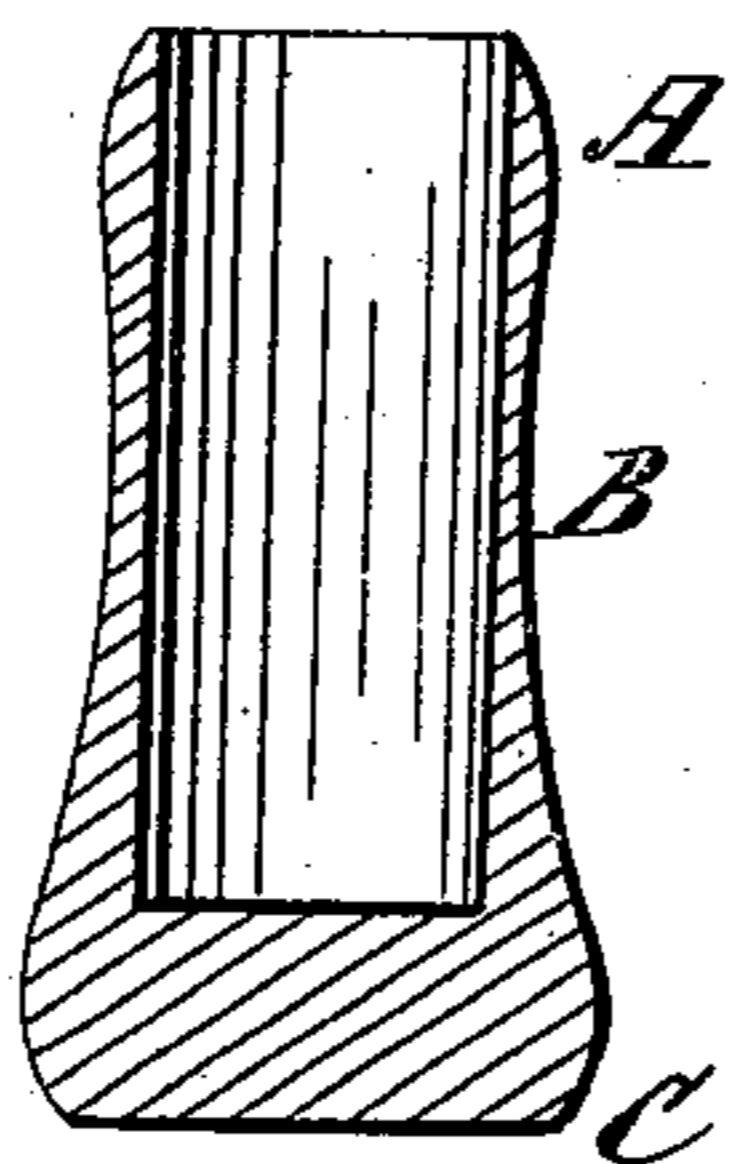


*E. S. Winchester,*  
*Tip for Chair-Feet,*  
*N<sup>o</sup> 70,490.                      Patented Nov. 5, 1867.*



*Witnesses.*

*J. B. Crosby*

*J. Frank Newman*

*Inventor*

*Edward S. Winchester*

# United States Patent Office.

EDWARD S. WINCHESTER, OF BOSTON, MASSACHUSETTS.

*Letters Patent No. 70,490, dated November 5, 1867.*

## IMPROVED TIP FOR THE FEET OF CHAIR-LEGS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, EDWARD S. WINCHESTER, of Boston, in the county of Suffolk, and State of Massachusetts, have invented a new and improved Tip for the Feet of Chair-Legs; and I do hereby declare that the following, taken in connection with the drawings, which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practise it.

My invention consists of the rubber tip, of the form herein shown and described, and which is peculiarly adapted, by its form and disposition of material, for use upon the legs of chairs, to prevent noise, slipping upon floors, and injury of carpets, floor-cloths, and floors, by the movement of or tipping of chairs.

My tip is made of elastic vulcanized rubber, with a straight or conical cavity, corresponding to the form of the end of the chair-leg upon which it is to be placed, the material about this ferrule increasing in thickness from its centre to its open end A, also increased from its centre B, to the closed end or base thereof C, on which the foot of the chair rests, and from which base the material is formed into a thick cushion, of convex outline, on which the superincumbent weight rests.

The increase of thickness from the top of the tip downward around the leg is necessary to reinforce and support the cushion under the foot of the chair-leg, and to prevent the tip from turning or becoming distorted in position upon the leg when subject to weight and movement on the chair, as would be the case if the material supporting the cushion were of uniform thickness, except when made very thick, and uniformly so, in which instance the tip would be clumsy, unsightly, and expensive, from unnecessary material. The thickness of the cushion acts as a spring, relieving and modifying all sudden jars, and the convexity of the outline of the cushion permits tilting of the chair.

The length of the tubular part surrounding the chair-leg; and the thickness of the cushion, are best made in the proportion shown in the drawing, where the length of the fit upon the leg, the elasticity of the rubber, and the disposition made of the material, render accidental displacement of the tip from the chair-leg impossible. The cross-section of the tip may be round, oval, or polygonal, as may be called for by the cross-section of the chair-leg on which the tip is to be placed.

I claim as my invention—

The India-rubber tip constructed as described, that is, formed as a ferrule, to be placed upon the foot of the chair, the ferrule increasing in thickness from its centre B to its open end A; also increased from its centre B to the closed end or base thereof, on which the foot of the chair rests.

In witness whereof I have hereunto set my hand this twentieth day of January, A. D. 1862.

EDWARD S. WINCHESTER.

Witnesses:

J. B. CROSBY,

J. FRANK NEWMAN.