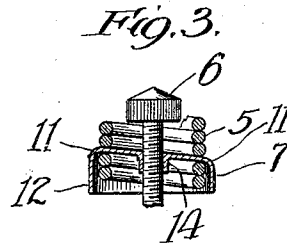
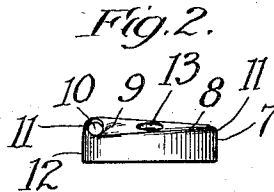
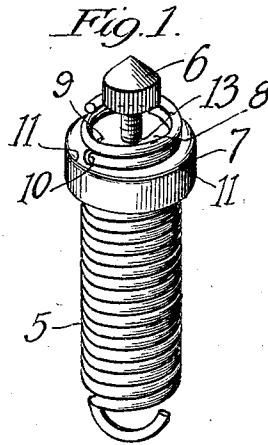


L. WILSON.
SCALE SPRING HANGER.
APPLICATION FILED FEB. 15, 1909.

937,907.

Patented Oct. 26, 1909.



Witnesses
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UNITED STATES PATENT OFFICE.

LULOFF WILSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO FRED D. WEST, OF CHICAGO, ILLINOIS.

SCALE-SPRING HANGER.

937,907.

Specification of Letters Patent.

Patented Oct. 26, 1909.

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To all whom it may concern:

Be it known that I, LULOFF WILSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Scale-Spring Hangers, of which the following is a specification.

My invention relates to improvements in spring hangers, and has for its salient object to provide a hanger construction for a helical spring, such as is often used in scales and analogous constructions, capable of suspending the spring in direct vertical position, or axial alinement with an adjusting screw.

A further object of my invention is to provide a construction which is cheap, simple, efficient and adapted for ready manipulation in use.

In the drawing, wherein I have illustrated an embodiment of my invention: Figure 1 is a perspective view, showing a fragment of a helical scale spring, a cap, and adjusting screw; Fig. 2 is a side elevation of the cap construction detached; Fig. 3 is a vertical section through the construction shown in Fig. 1.

In practice it has heretofore been customary to provide scale spring hangers combining with the helical spring a plate having projecting side lugs engaging between convolutions of the spring and centrally receiving an adjusting screw, and likewise constructions have been suggested in which the plate has its edge notched or recessed, and is initially formed into a spiral configuration conforming with the pitch of the spring convolutions; but these constructions I have found to be deficient in that they fail adequately to position the spring in axial alinement with the screw. The hitherto known constructions of the character first described in practice affords such slight engagement with the spring that the spring readily tilts out of alinement with the screw and causes variation in the scale reading from a true indication of weight, while constructions of the character last described, if made light, are structurally so weak that they easily become distorted under the strains of the expanding and contracting spring, and fail to maintain the alinement of the spring and screw necessary to accurate weight determination; and if made heavy unduly spread the spring con-

volutions, as well as being liable to lose their engagement with the spring.

In the embodiment of my invention I provide, as a means for engaging the spring, a cap having a continuous solid edge or border portion within the confines of which is made an aperture for the passage of the spring wire, the top surface of said cap being formed into a spiral conforming in general to the pitch of the spiral or helical spring; said spiral starting from one edge of the aperture, as its lowest point and ceasing at the other edge of the aperture as its highest point, so that the aperture is formed in a shoulder or abutment standing at an angle to the horizontal, and joining the ends of the spiral portion of the cap. Preferably also the solid border portion of the cap is formed into an annular rim, adapted to stand substantially parallel to the axis of the spring, and surrounding part of the spring.

In the particular construction shown, 5 indicates a spiral or helical spring, 6 the screw of any desired particular construction, and 7 indicates in general the cap. 8 indicates a generally spirally arranged top surface of the cap, and 9 the shoulder forming the connection between the lowest point of the spiral and the highest point thereof, and provided with the aperture 10 for the passage of the spring wire. 11 indicates the solid, uninterrupted border portion of the cap, the periphery of which is preferably bent down as at 12, to form an annular rim. In the center of the cap is made an aperture 13 threaded for the reception of the screw 6, the metal in the middle portion of the cap to this end being drawn down into a boss 14 which is suitably threaded.

It will be seen that in practice when the screw 6 is suitably supported upon any desired scale-bearing member, the cap arrangement through which the spring wire is screwed, as shown in Fig. 1, holds with great positiveness the spring in axial alinement with the screw, thereby insuring a proper relation of the spring to its support to secure accurate weighing indications. The solidity of the border portion of the cap insures against distortion of the surface thereof from initial configuration, under the straining of the spring and this effect is enhanced by the formation of the border portion into a rim at substantially right angles

to the general plan of the top thereof. The strength of the construction described enables light, easily-drawn stock to be used. Furthermore, the provision of the rim 12 affords
5 a handhold surface of a character which may be firmly grasped without injury to the fingers of the operator, for the purpose of threading the spring into the aperture and for holding the cap for facilitating adjustment
10 of the screw to vary the normal tension of the spring.

Having described my invention, what I claim is;

1. The combination with a helical spring;
15 of a cap member, peripherally solid and uninterrupted, having its top surface shaped in a spiral for conformity with the pitch of the spring, and to provide a shoulder connecting the lowest point of the spiral and
20 the highest point thereof, said shoulder having therein an aperture wholly within the border of the cap for the passage of the

spring wire, and supporting means connected to said cap and positioned thereby in relation to the spring.

2. The combination with a helical spring; of a cap, providing an uninterrupted downturned rim, a top portion spirally shaped for conformity with the pitch of the spring and shaped to provide a shoulder connecting the extremities of the spiral portion, said shoulder having therein an aperture wholly within the confines of the solid rim, and said top portion having an aperture centrally thereof and an adjusting screw engaging
said aperture, said screw and spring being retained in axial alinement by the cap.

In testimony whereof I hereunto set my hand in the presence of two witnesses.

LULOFF WILSON.

In the presence of—

MARY F. ALLEN,

GEORGE T. MAY, Jr.