H. MARTIN.

CASTER.

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1,224,765.

Patented May 1, 1917.

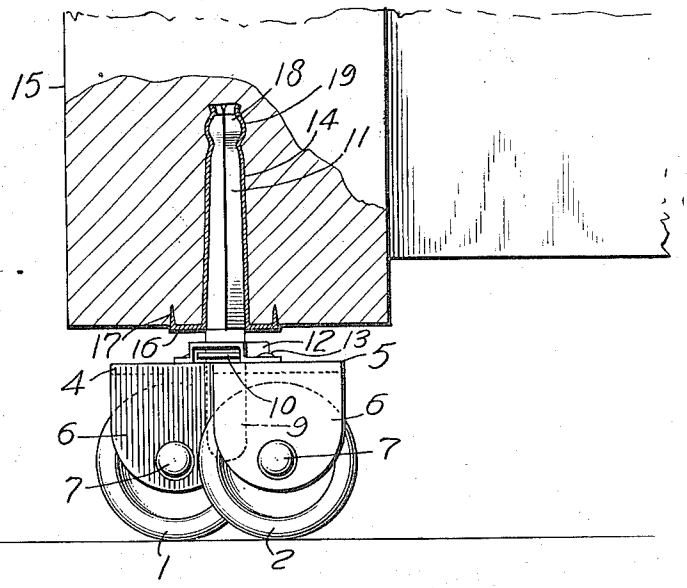


Fig. 1.

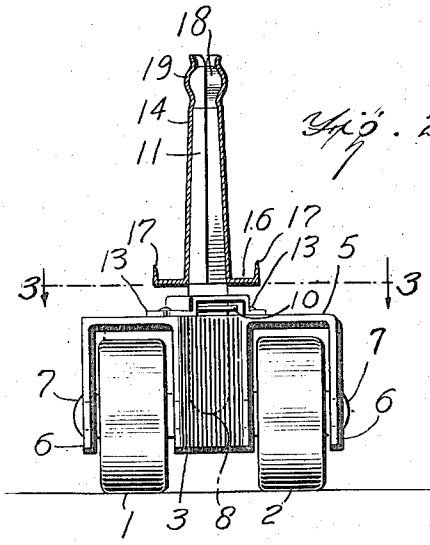


Fig. 2.

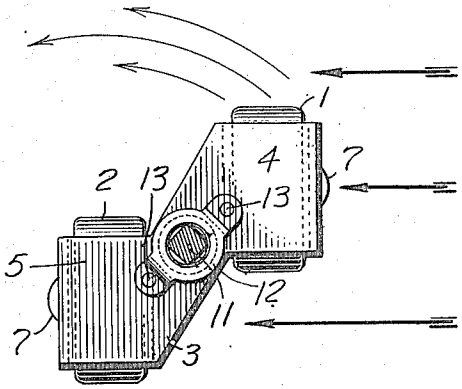


Fig. 3.

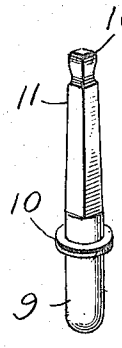


Fig. 4.

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CASTER.

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To all whom it may concern:

Be it known that I, HARRY MARTIN, a citizen of the United States, and a resident of St. Louis, in the State of Missouri, have invented an Improvement in Casters, of which the following is a specification.

My invention is an improvement in casters, and has for its object to provide a caster especially adapted for use with articles of furniture, wherein two wheels are provided, mounted one in advance of the other, and connected to the furniture to rotate on a vertical axis midway between the wheels and midway between their axes of rotation, and near the level of the said axes to prevent sticking of the caster when turning.

In the drawings:

Figure 1 is a side view of the improved caster in use with the mounting in section.

Fig. 2 is a front view of the caster.

Fig. 3 is a section on the line 3—3 of Fig. 2 looking in the direction of the arrows adjacent to the line.

Fig. 4 is a perspective view of the pedestal or mounting pin.

In the present embodiment of the invention each caster consists of two wheels 1 and 2, the said wheels being mounted with their axes parallel and offset laterally, so that one wheel will always be in advance of the other, whatever the position of the caster.

The wheels are mounted in a bracket consisting of a block 3 having at each end of its upper face a lateral extension 4 and 5, respectively. The block, as shown, is approximately diamond shape in horizontal cross section, and each of the lateral portions 4 and 5 is provided with a depending bearing arm 6, the lower end of each arm being flush with the lower surface of the block. The wheels are journaled on journal pins 7, which are held in the block and in the adjacent bearing arm, and the block is provided with a central vertical opening 8 extending from its upper surface to the plane of the axes of the wheel. Thus the bottom of the opening 8 is in a plane through the centers of the journal pins 7.

The pedestal or mounting pin for the caster comprises a rounded portion 9 shaped to fit the opening 8, and having an annular shoulder 10 near its upper end, and a portion 11 square in cross section and tapering, for engaging the socket of the caster. The rounded end 9 of the pedestal or mounting pin fits within the opening 8, with the shoulder 10 just above the upper surface of the block 3, and a ring 12 encircles the pin above the shoulder 10, the ring having downwardly offset lugs 13, which are secured to the portions 4 and 5 of the bracket. The socket or casing 14 for the pin is square in cross section and is firmly held within an opening in the piece of furniture 15, upon which the casters are mounted. The socket has a marginal flange 16 at its lower end, which is provided at its edge with spurs or lugs 17 for engaging within the material of the furniture to prevent disengagement of the socket or casing.

A resilient or snap fastener is provided between the pin and the socket, the said fastener, in the present instance, consisting of a ball 18 on the pin and a split or expansible portion 19 at the upper end of the socket or casing. In use the caster, including its bracket, turns on the pedestal or mounting pin, and the said pedestal or mounting pin is held from rotation with respect to the piece of furniture, through the engagement of the squared portion. It will be understood that the mounting of the bracket that is its connection with the piece of furniture, will depend upon conditions, the present form of connection being shown merely as a convenient form.

The pin 9—11 is at the exact center of the bracket or caster proper, midway between the wheels, and midway between the axes upon which they rotate. The lower end of the pin is at the center of the axes, and the bracket rotates upon the pin, instead of upon the piece of furniture. Thus the pin is fixed with respect to the furniture and the bracket rotates thereon. The shoulder 10 and the ring 13, by their coöperation, prevent displacement of the pin 9—11 from the bracket.

With the ordinary form of caster the wheels do not turn readily with respect to the piece of furniture on vertical axes, because of the fact that the wheel is not balanced with respect to the mounting pin or pedestal. The casters tend to stick, that is they will roll in one direction only, and when the furniture is moved in another direction the wheels do not swing into proper position, but skid, thus scarring the floor, or tearing the floor covering, and bringing a very great strain on the caster. This strain

is so great, that it is a common occurrence for an ordinary caster to break at the mounting pin or pedestal.

In the present invention, two wheels are provided, and instead of mounting them on a common axis, they are advanced one with respect to the other, as clearly shown in Fig. 3. In addition the caster turns at the base of the pin or pedestal and not at the top. With the ordinary form of caster the weight is behind the axis of the wheel or wheels, and the bearing for vertical rotation is elevated above the said wheels. In the present instance, these points are brought close together, so that the strain on the parts is reduced to a minimum.

I claim:

A caster construction substantially as herein described composed of a pair of spaced apart rollers whose axes are parallel, a bracket carrying the said rollers and having spindles therefor arranged parallel to each other and in the same horizontal plane but one in advance of the other at all times, the said bracket having midway between its said spindles and in a vertical plane at a right angle to the plane in which the said spindles lie a socket open at its upper end and having its lower end extended to a point approximately in the horizontal plane of the spindles, and a non-rotatable journal pin whose lower end extends into the said socket and bears at its lower extremity against the base thereof approximately in the horizontal plane of the spindles all substantially as described whereby the bracket is mounted to swing horizontally on a vertical stepped bearing whose step is arranged in the horizontal plane of its spindles to prevent the undue strain of what would result from a pivoting of the vertical spindle at a point above the bracket, all as and for the purposes set forth.

HARRY MARTIN.