# J. W. Peck, Jr.,

## Bed Spring,

No. 26,954, Patented Jan. 24, 1860.

Fig. 2.

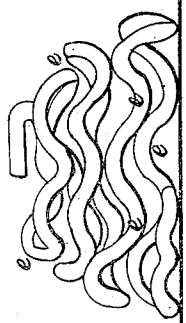


Fig. 4.

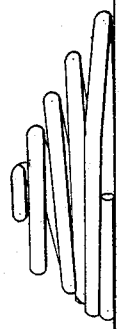


Fig. 1.

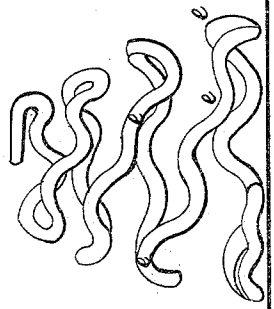
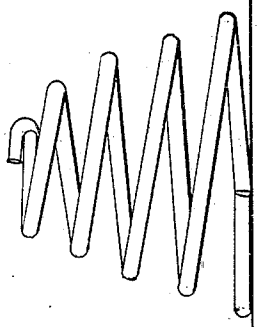


Fig. 3.



Witnesses.

B. Lynow

Wm. Thompson

Inventor.

James W. Peck Jr.

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# UNITED STATES PATENT OFFICE.

JAMES W. PECK, JR., OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF AND L. B. HAWXHURST, OF SAME PLACE.

## HELICAL SPRING.

Specification of Letters Patent No. 26,954, dated January 24, 1860.

*To all whom it may concern:*

Be it known that I, JAMES W. PECK, Jr., of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Helical Spring; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1, represents my improved spring in its natural state. Fig. 2, shows the same when compressed. Figs. 3 and 4, show the same views of the present constructed spring.

Similar letters of reference indicate corresponding parts in the Figs. 1, and 2.

The object of this invention is to give greater strength, elasticity and compactness to coiled springs, either the conical or cylindrical springs; using less metal in accomplishing this end, and making a spring which will retain its elasticity much longer and which is more active in its recoil than the ordinary springs.

The invention consists in crimping or corrugating the steel wire previous to forming it into a coiled or helical spring; and in conjunction with this crimping, its consists in giving to the wire at each bend a half twist, which will give resilient action to the wire when formed into a coil.

To enable those skilled in the art to fully understand my invention I will proceed to describe its construction and use.

The kind of springs in which my invention will probably be found most valuable are the conical spiral springs, which are extensively used for spring mattresses, cushions, sofas, chairs, &c.; in which instances they are subjected to frequent compression. With the ordinary mattress springs, this constant use soon injures the springs, so that their recoil is very slight, besides a great number of springs are required to give sufficient elasticity to the article on account of the want of strength to resist a heavy pressure with any degree of elasticity.

My springs are constructed in the following manner;—the steel or brass wire from which the spring is to be formed is first bent as shown at *e*, *e*, into regular corrugations or zig-zag crimps. The wire is then coiled up so as to form either a spiral or cylindrical spring. The springs having their wire then bent will be found much stronger and capable of sustaining a much greater weight, and they will be more active in their recoil than those of the present make. Another great advantage, my corrugated or zig-zag springs have over the ordinary springs, is, that they are less liable to bend or twist out of a perpendicular play, that is to say, the wire of my springs will not rub like those of the present style. I mean by this rubbing that when the spiral or conical springs are used, as for instance in sofas, the spring will not be liable to bend over, as shown by Fig. 4, and occasion disagreeable noise, and weakness of the spring.

In order to give still greater strength and elasticity to my corrugated wire springs, I draw the temper from the wire sufficient to admit of its being twisted at each angle or bend, the wire is then given a half twist at each bend or every other bend which, in combination with the vertical crimping, will give greater elasticity to the springs when formed, and greater strength than springs made with the same wire of the present construction.

In my spiral or conical springs each coil of wire will play one within the other, and should there be a slight lateral pressure upon these springs in compressing them the angles of the corrugations will come in contact and prevent one wire from riding or rubbing over the other. For the cylindrical spring the corrugations are made at regular intervals apart so that when the spring is compressed they will each coincide with the other, the spring may then be thus compressed as compactly as those of the ordinary construction.

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

The corrugated or zig-zag wire spring herein described, as a new article of manufacture.

JAMES W. PECK, JR.

Witnesses:

B. GIROUS,

WM. THOMPSON.