

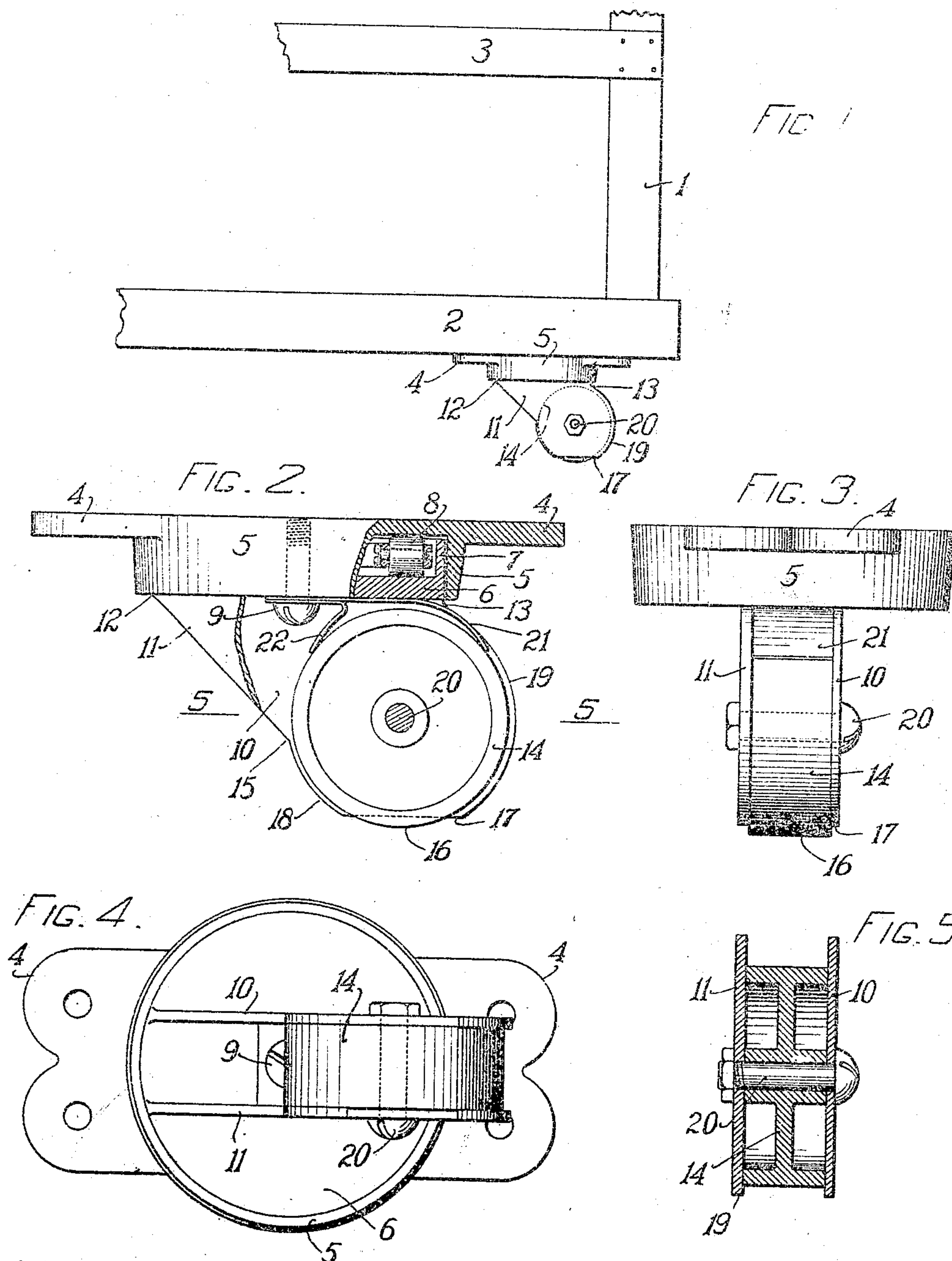
No. 860,650.

PATENTED JULY 23, 1907.

I. E. FLETCHER.

CASTER FOR DRYING RACKS FOR SHOE FACTORIES.

APPLICATION FILED SEPT. 26, 1906.



WITNESSES

A. T. Palmer

Edward Maxwell.

INVENTOR

IRA E. FLETCHER

BY

G. S. Maxwell

ATTY



# UNITED STATES PATENT OFFICE.

IRA E. FLETCHER, OF MONTELLO, MASSACHUSETTS.

## CASTER FOR DRYING-RACKS FOR SHOE FACTORIES.

No. 860,650.

Specification of Letters Patent.

Patented July 23, 1907.

Application filed September 26, 1906. Serial No. 336,280.

To all whom it may concern:

Be it known that I, IRA E. FLETCHER, a citizen of the United States, residing at Montello, in the county of Plymouth and State of Massachusetts, have invented an Improvement in Casters for Drying-Racks for Shoe Factories, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

Great difficulty is experienced in shoe factories in connection with the casters commonly employed for the shoe racks. The floor is more or less littered with threads, dirt, cement-smeared scraps of leather, shoe linings etc. and other lumpy and stringy debris, so that it is found to be practically impossible to run the shoe racks over the floor for any length of time without the casters fouling and clogging so as to impede or entirely stop their rotation.

Various kinds of casters have been devised with the object of automatically cleaning themselves but without satisfactory results for the purpose in question. My caster, which forms the subject of this patent, accomplishes the desired results by a special combination of scrapers with depending side walls of special angles and constructions and overhanging supporting housing, all coöperating to meet the usual situation in shoe factories and prevent the clogging and fouling referred to.

In the accompanying drawings: Figure 1 is a fragmentary view representing in side elevation the relation of my caster, when in proper position, to a usual shoe rack: Fig. 2 is an enlarged detail in side elevation, parts being broken away and shown in section for clearness of illustration. Fig. 3 is an end view thereof looking toward the left Fig. 2. Fig. 4 is a bottom plan view of the caster. Fig. 5 is a sectional view on the line 5-5 Fig. 2:

A shoe rack consists of corner uprights 1 extending from a base 2 and spanned at frequent intervals by cross-supports 3 having slats, not shown, for retaining the shoes in separated position, so that when fully loaded with shoes it is very heavy. These loaded racks are shoved along from one operator to the other as the shoe progresses in its various operations through the factory so that the casters which support the rack have to pass over the various littered places in the factory, some of which are littered with cement covered scraps and others are littered with cloth scraps, pieces of thread, string etc. and others with leather shavings, waxy trimmings etc. and my invention resides in the arrangement of parts and their shape and combination so that the caster will maintain itself free and comparatively clean.

On a suitable screw plate 4 is formed a circular depending integral flange 5 in which is mounted a cup-shaped carrier 6 whose vertical flange 7 bears against

the depending flange 5 and extends upwardly nearly to the base plate 4 and retains any convenient form of roller bearing 8. This carrier cup is secured by a screw bolt 9.

Centrally projecting from the bottom of the carrier 6 are parallel supporting walls or cheeks 10, 11 which extend the entire width of the part 6 between the points 12 and 13. These supporting cheeks or plates carry at their lower ends a wheel 14. Said plates extend obliquely at 15 approximately tangentially of the wheel and curve around snugly against the side edges of the wheel throughout the entire periphery thereof excepting at the very bottom 16 where they are cut off slightly at 17 parallel to the floor so as merely to provide projecting roller surface sufficiently to permit the caster wheel to pass over a small heap of rubbish for instance. It is necessary to have the wheel 14 project slightly in this manner as the weight of the rack will compel it to sink more or less into any small collection of refuse with which it may meet in its progress over the floor of the factory. The cheeks project beyond the wheel slightly so as to cover the entire sides of the wheel as indicated at 18, 19 and the wheel is pivoted at 20 approximately in vertical line with the roller bearings, so that the entire bearing area of the wheel where it engages the floor comes just within the interlocking cup-shaped projecting flanges 5, 7. Also the wheel is as close to the carrier 6 as possible leaving only room enough to interpose opposite spring scrapers 21, 22 whose securing ends are clamped between the bolt 9 and the cup-shaped carrier 6. Said scrapers 21, 22 are relatively short as clearly shown in Fig. 2 and get a strong bearing comparatively close to their free ends by reason of their engagement with said carrier 6, and in width they span the entire distance between the opposite cheek plates 10, 11.

In use, notwithstanding the great weight of the loaded shoe rack and the necessarily foul and dirty condition of the floor, I have found that the caster will maintain its own proper condition, larger pieces of leather and other foreign substances being warded off by the lower inclined projecting edges of the side walls or cheeks 10, 11, and even thread and other filaments or slender debris being prevented from winding round the moving wheel by reason of the scraper like cut away portions 17 at the bottom of the cheeks, which bear against the edges of the peripheral web of the caster wheel as clearly shown in Figs. 2, 3, and 5, and any cement or dust and dirt which sticks to the bearing surface of the wheel is sure to be scraped off by the opposite scrapers according to the direction in which the wheel is revolving. Said scrapers cannot get out of alinement with the periphery because they are held snugly between the cheeks 10, 11 against lateral movement, and are held firmly down by their close, short, engagement with the carrier 6. By reason



of the overhanging construction of the upper parts, and the close proximity thereto of the caster wheel, the latter is protected from fouling on account of any dirt or debris which may be dropped *en masse* or kicked 5 against the rack. Also the deep depending flange 5 and the upwardly extending cup-shaped carrier, nested snugly together, prevent any fouling of this portion of the caster so that it is maintained in free running condition at all times.

0 Having described my invention, what I desire to secure by Letters Patent is:

15 A caster for shoe racks comprising a base plate provided with means for securing it to the bottom of a rack and having a circular depending flange, a cup-shaped carrier plate mounted within said depending flange substantially flush with the bottom thereof, anti-friction bearings supported within said carrier to engage said base plate,

depending flanges or cheeks extending centrally from said carrier, a caster wheel pivotally mounted between said flanges substantially in line with the supported peripheral 20 portion of said carrier, said wheel snugly fitting between said flanges or cheeks and the latter extending substantially to the bottom and covering substantially the entire sides of the wheel, being cut away slightly at the bottom of the wheel parallel to the floor, said wheel extending 25 close to the meeting edges of said carrier and depending base flange, and opposite spring scrapers bearing against said carrier and held snugly at their edges between the said depending cheeks and engaging said wheel in opposite 30 directions close to said carrier.

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

IRA E. FLETCHER.

Witnesses:

C. E. BACON,  
GEO. H. MAXWELL.