(No Model.)

D. A. SCHUTT

VEHICLE SPRING.

No. 346,952. Patented Aug. 10, 1886.

Fig. 1.

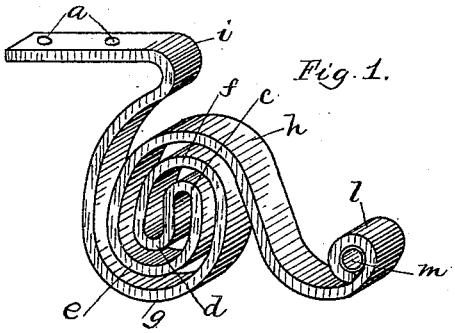


Fig. 2.

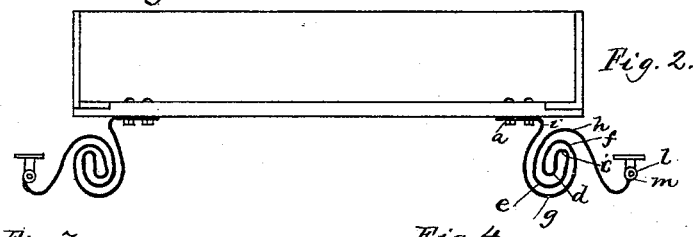


Fig. 3.

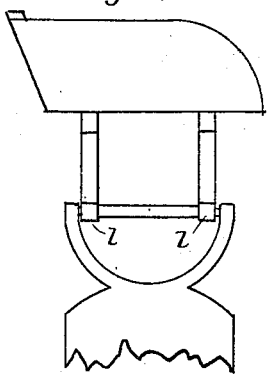


Fig. 4.

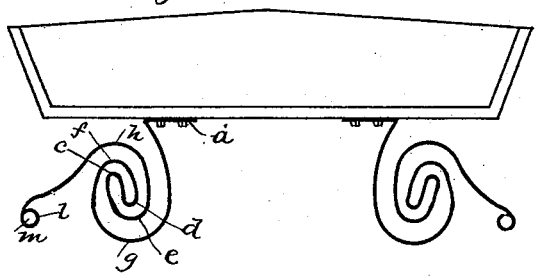


Fig. 5.

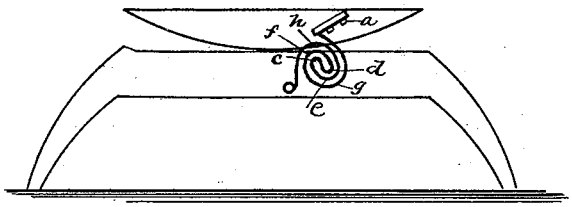
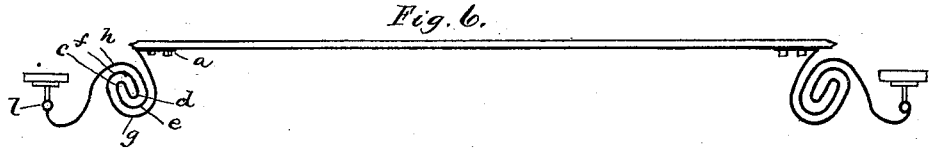


Fig. 6.



Witnesses:
M. C. Harrison.
Josiah H. Ellis

Per.

Inventor.
Dum. A. Schutt
O. D. Lewis
Attorney.

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

UNITED STATES PATENT OFFICE.

DUNY A. SCHUTT, OF HULTON, PENNSYLVANIA.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 346,952, dated August 10, 1886.

Application filed May 29, 1886. Serial No. 203,675. (No model.)

To all whom it may concern:

Be it known that I, DUNY A. SCHUTT, a citizen of the United States, residing at Hulton, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Springs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement in bearing-springs, the objects being to provide a spring of simple and durable construction, and also to construct the same in such a manner as to obtain the greatest elasticity from a comparatively small portion of metal; and with these ends in view my invention consists in the peculiar manner of bending or forming the spring from a single metallic bar, as will be fully described hereinafter.

In the accompanying drawings, Figure 1 is a perspective view of my improved spring constructed in accordance with my invention. Fig. 2 is an end elevation of a wagon-bed having my improved springs attached thereto. Fig. 3 is an end elevation of a wagon-seat provided with my improved springs. Fig. 4 is a side elevation of the same. Fig. 5 is a side elevation of a rocking-chair, showing the manner of applying my improved spring thereto. Fig. 6 is a side elevation of a spring-bed constructed with my improved springs.

To put my invention into practice, I provide a flat metallic bar of suitable size, having one or more circular openings, *a*, formed at one end and loop *l* at the other, in which a small bushing, *m*, is secured. This flat metallic bar I first bend at *c* a short distance from the center, and again with a reverse curve, *d*, of the same radius. The bend or curve *f* is next formed, after which the reverse bend *e* is made. I now form the large outside curves, *g h*, and bend one end of the bar at an acute angle, *i*, to form a means for rigidly securing the same to the object requiring its use. On the other end of the bar I form a loop, *l*, which is also attached to the object by a small pin or bolt.

A spring thus formed occupies but a small space, and may be applied to various objects requiring its use, as shown in the accompanying drawings.

I am aware that it is not new to arrange a spring having its middle portion in the center of a coil composed of integral parallel reverse curves, the free ends of which are connected with a lever, which latter carries devices for attachment to equalizing-bars arranged transversely on the under front and rear portion of a vehicle-body, and therefore do not wish to be understood as claiming such, broadly.

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

1. As an improved article of manufacture, a flat convolute spring having an integral tangential attaching-arm and a curved attaching-arm terminating in an eye, substantially as specified.

2. A spring for the purposes described, consisting of a flat metallic bar bent about midway of its length and formed by parallel coils in the same direction, with its ends carried in opposite directions, one of which is tangential and perforated, and the opposite one curved and terminating in a loop or eye, substantially as specified.

DUNY A. SCHUTT.

Witnesses:
J. B. CLARK,
P. B. REILLY.