

J. H. GOULD.
Vehicle Springs.

No. 150,685.

Patented May 12, 1874.

Fig. 1

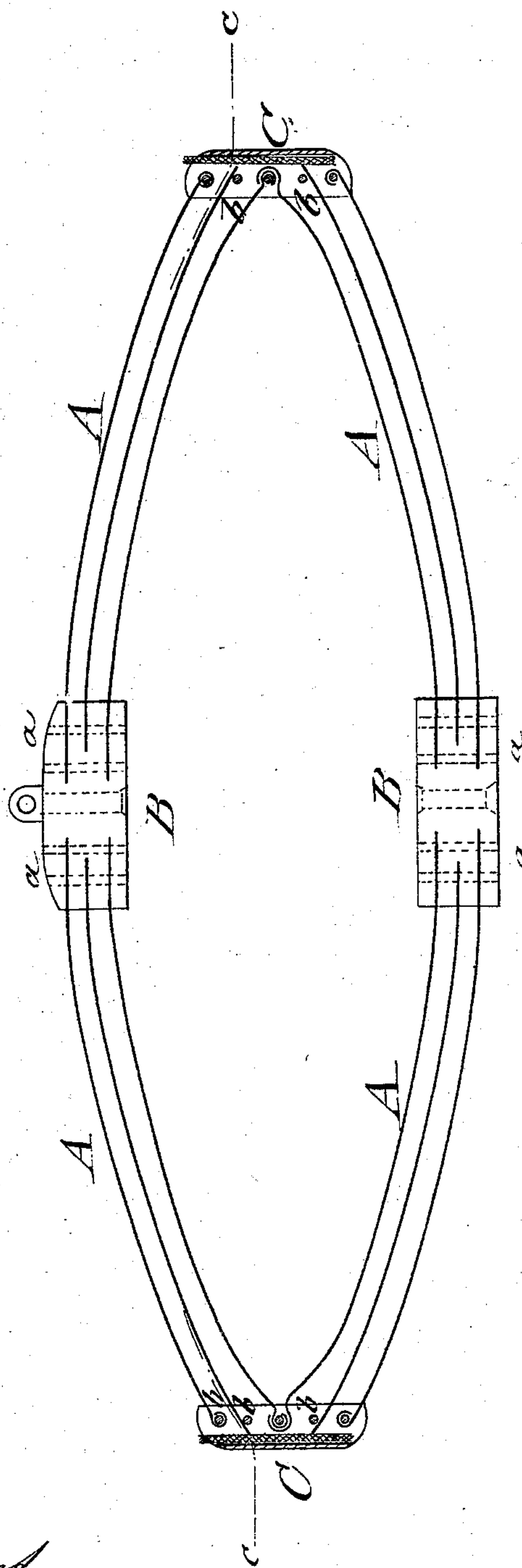
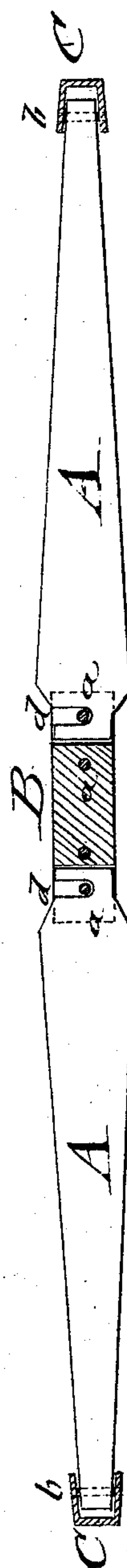


Fig. 2



WITNESSES:

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UNITED STATES PATENT OFFICE.

JACOB H. GOULD, OF RUTLAND, OHIO.

IMPROVEMENT IN VEHICLE-SPRINGS.

Specification forming part of Letters Patent No. **150,685**, dated May 12, 1874; application filed February 7, 1874.

To all whom it may concern:

Be it known that I, JACOB H. GOULD, of Rutland, in the county of Meigs and State of Ohio, have invented a new and Improved Carriage-Spring, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a sectional end view of my improved carriage-spring; and Fig. 2, a horizontal longitudinal section of the same on the line *c c*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of my invention is to produce a spring for vehicles of all kinds which gives great resistance and uniform elasticity to the weight pressing thereon, with less material and friction, being also less expensive in its manufacture, and, on account of the equalized strain, more durable and satisfactory. My invention consists of a series of spring plates or leaves, which are tapering from the center toward the ends, and of equal thickness along their full length, and are placed at such distance from each other that they do not touch each other when compressed, and are applied to recessed and bolted central blocks, or running through from socket to socket, with intermediate separating-blocks. Some of the springs are made detachable, the ends of all being supported on separate pins of the sockets, which are lubricated in suitable manner.

In the drawing, A represents the leaves or plates of my improved vehicle-spring; B, the central supporting-blocks, and C the sockets. The leaves A are made of steel plates, of equal length and thickness throughout, either of symmetrical halves, or extending the full length from socket to socket. They are tapering in width from the central part to the end, and flat, without corrugations, to produce an equal degree of elasticity throughout their full length, and prevent thereby breakage caused by unequal strain on any part thereof. Each leaf A is attached, separately from the other, to the central blocks B and sockets, and at such distance apart that they do not come in

contact with each other, however great the pressure exerted on them.

In case half leaves or plates are used, the central blocks B are recessed at the ends, for taking up the same, and bound firmly together by vertical cross-bolts *a*.

If full plates are used, separate blocks are interposed between, for retaining the required distance of the plates.

The outer ends of the leaves A rest on separate pins *b*, which are lubricated by an oiled wick, or similar substance, placed vertically in the sockets back of the pins, as shown in Fig. 1. The friction of the springs and wearing out of those parts are thereby materially reduced.

For the purpose of adjusting the spring-power to the weight to be supported, the intermediate or middle plates may be made detachable, and inserted or taken out, as required. The inner ends are, therefore, provided with slots *d*, as shown in Fig. 2, which slide onto the connecting-bolts *a*, resting with the outer ends loosely upon their socket-pins.

Repairs can easily be made, as any injured plate may be replaced without dispensing with the rest.

The action of the spring is uniform throughout its full length, producing thereby more agreeable movements and greater comfort to the occupant of the vehicle.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The vehicle-spring composed of separate tapering leaves A, central blocks B, and lubricating-sockets C, all combined in such manner that the plates are constantly retained at certain distance from each other, as and for the purpose described.

2. The detachable spring-plates A, with side slot *d*, in combination with the cross-bolts *a*, supporting-blocks B, and the lubricated socket-pins, as and for the purpose described.

Witnesses: JACOB H. GOULD.

W. W. HUBBELL,
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