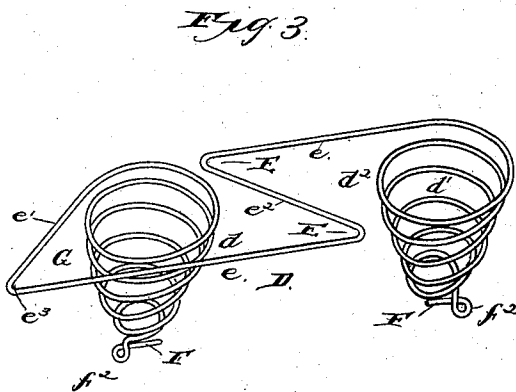
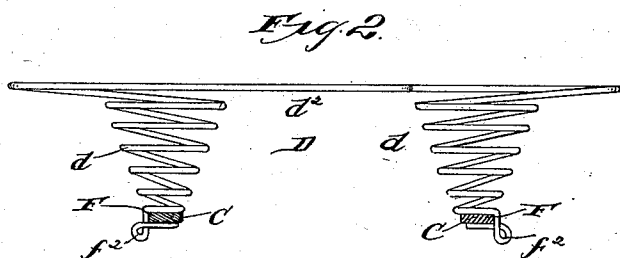
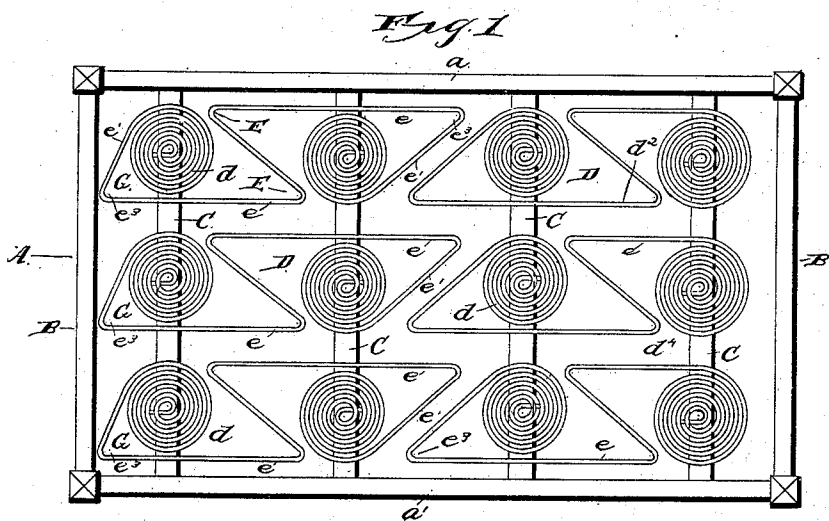


(No Model.)

C. E. RICE.
BED SPRING.

No. 406,475.

Patented July 9, 1889.



Witnesses
Geo. H. Thorne
E. Siggus

Inventor
Chas. E. Rice.
By *his* Attorneys,
C. A. Howard

UNITED STATES PATENT OFFICE.

CHARLES E. RICE, OF JONESBURG, MISSOURI.

BED-SPRING.

SPECIFICATION forming part of Letters Patent No. 406,475, dated July 9, 1889.

Application filed January 6, 1888. Serial No. 259,955. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. RICE, a citizen of the United States, residing at Jonesburg, in the county of Montgomery and State of Missouri, have invented a new and useful Improvement in Spring Bed-Bottoms, of which the following is a specification.

My invention relates to an improvement in twin bed-springs; and it consists in the peculiar construction and arrangement of parts, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a plan view of a bed-bottom having springs embodying my invention. Fig. 2 is a side elevation of one of my improved twin springs. Fig. 3 is a perspective view of the same.

From a wire D, of suitable length and size, a pair of inverted conical coils d, d' are formed. From the upper end of one of the coils extends a Z-shaped connecting-frame d^2 , the arms e of which are longitudinal and arranged beyond opposite sides of the tops of the coils and parallel with each other. The portion e^2 of the wire which connects the arms e is arranged obliquely between the tops of the coils, and thereby bridges the space between the said tops of the coils and the arms e . One of said arms e is much longer than the other and extends outward in a longitudinal direction beyond the proximate coil d , and has its outer end bent obliquely at an acute angle to form the portion e' , which merges in the top of the coil d . The said portion e' and the projecting portion e constitute an open acute-angled frame G. At the lower ends of the coils the ends of the wire are bent to form inwardly-extending clamping-arms F and spring-coils f^2 , whereby the lower ends of the springs are adapted to be secured to the transverse slats C of a bedstead, as shown in Figs. 1 and 2.

The advantages resulting from my construction of the bed-spring are as follows: The longitudinal arms e of the frame, which connect the tops of the coils, being disposed beyond the opposite sides of the coils, the said frame is rendered wider than the coils, and the portion e^2 , which connects the said arms, being arranged obliquely between the coils and across the space between them, the tops of the said coils are entirely unobstructed,

and the same are adapted to clear the connecting-frame when the spring is weighted. Consequently the tops of the coils are caused to rise in the open portion of the frame until they come in contact with the bottom of the mattress, and the springs are provided with a maximum amount of bearing or supporting surface and adapted to be made from a minimum amount of wire. Inasmuch as the connecting-frame is thus caused to clear the tops of the spring-coils, it follows that no two parts of the twin spring come in frictional contact when the same is weighted, and consequently there is no abrasion on any portion of the wire, the springs are rendered noiseless, the durability thereof is very considerably enhanced, and the tick which covers the mattress is not liable to be clamped between parts of the spring and cut or worn into holes.

My springs are arranged transversely on the slats and longitudinally with relation to the bedstead, and each pair of springs is arranged in reverse relation to each other with their coils d proximate, as shown in Fig. 1, and thereby their acute-angled frames or portions G are caused to overlap each other and to lie in the same horizontal plane and bridge the space between the pairs of springs, the oblique sides e' of said frames or portions being arranged parallel with each other, and hence the mattress is prevented from sagging between the said pairs of springs.

Having thus described the invention, I claim—

1. The bed-spring formed from a single piece of wire and comprising the twin spiral coils, the Z-shaped connecting-wire between the upper ends thereof, said connecting-wire being bent to form the parallel longitudinal portions e on opposite sides of the top of the coils, the obliquely-arranged portion e^2 , connecting the parts e and arranged to bridge the space between the twin springs, one of the side portions e projecting longitudinally beyond one of the coils and being then bent to form the oblique portion e' , which merges in the top of the coil and diverges from the portion e^2 , said portions e, e^2 , and e' being arranged in the same horizontal plane above the tops of the coils, substantially as described.

2. The twin springs comprising the coils, the Z-shaped connecting portion between

their tops, and the acute-angled arm projecting longitudinally from the top of one of the coils and arranged in the same horizontal plane with the connecting portion, whereby,
5 when the pairs of said springs are arranged in the same longitudinal line and in reverse relation to each other, the acute-angled arms will lap in the space between the proximate coils, with their oblique portions parallel, and

bridge the said space, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

CHARLES E. RICE.

Witnesses:

Z. T. MAXWELL,
LETTIE EVANS.