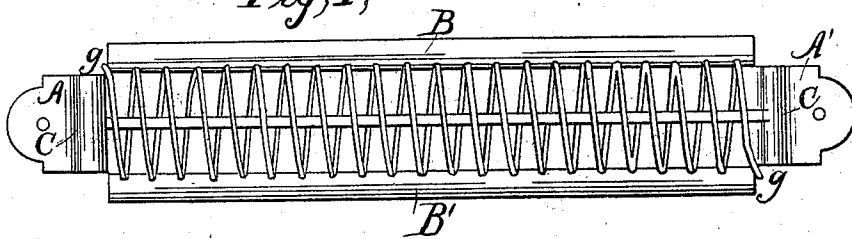


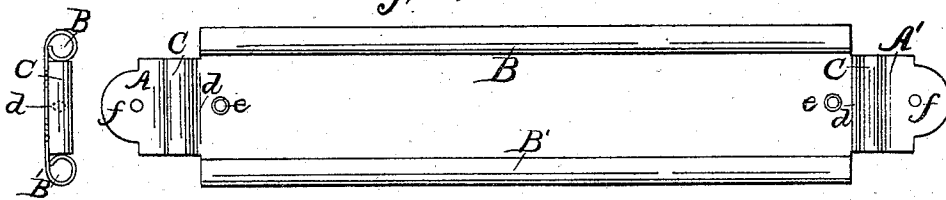
J. Adair *Pen Rack.*

Nº 58,363. Patented Oct. 2, 1866.

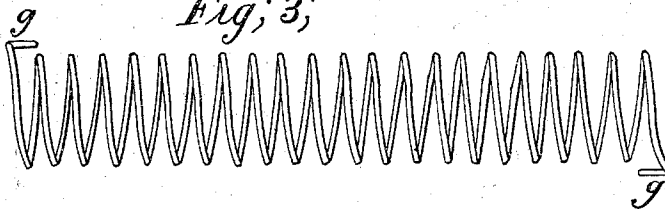
Fig; 1;



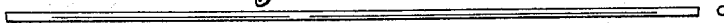
Fig; 2;



Fig; 3;



Fig; 4;



Witnesses;
E. J. Savage.
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Inventor;
James Adair

UNITED STATES PATENT OFFICE.

JAMES ADAIR, OF PITTSBURG, PENNSYLVANIA.

SPRING PEN-RACK.

Specification forming part of Letters Patent No. 58,363, dated October 2, 1863.

To all whom it may concern:

Be it known that I, JAMES ADAIR, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Spring-Rack; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in attaching to a suitable bed a spiral wire spring for the purpose of receiving and holding between its coils such articles as pen-holders, pencils, letters, cards, brushes, tools, &c.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

It is made up of three parts or pieces—a bed, a spiral spring, and a fastening-rod—as see Figure 1, in which the spiral spring, Fig. 3, is shown resting within the elevated sides of the bed, Fig. 2, to which it is securely held by the fastening-rod, Fig. 4.

The bed, Fig. 2, is made of a rectangular strip of sheet-brass somewhat larger and wider than the spiral spring, Fig. 3, is to be, and from either corner of which strip a rectangular piece, of fixed size, is to be cut away, thus forming projections or tongues A and A', Figs. 1 and 2, of equal size on either end of said strip, and whose corners are then rounded off for the sake of ornament. Each lateral edge or border of this strip is then folded over a proper mandrel, so as to form tubes B and B', Fig. 2, which shall extend from the base of one tongue, A, to the base of the other, A', Fig. 2, the two tubes B B' lying on the same plane and parallel to each other. (See cross-section, Fig. 2.) On each of these tongues A A', Fig. 2, and from the base of each of these tongues and parallel with said base a corrugation, C, is formed, extending clear across the tongue, its convex surface being the extension of the surface on which the above-named tubes B B' rest. (See cross-section, Fig. 2.) It will now be seen that the tubes B B' and corrugations C C, Fig. 2, made on and of this strip or bed, as it now is, will inclose a rectangular space, and in this space the spiral spring is to rest. Holes *d d*, Fig. 2, communicating with this inclosed space, are made in the corrugations C C, and close to the base of the tongues A A', and on a line passing cen-

trally and laterally over the bed, as see dotted circle *d* in the cross-section of Fig. 2. Other holes, *e e*, Fig. 2, on this same line are made at the ends of this inclosed space near the base of the tongues A A', and so made as to slightly force up the metal of the edge of the holes into this inclosed space, or in the direction of the tubes B B' and corrugations C C, while yet other holes, *f f*, are made in a line with the others near the middle of the tongues A A', and, of course outside of the space inclosed by the tubes B B' and corrugations C C, all as shown in Fig. 2.

The spiral or, what it amounts to, the series of self-connecting springs, Fig. 3, to rest within the above-named inclosed space of the bed, Fig. 2, is made of elastic wire and in the usual manner, with the coils slightly apart. The ends of this spiral or series of self-connecting springs, Fig. 3, are bent inward toward each other and parallel to the spiral, extending beyond the point of bending, say, a quarter of an inch, so forming hooks *g g*. This series of springs, Fig. 3, is to be of such a length and diameter that when somewhat distended and the hooks *g g* inserted in opposite ends of the tubes B B', Fig. 1, it will hold itself in position while the coils shall touch the bed, Fig. 2, in three lines at the same time—on the tubes B B' and on the flat surface of the bed, Fig. 2.

The fastening-rod, Fig. 4, is made of a straight piece of stiff wire and just long enough to reach across the bed, Fig. 2, and into both of the corrugations C C at the same time, passing into said corrugations through the holes *d d*, Fig. 2, made therein, as previously described. (See dotted circle *d* in the cross-section of Fig. 2.)

These three pieces, Figs. 2, 3, and 4, are now put together as follows: The hooks *g g* formed on the ends of the spiral, Fig. 3, are inserted in opposite ends of the tubes B B', Fig. 1. All the coils of the spiral now touch the bed, Fig. 2, in three lines, along the tubes and along the bottom of the inclosed space previously described. The outermost coil of either end of the spiral, Fig. 3, is placed on the bottom of the bed, Fig. 2, between the raised edge of the hole *e*, before named, and the corrugation C, Fig. 2. One of the tongues, as A', Fig. 2, is now bent forward—say, at an angle of forty-five degrees—toward the spiral hinging on its corrugation C. The fastening-rod, Fig. 4, is now passed from the outside through the hole

d, (see cross-section, Fig. 2,) down through the spiral and through the opposite hole *d*, and into the other corrugation C, Fig. 2, in the tongue A. The hinging-tongue A' is now bent back to its former position, and the fastening-rod, Fig. 4, is thereby secured in place, where it keeps the several coils of the spiral, Fig. 3, flush with the bed, Fig. 2, all as shown in Fig. 1, a lateral motion, however, being allowed to all the coils excepting those terminating the spiral, for these are held in place by the raised edges of the holes *e e*, Fig. 2, previously described, and so are relieved of undue strain.

Each coil of the series, Fig. 3, could be rendered independent by continuing holes with raised edges, as *e e*, throughout the bed, Fig. 2; but they would not be so efficient as when they have a lateral play and act against each other, as in this latter case the weakness of one coil can, to a certain extent, be counteracted by the superior elasticity of connecting-coils. The holes *ff* in the middle of the tongues A A', Fig. 2, are to receive nails by which to hold the rack, Fig. 1, to a desk or other support.

The operation of this spring-rack is very simple. By pressing a pencil, for instance, against the spiral or series of self-connecting springs, it will pass between two coils and be there securely held.

The functions of the several parts may thus be more fully set forth: The bed, Fig. 2, is in the first place to hold the springs, Fig. 3, and in the second place to so hold them as to permit a lateral movement only, the tubes B B', Fig. 2, acting as guides for the springs in said lateral movement, and as impediments to them in a transverse movement, at the same time receiving the hooks *g g* terminating the spiral, Fig. 3, and so preventing said spiral turning in its

bed, Fig. 2. The corrugations C C, Fig. 2, with their holes *d d*, are to receive the ends of the fastening-rod, Fig. 4, so as to hide them from view, and to prevent them slipping out of place without the use of soldering or other expensive device, at the same time ornamenting the bed, Fig. 2.

The simple functions of the holes *e e* and *ff*, Fig. 2, and those of the springs and hooks, Fig. 3, as well as those of the fastening-rod, Fig. 4, have been sufficiently explained; but the springs, the vitals of the rack, are made in the manner shown for the following reasons: They are made self-connecting or in continuity and of wire curves, so that they can be formed, applied, and securely fastened more quickly and cheaply than independent springs, with the use of less material, and at the same time be more durable and elastic, and so that they can act upon each other to permit the holding of articles of quite a variety of sizes without injury. Further, they are arranged close together, so that the article to be held can be pressed against the line of springs and be caught at any point between the extreme coils, so avoiding the trouble of guiding the article to a particular spot.

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

The spring-rack having its springs arranged close together, made self-connecting or in continuity, and formed of wire properly curved, and having its bed and fastening-rod as made, used, and applied, all substantially as and for the purpose set forth.

JAMES ADAIR.

Witnesses:

E. T. DRARO,
NICHOLAS VEEDER.