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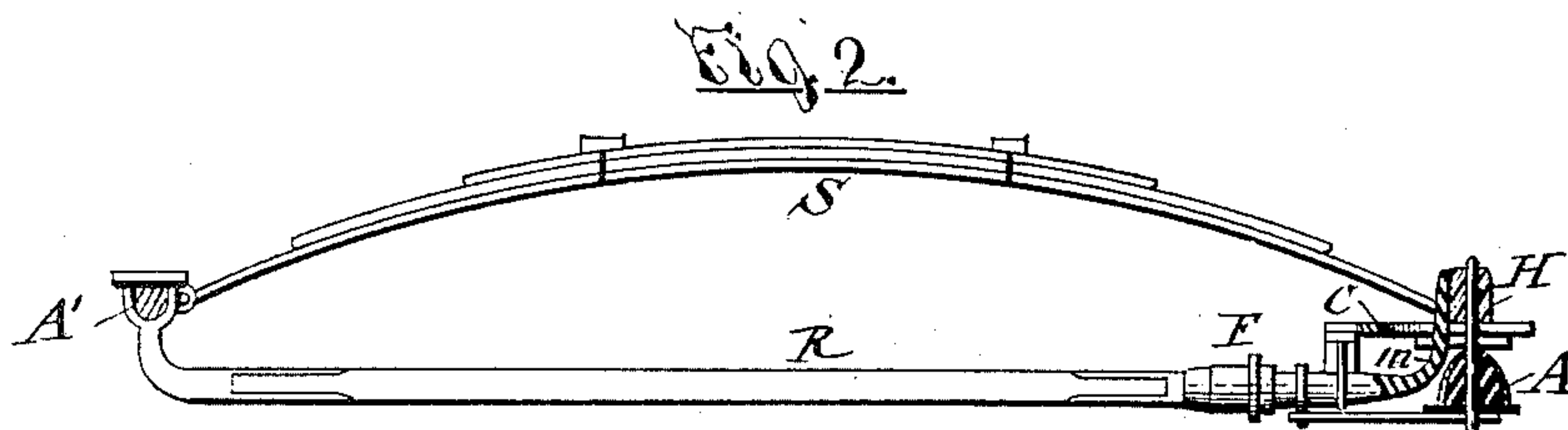
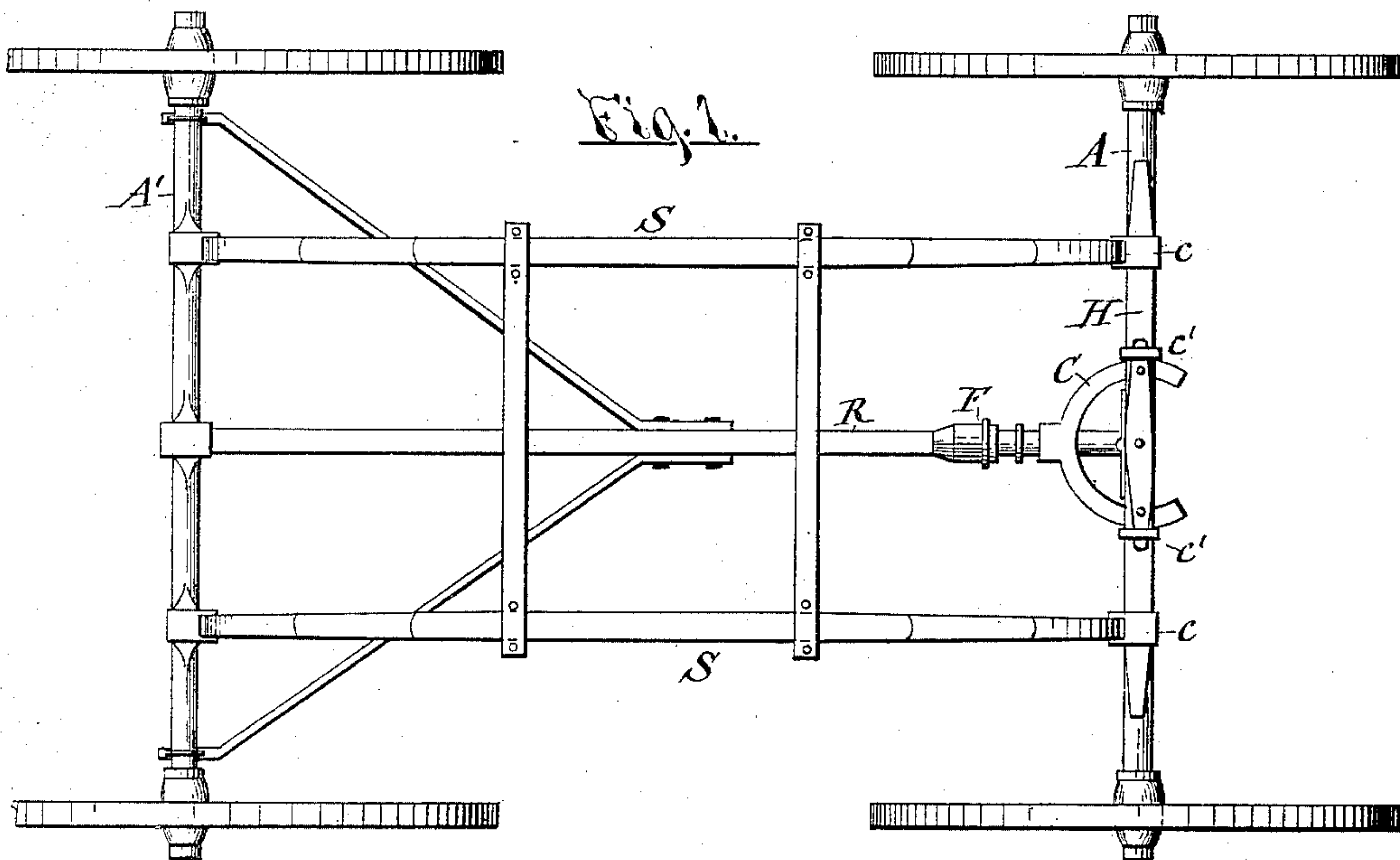
2 Sheets—Sheet 1.

W. L. EARLE & C. G. CROFOOT.

SPRING VEHICLE.

No. 338,940.

Patented Mar. 30, 1886.



Witnesses.

C. Bendixon

A. F. Walz

Inventors:

William L. Earle

Charles G. Crofoot
per Hull, Laessle & Hey
Attys—

(No Model.)

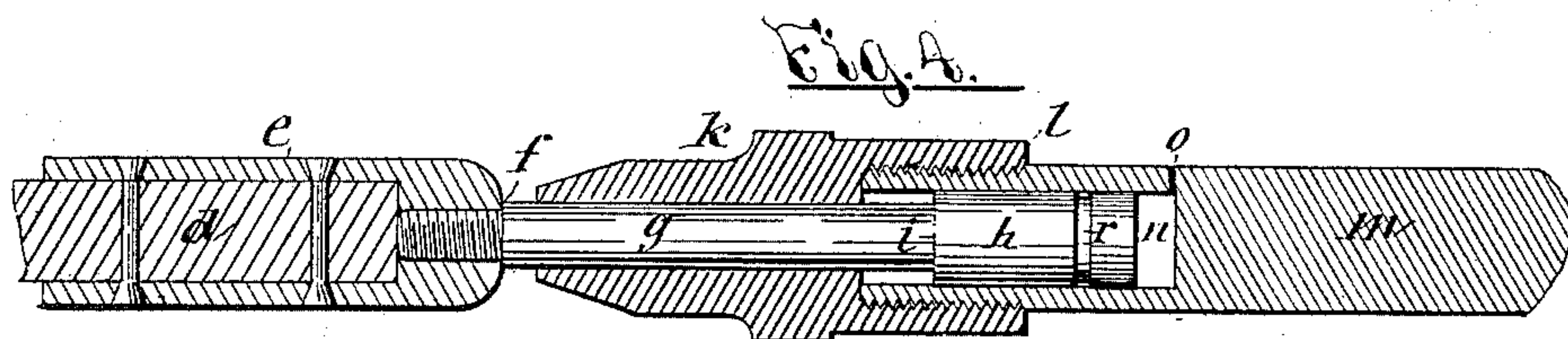
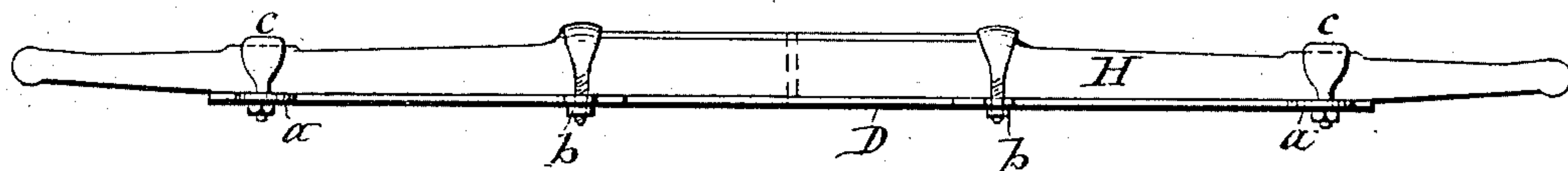
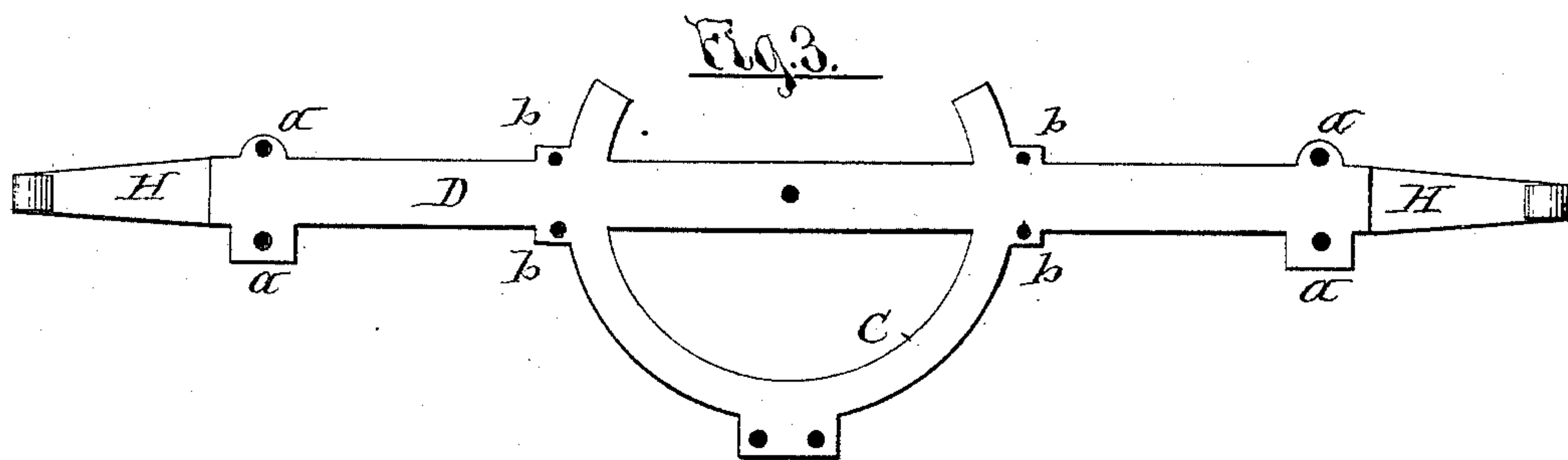
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William L. Earle

and Charles G. Crofoot
per Wm. L. Earle & Co.
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM L. EARLE AND CHARLES G. CROFOOT, OF TULLY, NEW YORK.

SPRING-VEHICLE.

SPECIFICATION forming part of Letters Patent No. 338,940, dated March 30, 1886.

Application filed January 7, 1886. Serial No. 187,883. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM L. EARLE and CHARLES G. CROFOOT, of Tully, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Running-Gear for Vehicles, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

Our invention relates to that class of spring-vehicles which have the reach extensible, so as to conform to the expansion and contraction of the side springs, which are coupled to the front and hind running-gears; and the invention consists in the improved construction of the reach-coupling, as hereinafter fully described, and set forth in the claims.

In the annexed drawings, Figure 1 is a plan view of a vehicle embodying our improvements. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 shows enlarged detached inverted plan and side views of the head-block, and Fig. 4 is an enlarged longitudinal section of our improved coupling of the reach.

Similar letters of reference indicate corresponding parts.

A and A' represent, respectively, the forward and rear axles of the vehicle.

H is the head-block, pivoted on the forward axle by the king-bolt in the usual manner, and C denotes the so-called "fifth-wheel," which is interposed between the head-block and axle A. The upper circle of this fifth-wheel we make integral with the transom-plate D, which is secured to the under side of the head-block. This transom-plate we make of a length to reach to the points where the side springs, S, are to be hung on the head-block, and at said points we form the transom-plate with perforated lateral projections *a a*, which serve as clip-bars for the reception of the clips *c c*, by which the end portions of the transom-plate are attached to the head-block, and on which clips the side springs, S S, are hung.

At the outer edge of the fifth-wheel C the transom-plate is formed with another set of projections, *b b*, which are perforated and constitute clip-bars for the reception of the clips *c'*, by which the central portion of the transom-plate is secured to the head-block.

R denotes the reach, which we provide with a swiveled and longitudinally-extensible coupling, F, of the following improved construction. The wooden portion *d* of the reach we terminate a short distance back of the fifth-wheel C, and attach to said end of the reach a longitudinal clip, *e*, which is provided with a screw-threaded eye or socket, *f*, in its forward end. (See Fig. 4 of the drawings.) In this eye or socket is screwed a stem, *g*, the forward end of which is formed with a circumferentially-enlarged cylindrical head, *h*, forming by its rear end an abrupt shoulder, *i*, on the stem *g*. On the said stem, back of the head *h*, slides a collar, K, which is slipped onto the stem before it is attached to the reach. The forward end of the collar K terminates with a female-screw-threaded sleeve, *l*, and into this is screwed a male-screw-threaded shank, *m*, which has its forward end rigidly secured to the head-block H, and its rear end provided with a longitudinal cylindrical cavity, *n*, in which the head *h* of the stem *g* slides. If desired, an oil-hole, *o*, may be drilled into the cavity *n* from the top of the shank *m*, to permit of lubricating said cavity, and the head *h* may be provided with a circumferential groove, *r*, for the reception of a packing-ring, to prevent rattling of the described coupling.

It will be observed that our improved reach-coupling, while readily applied and as readily removed from the reach when desired, at the same time is perfectly secure in its attachment, and affords ample play to allow it to accommodate itself to the varying distance between the two axles incident to the vibration of the side springs, S S. The abutment of the ends of the head *h* against the ends of the cavity *n* prevents undue longitudinal expansion and contraction of the reach.

It is obvious that the described coupling may be reversed in its position.

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

1. The improved reach-coupling, consisting of the longitudinal clip *e*, provided with the screw-threaded socket *f*, the stem *g*, screwed into said socket and terminating with the head *h*, the collar K, sliding on said stem and

provided with the female-screw-threaded sleeve *l*, and the shank *m*, screwed into the sleeve *l* and provided with the cavity *n*, all constructed and combined substantially in the manner specified and shown.

2. In a reach-coupling, the combination of the stem *g*, provided with the head *h*, the collar *K*, sliding on said stem and provided with the female-screw-threaded sleeve *l*, and the shank *m*, screwed into the sleeve *l* and provided with the cavity *n*, substantially as described and shown.

In testimony whereof we have hereunto signed our names and affixed our seals, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 9th day of December, 1885.

WILLIAM L. EARLE. [L. S.]

CHARLES G. CROFOOT. [L. S.]

Witnesses:

FREDERICK H. GIBBS,
E. C. CANNON.