

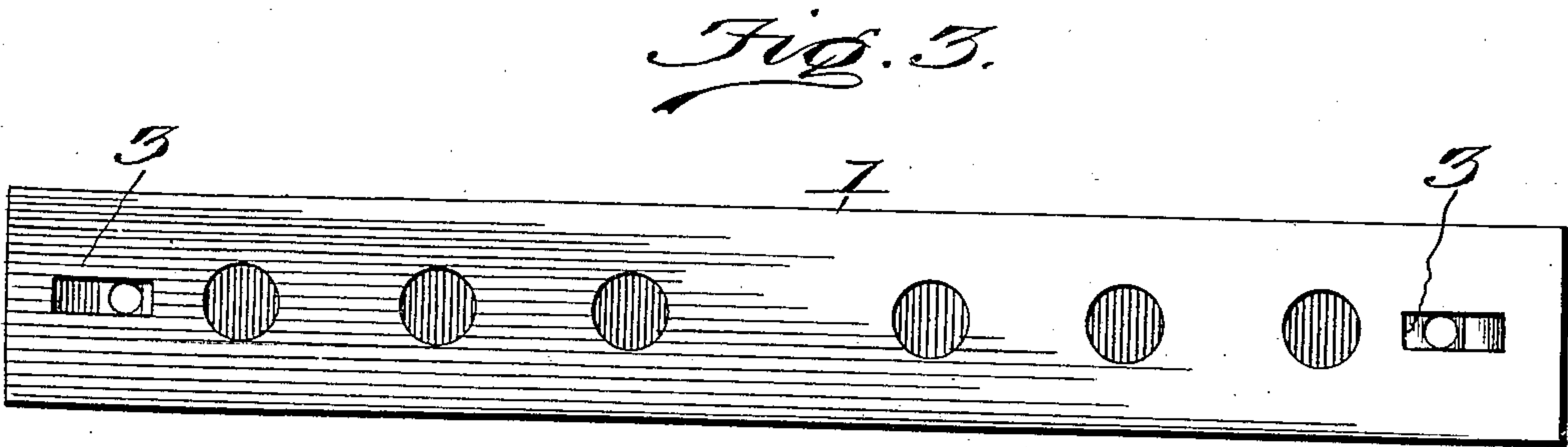
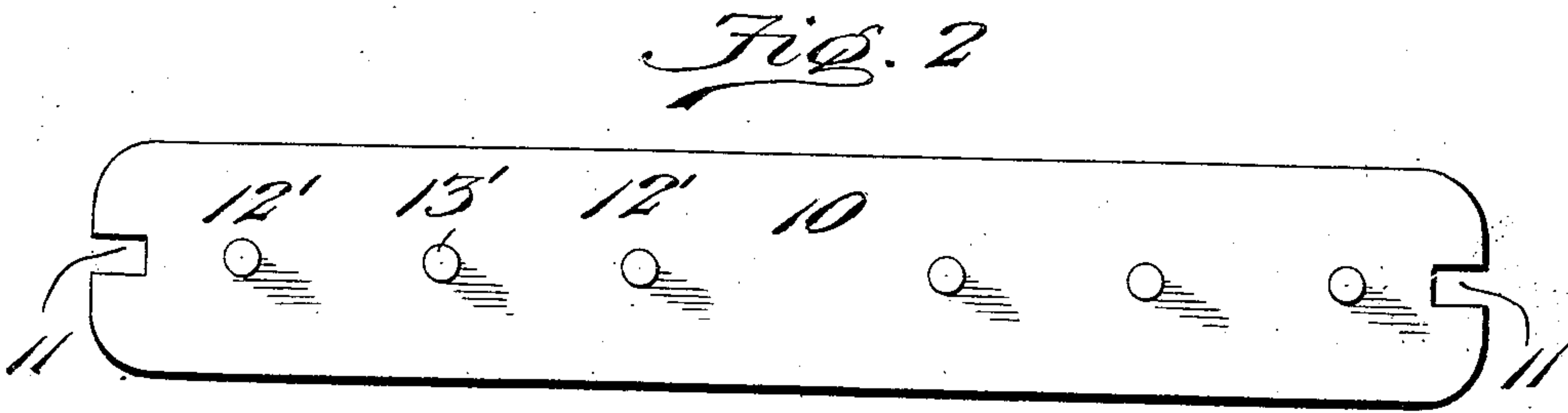
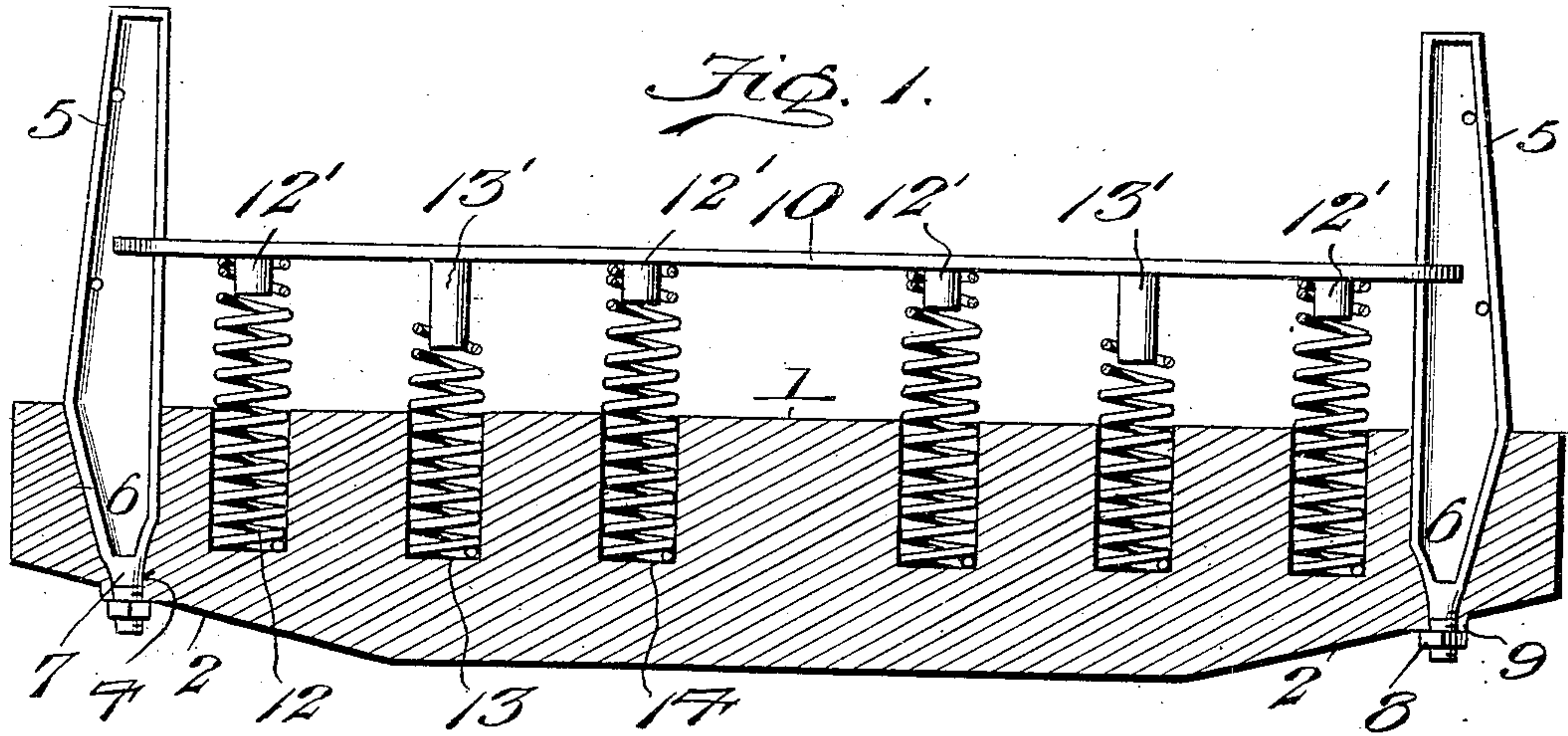
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PATENTED DEC. 31, 1907.

F. HELMICK & T. B. PERKINS.

SPRING BOLSTER.

APPLICATION FILED MAY 23, 1907.



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SPRING-BOLSTER.

No. 875,523.

Specification of Letters Patent.

Patented Dec. 31, 1907.

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To all whom it may concern:

Be it known that we, FRANK HELMICK and THOMAS B. PERKINS, citizens of the United States, residing at Baker City, in the county of Baker and State of Oregon, have invented new and useful Improvements in Spring-Bolsters, of which the following is a specification.

This invention relates to spring bolsters for wagons and other vehicles, for giving elastic support to the body thereof, the object of the invention being to provide an improved construction of bolster adapted to permit ample flexibility of the body and efficiently absorb all shocks and jars sustained by the loaded vehicle in traveling over rough road-beds, and which, in addition, comprises comparatively few parts adapted to be quickly and conveniently assembled and disassembled and is designed to increase the resistance to the downward movement of the body according to its extent of play or the weight of the load thereon.

In the accompanying drawing:—Figure 1 is a longitudinal sectional elevation of a spring bolster constructed in accordance with our invention. Fig. 2 is a bottom plan view of the follower thereof. Fig. 3 is a top plan view of the bolster bar or body.

Referring to the drawing, the numeral 1 designates the bolster bar or body, which may be suitably constructed for use as a front or rear bolster, and is preferably beveled on the under side thereof, as at 2, to decrease its thickness at the ends, or may be otherwise shaped for such purposes.

The body bar or bolster, which is preferably formed of cast or rolled steel or other suitable metal, is provided at its ends with oblong rectangular sockets 3, the outer walls of which have an inward and downward taper, said sockets gradually decreasing in depth toward their lower ends, and communicating with circular openings 4, extending through the portions 2. The side standards 5, carried by the bolster, have their lower ends 6 shaped to fit within the said sockets 3, whereby they are adapted to be partially held therein by a wedging action, and said standards terminate at their lower ends in cylindrical stems 7, the lower portions of which are threaded to receive securing nuts 8, bearing against plane faced bosses 9 formed upon the surfaces 2, whereby the standards are detachably secured in position.

The follower 10, comprising a rolled metallic plate, is arranged above the bolster bar or body, and is formed at its ends with notches 11 to receive the inner edges of the standards 5, by which said follower is held in guided relation to the standards, for a vertical sliding motion thereon. The follower is supported by a series of springs 12 and 13, six of which are shown in the present instance, three on each side of the transverse center of the bolster, said springs being seated at their lower ends in receiving sockets or pockets 14, formed in the bolster bar or body 1, whereby they are retained against displacement. Riveted or otherwise secured to the follower 10 and depending therefrom are guide pins or studs 12' and 13', which respectively enter the upper ends of the coil springs 12 and 13, and retain said springs in engagement with the follower as the latter rises and falls, whereby any possibility of disarrangement of the upper ends of the springs is prevented.

In practice, each set of three springs on opposite sides of the transverse center of the follower consists of alternately arranged long and short springs, while the studs or pins 12' and 13', which co-act therewith, are alternately long and short to compensate for the respective sizes of the springs and to maintain a guiding connection therewith. By this arrangement, it will be seen that two central supporting springs are long springs, the two intermediate springs short springs and the two outer springs long springs, thus providing for an effective spring supporting of the follower and the vehicle body. It will be understood that the long springs will support the weight of a lightly laden body and permit free action thereof, while, upon the depression of the follower by a heavily laden body, all the springs will come into action, to sustain the same. By this construction, also, the body whether lightly or heavily laden when jolted or jarred to a considerable extent, will be prevented by the increasing resistance of the springs to the downward motion of said body from moving too far and striking the bolster body.

It will be understood, of course, that the center of the bar 1, when the device is employed as a front bolster, will be provided with a central opening for the passage of the king-bolt, while said bar, when the device is used as a rear bolster, will be notched in its lower edge to receive the reach and hounds.

Similar changes in the construction may be resorted to to adapt the device for application to different types of vehicles.

It will be apparent from the foregoing description, taken in connection with the accompanying drawing, that the invention provides a spring bolster of simple construction, which increases the elastic bearing surface of the vehicle body and supports the same in an effective manner. The construction described is advantageous in regulating the spring resistance according to the weight of the load and movements of the body in passing over smooth or rough road-beds.

Having thus described the invention, what is claimed as new, is:—

1. A spring bolster comprising a body having receiving sockets therein, standards supported by the body, a follower in guided connection with the standards, a system of springs seated at their lower ends in the sock-

ets, said springs comprising alternately arranged long and short springs, and alternately arranged short and long guide pins depending from the follower and receiving and engaging the ends of said springs. 25

2. A spring bolster comprising a body bar, standards supported thereby, a follower slidably connected with the standards, springs seated at their lower ends in the body bar, some of said springs being longer than the others, and long and short guide pins on the follower, the long pins engaging the upper ends of the short springs and the short pins the upper ends of the long springs. 30 35

In testimony whereof, we affix our signatures in presence of two witnesses.

FRANK HELMICK.

THOMAS B. PERKINS.

Witnesses:

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