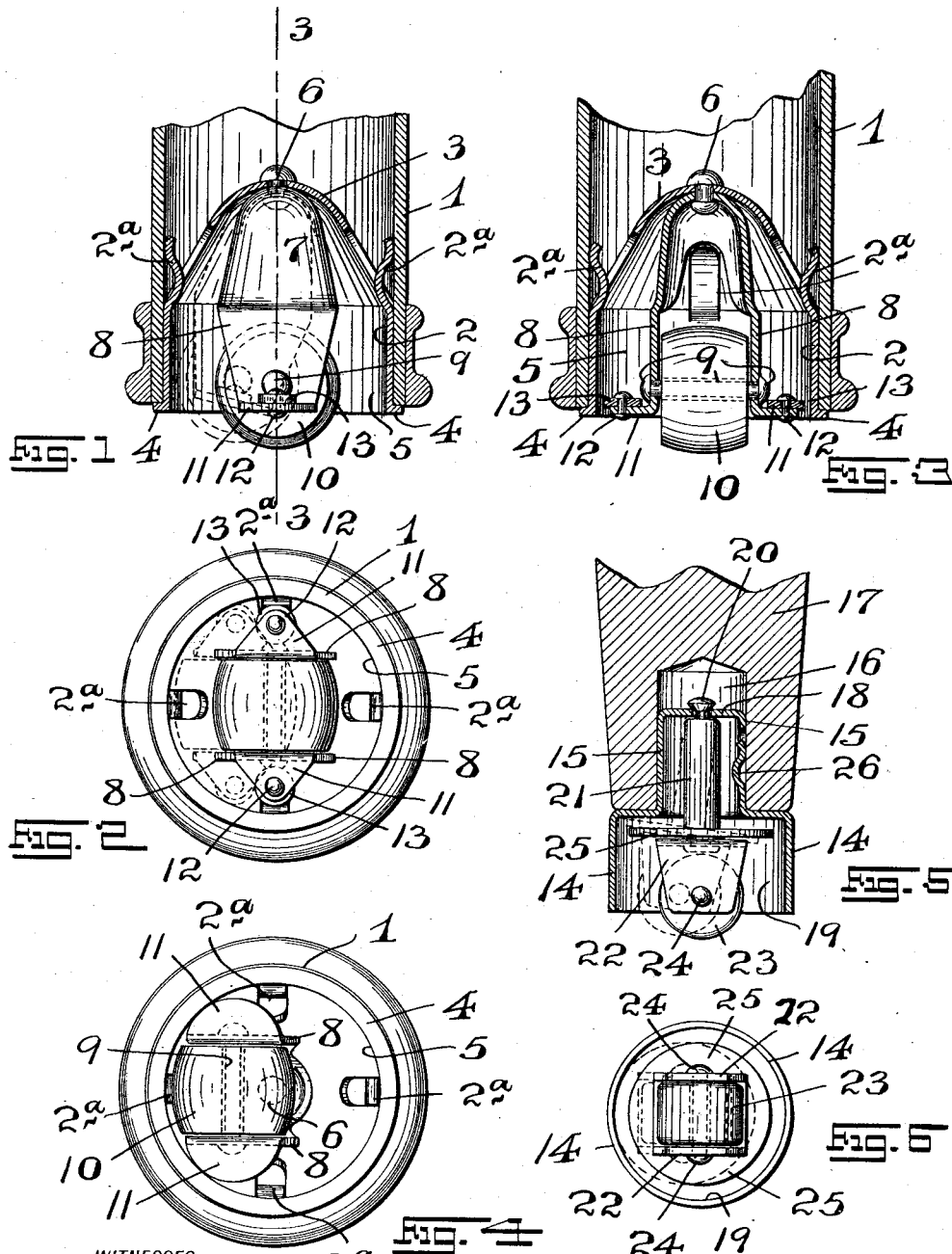


J. C. BLEVNEY.
 CASTER.
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1,052,454.

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WITNESSES:
 Harry E. Pfeiffer
 Fred W. W. Trautzel.

INVENTOR:
 John C. Blevney,
 BY
 Trautzel and Richards,
 ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHN C. BLEVNEY, OF NEWARK, NEW JERSEY.

CASTER.

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To all whom it may concern:

Be it known that I, JOHN C. BLEVNEY, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in 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, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

The present invention relates, generally, to improvements in casters for furniture; and, the invention has reference, more particularly, to a novel form of caster in which the roller thereof is mounted in such a manner, that it will more easily and quickly adjust and align itself to the direction of pull exerted upon the furniture with which the caster is connected.

The invention has for its principal object to provide a simple and inexpensive construction of caster adapted for use with all types of furniture, but particularly adapted for use with the tubular posts of metal beds, and other heavy furniture.

The invention consists, primarily, in the novel caster hereinafter set forth; and, this invention consists, furthermore, in the novel arrangements and combinations of the various parts of the caster, as well as in the details of the construction of the same, all of which will be more fully described in detail in the following specification, and then finally embodied in the clauses of the claims which are appended thereto, and which form an essential part of the said specification.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a longitudinal vertical section of one form of the novel construction of caster made according to the principles of the present invention, the same being shown in that form, which is adapted for use with the tubular posts of metal bedsteads, and similar furniture; Fig. 2 is a bottom view of the same; Fig. 3 is a transverse vertical section of the caster, said section being taken on line 3—3 in said Fig. 1 with a supporting rivet and the caster wheel shown in elevation; and Fig. 4 is a bottom view of a slightly modified construction of caster, the same being also adapted for use with the

tubular posts of metal bedsteads. Fig. 5 is a longitudinal vertical section of another modified form of caster, made according to the principles of the present invention, the same being adapted for use with all general form of furniture; and Fig. 6 is a bottom view of the same.

Similar characters of reference are employed in all of the said above described views to indicate corresponding parts.

Referring now to the said drawings, the reference-character 1 indicates the lower open end-portion of a tubular post, such as usually support the frames of metallic beds, and similar furniture. Adapted to fit within the open end-portion of said tubular post is a casing or shell 2, open at the bottom, but having an inclosing upper portion 3. Said shell 2 may be provided with a series of spring-like fingers or frictional binders 2^a, the same being struck out of the body of said casing or shell, and are adapted to press against the inner sides of said tubular post 1, to make a frictional engagement therewith for the purpose of retaining said shell or casing 2 in its essential relation within said post. Extending outwardly from the lower marginal edge of said casing or shell 2 is an annular flange or rim 4, which engages, in a supporting relation thereto, the lower end-portion of said tubular post 1. The lower inner surface of said shell or casing 2 is cylindrical, and provides a bearing-surface, as 5, for the purpose to be subsequently described. Centrally disposed in the inclosing upper portion 3 of said shell or casing 2 is a rivet 6, or other fastening means, which serves to movably suspend within said shell or casing 2 a frame 7, from which depend a pair of supporting portions 8, between which is rotatably mounted, upon a suitable spindle 9 extending between said supporting portions, a roller or wheel 10. The said frame 7 is suitably connected, in the above described arrangement, and in such a manner, so as to possess a swiveling or rotary movement with relation to the said shell or casing 2, as well as a swinging or oscillatory movement within said shell or casing 2, similar in nature to the swinging or oscillatory movement of the bell-clapper within the interior of a bell-body. The roller or wheel 10 is supported by the said frame 7, in such a manner, so that it projects beneath the plane of the open end of said casing or shell, no matter what

position it assumes therein, and that the said roller is in rolling contact with the floor beneath the tubular post 1 at all times. Projecting outwardly from each of the supporting portions 8 of said frame 7, and in a horizontal plane, are alining lugs or projections 11, upon the free ends of which are journaled, by means of rivet-connections 12 or any other suitable means, anti-friction rollers 13.

In its operation, the novel construction of caster, herein-above described, performs its functions in the following manner:— When the furniture, to which the casters are attached, is subjected to either a pull or push, for the purpose of moving the same, the frame 7 and its roller or wheel 10 will swing in a direction opposite to the direction of the said pull or push; or, in other words, will swing or oscillate upon its holding rivet 6 toward the shell or casing 2, and at the same time the frame 7 will swivel upon the rivet 6, with a tendency to aline the roller or wheel to the direction of movement of the furniture. As the frame 7 thus swings or oscillates, the anti-friction rollers 13 of said alining lugs or projections 11 are brought in contact with the bearing-surface 5 of the shell or casing 2, and thus serve, not only to immediately center and maintain said roller or wheel 10 in alinement with the line or direction of movement of the furniture, but also serve to prevent the said roller or wheel from striking the said casing or shell, whereby the friction of its rotary movement would be impaired. It will thus be apparent, that the roller or wheel 10 will quickly and easily aline itself to the direction of movement, which not only renders the furniture more easily and quickly moved in any direction, but also saves the wear and tear upon the floors or floor-coverings, which is due to the slow and uncertain action of casters mounted to turn or swivel upon a fixed vertical axis.

As is illustrated in Fig. 4 of the drawings, it is not absolutely essential that the anti-friction rollers 13 be applied to the alining lugs or projections 11, but the same may be so formed, that their outer ends will engage the bearing-surface 5 of the shell or casing 2, and thereby operate to bring the roller or wheel 10 into proper alinement, and stop the same from contacting with the wall of said shell or casing.

Referring now, more particularly, to Figs. 5 and 6 of the accompanying drawings, I have illustrated therein a slightly modified construction of caster, the same, however, still embodying the principles of the present invention. In this construction, I provide a shell or casing 14, open at its lower end, and reduced in diameter at its upper end 15, so that the same may be received in the socket 16 formed in the lower

end of the legs or standards 17 of general forms of furniture. Said upper end 15 is closed over by the wall 18, and the inner surface of the shell or casing 14 is cylindrical in form, so as to provide a bearing-surface 19. Suspended within said shell or casing 14, by means of the loose rivet-connection 20, which engages the wall 18, is a shank 21 of a frame 22, in the lower end of which is rotatably mounted a roller or wheel 23, the same being arranged upon a suitable pintle 24 carried by said frame 22. Rotatably mounted upon said shank 21, so as to turn in a substantially horizontal plane, is a fender-disk 25, which, while keeping the roller or wheel from contact with said shell or casing, also assists, by rolling upon said bearing-surface 19, to aline said roller or wheel to the direction of movement of the furniture, to which the caster is attached. Since the roller or wheel 23 is mounted in connection with said shell or casing 14, so as to possess the functions of both swinging or oscillating therein, as well as swiveling by means of its loose rivet-connection, it follows that the principles of its operation and action are the same as above described in connection with the first-mentioned construction of caster. Said upper end 15 of said shell or casing may also be provided with one or more spring-like fingers or frictional binders 26, which serve to engage the inner wall of the socket 16 of the leg or standard 17 to retain said casing or shell in proper relation thereto.

From the above description and the accompanying drawings, it will be obvious that I do not limit my invention to the exact arrangements and combinations of the several devices and parts herein described and illustrated, for the same may be varied without departing from the scope of the present invention; nor, do I limit my invention or confine myself to the exact details of the construction of the parts as herein described and as illustrated in the drawings.

I claim:—

1. A caster comprising a casing, a frame carrying a wheel mounted in connection with said casing so as to possess both a swinging and swiveling action, and alining means connected with said frame adjacent to the axis of said wheel adapted to contact with the interior surfaces of said casing to both aline said wheel and also fend said wheel from contact with said casing.

2. A caster comprising a casing closed at its upper end and provided with an interior cylindrical bearing-surface, a frame suspended within said casing from the upper wall thereof, said frame possessing both a swinging and swiveling movement within said casing, a wheel mounted in connection with said frame and projecting partially through the open end of said casing, and

alining lugs projecting in opposite directions from said frame, said lugs being adapted to contact with the bearing-surface of said casing, when said frame swings toward the walls of said casing.

3. A caster comprising a casing closed at its upper end and provided with an interior cylindrical bearing-surface, a frame suspended within said casing from the upper wall thereof, said frame possessing both a swinging and swiveling movement within said casing, a wheel mounted in connection with said frame and projecting partially through the open end of said casing, projections connected with said frame, said projections extending in opposite directions, and anti-friction rollers mounted upon the free ends of said projections adapted to contact with the bearing-surface of said casing, when said frame swings toward the walls of said casing.

4. A caster comprising a casing closed at its upper end and provided with an interior cylindrical bearing-surface, a frame suspended within said casing from the upper wall thereof, said frame possessing both a swinging and swiveling movement within said casing, a wheel mounted in connection

with said frame and projecting partially through the open end of said casing, projections connected with said frame, said projections extending in opposite directions below the axis of said wheel, and anti-friction rollers mounted upon the free ends of said projections adapted to contact with the bearing-surface of said casing, when said frame swings toward the walls of said casing, and spring-like fingers connected with said casing, adapted to retain the same in proper relation to said furniture.

5. A caster comprising a casing closed at its upper end, and having an outwardly projecting flange at its lower end, a frame, a wheel mounted in the free end of said frame and projecting partially through the open end of said casing, and means for connecting said frame to said casing, so that the former will both swing and swivel within the latter.

In testimony, that I claim the invention set forth above I have hereunto set my hand this 28th day of November, 1911.

JOHN C. BLEVNEY.

Witnesses:

GEORGE D. RICHARDS,

FREDK. H. W. FRAENTZEL.