No. 666,750. Patented Jan. 29, 1901.

M. P. GERBING.

ELLIPTIC SPRING FOR VEHICLES.

(Application filed May 7, 1900.)

(No Model.)

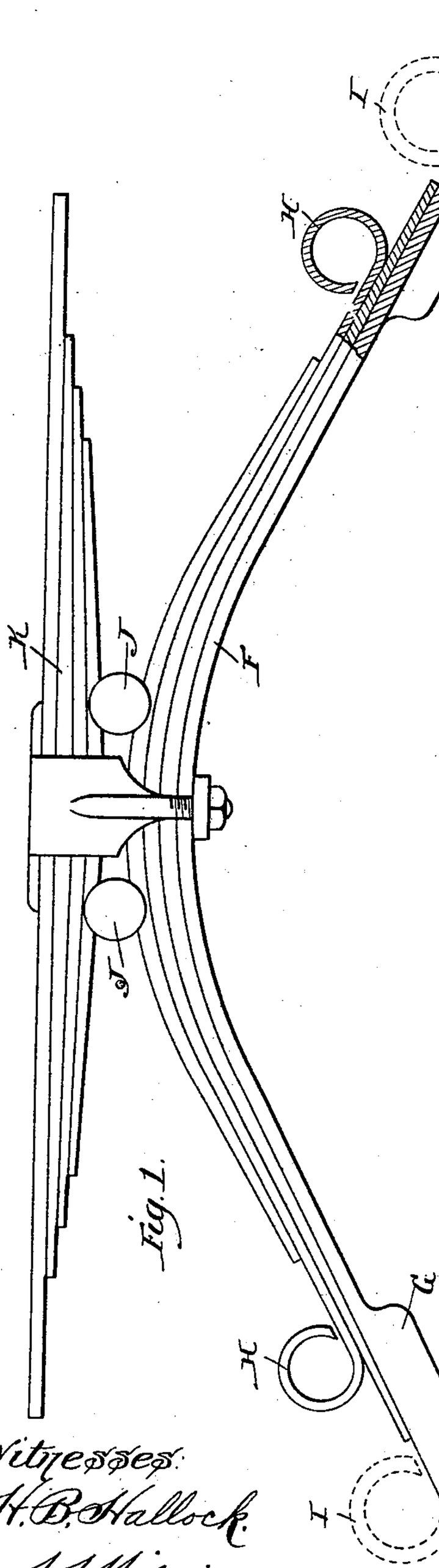

Fig. 1.

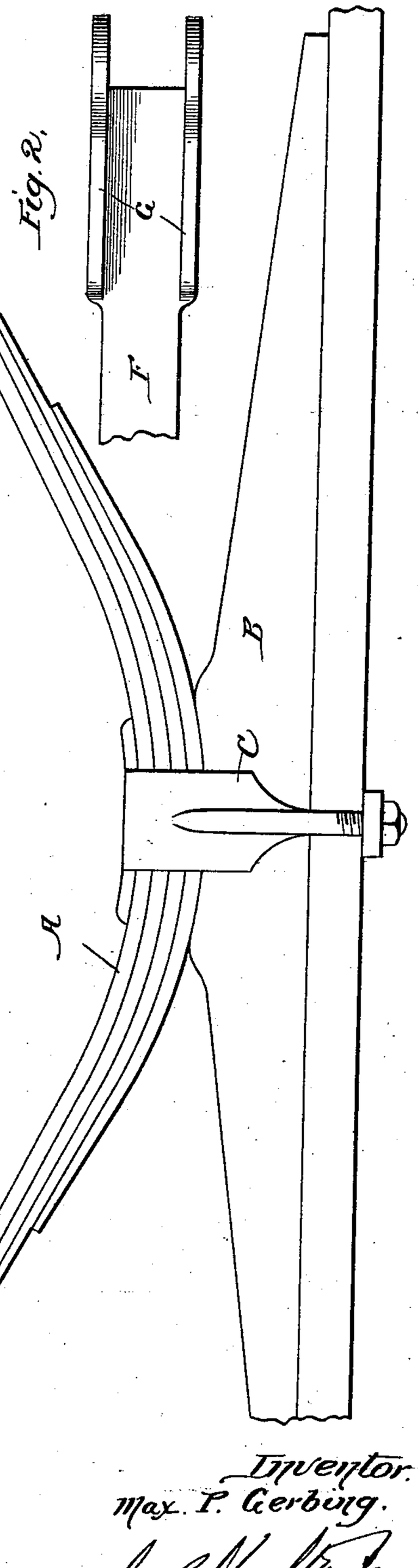

Fig. 2.

Witnesses:
H. B. Hallock.
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UNITED STATES PATENT OFFICE.

MAX P. GERBING, OF WENTWORTH, MISSOURI.

ELLIPTIC SPRING FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 666,750, dated January 29, 1901.

Application filed May 7, 1900. Serial No. 15,707. (No model.)

To all whom it may concern:

Be it known that I, MAX P. GERBING, a citizen of the United States, residing at Wentworth, county of Newton, and State of Missouri, have invented a certain new and useful Improvement in Elliptical Vehicle-Springs, of which the following is a specification.

My invention relates to a new and useful improvement in elliptical vehicle-springs, and has for one object to so construct a spring of this description as to render it exceedingly rigid so far as side play is concerned, while giving its members free and full elasticity to and from each other; and a further object of my invention is to so form the ends of the leaves of the spring as to cause them to freely ride one upon the other without chafing or undue friction; and a further object of my invention is to brace the center portion of the upper member of the spring with elastic cushions, which, while permitting the free action of the spring, will support it when heavy strains are brought to bear thereon and it is compressed to a considerable degree.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claim.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an elevation of a spring made in accordance with my improvement, one of the couplings thereof being sectioned so as to illustrate the connection between the two members of the spring; and Fig. 2, a bottom plan of the upper member of one of the couplings.

In carrying out my invention as here embodied, A represents the lower member of the elliptical spring, which may be made in the usual manner, consisting of a series of leaves superimposed one upon the other and adapted to be secured to the axle B of the vehicle by means of the clip C. The upper or principal leaf of this section terminates in the eyes D, through which the bolts E pass for coupling together the two sections of the spring. The upper section F of this frame is likewise composed of a series of leaves, the lower or principal leaf thereof terminating in the flanged housings G, between which the eyes D are pivoted, so that when the spring is compressed and the members of these couplings are swung relative to each other the housings will embrace more and more the lower section of the spring, and thus stiffening the spring sidewise when the greatest strain is brought thereon, and when this extra rigidity is most needed, as shown in the drawings, these housings extend to a considerable distance toward the center of the spring, and in proportion to their length so will the action of the spring be affected, and the length of these housings may be varied to suit the requirements of any particular frame. The remaining leaves of the upper section may have their ends turned up, so as to increase the facility with which they will ride upon the leaf next below, and in order that these turned-up ends may not interfere with surrounding objects nor mar the appearance of the spring they are preferably formed into rings or circles, as indicated at H. If desired, the main leaf of the spring may also have rings I formed upon its end, so as to correspond with the other rings, or in practice only certain of the leaves may have their ends upturned, since it has been found that there is greater movement of some of the leaves than of others.

Suitable buffers J, of elastic material, are interposed between the bolster K and the upper section of the spring at such points as will afford a packing or support for the spring when it is compressed to a considerable extent, but which will not interfere with the free movements thereof. These buffers may be secured in any convenient manner in place.

Having thus fully described my invention, what I claim as new and useful is—

In combination, a vehicle-spring consisting of two semi-elliptical sections coupled together at their ends, the ends of one section terminating in eyes, while the ends of the

other section terminate in housings, said eyes being pivoted in the housings by bolts, and rings formed upon the ends of certain of the leaves, a bolster secured thereto, and buffers interposed between the bolster and upper section of the spring.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

MAX P. GERBING.

Witnesses:
W. F. FENTON,
HENRIETTA WILEY.