S. KONZ.

Furniture-Casters.

No. 196,024. Patented Oct. 9, 1877.

Fig.1.

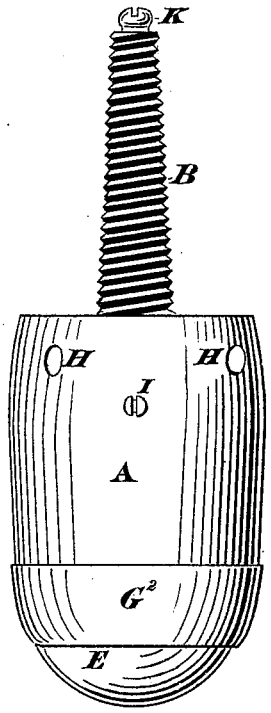


Fig.2.

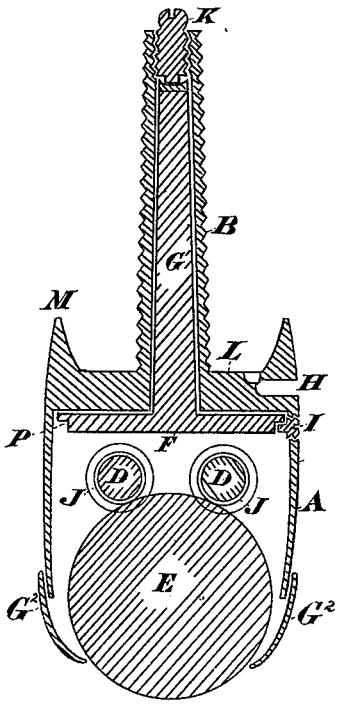


Fig.3.

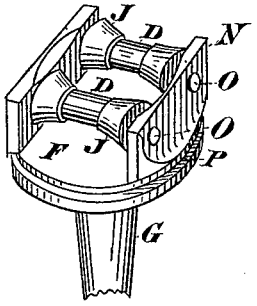
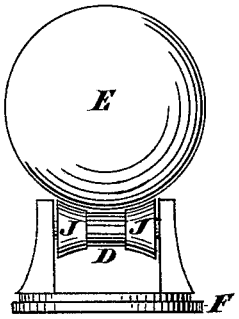


Fig.4.



Witnesses,

Frank Pardon.

Albert Fleischmann.

Inventor;

Sebastian Konz by

A. W. Stuart his atty

UNITED STATES PATENT OFFICE.

SEBASTIAN KONZ, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF ONE-HALF HIS RIGHT TO PAUL W. CARLE, OF SAME PLACE.

IMPROVEMENT IN FURNITURE-CASTERS.

Specification forming part of Letters Patent No. **196,024**, dated October 9, 1877; application filed August 6, 1877.

To all whom it may concern:

Be it known that I, SEBASTIAN KONZ, of Louisville, Jefferson county, State of Kentucky, have invented an Improvement in Furniture-Casters, of which the following is a specification:

My invention relates to certain improvements which I have made upon the furniture-caster for which a patent was granted me, dated June 20, 1876, No. 178,857; and consists, first, in the novel devices by which the upper part of the caster is connected with the lower portion, which contains the friction-rollers and the ball-roller, in such a manner that such lower portion can revolve horizontally; secondly, in the combination of a hollow screw-shaft, which is screwed into the leg of the article of furniture, and having a set-screw in its top end and an interior revolving shaft designed to revolve within the screw-shaft, it being provided in its upper end with a concave hardened bearing for the set-screw, so that when the lower part of the caster revolves within the upper the only point of frictional contact (except the connecting-screw before mentioned) will be that point of the pivot-screw and that bearing, and thus the friction will be diminished; and, thirdly, to the peculiar construction and mounting of a pair of friction-rollers in the lower portion of the caster, and cutting away the middle portion of the rollers in such a manner that the ball-roller will come in contact with their outer ends only, and thus friction between them and the ball will be greatly diminished, all of which devices will be hereinafter more fully described and definitely claimed.

Referring to the accompanying drawings, Figure 1 represents an elevation of a caster embracing in its construction my improvement; Fig. 2, a central vertical section of the same; Fig. 3, a perspective view of the interior shaft and roller-frame inverted; and Fig. 4, a detail view of the ball-roller in connection with a friction-roller in an inverted position.

A is the case or cylinder, and B the hollow screw-shaft extending up from the center of the upper end thereof. L and M indicate the cup form for receiving the leg of a piece of furniture; K, the pivot-screw, fastened in the top of the screw-shaft by means of screw-heads, as shown, and provided with a blunt point at the lower end; and G is the revolving interior shaft, provided at its upper end with a concave hardened bearing to turn against the point of the screw-pivot K, and contain a little lubricating-oil. F is the short interior cylinder, which, together with the jaws N, constitute the frame for the friction-rollers D D, and J and J represent the shoulders, which alone come in contact with the ball-roller E, the friction-rollers being cut away at D and D. H H H are holes extending from the outside of the case or cylinder A through it and up through the base L, and are designed for the insertion of a suitable wrench to drive the shaft B into the piece of furniture, and also to enable one to ascertain when the bottom of the leg is flat upon the base L.

G^2 is the flat ring before mentioned, and, if made of proper size and thickness, will, when sprung onto the lower end of the cylinder, resist removal as much as may be desired, and hold the ball E in place.

I is the set-screw. It is screwed into and through the case A, and its flat point extends into the horizontal groove P in the short cylinder F, as shown in Figs. 2 and 3, and effectually confines the two portions of the caster together, but allows the lower to revolve within the upper, as before stated; and the object of the movement is that the friction-rollers may automatically adjust themselves, so that their axles shall be parallel with the axis of motion of the ball-roller E.

In moving the furniture the force is first exerted upon the ball, and then through the ball upon the friction-rollers and their frame, which adjusts itself, as before described.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the set-screw I, working in a screw-hole through cylinder A, and having a square point, and the groove P in the interior cylinder F, adapted to connect the lower revolving part and the upper part of the caster together, and allow the requisite action, substantially as described.

2. The combination of the screw-pivot *k*, having a blunt or rounded point, and being screwed into the upper end of screw-shaft B, and the concave upper end of revolving shaft G, adapted to secure easy and true revolving motion of

the lower part of the caster, substantially as described.

3. The friction-rollers D D, mounted in their revolving frame F N, and cut away in the center in such manner that only the shoulders J J will come in contact with the ball, in combination with ball-roller E, adapted to secure easy motion of the said ball-roller, substantially as described.

SN. KONZ.

Witnesses:
P. W. CARLE,
W. P. LINCOLN.