No. 735,838. PATENTED AUG. 11, 1903.

C. STENGEL.

CASTER.

APPLICATION FILED MAY 4, 1903.

NO MODEL.

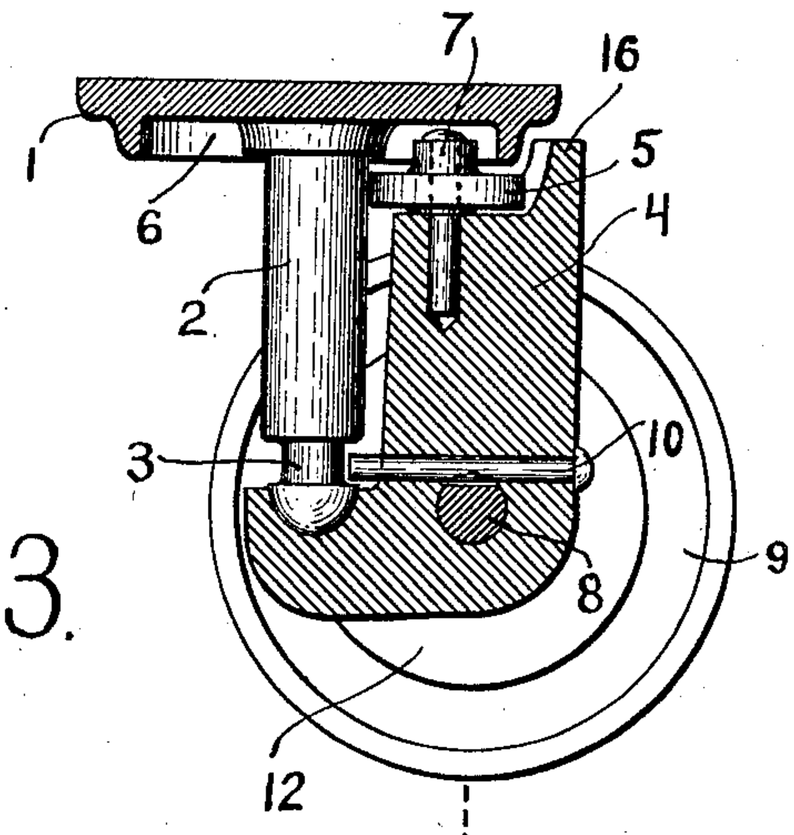

Fig. 3.

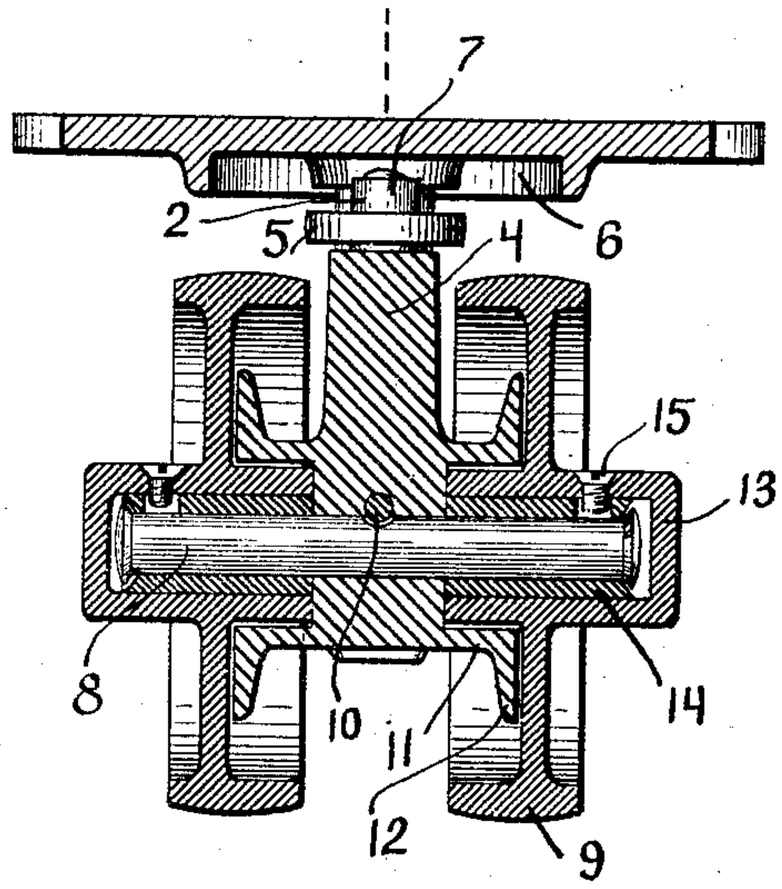

Fig. 2.

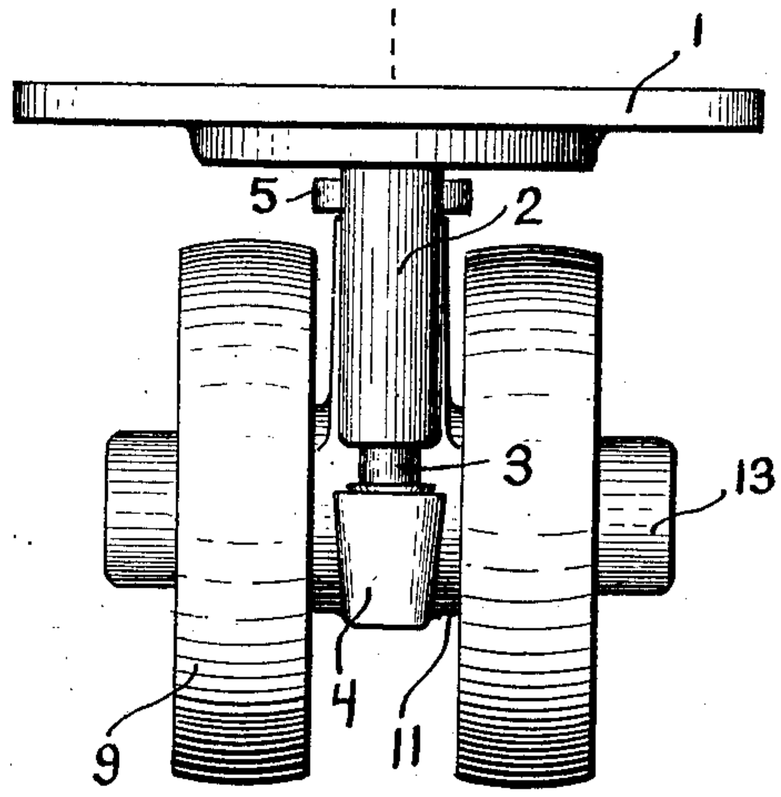

Fig. 1.

Witnesses:
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No. 735,838. Patented August 11, 1903.

UNITED STATES PATENT OFFICE.

CHARLES STENGEL, OF HAMILTON, OHIO.

CASTER.

SPECIFICATION forming part of Letters Patent No. 735,838, dated August 11, 1903.

Application filed May 4, 1903. Serial No. 155,477. (No model.)

To all whom it may concern:

Be it known that I, CHARLES STENGEL, a citizen of the United States, residing at Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Casters, of which the following is a specification.

This invention, pertaining to improvements for furniture, will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a front elevation of a caster embodying my improvements; Fig. 2, a vertical section of the same in the plane of the axis of the floor-wheels, and Fig. 3 a vertical section in the plane of the axis of the stem.

In the drawings, 1 indicates a plate of ordinary form for use in case the caster is to be secured to furniture on the plate system as distinguished from securing the caster-stem directly in a socket in the furniture; 2, the stem provided with a hemispherical lower end; 3, a reduced neck formed near the lower end of the stem; 4, the housing provided with a forwardly-projecting portion having a socket articulately engaging the lower end of the stem; 5, an antifriction-wheel mounted at the top of the housing on a vertical axis and having its periphery engaging the periphery of the upper portion of the stem; 6, an annular cavity formed in the lower surface of the plate by means of a pendent flange concentric with the stem; 7, a boss projecting upwardly from the antifriction-wheel and engaging freely within the cavity 6, so as to permit the free rotation of the housing upon the stem and at the same time permit of the housing rocking to a reasonable extent in a direction at right angles to the path of travel of the caster; 8, the floor-wheel axle, the same being secured within the housing to the rear of and at about the level of the lower end of the stem and projecting at each side of the housing for the reception of the two floor-wheels; 9, the floor-wheels, one upon each end of the axle; 10, a pin driven horizontally through the housing, its inner end engaging the groove at the neck of the stem and its intermediate portion engaging a notch at the mid-length of the axle, the pin serving to lock the axle in the housing and the housing to the stem; 11, annular shields projecting from each side of the housing and within the inner peripheral flanges of the floor-wheels and to near the webs of the floor-wheels and loosely encircling their inner hubs of the floor-wheels; 12, circular flanges at the outer ends of these shields, the same coming close to but clearing the inner surfaces of the webs of the floor-wheels; 13, closures at the outer ends of the bores of the floor-wheels, the bores of the floor-wheels being considerably larger than the axle and the closures 13 being formed by carrying the bores not entirely through the hubs of the wheels; 14, bushings free on the outer ends of the axle and snugly fitting the bores of the floor-wheels, the ends of the axle being riveted to prevent the endwise displacement of the bushings; 15, set-screws in the hubs of the floor-wheels to retain the wheels upon the bushings, and 16 a tongue projecting upwardly from the outer portion of the housing to the rear of the antifriction-wheel.

The pin 10, as before explained, is tight in the housing and serves to lock the axle in the housing and the housing to the stem. In many classes of factories, especially shoe-factories, scattered threads upon the floor give trouble by entanglement in the wheels of the casters on the stock-trucks. In the present case the tongue 16, projecting from the housing, serves to guard the antifriction-wheel. The closure 13 for the outer ends of the bores of the floor-wheels prevents any access of threads at the outer ends of the axle, while the annular shields 11 and circular flanges 12 guard the inner portion of the hub of the wheel. The shields 11 and flanges 12 are preferably formed integral with the housing, as illustrated.

In assembling the caster the axle is put in place and the bushings are put upon the axle and then the heading of the axle is done, after which the wheels are secured upon the bushings.

I claim as my invention—

1. In a caster, the combination, substantially as set forth, of a housing, a headed axle secured therein and projecting from each side thereof, a bushing loose upon each end of the axle, and a floor-wheel secured upon each bushing and having a closure at the outer end of its bore.

2. In a caster, the combination, substan-

tially as set forth, of a housing, an axle secured therein and extending from each side thereof, a floor-wheel mounted at each end of the axle and provided with an inwardly-projecting hub, and an annular shield projecting from each side of the housing and within the inner peripheral flange of the floor-wheel and to near its web and loosely fitting around the hub of the floor-wheel.

3. In a caster, the combination, substantially as set forth, of a housing, an axle secured therein and extending from each side thereof, a floor-wheel mounted at each end of the axle and provided with an inwardly-projecting hub, an annular shield projecting from each side of the housing and within the inner peripheral flange of the floor-wheel and to near its web and loosely fitting around the hub of the floor-wheel, and a circular flange at the outer extremity of each of said shields contiguous to the inner surface of the web of the floor-wheel.

4. In a caster, the combination, substantially as set forth, of a stem having a hemispherical lower end and provided with a peripheral groove near its lower end, a housing having its body to the rear of the stem and having a portion projecting into engagement with the lower end of the stem, a notched axle disposed in the housing to the rear of the stem, floor-wheels mounted on the axle, and a pin secured horizontally in the housing and having its front end engaging the groove in the stem and having an intermediate portion engaging the notch in the axle and serving to lock the axle to the housing and the housing to the stem.

5. In a caster, the combination, substantially as set forth, of a stem, a plate thereon having an annular recess in its lower surface, a housing articulated to the stem, an axle carried by the housing to the rear of the stem an antifriction-wheel on a vertical axis at the top of the housing also at the rear of the stem and having its periphery engaging the rear side of the stem, a hub projecting from said wheel into said annular recess, and floor-wheels upon the axle.

6. In a caster, the combination, substantially as set forth, of a stem, a plate thereon having an annular recess in its lower surface, a housing articulated to the stem, an antifriction-wheel on a vertical axis at the top of the housing and having its periphery engaging the stem, a hub projecting from said wheel into said annular recess, an axle carried by the housing, floor-wheels upon the axle, and a tongue projecting from the housing upwardly to the rear of the antifriction-wheel.

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Witnesses:
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