

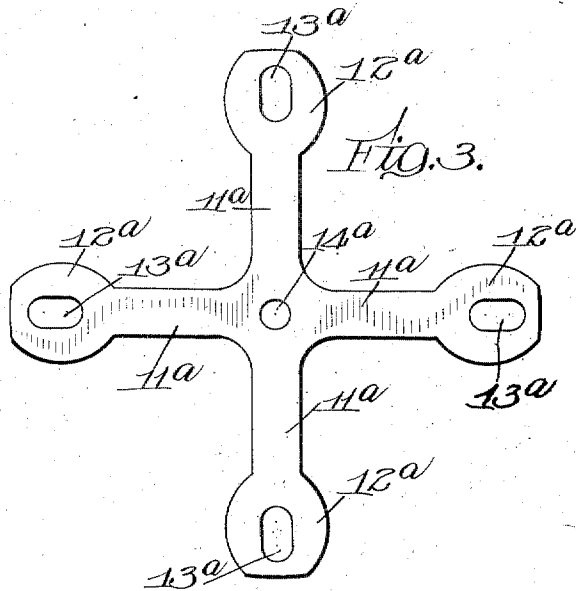
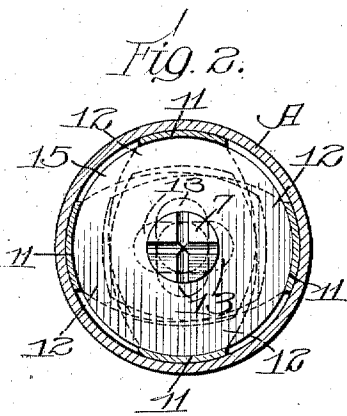
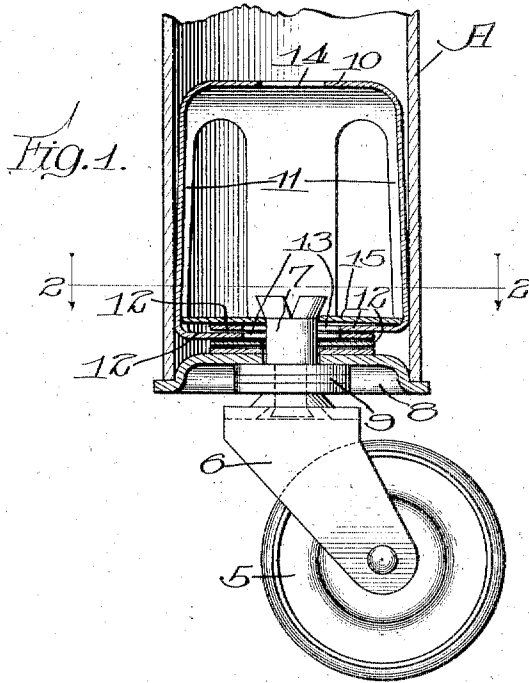
H. J. HORWICH.

CASTER.

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982,820.

Patented Jan. 31, 1911.



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UNITED STATES PATENT OFFICE.

HENRY J. HORWICH, OF CHICAGO, ILLINOIS, ASSIGNOR TO DAVIS, HORWICH & STEINMAN, INCORPORATED, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CASTER.

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Specification of Letters Patent.

Patented Jan. 31, 1911.

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To all whom it may concern:

Be it known that I, HENRY J. HORWICH, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Casters, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in casters, and particularly to that type of casters in which is employed a spring frame that is inserted in the hollow leg or standard of a piece of furniture, as for example the cylindrical hollow leg of a metal bedstead.

The objects of the invention are to provide an improved construction of spring frame that can be easily inserted into a hollow leg or standard and that when fully inserted will frictionally engage the leg or standard; to provide means for preventing the said spring frame from yielding laterally or upwardly when strain is imposed upon the device by moving the article of furniture from one position to another on its casters; to provide a construction rendering it unnecessary to equip the caster with the ordinary long pintle with which casters of this general type are ordinarily provided; and to improve generally the construction and operation of devices of this character.

That which I believe to be new will be pointed out in the claims.

In the drawings:—Figure 1 is a view partly in side elevation and partly in vertical section, of my improved caster, and showing also in section a portion of a hollow furniture leg or standard with which the caster is in engagement. Fig. 2 is a cross-section taken at line 2—2 of Fig. 1; and Fig. 3 is a plan view, on a reduced scale, of the blank from which the spring frame is formed.

Referring to the drawings,—A indicates a hollow leg or standard, as for example, the cylindrical leg or standard of an ordinary metal bedstead.

5 indicates an ordinary caster wheel, journaled as usual between a pair of rigid arms, 6, that are connected together at their upper ends by a horizontal portion usually formed integral with said arms. 7 indicates a stud or short pintle projecting upward from the central part of the said con-

necting horizontal portion of the arms and secured in place in any desired manner.

8 indicates a plate mounted on the stud 7 and of a size to adapt it to support, adjacent to its edge, the lower end of 60 the hollow leg or standard A. This plate in the form of construction shown is stamped out so that its central portion is raised considerably above its edge portion and I therefore provide a number of wash- 65 ers 9 beneath it—which of course would not be needed if the plate were made flat.

10 indicates a metal frame formed, as shown, from a single piece of material, the blank as cut for the formation of the frame being clearly shown in Fig. 3. By the use of a suitable die, or other means, this blank is operated upon to produce the frame shown in the other figures of the drawing and comprising, as there shown, four downwardly-directed arms 11 having inwardly-turned ends 12, in which inwardly-turned end pieces are formed slots 13. These slots are best shown in the representation of the blank of Fig. 3 where they are indicated by 13^a—and in the same figure 11^a indicates the parts that in the completed frame constitute the downwardly-extending arms 11, and 12^a the parts that constitute the inwardly-turned end portions 12. In the upper end of the frame is a hole 14 (indicated in the view of the blank by 14^a) which, while not an essential, is a desirable provision in that it more readily permits the proper drawing of the metal when the blank is subjected to the action of the forming die or other tool, and consequently aids in producing a rounded surface at the upper end of the frame. Having the upper end so rounded renders it much easier to insert the frame into a socket or hollow leg. 95

The material of which the frame is formed is to be of spring metal and so formed that the arms will have a tendency to press outwardly against the wall of the hollow leg or standard and thereby frictionally hold the frame as a whole in place. 100

The inturned end portions 12 of the arms 11 lie one above another, as clearly shown in Fig. 1, with the stud 7 passing through their respective slots 13. 15 indicates a disk having a central aperture through which the said stud also extends. This disk lies upon the uppermost one of the inturned slot- 105 ted end portions 12 and after having been 110

placed in position the portion of the stud 7 that projects above the disk is to be upset as shown or otherwise provided with a head or enlargement that will serve to prevent the disk from being forced upward, but which of course is not to cause the disk to bear so firmly upon the inturned end 12 that it rests upon, as to prevent a free inward movement of the several inturned ends when the frame is being inserted into a leg or standard or prevent a correspondingly free outward movement to obtain the required frictional contact of the arms 11 with the leg or standard. As clearly shown in the drawings this disk is best made of a diameter that will cause its edge to touch, or nearly touch, the inner faces of the arms 11 when the frame is in position within a hollow leg or standard. This disk being of stiffer or more rigid material than that employed in the construction of the spring frame and being held firmly against the upper one of the inturned ends 12 and fitting snugly between the various arms 11 acts to prevent any distortion or yielding of the spring arms and their said inturned ends, as would be apt to be the case if such disk were not provided, whenever the article of furniture to which the caster is attached is moved from place to place. It therefore acts as a lock to at all times hold the spring frame as a whole in proper position and effectually counteracts all ordinary strain caused by such moving of the piece of furniture. The heavier the article of furniture the greater is the tendency to a side strain or twisting whenever such piece of furniture is rolled around on its casters, but with the disk provided, as shown, this tendency is wholly overcome and the frame as a whole is at all times maintained in proper position and in perfect working condition.

That which I claim as my invention, and desire to secure by Letters Patent, is,—

1. The combination with a caster-wheel, arms in which said wheel is rotatably mounted, an upwardly-projecting stud or pintle connected with said arms, and a furniture-leg support mounted on said stud or pintle, of a metal frame comprising a plurality of arms adapted to frictionally engage the wall of a hollow furniture-leg and having inturned slotted lower end portions through the slots in which said stud or pintle projects, and means on said stud or pintle adapted to bear against the upper one of said inturned ends.

2. The combination with a caster-wheel, arms in which said wheel is rotatably mounted, an upwardly-projecting stud or pintle connected with said arms, and a furniture-leg support mounted on said stud or pintle, of a metal frame comprising a plurality of arms adapted to frictionally engage the wall of a hollow furniture-leg and having inturned slotted lower end portions through the slots in which said stud or pintle projects, and a disk secured upon said stud or pintle over said inturned ends.

3. The combination with a caster-wheel, arms in which said wheel is rotatably mounted, an upwardly-projecting stud, and a furniture-leg support mounted on said stud, of a metal frame comprising a plurality of arms adapted to frictionally engage the wall of a hollow furniture-leg and having inturned slotted lower end portions through the slots in which said stud projects, said stud having an enlarged head portion over and in close proximity to the upper one of said inturned end portions.

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Witnesses:

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