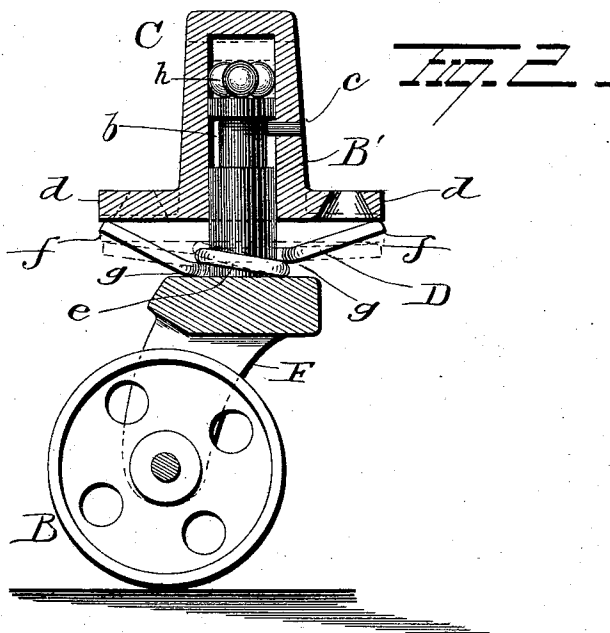
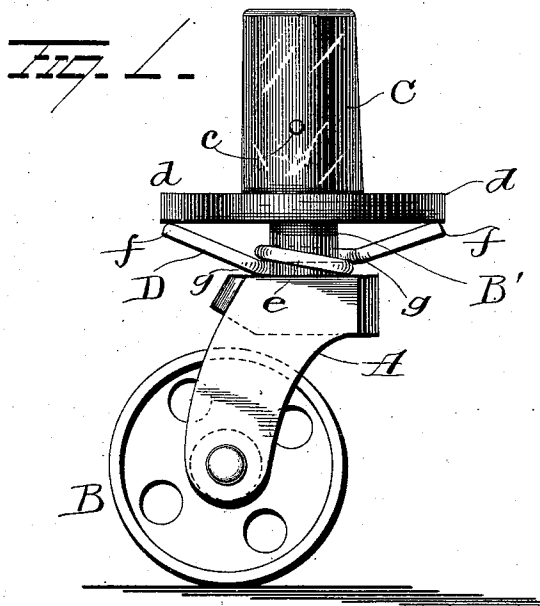


(No Model.)

W. T. SMITH.
CASTER.

No. 537,079.

Patented Apr. 9, 1895.



Witnesses
S. J. Nottingham
G. F. Downing

Inventor
W. T. Smith
By *M. D. Leggett & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM T. SMITH, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE WILLIAM KNABE & CO. MANUFACTURING COMPANY, OF SAME PLACE.

CASTER.

SPECIFICATION forming part of Letters Patent No. 537,079, dated April 9, 1895.

Application filed February 9, 1895. Serial No. 537,797. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. SMITH, of Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Roller-Casters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in roller casters, and it consists in certain novel features of construction and combinations of parts as will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a view of my improvement; and Fig. 2 is a view in section of the same.

A represents the horn, which is preferably of the form in common use, and to which the roller B is attached in the usual manner.

B' is a spindle projecting upwardly from the horn and provided near its upper end with an annular groove *b*, in which rests the free end of pin *c*, while the opposite end thereof is secured in the side wall of socket C. Thus it will be seen that spindle B' is movably secured within socket C through the medium of pin *c*. Socket C is provided with an extended outwardly projecting flange *d* having countersunk holes therein for the reception of screws, by means of which the caster is secured in its operative position. Interposed between the upper face of horn A and the lower surface of flange *d*, is spring D, which latter is preferably of the form shown in the drawings. The coiled portion *e* which encircles spindle B' rests on the horn A, while the outwardly and upwardly extending arms *f*, *f*, bear against the under face of flange *d*. The spring is coiled twice around the spindle and as each end bears against the under side of the flange, each operates, practically, as an independent spring. When the roller is applied to an article, the springs yield or give at their outer ends while the coiled sections thereof are forced upwardly, each bend of the spring as at *g* acting as a fulcrum on which the spring rests. If the weight on the caster be sufficient, the upper coil will be

forced into contact with the flange *d*, while the lower coil will assist in supporting the upper one. Thus it will be seen that when the weight is sufficient to overcome the spring arms *f*, *f*, the coils which operate as additional elastic supports are brought into action, and assist in sustaining the object carried by the casters. The springs being fulcrumed at the bends *g* can yield on both sides of the bend and thus yieldingly sustain any object carried thereon.

In supporting heavy articles with casters constructed as above described, it will be seen that when the springs are fully compressed the weight is supported to a large extent by the spindles and when it is desired to change the course of the rollers, considerable power is required to revolve the spindles in the sockets, as the former have a tendency to bind in the latter, and hence in order to overcome this difficulty and to render the operation of the spindles active, I have located on the upper ends of said spindles ball bearings *h*, which latter also bear against the inner top surface of the sockets, thereby removing friction and rendering the spindles more easy of operation.

It is evident that changes in the construction and relative arrangement of the several parts might be made without avoiding my invention and hence I would have it understood that I do not restrict myself to the particular construction and arrangement of parts shown and described, but,

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As an article of manufacture, a caster consisting of a socket, a horn having a roller therein, said horn having a shank inserted in the socket, one of said parts provided with a wide annular groove and the other with means projecting into the groove to prevent the parts from being separated but to permit a limited vertical play relative to each other, rollers confined between the shank and inner end of the socket and a spring interposed between the horn and socket, substantially as set forth.

2. As an article of manufacture, a caster
comprising a socket, a horn the shank of which
is fitted to and adapted to turn in the socket,
and a spring consisting of a piece of spring
5 wire bent around the shank of the horn and
its ends bent outward to bear on the socket,
substantially as set forth.

In testimony whereof I have signed this
specification in the presence of two subscrib-
ing witnesses.

WM. T. SMITH.

Witnesses:

CHAS. L. HUTCHINS,
C. I. DUNN.