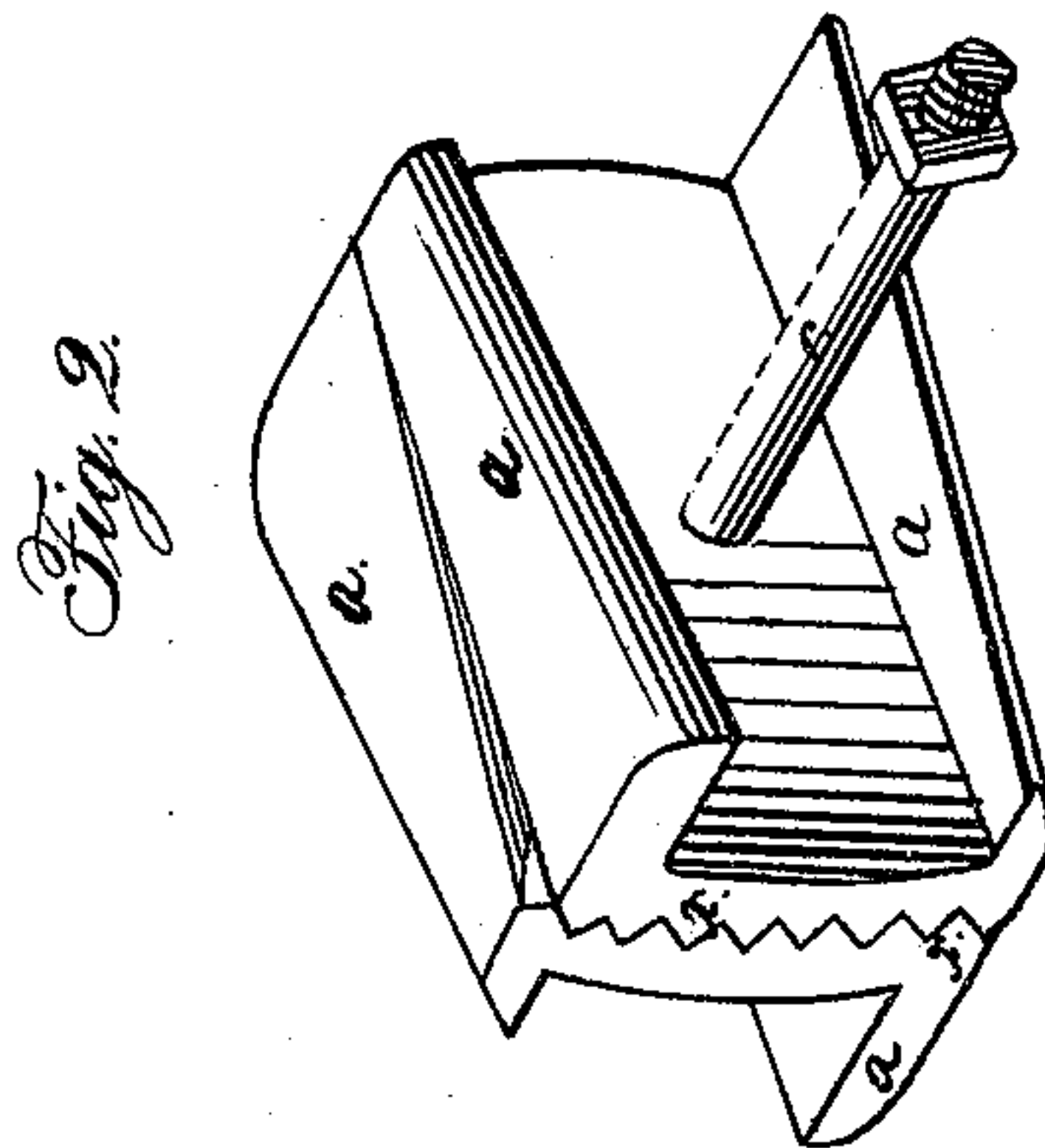
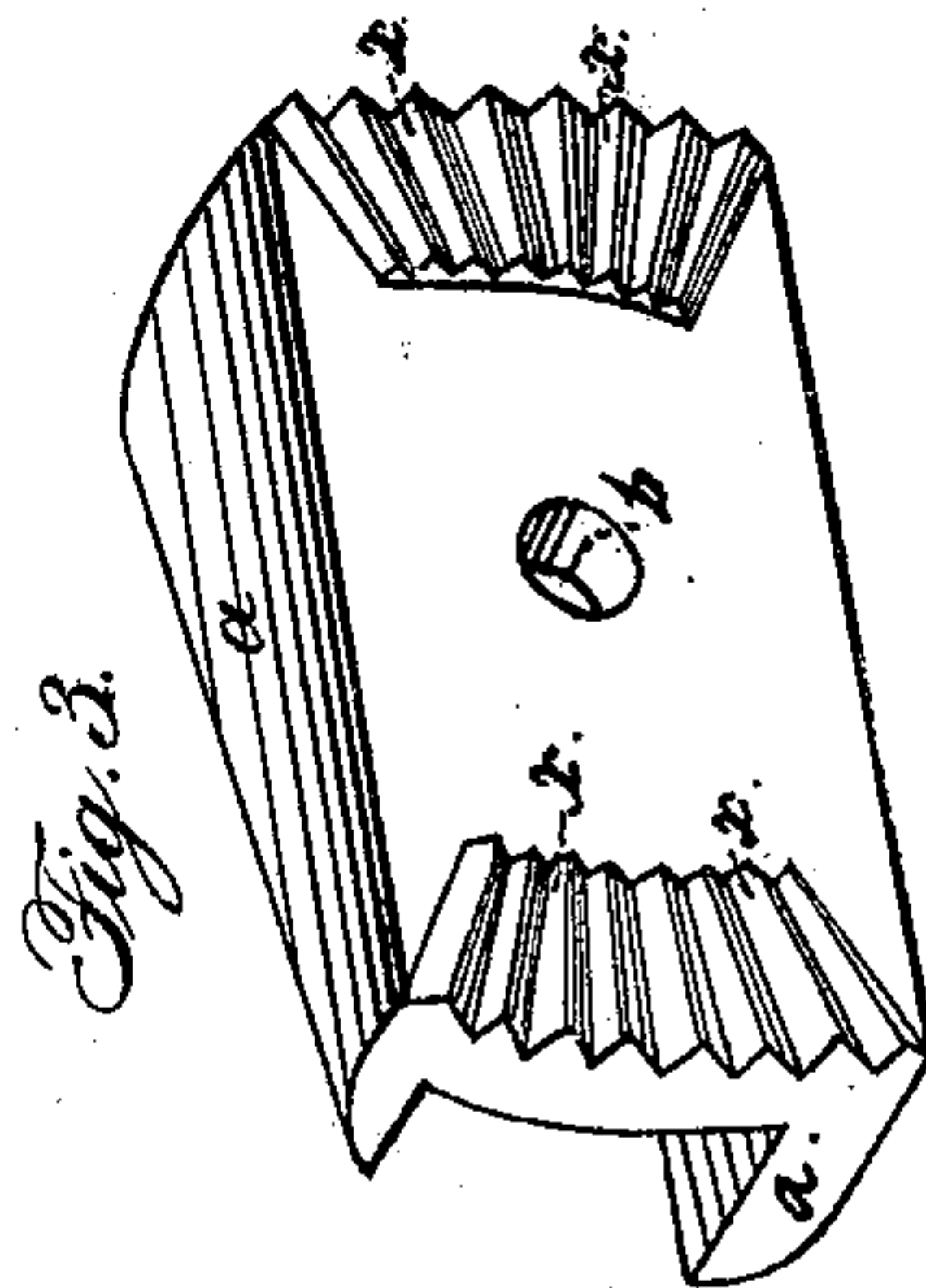
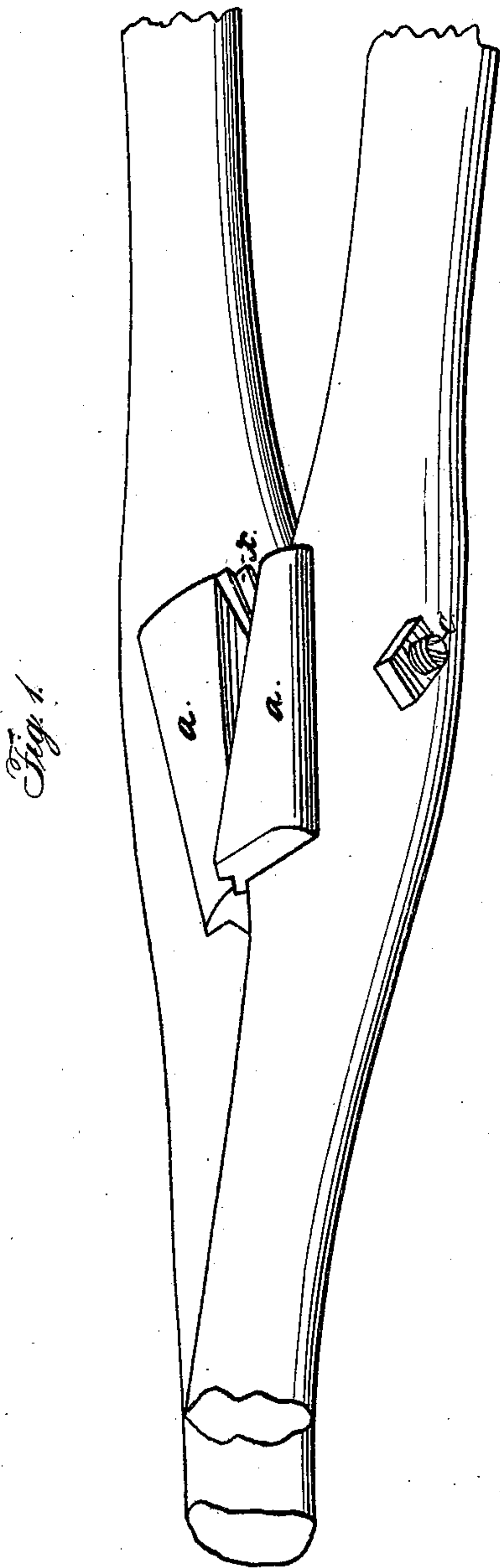


M. G. HUBBARD.

Carriage-Spring.

No. 15,234.

Patented July 1, 1856.



Inventor:

*M. G. Hubbard*

# UNITED STATES PATENT OFFICE.

M. G. HUBBARD, OF PENN YAN, NEW YORK.

## MODE OF ADJUSTING CARRIAGE-SPRINGS.

Specification of Letters Patent No. 15,234, dated July 1, 1856.

*To all whom it may concern:*

Be it known that I, M. G. HUBBARD, of Penn Yan, in the county of Yates and State of New York, have invented a new and useful Improvement in Wooden Springs for Carriages; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, in which—

10 Figure 1, shows the double fulcrum iron affixed to the spring; Fig. 2, the irons detached from the wooden spring-bars; Fig. 3, one of the double irons separately drawn, showing the radial ribs.

15 My improvement is made to obviate a difficulty I have previously found in the use of my wooden springs with double fulcrum irons, which is this, after a wooden spring has been some time in use it becomes curved and set, and then with my former fulcrum iron it is rendered useless, or partially so, but I can now have control over the position of the springs where they cross, and set them up as they sag down so as to hold the  
25 springs in position for long service.

My fulcrum irons are constructed as follows: They are composed of two channeled or rough shaped irons as clearly seen in the drawings, the backs of which that come in  
30 contact being straight and their edges

turned up at right angles, the inclination in the depth of these flanges *a, a*, being proportioned so as to gain the requisite amount of strength with the minimum amount of metal. Through the center of these irons 35 there is a hole *b*, and when they are affixed to the springs they are placed back to back and a bolt *c* is passed through the whole. On the back of these fulcrum irons are radial ribs *x* near each end and extending in 40 toward the center. These ribs on the two opposite irons fit into each other and they are all of a size. Therefore they permit the two irons to be put together at any angle, and be there securely fastened by the single 45 bolt through the center. This device enables me to place the two bars at the proper position and to shift as the springs require to be set up.

Having thus fully described my improve- 50 ment what I claim therein as new and for which I desire to secure by Letters Patent is—

The double fulcrum iron with a changeable angle constructed and arranged in the 55 manner and for the purposes set forth.

M. G. HUBBARD.

Witnesses:

SYLVESTER LAY,  
J. J. GREENOUGH.