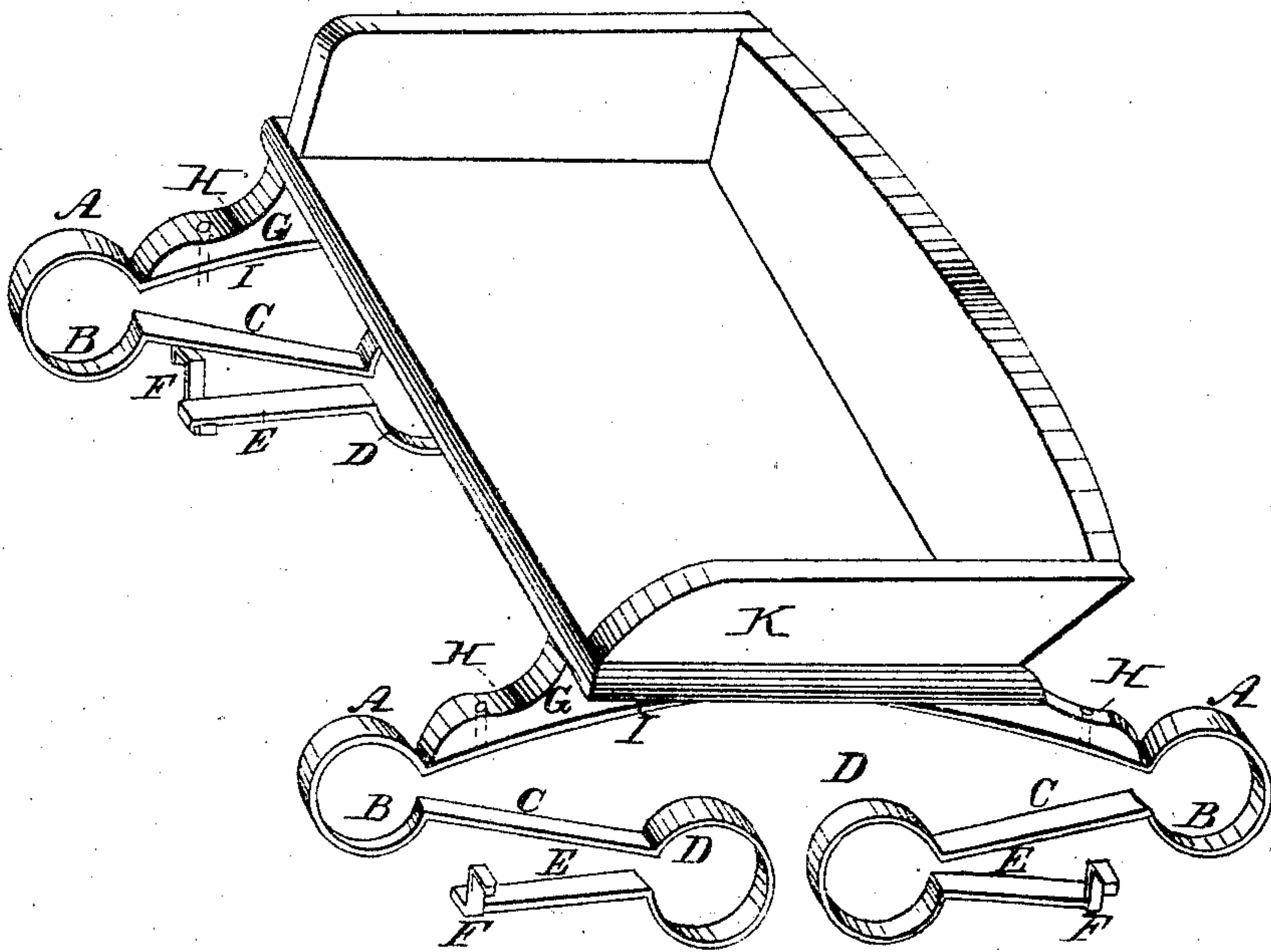


G. H. MITTAN.
Wagon-Seat Spring.

No. 90,375.

Patented May 25, 1869.



WITNESSES
Augustus Ring
James A. Daffety

INVENTOR.
G. H. Mittan
By his attorney
J. A. Chapin



GEORGE H. MITTAN, OF DEWITT, ILLINOIS.

Letters Patent No. 90,375, dated May 25, 1869.

IMPROVED SPRING FOR WAGON-SEATS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE H. MITTAN, of Dewitt, in the county of Dewitt, and State of Illinois, have invented an Improved Spring for Carriage-Seats; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, and letters marked thereon, making a part of this specification, in which—

Figure 1 is a perspective representation of my improved springs as they are attached to a seat.

The nature of the present invention consists in the novel manner in which steel-plate is so formed as to give a compound spring which can be conveniently used for carriage-seats.

A represents a plate of steel, of such strength as will be suitable to sustain a required weight.

That part of the spring shown at I is made of such length and curve as will fit the curve of the under side of the seat-bearer G, to which it is fastened with bolts H.

Those parts, B, of the spring, projecting beyond the ends of the bearers, are so bent upward and then turned underneath as to nearly form circles, but the parts do not touch.

Straight bars, C, are then made to diverge from the

inclined ends of the part I, and extend to circular parts D, which have the same form as those shown at B.

Straight bars E are then made to project outward from the circular parts D, and diverge from the bars C.

Bearing-hooks, F, are then rigidly fastened to the ends of the bars E, for the purpose of suspending the spring from the top edge of a carriage-box.

By means of this construction and arrangement, a light weight, such as that of persons, can be carried on the seat K with much less jolting than when the ordinary springs are used; and if a greater weight is put thereon, there is no danger of breakage.

Further, springs of this character can be made at much less cost than the common elliptical spring, while at the same time they have two bearings on the box.

Having thus fully described my invention,

What I claim, and desire to secure by Letters Patent of the United States, is—

As a new article of manufacture, a spring for carriage-seats, consisting of the curved part I, circular parts B D, bars C E, and hooks F, as set forth.

GEORGE H. MITTAN.

Witnesses:

AUGUSTUS KING,
JAMES A. LAFFERTY.