(No Model.)

J. R. WALKER.

SPRING GEAR FOR VEHICLES.

No. 342,150. Patented May 18, 1886.

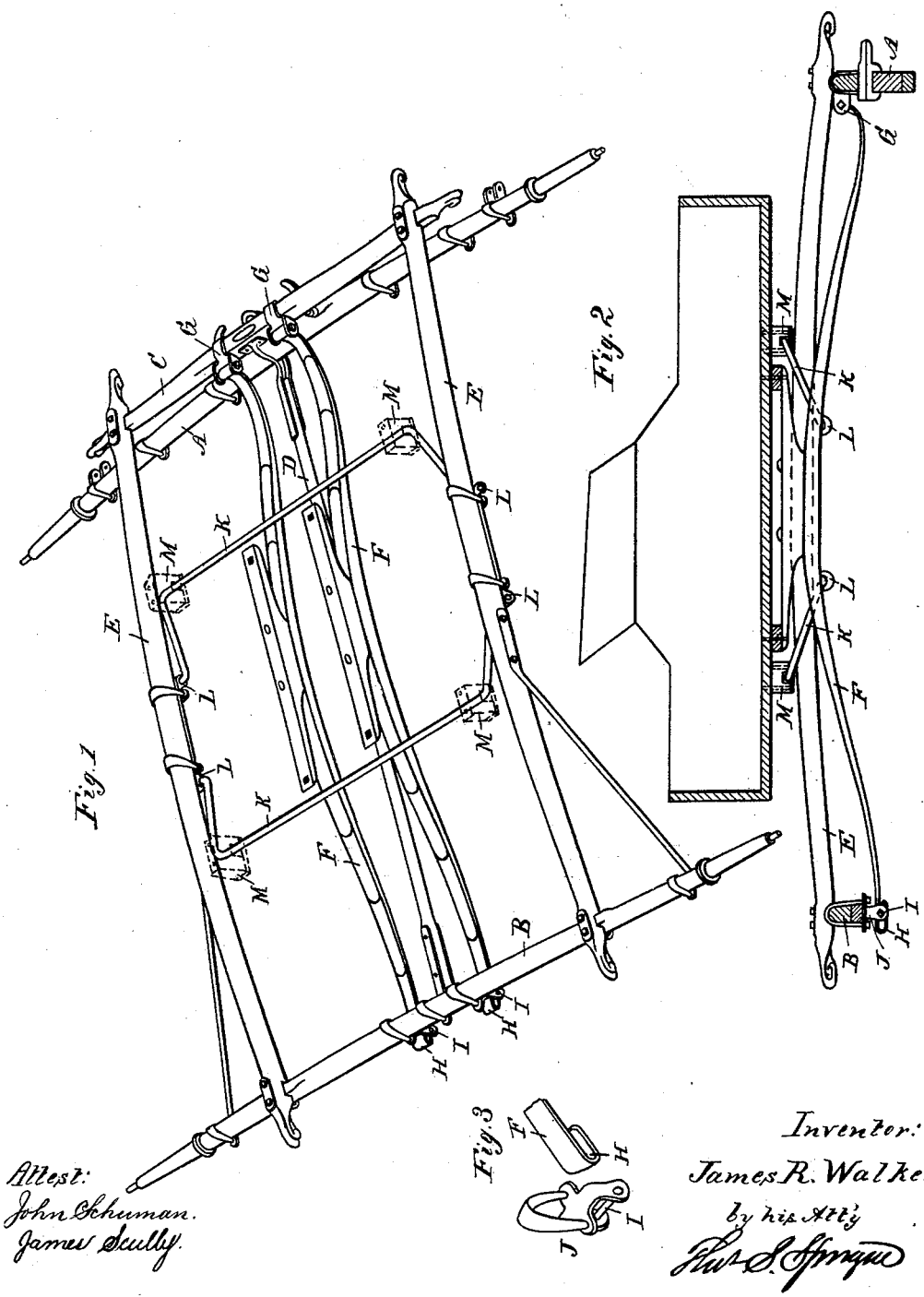

Fig. 1

Fig. 2

Fig. 3

Attest:
John Schuman.
James Scully.

Inventor:
James R. Walker
by his Atty
Pus S. Sprague

UNITED STATES PATENT OFFICE.

JAMES R. WALKER, OF DETROIT, MICHIGAN.

SPRING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 342,150, dated May 18, 1886.

Application filed February 25, 1886. Serial No. 193,106. (No model.)

To all whom it may concern:

Be it known that I, JAMES R. WALKER, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Buggy-Gearing; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to a new and useful improvement in buggy-gearing; and the invention consists in the peculiar construction and arrangement of a side-bar gear, all as hereinafter set forth.

In the drawings which accompany this specification, Figure 1 is a perspective view of my improved buggy-gearing. Fig. 2 is a vertical central longitudinal section thereof. Fig. 3 is a detail showing the eye and suspension-clip of the center springs in perspective view.

A and B are the front and rear axles, respectively, C is the head-block, D is the reach, and E are the side bars, of a buggy-gearing, all these parts being of known construction.

F F are two metallic leaf-springs running parallel with and close to the reach, one on each side of the reach and supporting the body. These springs are connected at the front to the head-block by couplings G, similar to shaft-couplings, and are suspended underneath the hind axles by shackles, which allow freedom of motion to the springs without subjecting the axle to strain or twist. To this end I preferably provide the rear ends of these springs with elongated eyes H, which engage with the bolts I of the shackles J, all so arranged that the springs can freely stretch when loaded. If desired, rubber cushions may be placed within the eyes.

K are two steel equalizers, arranged to prevent rocking or side motion. These equalizers are formed in the shape of cranks, one working toward the front end of the body and the other to the rear. Their ends are supported in journal-boxes L, which are secured in any convenient manner to the under side of the side bars. They are also attached to the under side of the body in such a manner as not to bind or restrict the motion of the springs. This object may be obtained by means of the bearing-blocks M, placed in the angles of the equalizers, or in any suitable manner.

With a running-gear constructed as shown and described, it will be seen that the springs being close to the center and removed as far as possible from the wheels, they avoid nearly one-half of the upward and downward motion caused by the wheels in passing over obstructions, and as both springs assist each other the result is, that the strain is distributed and great ease and comfort in riding is obtained thereby.

The equalizers cause the body to ride level, and there is no backward or forward motion, nor is there any side swing, it all being counteracted by the equalizers, which distribute the strain over the whole combination without in any way interfering with the legitimate function of the springs, which latter have at all times a free action without straining the buggy. Although I prefer two equalizers, as described, a single equalizer may be used, if desired.

I am aware of the Patents Nos. 244,139 and 302,997, and make no claim to the construction shown therein as forming part of my invention.

I deem it important that the springs F F be arranged centrally between the side bars and parallel therewith, and that they be entirely independent of the equalizer, and also that they be free to move longitudinally in a horizontal plane, whereby the best results are attained.

What I claim as my invention is—

The combination, with the axles, side bars, head-block, and central reach, of the springs F F, arranged one upon either side of said reach and parallel therewith, the equalizers K K, in the form of cranks, with their ends journaled in boxes L, pendent from the side bars and independent of said springs, and bearing-blocks M on said equalizers, substantially as and for the purpose specified.

JAMES R. WALKER.

Witnesses:
H. S. SPRAGUE,
EDMOND SCULLY.