

5. A caster of the character described, employing spindle members having terminals provided with laterally-tapered recesses to 105 contain a lubricant, said recesses being prolonged into cylindric sockets or bearings, and a wheel having annular lateral recesses receiving said terminals and carried by a journal or axle resting in said sockets or bearings. 110

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

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