McCORMICK & JERROLD.

Car Spring.

No. 29,222. Patented July 17, 1860.

Fig. 2.

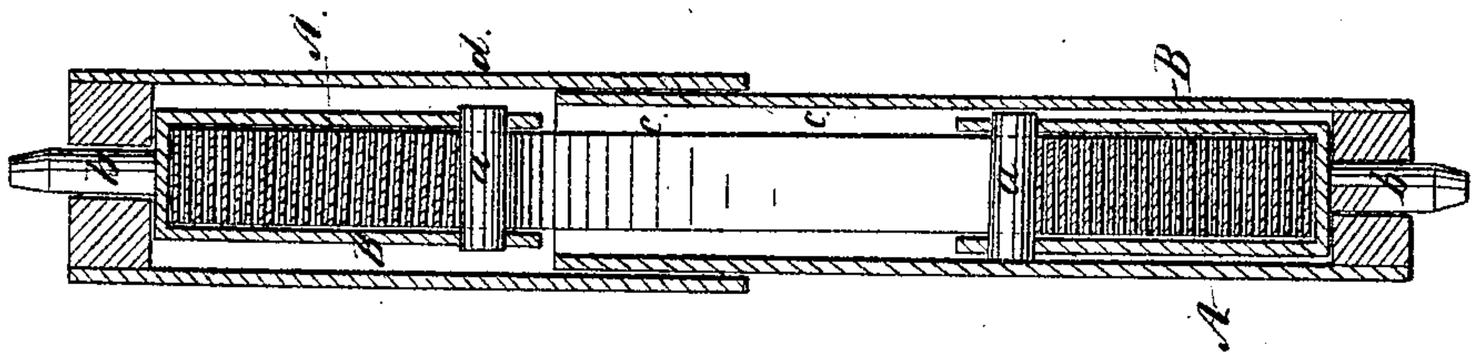
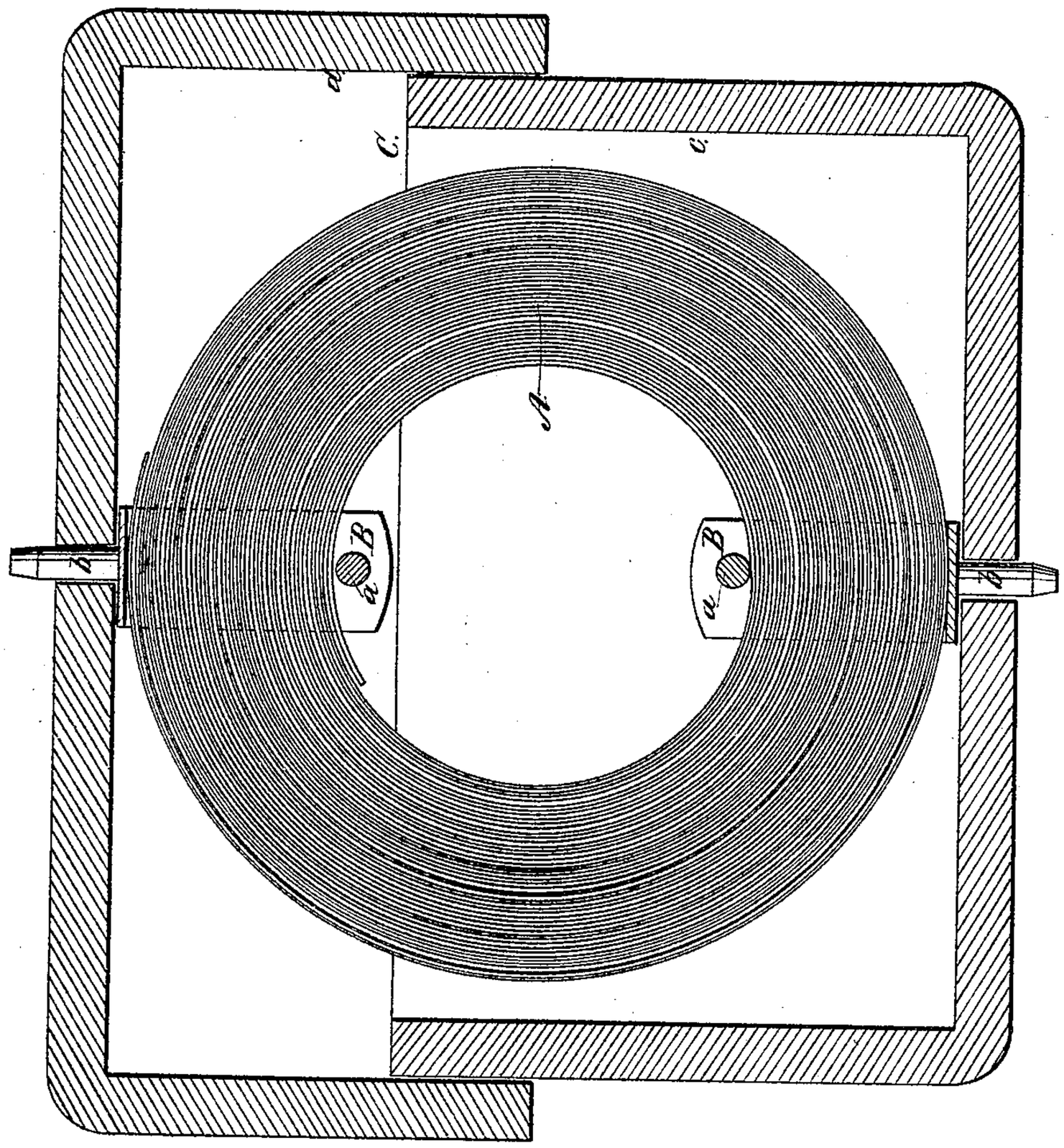


Fig. 1.



Witnesses:

P. S. Spencer

C. M. Hughes

Inventor:

J. J. McCormick & J. R. Jerrold

Munn & Co

Attys

UNITED STATES PATENT OFFICE.

J. J. McCORMICK AND J. E. JERROLD, OF PATERSON, NEW JERSEY, ASSIGNOR TO J. E. JERROLD AND EUGENE BEGGS, OF SAME PLACE.

CAR-SPRING.

Specification of Letters Patent No. 29,222, dated July 17, 1860.

To all whom it may concern:

Be it known that we, J. J. McCormick and J. E. Jerrold, both of Paterson, in the county of Passaic and State of New Jersey, have invented a new and Improved Car Spring; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 represents a longitudinal vertical section of our invention. Fig. 2, is a transverse vertical section of ditto.

Similar letters of reference in both views indicate corresponding parts.

This invention consists in the employment for the purpose of producing a car spring of a long thin strip of sheet steel wound up so as to form a close coil and retained in this form by two clamps. Pivots projecting from these clamps, form the guides for the spring in the case, which consists of two parts one sliding over the other and which is so proportioned in relation to the coil, that it checks the motion of the spring beyond a certain limit.

To enable those skilled in the art to make and use our invention we will proceed to describe its construction and operation with reference to the drawing.

The principal portion of our spring consists of a coil A, made of a long thin strip of sheet metal and wound very close as clearly shown in Fig. 1. The diameter of the coil and the number of turns given to the strip depends entirely upon the weight which the spring is calculated to support, and it will be easily understood that our coil will support a larger weight and give less motion if its diameter is reduced and it will support a smaller weight and give more motion, if with the same quantity of steel its diameter is enlarged.

Two clamps B, retain the coil A, in its form and these clamps are fastened to the coil by means of pins or wedges *a*, as clearly shown in Fig. 2, in the drawing. Two such clamps fastened to the spring one opposite the other as shown in the drawing, are sufficient to retain the coil in the proper form, but if it is desired, four or more clamps may be employed. These clamps B, are provided with pivots *b*, projecting out from the top of the upper clamp and the other from the bottom of the lower clamp, and the pivots extend through the top and bottom of the case C, which surrounds the coil A, so as to retain the coil in the center of the case and to form its guides during its motions or oscillations.

The case C, consists of two parts *c*, *d*, and the top part or cover *d*, is made to slide easily over the bottom part or the cover *d*, of the case, so that a weight placed on the cover *d*, compresses the spring in a vertical direction and no chance is given to it to act on the coil sidewise or to produce a canting over of the cover of the case. The body of the case is supposed to be firmly secured to the axle or axle box of a car or other vehicle and it is made of such a width, that the coil A, on being compressed to a certain extent, strikes against the edges of said case and that it is not allowed to be compressed beyond a certain limit. By these means the motion of the spring can be regulated at pleasure, and it is preserved against injury from being overloaded.

The principal advantages which we gain by this mode of constructing a car spring, are, that a very small quantity of steel produces a powerful spring, and that the space which it occupies is so small that it does not come in the way of any of the other parts of the car or wagon. It is obvious that it may be applied to all sorts of vehicles as well as to rail-road cars and locomotives.

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

1. The employment for the purpose of producing a car spring, of a long thin strip of sheet steel wound up so as to form a close coil A, and fastened in this position by clamps B, or their equivalents substantially in the manner herein set forth.

2. The arrangement, in combination with the coil A, of a case C, constructed and operating substantially as and for the purpose specified.

J. J. McCORMICK.
J. E. JERROLD.

Witnesses:
G. Dougherty,
Hector C. Hudson.