

# STRINGFELLOW & SURLES

## Carriage-Spring.

No. { 31,134. }

Patented Jan. 15, 1861.

Fig. 1

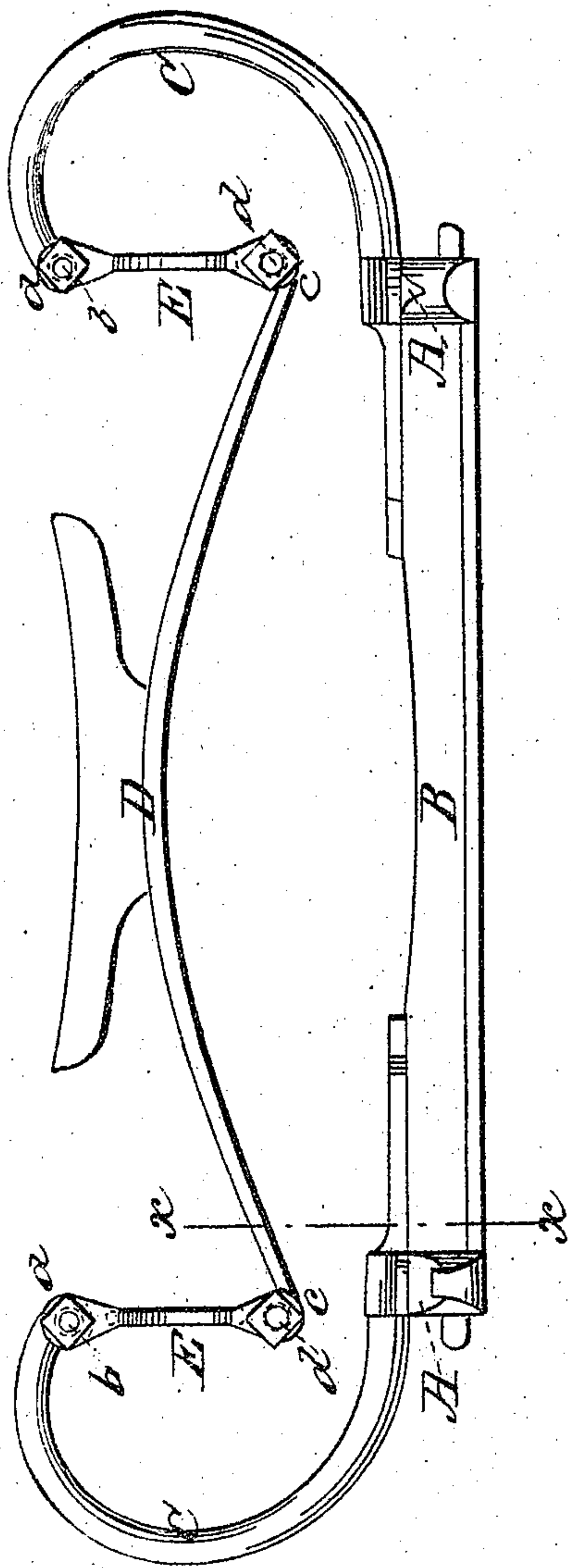
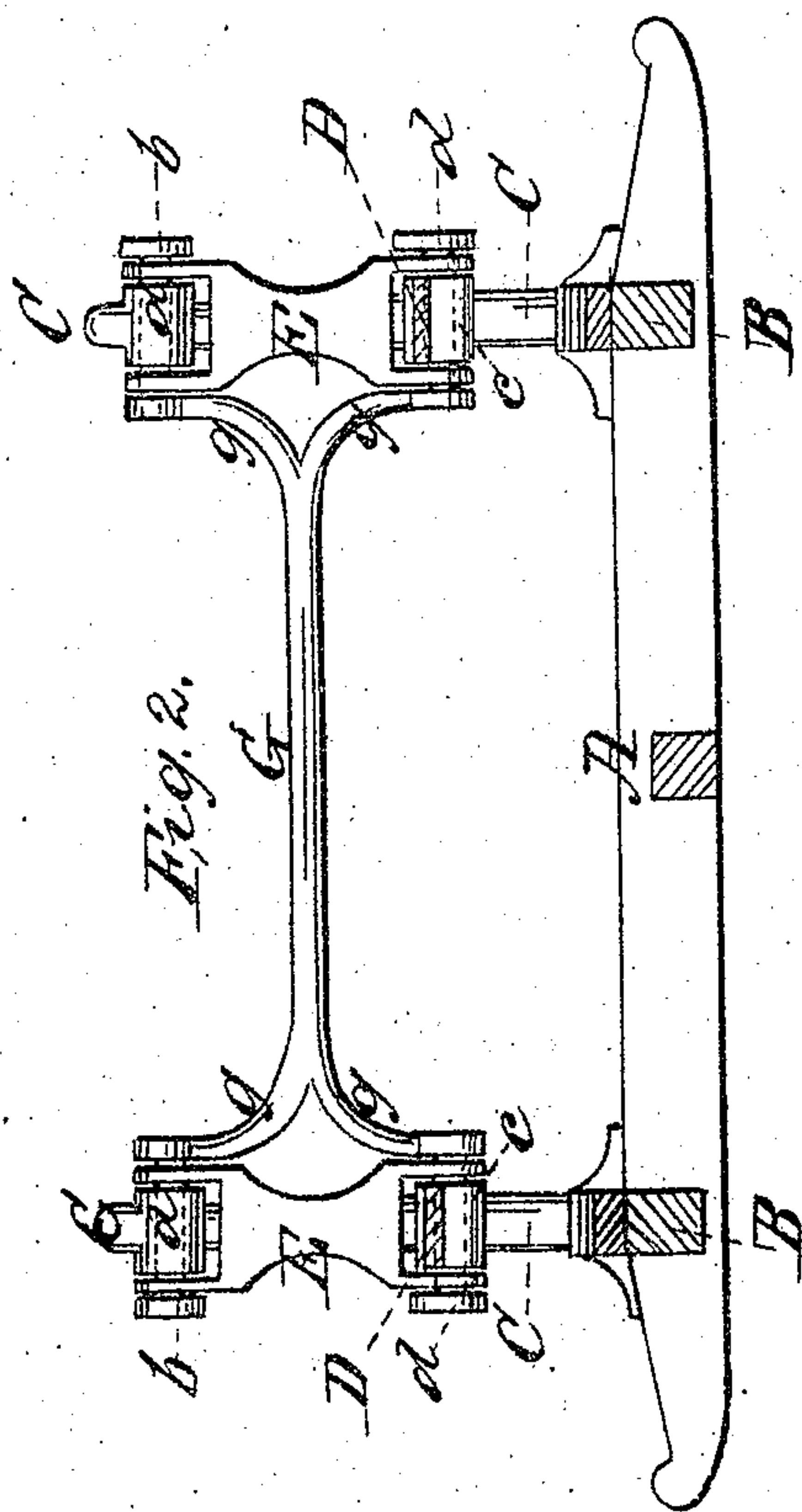


Fig. 2.



Witnesses:

J. W. Coombs  
R. S. Spencer

Inventor

C. C. Stringfellow  
& M. Surles  
per Munn & Co. Attorneys



# UNITED STATES PATENT OFFICE.

C. C. STRINGFELLOW AND D. W. SURLS, OF LUMPKIN, GEORGIA.

## MODE OF HANGING CARRIAGE-BODIES.

Specification of Letters Patent No. 31,134, dated January 15, 1861.

*To all whom it may concern:*

Be it known that we, C. C. STRINGFELLOW and D. W. SURLS, of Lumpkin, in the county of Stewart and State of Georgia, have invented a new and Improved Mode of Hanging Carriage-Bodies; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of the improved mode of hanging carriage bodies. Fig. 2 is an end view of the rear parts taken in a transverse vertical plane indicated by the red line  $x, x$ , in Fig. 1.

Similar letters of reference indicate corresponding parts in both figures.

This invention is a novel improvement in hanging carriage bodies on springs and from C shaped jacks or supports, whereby the body is allowed a free and easy vibration longitudinally and it is relieved from sudden and disagreeable jolts and jerks in traveling on rough roads, or from the sudden starting of the horse. The parts are also so braced and strengthened that all liability to twist the carriage body is effectually prevented.

The invention consists in the combination of transverse tie rods, with the side springs which are hung by shackle bars, or jointed links, from C shaped supports, as will be hereinafter fully explained.

To enable those skilled in the art to make and use our invention we will proceed to describe its construction and operation.

A, A, are the bolsters and B, B, are the perches of an ordinary buggy frame.

C, C, are two front C shaped iron loops or supports which are securely bolted to the side perches, and over the bolster at the points where the bolster is connected with the perches; and C', C', are two rear C shaped loops, which are similar to loops C, C, and similarly secured to the rear part of the frame. These C shaped loops C, C, and C', C', are not springs but serve as supports for the springs D, D, and the parts which are attached to and mounted on these springs D, D.

On the overhanging end of each loop support C, and C', is formed a transverse eye  $a$ , which will be seen by reference to Fig. 2 of the drawings, through which eyes  $a, a, a, a$ , bolts  $b, b, b, b$ , are passed which connect the upper ends of the shackle bars

E, E, E, E, to the ends of the aforesaid loops, and form joints which will allow the lower ends of bars E, to swing back and forth in a direction with the length of the vehicle. The lower ends of the swinging bars E, (these bars being all of the same length) are jointed to the ends of the semi-elliptic springs D, D, by means of eyes  $c, c, c, c$ , on the springs and bolts  $d, d, d, d$ , in a similar manner to the joints of the bars E, E, with the supports C, C'. The two springs D, D, on which the body of the vehicle rests are thus suspended over the frame A, B, from the overhanging ends of the stationary supports C, C, C', C', and these springs extend from the front to the rear supports on each side of the carriage body over the perches B, B, and a suitable distance above these perches. It will thus be seen that the springs D, D, are suspended in such a manner from the four supports C, C, C', C', that the body of the carriage which is mounted on said springs will be allowed to have a free swinging motion backward or forward, and in consequence of the springs being hung by the shackle bars E, E, E, E, these springs will also have an upward movement, in other words the ends of the springs in their longitudinal movement will describe circles concentric with the axis of their respective bolts  $b, b, b, b$ . The longitudinal movement of the two springs D, D, will therefore be regulated by the length of the shackle bars E, from joint to joint.

In uniting the shackle bars to the ends of the springs D, D, and the supports C, C, C', C', two tie bars G, G, with forked ends, one of which is shown in Fig. 2 of the drawings, are used for the purpose of bracing the supports C, C', and also the ends of the springs D, D, so as to prevent the swaying of the carriage body from twisting or bending the supports C, C', laterally. The forked arms  $g, g$ , of these tie bars G, G, have eyes formed on their ends; and the length of the bars G, is exactly equal to the spaces between the ends of the eyes  $a, a, a, a$ , so that when the bars are properly put in place their eyes will receive the bolts  $b, b, b, b$ , and the bolts  $d, d, d, d$ , and by means of these bolts the bars G, are securely attached at the joints of the supports C, C', and to the ends of springs D, D, so as to move with the shackle bars E, and serve as lateral braces or ties for the springs D, D, and the supports C, C, C', C'.

From this description it will be seen that when a load is put upon the two side springs D, D, the four shackle bars E, E, E, E, will hang perpendicularly over the bolsters or  
5 axles, and that when the vehicle is moving over rough roads the shackle bars will allow the body of the carriage to have a free and easy swinging motion which will counteract all unpleasant and injurious jars to the car-  
10 riage body, and carriage parts, at the same time the long springs D, D, will allow the carriage body to have an easy elastic motion.

We are aware that side springs have been used attached at their ends to the ends of  
15 C formed springs or rigid or stiff supports

by means of jointed links so that the carriage body will have a longitudinal motion, of the side springs, and we do not claim such as our invention. But

What we do claim as new and desire to 20 secure by Letters Patent, is:

The transverse ties G, G, arranged and operating substantially as and for the purposes specified.

C. C. STRINGFELLOW.  
D. W. SURLES.

Witnesses:

S. S. CATCHING,  
ROBERT W. WALTON.