

(No Model.)

A. B. DISS.
CASTER WHEEL.

No. 484,305.

Patented Oct. 11, 1892.

Fig. 1.

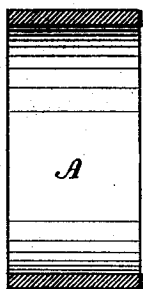


Fig. 2.

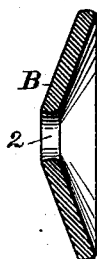


Fig. 3.

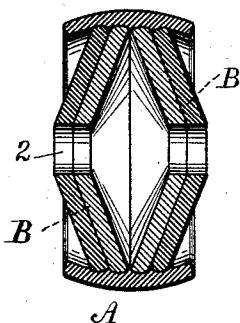
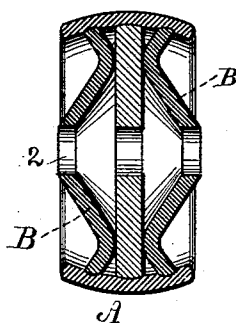


Fig. 4.



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UNITED STATES PATENT OFFICE.

ALBERT B. DISS, OF BROOKLYN, NEW YORK.

CASTER-WHEEL.

SPECIFICATION forming part of Letters Patent No. 484,305, dated October 11, 1892.

Application filed January 18, 1892. Serial No. 418,368. (No model.)

To all whom it may concern:

Be it known that I, ALBERT B. DISS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Wheels or Rollers for Casters and other Articles, of which the following is a specification.

In manufacturing caster-wheels it has been usual to make use of a cast-brass wheel or roller, especially in the better class of casters; but in practice it is found that the cast metal is comparatively soft, and under the strain or weight to which the caster is usually subjected the bearing for the pivot-pin gives way either by wear or by bending, and sometimes the hub portion of the caster-wheel breaks away, and in addition to this it is usual to turn off the surface of the caster-wheel with deep circular recesses at each side to lessen the weight of metal necessary; but these recesses frequently become filled with dust and lint and it is difficult to clean the same because of the angular bottoms of the recesses. In some instances the caster-wheel has been made of separate pieces, one of which is a perforated disk.

The present invention relates to the manner hereinafter described in which the caster or other wheel is constructed, whereby great strength is obtained, the risk of injury is lessened, and the expense of the wheel is greatly decreased.

In the drawings, Figure 1 shows a section of a tube employed by me. Fig. 2 is a section of one of the disks. Fig. 3 is a section of the wheel with four disks after the parts have been put together, and Fig. 4 is a similar view of the caster-wheel with three disks.

I make use of a metal pipe or tube of a diameter corresponding to the diameter of the caster-wheel, or nearly so, and this pipe or tube is preferably of brass or other ornamental metal and is sufficiently thick for obtaining the necessary strength. The tube is cut off into sections A, the length of each section corresponding to the width or thickness of the caster-wheel.

I make use of metal disks B B, cut out from suitable sheet metal—such as sheet-steel—and having central holes of a size adapted to receive the pin or pivot of the caster-wheel, and each disk is stamped up conically, and

in making a caster-wheel two, three, four, or more of these disks B are set together with the convex sides outwardly, and these are then introduced into the tube-section A and held by suitable tools while the tube-section A is closed around the edges of the disks B, so that such tube-section A receives a convex exterior surface, as shown in Figs. 3 and 4, and the edges of the disks become embedded into the tube-section A. Hence it is impossible for the disks B to escape from the tube-section forming the periphery of the caster-wheel or to become loose therein, because the tube-section and its ends are contracted in diameter and become smaller at the ends than the disks. The caster-wheel thus made might be employed in the ordinary frame or jaws of the caster or used in any other manner or in any other device, the axis or pin passing through the central holes of the disks B, and the conical shape which has been given to the disks B causes the bearings of such disks upon the pivot-pin to be in line or slightly beyond the edges of the tube-section A.

When only two disks—such as shown in Fig. 2—are employed, the angles between the surfaces of the disk and the interior of the tube-section might be filled with solder or soft metal. Usually it is advantageous to employ three disks, as shown in Fig. 4, the central disk being thickest and slightly largest, or four disks may be used, as in Fig. 3, the two inner disks being slightly the largest. The disks are preferably cleaned and polished before placing them in the tube-section. This may be done by a tumbler or other appliance. After the parts are put together the wheels may be dipped in a proper plating solution—such as brass or bronze solution—to coat the outer surfaces of the wheels, so as to be of uniform color, and they may then be buffed or polished. Wheels made as aforesaid are much stronger than the wheels heretofore constructed, and with brass or other ornamental metal they are much cheaper than those heretofore made.

I claim as my invention—

1. The caster-wheel having a rim composed of a tube-section and two or more centrally-perforated convex disks placed within the tube-section with their convex faces outwardly and held within the tubular rim by the said

rim being compressed and closed inwardly, substantially as set forth.

2. The caster-wheel having a rim composed of a tube-section, a flat centrally-perforated disk within the same, and two centrally-perforated convex disks within said tube-section, one at each side of the central disk and with their convex faces outwardly, said disks being

held within the tubular rim by the said rim being compressed and closed inwardly, substantially as set forth.

Signed by me this 15th day of January, 1892.

ALBERT B. DISS.

Witnesses:

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WILLIAM G. MOTT.