

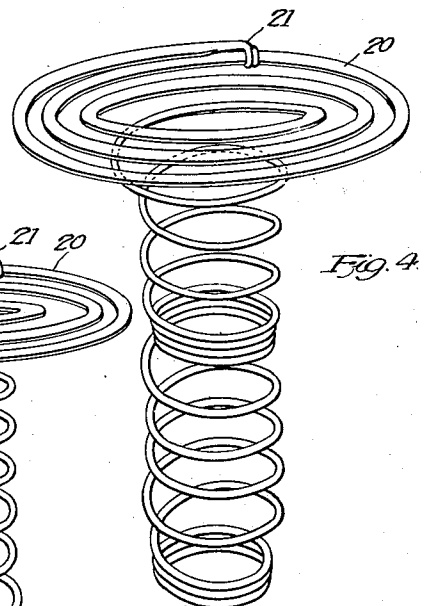
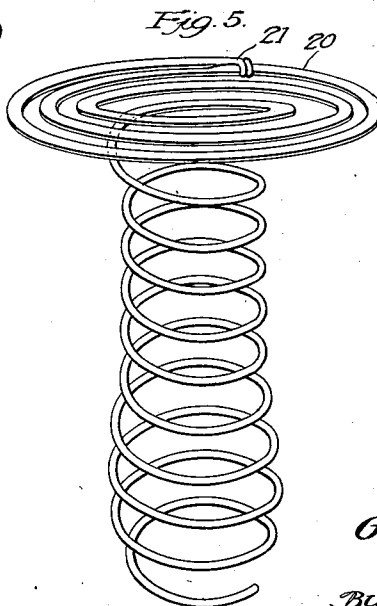
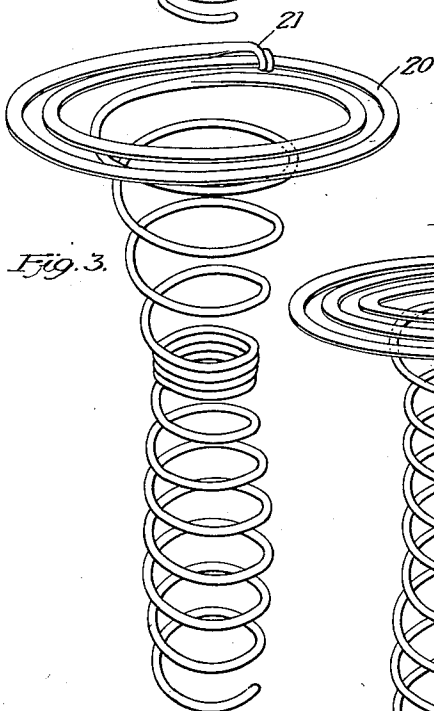
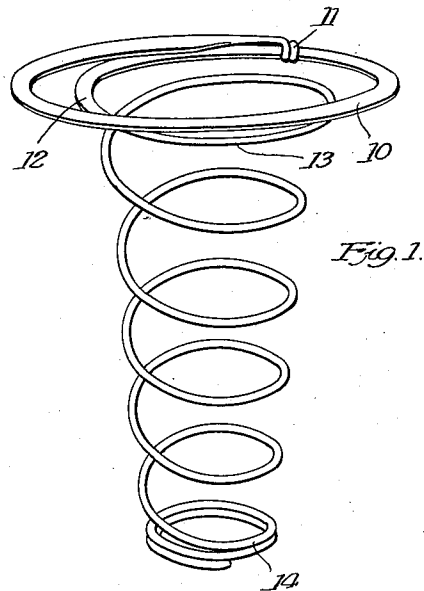
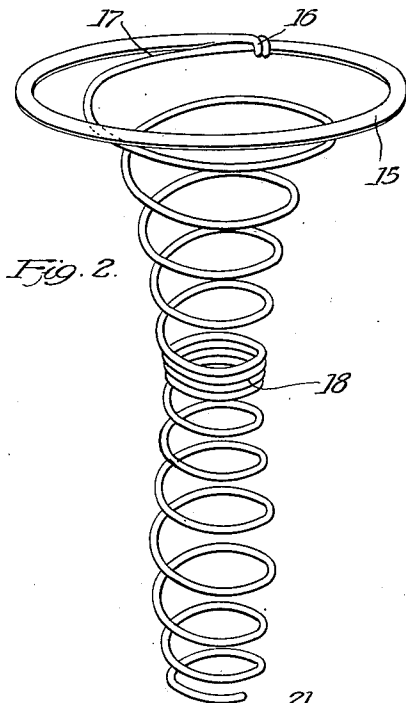
June 12, 1934.

G. G. POWERS

1,963,053

WIRE SPRING

Filed Aug. 14, 1933



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UNITED STATES PATENT OFFICE

1,963,053

WIRE SPRING

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poration of Illinois

Application August 14, 1933, Serial No. 685,007

2 Claims. (Cl. 5—256)

My invention relates to springs, and particularly to a spring of the type intended for use in a spring bed or bed spring.

Springs of the character identified, are uniformly constructed to provide an enlarged top or upper end, and a body portion of smaller diameter, the lower end being secured in an approved manner to a supporting element.

An object of my invention is to provide a spring in which the top is composed of flat spring wire either of the open top or the flat volute top type, in order to provide a relatively resilient upper end with comparatively great resistance to lateral deflection and to provide a flat surface for contact with the spring covering. A spring constructed as described herein is adapted to be produced in a machine such as disclosed in the co-pending application of myself and C. A. Rhine-vault, Serial No. 684,092, filed August 7, 1935. A spring of the general type disclosed herein is described and claimed in my co-pending application, Serial No. 644,254, filed November 25, 1932.

The points of contact between an overlying mattress and a bedspring are subject to wear and if the wear is excessive the mattress cover is ultimately worn through rendering it unfit for further use. Excessive wear occurs where springs composed of round wire are used, due to the small area of contact of the round wire with the mattress.

This objection is overcome by the construction of the spring in the manner herein shown, in which the area of contact between a spring top and the spring cover is very greatly increased. While in the use of round wire a line contact only is provided, the flattened wire presents an area of contact multiplied very greatly with consequent longer life and at the same time greater comfort even where a thinner cover or pad is employed. Furthermore, by flattening the wire constituting the top, with the flat in a horizontal plane, the resiliency of the top is increased, while the resistance to lateral movement or sway is likewise increased.

A further advantage in the construction shown is that of appeal to the eye. A spring constructed as described is attractive in appearance and offers a suggestion of greater comfort than one constructed throughout of round wire.

The invention will be more readily understood by reference to the accompanying drawing, in which:

Figs. 1 to 5 are perspective views of springs constructed in accordance with my invention, each spring differing somewhat from the others.

In Fig. 1, I have illustrated a spring of the simplest and commonest form consisting of an open top composed of a single turn 10 of flat wire with the flat arranged in a horizontal plane, the upper terminal end of the wire remaining

round as at 11 and being twisted around the flattened portion 10. The second turn 12 gradually merges into a round wire portion 13 and this continues throughout the remainder of the body, the lower end consisting of two contacting turns 14 likewise of round wire.

The construction shown in Fig. 2 is much the same, the upper turn 15 being composed of flattened wire, a round end 16 acting as a tie. The flattened portion 15 is substantially wholly limited to the top turn, the next turn 17 consisting of round wire. The spring shown in this figure is of the double deck type, the body having four turns 18 in contacting relation at a point midway of the length of the body. These turns are used as a point of engagement of intermediate cross-connecting members. The lower end of the body is composed of round wire in the usual form.

The construction of Figs. 3, 4 and 5 is of the preferred type, consisting of two or more turns 20 of flat horizontal wire, the top being of the flat volute type. This construction provides for a maximum contact area between the spring and the spring cover, and presents not only a highly effective operating spring, but one that is also attractive to the eye of the prospective user. In each instance the upper terminal end is composed of round wire 21 that is utilized to form the tie. The body of the spring in each instance is composed of round wire, the springs shown in Figs. 3 and 4 being of the double deck type as described in connection with the construction shown in Fig. 2.

Springs such as described have many advantages both from an operating and a selling standpoint. Many other modifications of the idea generally disclosed herein will suggest themselves and I do not wish to be limited except as indicated in the appended claims.

I claim:

1. A spring having an enlarged top composed of flat wire, the major axis of which flat wire is transverse to the longitudinal axis of the spring, the body of the spring being composed of round wire.

2. A spring for a bed consisting of a body of an enlarged top composed of flat wire with the flat wire in a horizontal plane, the top being composed of a plurality of turns arranged in substantially the same plane, and the body of the spring being composed of round wire.

GEORGE G. POWERS.