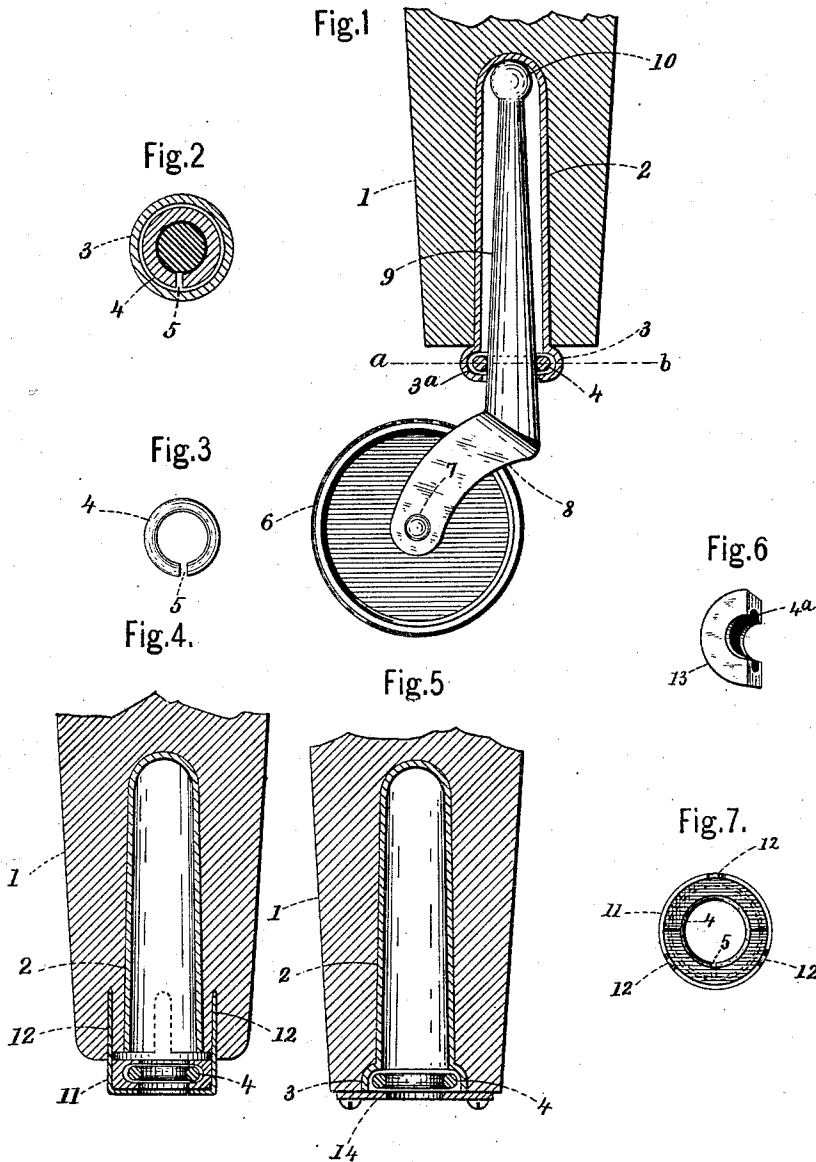


(No Model.)

A. HARDENBERGH & W. C. FROEHLEY.
CASTER.

No. 473,924.

Patented May 3, 1892.



Witnesses.

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CASTER.

SPECIFICATION forming part of Letters Patent No. 473,924, dated May 3, 1892.

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To all whom it may concern:

Be it known that we, ABNER HARDENBERGH and WILLIAM C. FROEHLEY, both citizens of the United States, residing in Hamburg, in the county of Erie and State of New York, have invented certain new and useful Improvements in Caster-Wheels, of which the following is a specification.

Our invention consists in a new and useful improvement in casters, and will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a caster-wheel, showing, also, a vertical central section through a portion of a bedstead-leg to which it is attached and a similar section through the case in which the shank of the caster is held. Fig. 2 is a horizontal section on line *a b*, Fig. 1, the wheel and other portions below it being omitted. Fig. 3 is a detached plan view of the clasp-ring. Figs. 4 and 5 represent sectional elevations showing modifications of the device. Fig. 6 is a perspective view of one-half of a modified box for holding the clasp-ring. Fig. 7 represents a top view of two of such half-boxes in place within a holding-case.

Referring to said drawings, 1 represents a portion of the leg of a bedstead or other article to which the caster is attached. Into the lower end of the leg of a bedstead or other article is bored a vertical hole, into which is fitted the tubular caster-holding case 2, having its top closed and bottom open, as shown in Fig. 1. At the bottom of the case 2 is an enlarged portion 3, having on the inner side an annular groove, in which the clasp-ring 4 is secured so as to be held loosely therein. The clasp-ring 4 is preferably made of tempered steel wire, but may be made of any other suitable material, the ends being separated at 5, so that it can be made to spring apart, as will more clearly hereinafter appear.

In Fig. 1, 6 represents the caster-wheel. It is made in the usual manner and pivoted by a pin 7 to an ordinary forked holding-piece 8. The holding-piece 8 is provided with a tapering shank 9.

From the above-described construction it will be seen that when the shank 9 is slipped

up in place it catches within the ring 4, which clasps and holds it tightly. At the same time the ring 4, being fitted loosely in its annular holding-groove 3^a, (see Fig. 1,) is free to turn easily therein, so that the shank 9 and its wheel 6 are free to be easily rotated and still are held with sufficient force to keep them from dropping out when the leg 1 is lifted up. When in use, the bearing end 10 of the shank 9 rests against the concave top of the case 2. (See Fig. 1.)

When it is necessary to remove the caster, all that is required to be done is to pull with sufficient force to release it from the force of the clamping-spring 4.

In the modification shown in Fig. 4 we have shown a small cup-shaped case 11, having a series of projecting pins 12. (It is also shown in Fig. 7.) In this case are placed two half-boxes 13, each having a half of a groove 4^a. (See Fig. 6, in which this half-groove is designated by the character 4^a.) When two of these half-boxes are put in place within the case 11, as in Fig. 7, they form the continuous circular groove 3^a, in which the clasp-ring 4 may be held, as shown in Fig. 4. It is secured to the table-leg by means of the pins 12, which are forced or driven up into the wood or bottom of the leg. A case 2 without the enlargement 3 may be also put in, so that the top of the shank 9 when put in will have a bearing-point, or any other suitable bearing-point may be used.

The modification shown in Fig. 5 consists in leaving the enlargement 3 on the case 2 without being contracted at the lower end, so that the clasp-ring 4 may be set into the opening, substantially as shown in said Fig. 5, and secured by a plate 14.

Either of the modifications above described would provide a means for holding the clasp-ring 4 in position; but we prefer the construction shown in Fig. 1. This clasp-ring 4 will receive a straight caster-wheel shank as well as a tapering shank 9. We therefore do not confine ourselves to the use of a tapering shank alone.

It will be noticed that the ring 4, being fitted loosely in the annular groove 3^a, so as to have room to expand or contract, turns at all times easily in said groove, so that the caster-

shank when held in said ring is free to turn easily without any obstruction whatever.

We claim as our invention—

In a caster, the combination, with a separated clasping-ring, of a suitable case in which it is held so as to turn freely and enlarge or contract therein and a caster provided with a plain smooth shank adapted to pass into

and be held by said ring, substantially as described.

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Witnesses:

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