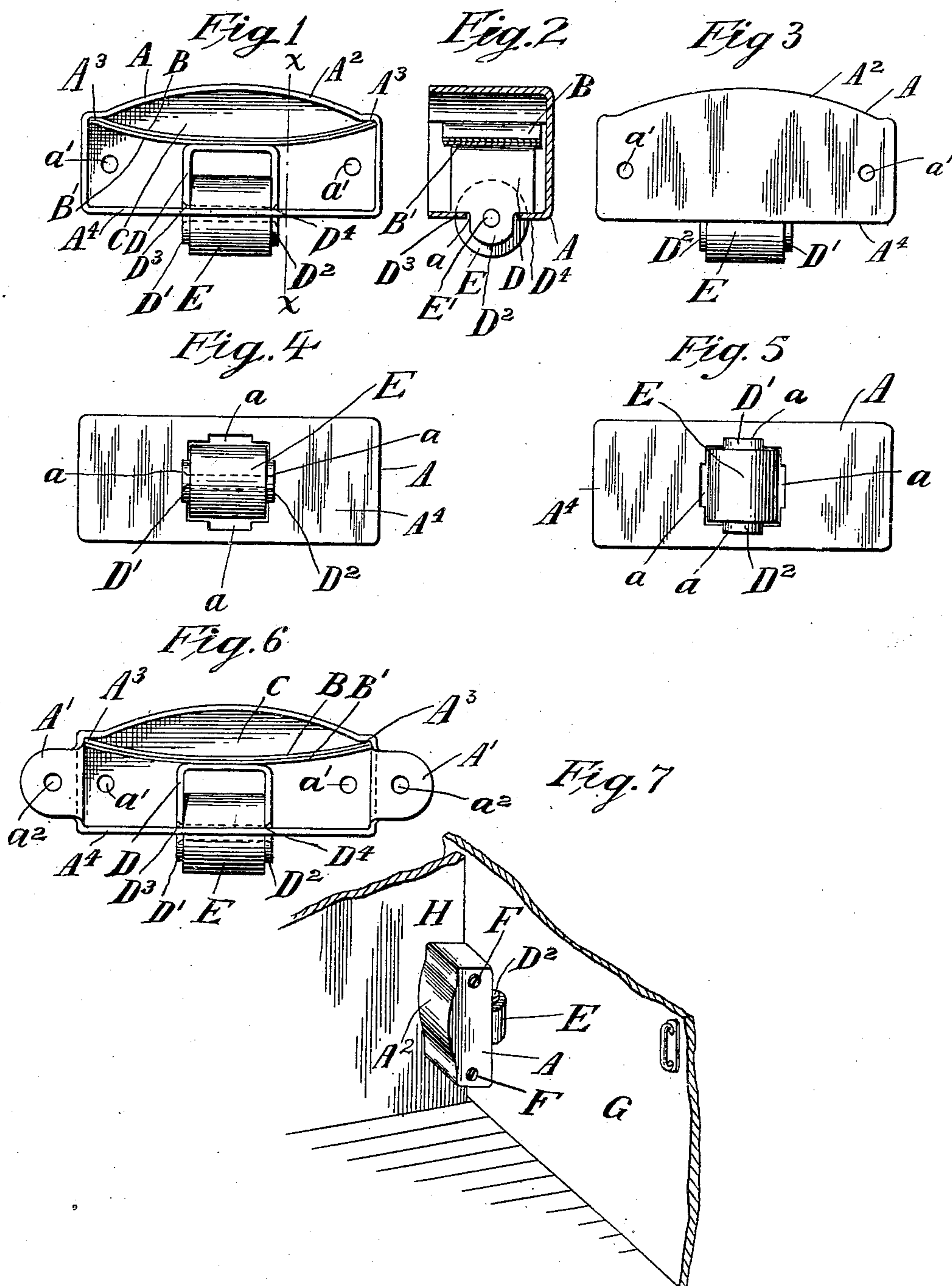


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ANTIRATTLING DEVICE.  
APPLICATION FILED JUNE 26, 1908.

930,072.

Patented Aug. 3, 1909.



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# UNITED STATES PATENT OFFICE.

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## ANTIRATTLING DEVICE.

No. 930,072.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed June 26, 1908. Serial No. 440,440.

*To all whom it may concern:*

Be it known that I, JOHN J. HALLADAY, a citizen of the United States, and resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Antirattling Devices, of which the following is a specification.

My invention relates to anti-rattling devices, and the object of my invention is to provide a device of this character which may be manufactured at a very low cost and in which the roller may be held in the casing with its axis longitudinally or transversely disposed relative to the bottom of the casing and guided in either position.

A further object is to provide a spring composed of two or more leaves to secure flexibility and durability.

The invention resides in the detail of construction as pointed out hereinafter in the claims.

Referring to the drawings which form a part of this specification,—Figure 1, is a view of the open side of the device. Fig. 2, is a cross sectional view on line X—X of Fig. 1. Fig. 3, is a view of the closed side of the device. Fig. 4, is a view of the bottom of the casing or housing, disclosing the roller with its axis disposed longitudinally relative to the casing. Fig. 5, is a view of the bottom, with the roller disposed transversely relative to the casing. Fig. 6, is a view of the open side showing end tabs formed integral with the casing at its ends. Fig. 7, is a perspective view of the device illustrating its use in connection with a sliding door.

A, indicates the casing, which is preferably drawn from sheet metal, and may be provided with end tabs A'—A', if desired. The casing is drawn from sheet metal by means of dies, and is provided with an arched top A<sup>2</sup> and shoulders at A<sup>3</sup>, on which the ends of the leaf spring B, rests. B', indicates a second leaf spring disposed as shown. Both leaves are bent to form a curve as shown, and when in the position shown, form with the casing top a chamber C. The distance from the top of the casing to the bottom, on the inner side, is approximately that of the height of the saddle D, so that the saddle and roller E may be inserted within the casing to the position shown. The saddle is provided with projections D' and D<sup>2</sup> respectively, between which the roller E is supported and held by a pin E', the ends of which rest in holes formed in said projec-

tions D' and D<sup>2</sup>, as shown. The saddle D is provided with shoulders D<sup>3</sup> and D<sup>4</sup> respectively, located adjacent to the projections D' and D<sup>2</sup>, which are adapted to abut against the bottom A<sup>4</sup> to limit the outward movement of the saddle. The cross sectional area of the saddle forms practically a square, and the diameter of the roller is about equal to its length, so that the roller may rest in the casing with its axis disposed either longitudinally or transversely of the casing, as illustrated in Figs. 4 and 5, respectively.

It will be observed that there are four recesses a, a, a, a, formed in the sides of the rectangular shaped opening in the bottom A<sup>4</sup>, in which the roller E is located. These recesses serve as guides for the projections D' and D<sup>2</sup>, which fit in said recesses in sliding engagement, as will be readily understood.

The casing is provided with holes a', a', through which screws F project to hold the casing in position. The tabs A' are also provided with holes a<sup>2</sup>, for the same purpose. In drawing up the casing A from sheet metal, the tabs A' are first drawn with their sides in alinement with the end surfaces of the casing, and afterward bent at right angles thereto, as shown.

G, indicates a sliding door, and H, a casement to which the device is fastened.

In operation the roller is prevented from shifting laterally by the projections D' and D<sup>2</sup> abutting the bottom of the casing. By bending the springs before insertion in the casing, a large range of movement is provided, and by using two or more springs superimposed as shown, a greater elasticity and durability is provided, and the spring as a whole is more easily formed and inserted in the casing, due to the fact that the thin leaves are easier to stamp, and may be inserted in position in the casing one at a time, until the desired stiffness of action is secured.

By this construction, extreme lightness and strength are attained, together with a simple and durable construction, at a low cost.

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

1. A device of the character described comprising a housing having a rectangular shaped opening in one of its sides, and having extensions of said opening forming recesses in the metal on each of the four sides



of the opening, said recesses being located in pairs opposite to each other, and a saddle having projections adapted to rest in said recesses, and carrying a roller as set forth.

5 2. A device of the character described comprising a housing having a square opening therein and recesses adapted to guide projections on the saddle, a saddle having  
10 projections occupying said recesses, a roller carried by said saddle, and a spring bearing against said saddle.

3. A device of the character described comprising a housing having a square opening therein and recesses adapted to guide  
15 projections on the saddle, a saddle having projections occupying said recesses, a roller carried by said saddle, and a removable spring bearing against said saddle.

4. A housing, a plurality of independent  
20 leaf springs superimposed one above the

other, a saddle having projections extending through said housing and guided in recesses formed therein, and a roller held between said projections.

5. A housing formed of sheet metal and 25 provided with an extending portion at each end, a plurality of independent leaf springs superimposed one above the other, a saddle having projections extending through said housing and guided in recesses formed there- 30 in, and a roller held between said projections.

Signed at New York in the county of New York and State of New York this 26th day of March A. D. 1908.

JOHN J. HALLADAY

Witnesses:

DANIEL DE V. HARNED,  
FRANK M. ASHLEY.