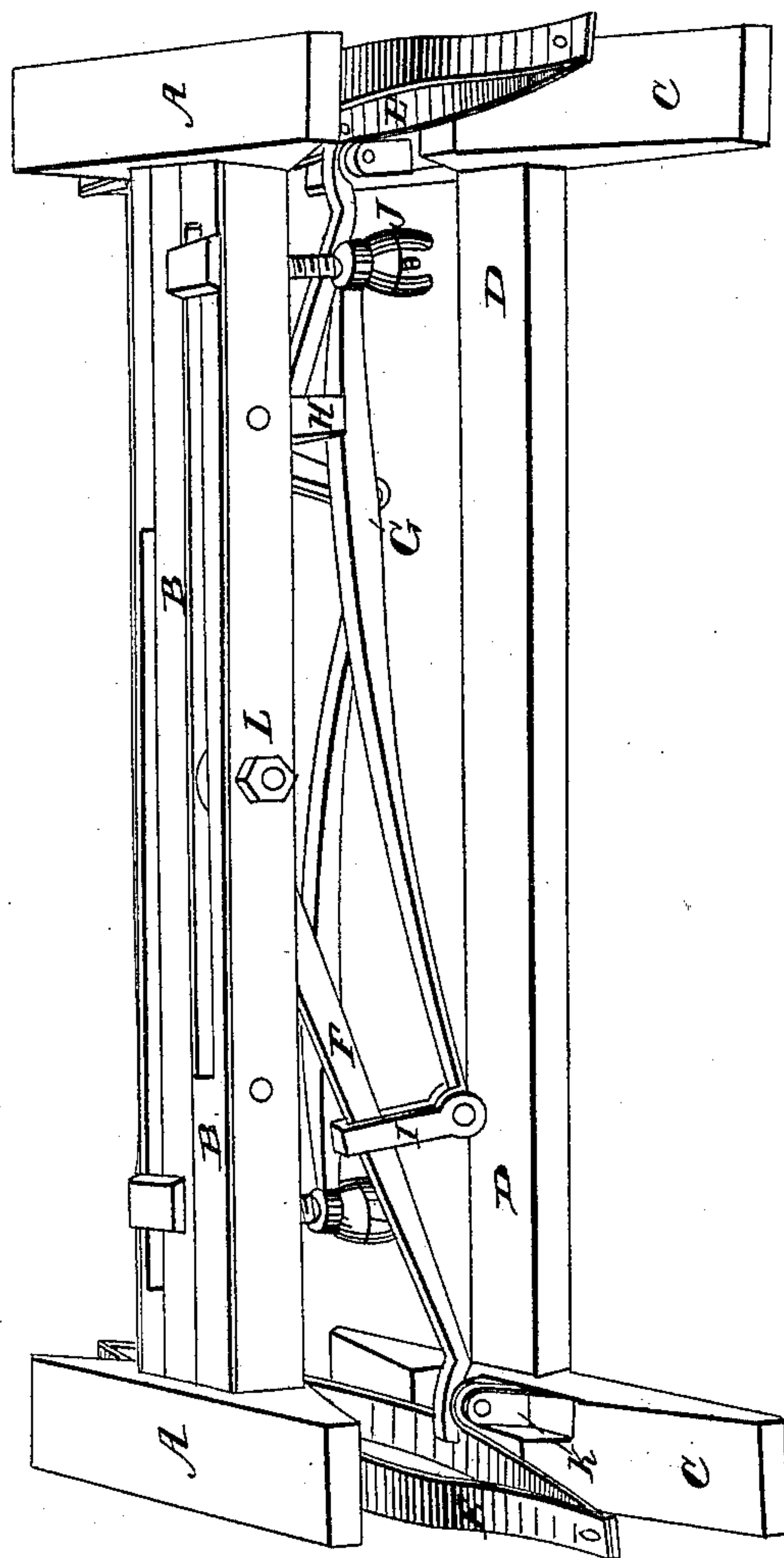


E. RING.  
Wagon-Spring.

No. 2,200.

Patented July 29, 1841



# UNITED STATES PATENT OFFICE.

ELIHU RING, OF TRUMANSBURG, NEW YORK.

## MANNER OF COMBINING SPRINGS AND LEVERS TO SUSTAIN THE BODY OF WAGONS AND OTHER CARRIAGES.

Specification of Letters Patent No. 2,200, dated July 29, 1841.

*To all whom it may concern:*

Be it known that I, ELIHU RING, of Trumansburg, in the county of Tompkins and State of New York, have invented a new and improved mode of combining springs and levers and of applying them so as to sustain the body of a wagon or other kind of carriage and its load in an advantageous manner, they being by their peculiar construction capable of being adapted to the amount of the load which they are intended to sustain; and I do hereby declare that the following is a full and exact description thereof.

These combined springs and levers may be arranged in various ways without changing the nature of their combination and action, which combination and action are clearly exemplified in the accompanying drawing. In this, A, A, are the timbers upon which the wagon body is to rest, and which are framed together by means of the longitudinal timbers B, B, which may be denominated the upper spring bars.

The pieces C, C, sustain the axles, and are connected together by the longitudinal piece, or perch, D, D. Between the pieces A, and C, are the elliptic springs E, E, which are of the ordinary kind, and are affixed in the usual manner. When the load is light, it is principally sustained by these springs. Instead of elliptic springs, others of any of the known kinds adapted to the purpose may be used.

F, and G, constitute a connected lever and spring, which are so combined as to be readily adjusted so as to exert a greater or less degree of force, as may be desired. The spring G, rests against a fulcrum piece, or block H; is connected at its outer end to the lever F, by means of the stirrup I, working on a joint pin. At its inner end the spring G, may be drawn up by means of a screw nut and bolt J. The lever F, bears by its outer end upon a friction roller K, its fulcrum being the bolt L, which passes through the timbers B, B. The spring G, is necessarily made very stout, as it is in-

tended to act under the pressure of very heavy loads. A similar lever and spring are seen in the drawing, as acting on the opposite side of the frame; and this resembles that above described, in every particular, but stands in a reversed direction. It will be seen that by this arrangement of the springs and levers, the whole action may be thrown upon the elliptic springs; that the levers and springs may be lightly strained together so as to bear their portion of the load when it is increased somewhat beyond that to which the elliptic springs are adapted; or that they may be brought to a high degree of tension whenever the nature of the load renders it desirable that this should be done. The upper and lower portions of the frame may advance and recede with perfect freedom, the outer ends of the levers F, playing backward and forward upon the friction rollers, and the springs G, acting unobstructedly by the play of its end upon the jointed stirrup.

Having thus fully described the manner in which I combine and arrange the respective parts of the apparatus used by me, what I claim therein, and desire to secure by Letters Patent, is—

1. The combination with the elliptic, or other springs, occupying the situation in which they are represented, the combined levers and springs F, and G, so connected and arranged as to operate substantially in the manner herein set forth.

These springs and levers may be increased in number; they may be placed in an inverted position, and changed in form, without materially changing their nature and action, and I do not, therefore, intend to limit myself in these particulars, but to introduce any variations which I may think proper, while the same result is attained by means substantially the same.

ELIHU RING.

Witnesses:

WM. C. CRIPPEN,  
JOHN L. STILWELL.