

(No Model.)

G. B. HAMLIN.
VEHICLE SPRING.

No. 390,669.

Patented Oct. 9, 1888.

Fig 1

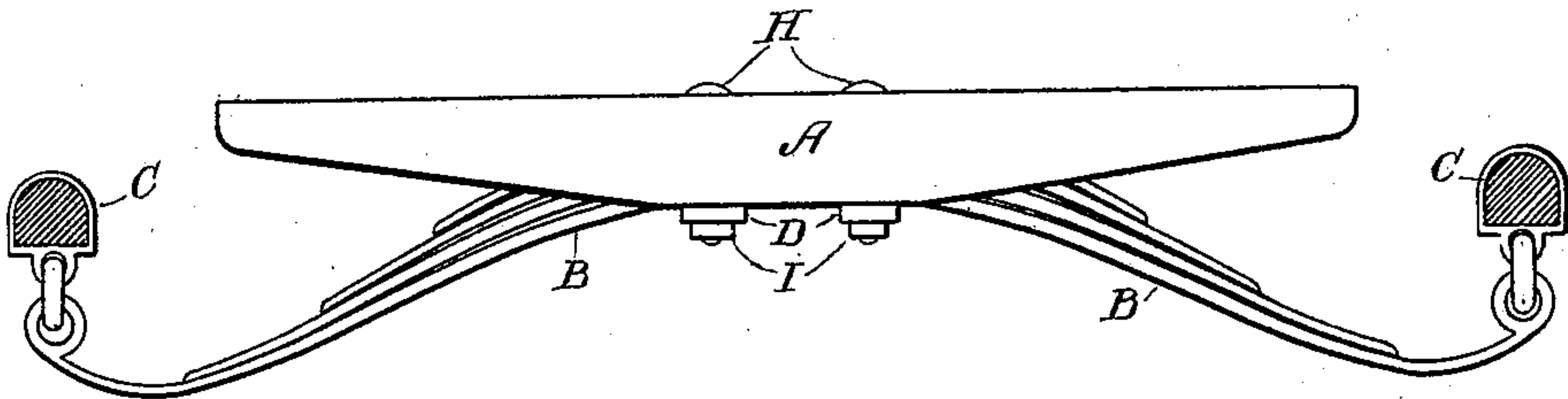


Fig 2

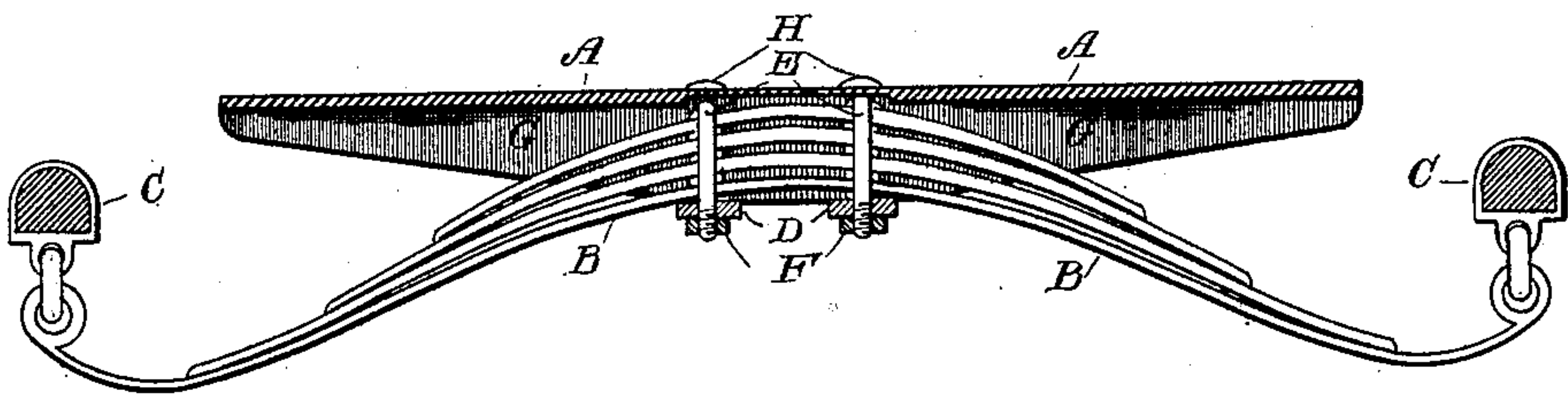


Fig 3

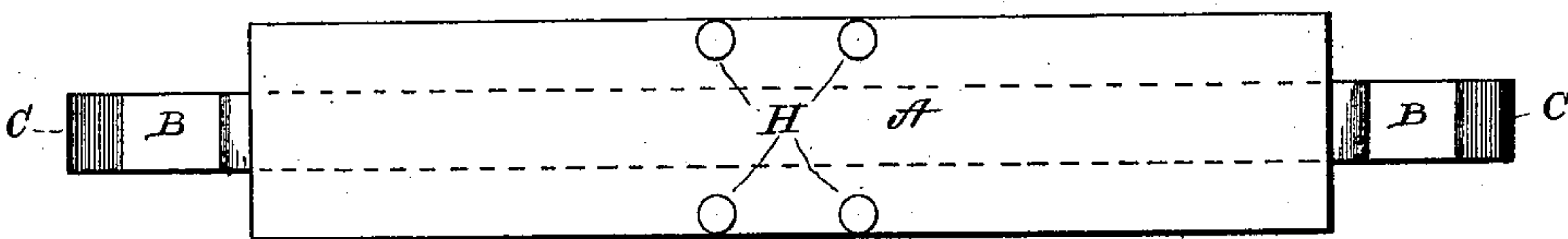
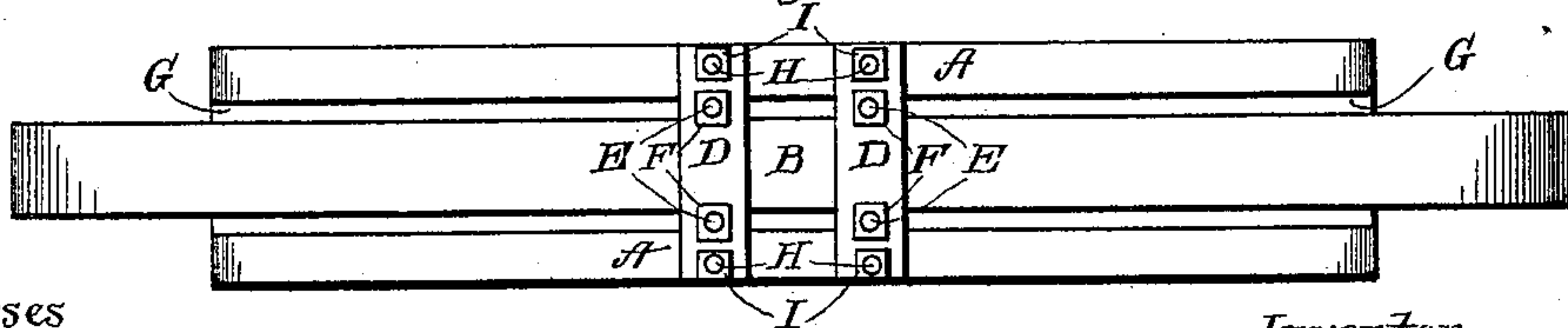


Fig 4



Witnesses
S. Williamson
E. S. Sumner

Inventor
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By *W. Smith* Atty.

UNITED STATES PATENT OFFICE.

GEORGE B. HAMLIN, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR OF ONE-HALF TO WILLIAM J. INNIS AND WARREN O. INNIS, OF OIL CITY, PENNSYLVANIA.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 390,669, dated October 9, 1888.

Application filed January 20, 1888. Serial No. 261,352. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. HAMLIN, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Vehicle-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 appertains to make and use the same.

My invention relates to springs for vehicles, but has especial reference to semi-elliptical springs designed for use in connection with side-bar vehicles.

The object of the present invention is to so attach the spring that the wagon or carriage body may be set to a minimum height, while at the same time the strain upon the base-plate shall be exceedingly slight and evenly distributed; and with these ends in view my invention consists in the details of construction and combination of elements hereinafter fully set forth, and then specifically designated by the claims.

In the accompanying drawings, Figure 1 is a front elevation showing a spring secured to a carriage spring-bar after the manner of my invention; Fig. 2, a similar view, the spring-bar being in section; Fig. 3, a top view, and Fig. 4 a bottom view.

Similar letters denote like parts in the several figures of the drawings.

A is the carriage spring-bar, B the semi-elliptical spring, and C the side bars, shackled to the ends of the spring in the usual manner.

D are base-plates, to which the spring is secured by clips E and nuts F.

The spring-bar is channeled at the under side throughout its longitudinal center to a depth sufficient to accommodate the spring at its widest diameter, as seen at G.

In attaching the spring to the spring-bar the former is inserted within the latter and the base-plates secured to the bar by bolts H and nuts I on each side of the spring.

It will be obvious that by securing the base-plates at both sides of the spring the leverage and consequent strain upon said plates are exceedingly slight as compared with that which characterizes my improvement referred to and set forth in an application for Letters Patent of the United States filed on even date herewith, since in the present instance the strain on the spring-bar is evenly distributed and balanced.

If desired, the spring-bar may of course be gouged to form a curved channel, the cutting away being carried to any degree without departing from the spirit of my invention.

It will be obvious that by following after this improvement a double or twin spring-bar is really formed, and therefore two separate spring-bars may be used and the spring secured in position between them.

I claim—

1. The combination, with the spring-bar cut away longitudinally, of the semi-elliptical spring secured within said spring-bar, substantially as set forth.

2. In combination with the semi-elliptical spring secured to base-plates by clips, the spring-bar cut away longitudinally to accommodate said spring and bolted to the base-plates at both sides of the spring, substantially as shown and described.

3. The combination, with the semi-elliptical spring and the spring-bar cut away to accommodate said spring, of the base-plates secured at their central portions to the spring-clips and bolted at their ends to the spring-bar at both sides of the spring, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE B. HAMLIN.

Witnesses:

DANIEL W. FINK,
LEOPOLD DIMOND.