(No Model.)

N. H. DAVIS.

SPRING.

No. 337,669. Patented Mar. 9, 1886.

Fig. 1.

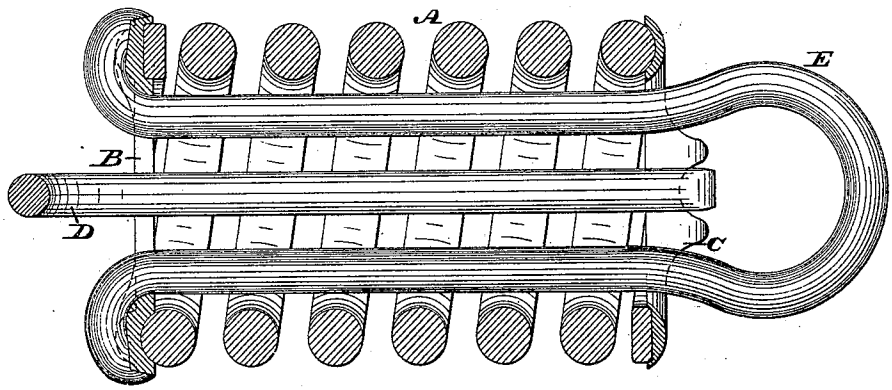
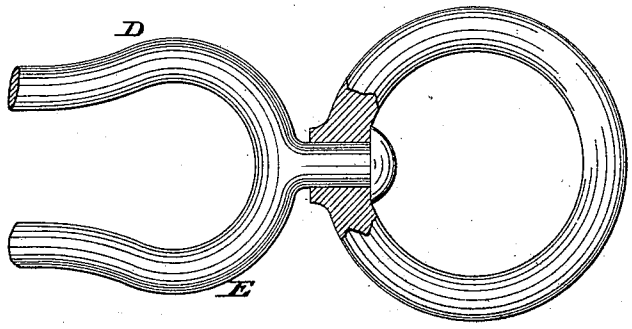


Fig. 2.



WITNESSES:
L. Douville
W. F. Kircher

INVENTOR:
Nathan H. Davis
BY John A. Wiedersheim
ATTORNEY.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

NATHAN H. DAVIS, OF PHILADELPHIA, PENNSYLVANIA.

SPRING.

SPECIFICATION forming part of Letters Patent No. 337,669, dated March 9, 1886.

Application filed September 19, 1885. Serial No. 177,620. (No model.)

To all whom it may concern:

Be it known that I, NATHAN H. DAVIS, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Springs, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a longitudinal section of a spring embodying my invention. Fig. 2 represents a view of a portion of a modification thereof.

Similar letters of reference indicate corresponding parts in the two figures.

My invention relates to improvements in a spring which may be simultaneously compressed in opposite directions, whereby it works effectively and with great resiliency, the construction of parts being hereinafter fully set forth and definite claims presented therefor.

Referring to the drawings, A represents a coiled spring which in general features is of usual construction. At opposite ends of the spring are caps B C, which rest on said ends, and are of the form of annuli.

D represents a yoke which is passed through the cap B, the spring A, and cap C, and has the ends of its limbs hooked and seated on the cap C, so as to engage therewith.

E represents a yoke which is passed through the cap C, the spring A, and cap B, and has the ends of its limbs hooked and seated on the cap B, so as to engage therewith. The crown portions of the yokes form eyes by which the spring may be attached to an article or articles with which it renders service, it being noticed that the said eyes are of greater width than the openings of the caps; or, in other words, the external diameter of the eyes are greater than the internal diameter of the spring, whereby they are prevented from being drawn inwardly through the cap and spring, and the parts of the spring are properly held together, it being seen that, owing to the hooks at one end of the yoke and the eye at the other end, each yoke is connected with the spring, and prevented from displacement in opposite directions therefrom, the spring and yokes thus being attached without other fastenings, it being evident that the caps are useful in providing enlarged bearings for the hooks of the yokes, so that said hooks take firm hold of the contiguous parts, and the spring is steadied in its contraction and expansion. When the spring is in use, the yokes are drawn in opposite directions, whereby it is compressed at both ends, thus acting effectively, quickly, and with great resiliency, obviating the use of a longer spring to produce similar results where the compression is at one end only. It will also be seen that the limbs of the yokes are within the coil or spring, so that there is a compactness of parts and occupation of small space by the same. Furthermore, the legs of the two yokes are spread or separated from each other, so that those of one yoke may be pressed between those of the other yoke, in which case, as the hooks of the yoke leave their seats, the yokes may be readily removed, and the spring or tug, as such, dismembered when required. This feature also permits the building or setting up of the spring or tug, as the legs of both yokes may be compressed while being passed through the coil, without being interfered with or limited by the other, the legs duly sprung apart, and having the flanges seated, thus connecting the yokes with the coil.

In Fig. 2 I show one of the yokes provided with a swivel, which, as will be seen, is connected with the eye or crown of said yoke.

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

A spring consisting of a coiled spring, caps at the ends thereof, and yokes formed of legs, with eyes and hooks at opposite ends, the legs passing through the caps and spring, and having the hooks engaged with the caps, said yokes being removably held in position, substantially as described.

NATHAN H. DAVIS.

Witnesses:
JOHN A. WIEDERSHEIM,
A. P. GRANT.