

G. DOOLITTLE.

Suspension Rings.

No. 136,977.

Patented March 18, 1873.

Fig. 1.

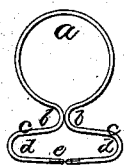


Fig. 2.

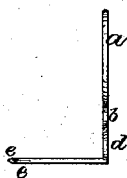
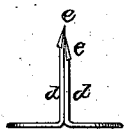


Fig. 3.



Witnesses.

John Taylor
Arthur L. M. Enare.

Inventor.

George Doolittle
By Atty, Wm. C. W. Antine

UNITED STATES PATENT OFFICE.

GEORGE DOOLITTLE, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE
DOOLITTLE MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN SUSPENSION-RINGS.

Specification forming part of Letters Patent No. 136,977, dated March 18, 1873.

To all whom it may concern:

Be it known that I, GEORGE DOOLITTLE, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Suspension-Rings; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing making a part of this application.

My invention relates to what are known as suspension-rings for hanging calendars, advertising-cards, &c. Previous to my invention all rings adapted to these uses have been made of sheet metal, requiring several distinct operations in forming the ring, and a large percentage of waste of material. My invention has for its object the production of suspension-rings at a greatly-reduced cost, and having all the parts thereof which come in contact with the suspended paper smooth, in order that the paper shall not be cut or abraded; and, to these ends, my invention consists in forming a suspension-ring of a continuous piece of wire, all its corners or angles being rounded, while the two ends are turned at right angles to the face of the ring, and cut so as to form sharp points, one slightly overlapping the other, as will be hereinafter explained.

To enable those skilled to fully understand my invention, I will proceed to describe the same more fully, referring to the accompanying drawing, in which—

Figure 1 is a plan view with the points projecting upwardly. Fig. 2 is a side or edge view, and Fig. 3 an end or base view.

Similar letters indicate the same parts in the several figures.

a is the ring portion, which is formed by bending the wire in a circle or other shape in any approved manner. Bends are then made to the right and left, forming the two smaller arcs *b b*; and the wire, after traveling in a straight line, *c*, a short distance, is again bent, forming the reverse arcs *d d*. The wire then travels in about parallel lines with the lines *c* till they meet, when they are upturned, forming the piercing-points *e*, both of which are,

in cutting off the length of the wire, formed into a sort of barbed arrow-point, and one is extended beyond and bent slightly over the the point of the other, so that the shortest leg, in being put through the card or paper, follows behind the point of the other, and through the hole pierced by it, thus lessening the force necessary to penetrate the paper or card to which it is attached, while at the same time the extension of one point beyond the other facilitates the spreading of them after they have passed through, and when they are to be turned down to fasten the ring to the card, &c., after the fashion of the T-shaped paper-fastener.

Of course I propose to make my improved suspension-ring by the aid of the most approved machinery; but as there are various modes by which they may be made, all or many of which would be obvious to any mechanic, I will not here describe a machine.

It will be observed that there is no waste whatever. Each length is cut off and the whole thereof utilized in the formation of the ring. All the edges or surfaces that are in contact with the paper are round and smooth, thus avoiding the tearing of the same.

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

1. As a new article of manufacture, a suspension-ring formed of a continuous wire, with the penetrating-legs terminating at right angles to and below the lower plane of the circle forming the ring proper, as and for the purpose set forth.

2. In a suspension-ring composed of wire or its equivalent, the penetrating-points, arranged substantially as described, so that the lower one shall be wholly or partially covered by the upper, as and for the purposes set forth.

Witness my hand this 3d day of January, 1873.

GEORGE DOOLITTLE.

Witnesses:

D. F. HOLLISTER,
FRANCIS E. BARLOW.