E. T. MALLOY.

CASTER.

APPLICATION FILED JULY 31, 1918.

1,282,448. Patented Oct. 22, 1918.

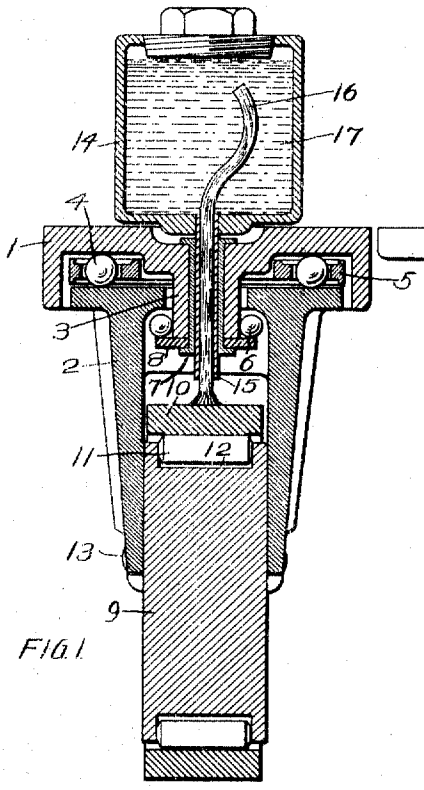


FIG. 1

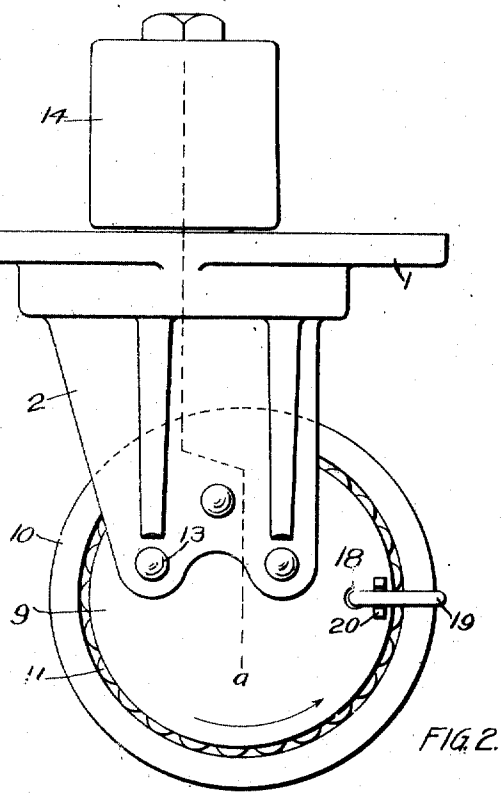


FIG. 2.

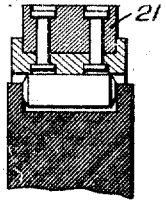


FIG. 6.

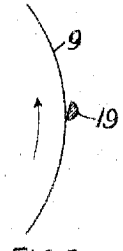


FIG. 5.

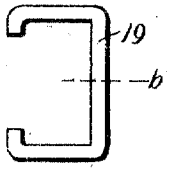


FIG. 4.

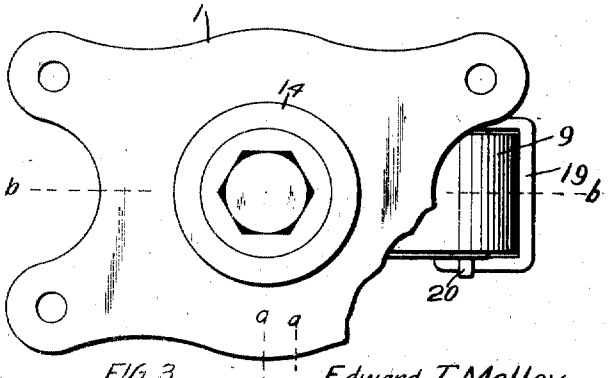


FIG. 3.

Witness:

Charles Willbrecht

Edward T. Malloy
Inventor

by James W. See
Attorney

UNITED STATES PATENT OFFICE.

EDWARD T. MALLOY, OF HAMILTON, OHIO, ASSIGNOR TO THE AMERICAN CASTER COMPANY, OF HAMILTON, OHIO.

CASTER.

1,282,448. Specification of Letters Patent. Patented Oct. 2, 1918

Application filed July 31, 1918. Serial No. 247,482.

To all whom it may concern:

Be it known that I, EDWARD T. MALLOY, 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 casters, relates to improvements designed particularly with reference to casters employed on trucks in shoe factories where the casters are likely to be picking up scraps of waxed threads, and the improvements will be readily understood from the following description taken in connection with the accompanying drawing in which:—

Figure 1 is a vertical section of a caster embodying an exemplification of my improvements, the section being taken in the plane of line *a* of Figs. 2 and 3:

Fig. 2 a side elevation of the structure:

Fig. 3 a plan of the structure, with a portion of the plate broken away:

Fig. 4 a plan of the doctor:

Fig. 5 a vertical section of the doctor in the plane of line *b* of Figs. 3 and 4: and

Fig. 6 a partial diametrical section of the wheel, illustrating a modification for use in case it be desired to arm the metallic tire with a felt tire.

In the drawing:—

1, indicates the plate:

2, the housing:

3, the stem depending from the plate and on which the housing is loosely swiveled:

4, the load-bearing balls disposed and active between the plate and the top of the housing:

5, the cage of these balls:

6, the balls forming the swiveling bearing of the housing and disposed about the lower portion of the stem, within a circular wall near the top of the housing:

7, a tube extending vertically through the stem and flanged at its upper and lower ends:

8, a washer disposed below the stem and held thereto by the lower flanging of the tube 7, this washer serving to support the balls 6:

9, a disk secured fixedly between the horns of the housing:

10, a tire loosely encircling the disk, having its side edges free from the horns of the housing:

11, a series of anti-friction rollers disposed in the periphery of the disk and engaging within the bore of the tire:

12, a broad peripheral groove in the disk to receive the rollers 11:

13, rivets securing the disk to the horns of the housing, the center of the disk being offset rearwardly from the vertical axis of the stem:

14, an oil-cup disposed removably upon the plate over the stem:

15, a wick-tube fixed in the base of the oil-cup and fitting removably in tube 7:

16, a wick disposed in the wick-tube and having its lower end brushing upon the tread of the tire:

17, oil in the oil-cup, which oil cup is provided with a filling-plug:

18, holes in the side places of the rear portion of the disk 9, at about the center of height of the disk:

19, a doctor formed of a wire bail crossing the periphery of the tire and having its arms bent inwardly into the holes 18:

20, lugs carried by the sides of the disk and engaging the arms of the doctor and serving to limit the vertical vibration of the doctor: and

21, a felt tire with which the metallic tire may be provided, if desired.

The lower end of the wick brushes the tread of the tire and applies oil thereto, which becomes spread so as to keep the tread of the tire at all times moistened with oil, which oil lessens the tendency of the tire to pick up waxed strings, and such pieces of string as do adhere to the tread will be scraped off by the doctor. The wire of the doctor is to be non-circular in section so as to present an edge for the scraping operation. The doctor may be readily sprung in place, and its rising and falling is limited by the lugs 20.

If a soft tired wheel is desired it may be formed of felt 21 disposed in a peripheral groove in the metallic tire, and held there by a circumferential series of rivets having their heads sunk well into the felt, to prevent marring of floors, and sunk well up in the bore of the metallic tire so as not to strike the anti-friction rollers. The oil-cup, with its immediate accessories, may be readily removed from the caster, and it is to be understood, of course, that the truck or rack to which the plate is attached will be provided with a suitable recess to permit the oil-cup to be placed and removed.

I claim:

1. A caster comprising, a plate, a housing swiveled to the plate, a fixed wheel-center carried by the housing and provided with a peripheral groove, a series of rollers disposed in the groove, a loose tire surrounding the center and its series of rollers and restrained sidewise by the housing, a doctor engaging the periphery of the tire, an oil-cup carried removably by the plate and having a wick-tube projecting downwardly to near the periphery of the tire, and a wick disposed in the wick-tube and brushing the tire, combined substantially as set forth.

2. A caster comprising, a plate, a housing swiveled to the plate, a fixed wheel-center carried by the housing and provided with a peripheral groove, a series of rollers disposed in the groove, a loose tire surrounding the center and the series of rollers and restrained sidewise by the housing, a doctor engaging the periphery of the tire and having side-arms extending inwardly and then bent toward each other and engaging holes in the wheel-center, an oil-cup carried removably by the plate and having a wick-tube projecting downwardly to near the periphery of the tire, and a wick disposed in the wick-tube and brushing the tire, combined substantially as set forth.

3. A caster comprising a plate, a hollow stem projecting downwardly from the plate, a housing swiveled on the stem, a fixed wheel-center carried by the housing and provided with a peripheral groove, a series of rollers disposed in the groove, a loose tire surrounding the center and its series of rollers and restrained sidewise by the housing, a doctor engaging the periphery of the tire, an oil-cup carried removably by the plate and having a wick-tube projecting downwardly through the stem to near the periphery of the tire, and a wick disposed in the wick-tube and brushing the tire, combined substantially as set forth.

4. A caster comprising, a plate, a housing swiveled to the plate, a fixed wheel-center carried by the housing and provided with a peripheral groove, a series of rollers disposed in the groove, a peripherally grooved loose tire surrounding the center and its series of rollers and restrained sidewise by the housing, a felt tire disposed in said groove, rivets having their heads countersunk in the felt and in the interior of the tire, a doctor engaging the periphery of the felt tire, an oil-cup carried removably by the plate and having a wick-tube projecting downwardly to near the periphery of the felt tire, and a wick disposed in the wick-tube and brushing the felt tire, combined substantially as set forth.

5. A caster comprising, a plate, a housing swiveled thereto and provided with a pair of downwardly projecting horns, a disk fixedly secured between the horns, a loose tire surrounding the disk between the horns, a doctor engaging the periphery of the tire, an oil-cup carried by the plate and having a wick-tube projecting downwardly to near the periphery of the tire, and a wick disposed in the wick-tube and brushing the tire, combined substantially as set forth.

EDWARD T. MALLOY.

Witnesses:
M. S. BALDEN,
JUSTUS VOLLBRECHT.