No. 645,974. Patented Mar. 27. 1900.

H. D. REED.

CASTER SOCKET.

(Application filed July 12, 1899.)

(No Model.)

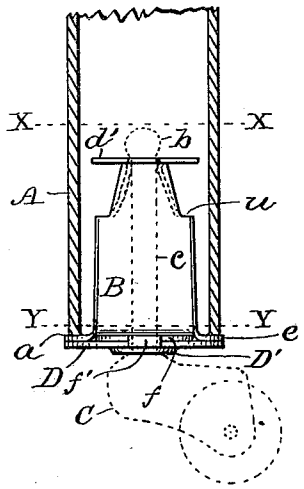


Fig. 1.

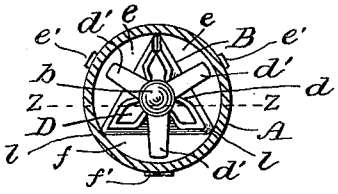


Fig. 2.

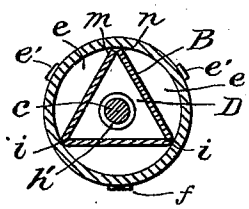


Fig. 3.

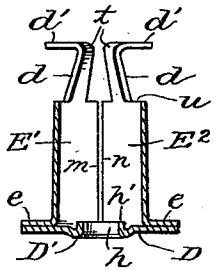


Fig. 4.

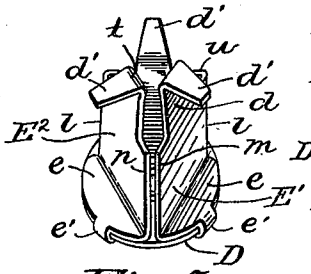


Fig. 5.

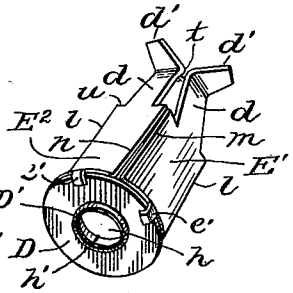


Fig. 6.

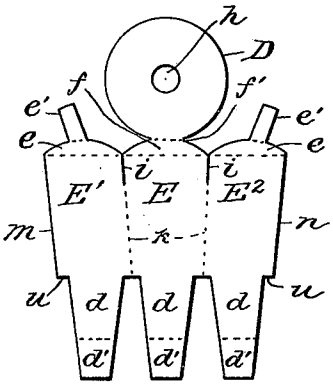


Fig. 7.

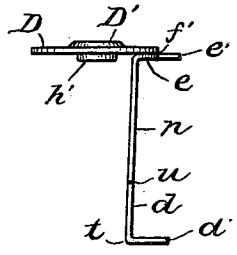


Fig. 8.

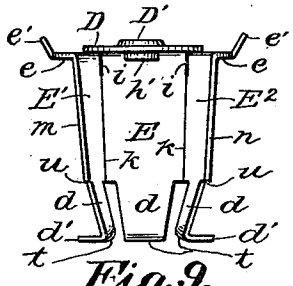


Fig. 9.

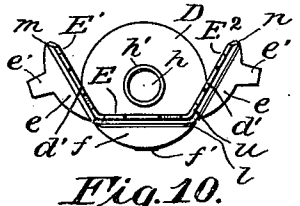


Fig. 10.

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# UNITED STATES PATENT OFFICE.

HARRY D. REED, OF INDIANAPOLIS, INDIANA.

## CASTER-SOCKET.

SPECIFICATION forming part of Letters Patent No. 645,974, dated March 27, 1900.

Application filed July 12, 1899. Serial No. 723,546. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY D. REED, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Caster-Sockets; and I do 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 the letters of reference marked thereon, which form a part of this specification.

My invention relates to a device for use with iron bedsteads and other furniture having tubular metallic legs with which casters are used; and the invention consists in a metallic socket or holder for the caster, adapted to be driven into the tubular leg and retained therein by means of frictional resistance, and of new and novel form of construction, whereby the same is cheaply produced and in which the caster-shank is securely retained by spring-pressure while being permitted to rotate, and the invention provides also a closure for the lower end of the tubular leg to prevent the entrance of vermin.

The invention consists, further, in providing a caster-socket which is most advantageously formed from a blank in one piece, the several parts of which are integrally connected.

My object is to provide a cheap socket for tubular posts which may be capable of receiving the caster-shanks of the various types in common use and which shall be durable and economical in use, and this is accomplished in my invention illustrated in the accompanying drawings, in which similar letters of reference in the several figures designate similar parts.

Referring to the drawings, Figure 1 represents a central vertical section of a lower end of a tubular bed-post in which a socket is shown as constructed in accordance with my invention and a caster also appears in dotted lines in operative position; Fig. 2, a horizontal sectional view on the line X X in Fig. 1; Fig. 3, a horizontal sectional view on the line Y Y in Fig. 1; Fig. 4, a vertical sectional view taken approximately on a line Z Z in Fig. 2; Figs. 5 and 6, perspective views of the socket complete; Fig. 7, a plan of the blank from which the socket is formed, and Figs. 8, 9, and 10 illustrate the socket in several of its stages of formation.

In construction suitable dies and tools are employed, and a blank is stamped from sheet-steel or other suitable metal and then bent by machinery into the desired shape in order to secure the greatest economy in labor. The blank comprises a body portion planned in connected sections, adapted to constitute the supporting-trunk by which the whole is retained in the end of the post A, and has a suitable number of arms, which engage a ball-head *b* at the top of the shank *c* of the caster C to prevent the accidental withdrawal of the caster. This truncated body portion may have any desired number of bearing-points to provide frictional resistance against the interior of the leg A; but as a matter of economy and expediency I prefer three sides E E′ $E^2$, preferably of plane surface, which provides practically three bearing ribs or edges *l l* and *m n*, the two latter combining as one bearing. In Fig. 7 the dotted lines indicate where the bends are to be made. Two of the trunk-sections each have a semicircular end to form flanges *e*, which have each a finger *e′*, and the third section has a like end to form a flange *f*, which has a short neck *f′*, to which is connected the circular base D, having a circular aperture *h*, the edge of which is turned up to form an annular flange *h′*, and in the process a bead is formed at the opposite side of the base to provide a bearing D′ to engage the caster-bearing at the base of the shank. At the edge *u*, which becomes the top of the trunk, each side section has a projecting vertical arm *d*, the extremity of which is bent over to form a lateral brace *d′*, which may come into action against the tubular leg in case of unusual strains transmitted to the top of the caster-shank. On the lines *k* are slits *i*, extending a short distance from the intersection of the semicircular ends, forming the flanges *e e* and *f* for the purpose of providing elasticity to the bearing-points.

In bending the blank to the proper shape the flanges *e e* and *f* are turned over to nearly a right angle to the sides of the trunk, and the bend is made at the neck *f′*, so that

the base D is turned over against the flange *f*, as indicated in Fig. 8. The braces *d'* are turned over, so that the angle at the bend forms bearings *t* to act against the base of the ball *b* of the caster-shank, the arms *d* being set over somewhat, so as to converge when completed and spring against the shank. The bends are made on the lines *k k* until the edges *m* and *n* approximately join, and the fingers *e' e'* are turned down and under the edge of the base, securely locking the disconnected portion of the base to the trunk, the truncated body being slightly smaller diametrically at the top than at the bottom when completed to compensate for variations in sizes of tubes comprising the furniture legs.

In the construction described the frictional resistance is sustained by the ribs comprising the corners of the triangular truncated body when pressed or driven into the tube, the latter usually having a ragged internal fringe of metal at the orifice left by the cutting-tool, and the bearing-ribs being convergent toward the top are readily forced through the frail fringe to solid metal, or the edges *m n* and at the slits *i* spring sufficiently to be forced along until the flanges *e* come into contact with the end *a* of the leg, the base D, together with the shank, also forming a closure for the leg A.

Although the blank substantially of the form shown in Fig. 7 is preferable, it is obvious that equally-good results may be attained by connecting the base D to either the side portions E' or $E^2$, and also the fingers or clips *e'* may be dispensed with, if desired; but their use permits of the employment of metal of the least thickness, which is therefore the least expensive. The body portion instead of being triangular in cross-section may be either hexagonal or octagonal, if desired, and the plane faces of the sides may be made either concave or convex within the scope of my invention.

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

1. A caster-socket comprising a body portion formed from a plate-blank having sections connected at their sides and bent over at the vertical divisional lines of the sections whereby vertically-disposed bearing-ribs are provided, and folded on horizontal lines near the bottoms of the connected sections to form exterior horizontal flanges whereby the bottom of the body portion is stiffened laterally; a base for the body portion whereby to support the same upon a caster; and arms projecting above the body portion whereby a caster-shank may be engaged.

2. A caster-socket comprising a truncated body portion triangular in cross-section throughout its length and formed from a plate-blank comprising sections connected at their sides and bent over whereby vertically-continuous ribs are formed wherewith to engage a tubular post, a base having a circular caster-shank bearing, and flanges formed at the exterior of the bottom of the truncated body portion and attached to the base and reinforcing and connecting the same with the body portion.

3. A caster-socket formed of a blank comprising side sections each of which has a projecting arm at one end and two of which have each at the opposite end a projecting finger and the third section of which has a circular base.

4. A caster-socket consisting of a truncated body portion triangular in cross-section and integrally connected at two of the vertical corners thereof and the third corner thereof formed by the two abutting edges of the converging sides, vertical arms projecting above the body portion and converging toward the top, and a base having a central bearing, all formed integrally from a sheet-metal blank.

5. A caster-socket formed from a blank plate comprising foldable sections integrally connected at the side edges thereof each of which sections is partially circular at one end and at the opposite end has a projection detached from adjacent sections, and one of which sections has a circular base connected thereto by a neck-piece extending from the partially-circular portion.

6. In a caster-socket, the combination of the shank, the tubular leg, the body portion formed of folded-over sections of a bent plate to provide vertical bearing-corners, vertical projecting arms bearing against the shank, and a base connected integrally with the body portion at one side thereof and by means of bent-over fingers at other sides of the body, substantially as set forth.

7. The combination of the tubular post, the caster, the caster-socket comprising a truncated body formed from a sheet having foldable sections each of which is semicircular at one end and provided at the opposite end with a projection, said foldable sections being folded on longitudinal lines dividing the sections one from the others whereby longitudinally-continuous corners are provided, one of such corners being formed by the two abutting side edges of the sheet and the corners that are formed by the folding of the sheet being slitted at the lower end of the corner, the flanges formed from the semicircular ends, and the base attached to such flanges.

8. A caster-socket formed of a single sheet comprising the sections E, E', $E^2$ each having the projecting arm at the top thereof, the flanges at the exterior of the bottom of the said sections, and the base integrally connected by a neck-section to one of said flanges, substantially as shown and described.

9. The combination with a tubular post and a caster, of a socket composed of a body portion cut from sheet metal and bent to form exterior vertical ribs and also exterior flanges at the bottom of the body portion between the ribs, the projecting arms at the top of the

body portion, and a base attached to the exterior flanges and having a central hollow bearing provided with the reinforcing-flange.

10. A sheet-metal caster-socket blank composed of an annular base part having a substantially-circular periphery, body-sections having each an end adjacent to the base part of partially-circular contour at the edge thereof and corresponding to the peripheral curvature of the base part, and an arm projecting centrally from the opposite ends of each of the body-sections.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY D. REED.

Witnesses:
WM. H. PAYNE,
E. T. SILVIUS.