

(No Model.)

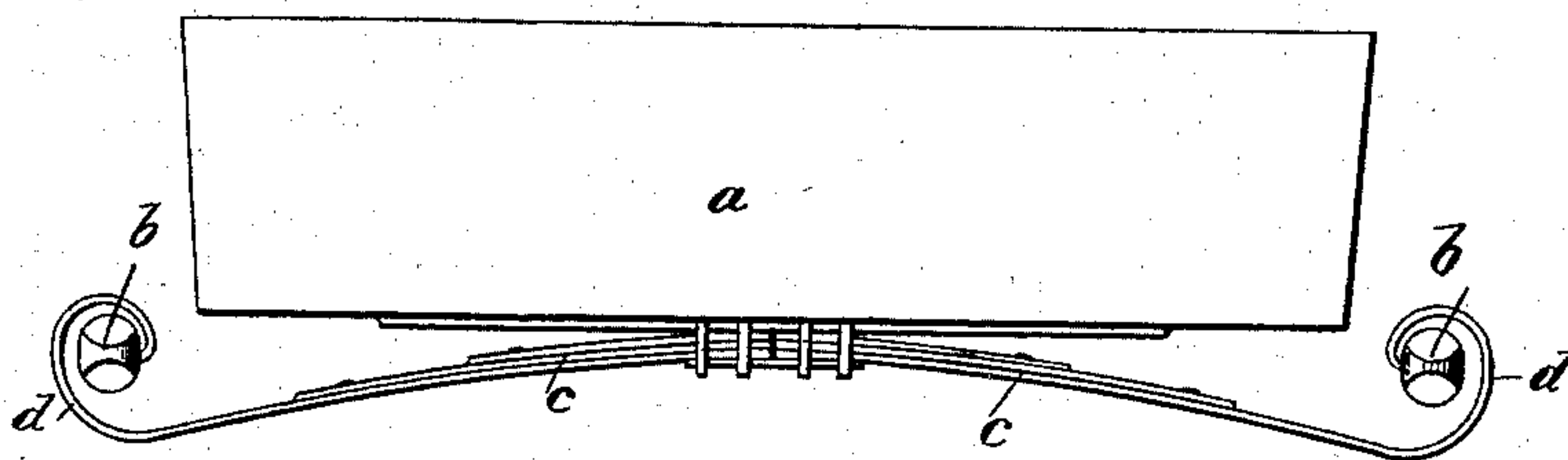
F. A. ISHAM.

BUGGY SPRING.

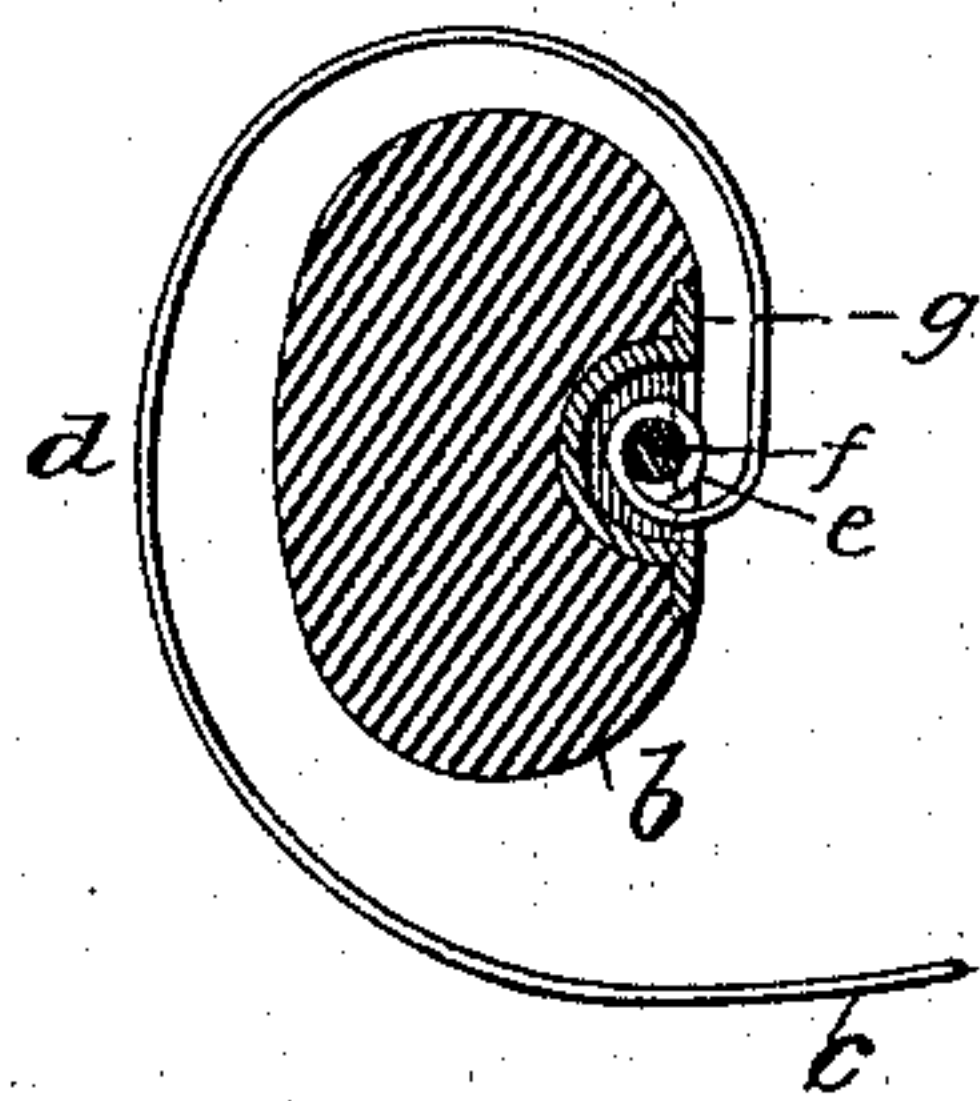
No. 261,926.

Patented Aug. 1, 1882.

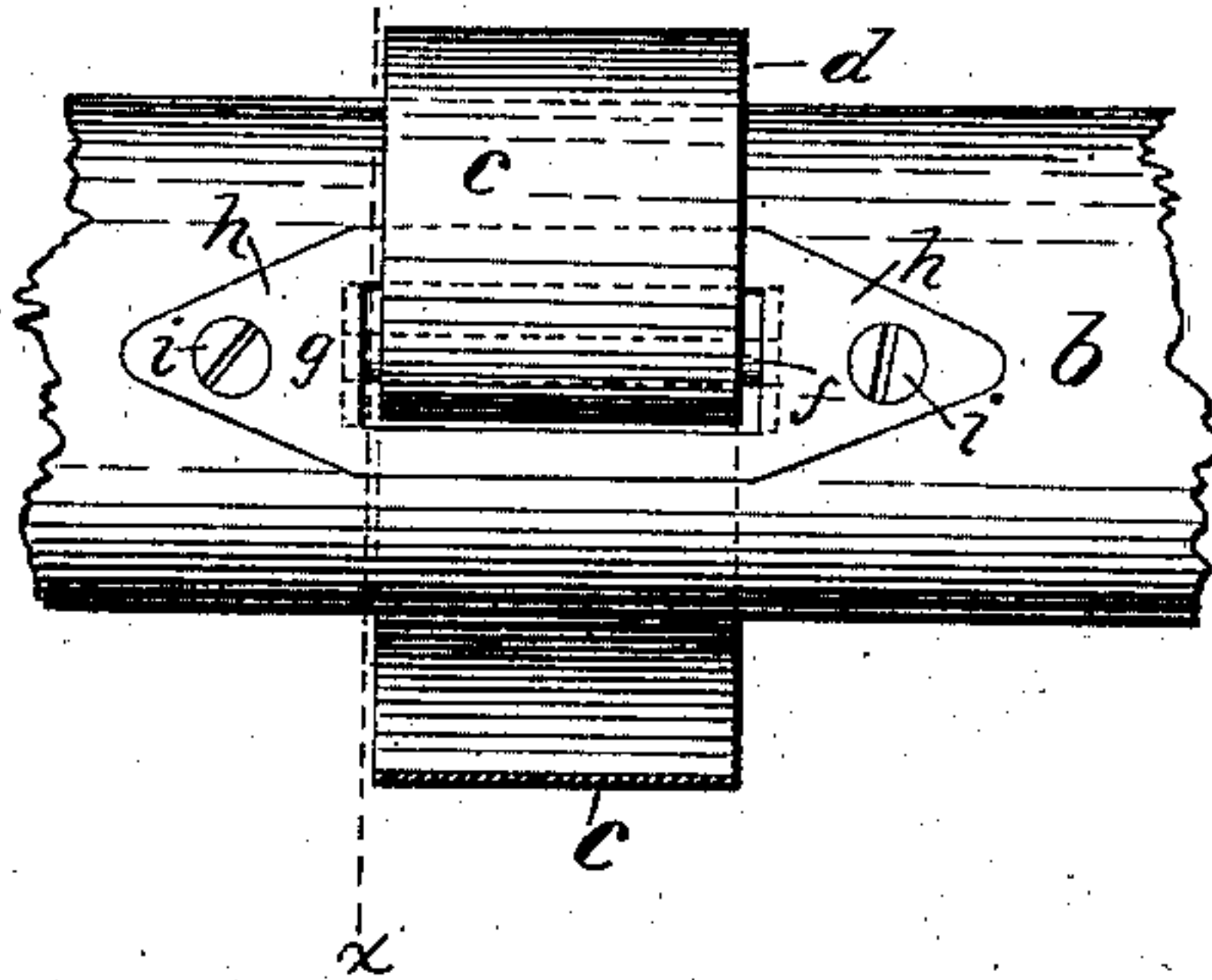
*Fig. 1.*



*Fig. 3.*



*Fig. 2.*



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# UNITED STATES PATENT OFFICE.

FREDERICK A. ISHAM, OF PLATTSBURG, NEW YORK.

## BUGGY-SPRING.

SPECIFICATION forming part of Letters Patent No. 261,926, dated August 1, 1882.

Application filed December 5, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK ASHUR ISHAM, a citizen of the United States, residing at Plattsburg, in the county of Clinton and State of New York, have invented certain new and useful Improvements in Buggy-Springs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention is in the nature of improvements in springs for buggies and other kindred wheeled vehicles, and has special reference to the construction and arrangement of the springs of that class of vehicles known in the market as "side-bar" vehicles.

My invention consists in attaching the springs transversely to the body, whence their ends curve downwardly and outwardly from the body below the side bars and are then curved upwardly over and above such bars, and are secured to the bars by sockets, so that I obtain in my construction the benefits and advantages of a practically volute spring, the resistance being both longitudinal and vertical.

My invention also consists in a socket or shackle composed of a shell for attachment to the side bars, and containing a pintle or bolt, to which the end of the spring is attached for securing the spring to the side bar.

In the drawings, in the several figures of which corresponding parts are similarly designated, Figure 1 is an end view of a side-bar wagon or buggy body, the springs, and side bars. Fig. 2 is a side elevation of a portion of a side bar, showing my socket or shackle and spring in position, and Fig. 3 is a cross-section on line *xx* of Fig. 2, these two latter figures being on a larger scale.

In practicing my invention, the body *a* and side bars, *b b*, may be of any approved construction. To the body, in any suitable manner, are secured the springs *c c*. I prefer to employ in a vehicle four springs, which may be divided half-springs of steel plates, and I bolt them transversely of the body. The lower plates of these springs have their ends curved or curled volutely, as at *d*, so as to encircle or partly encircle the side bars, *b b*, as shown,

said ends extending below the side bars and curling upwardly over and above the said bars. The extremities of these curled ends may be formed into cylinders *ee*. The preferred form of socket or shackle used to secure these springs to the side bars consists in a pin, *f*, secured in a shell, *g*. The pin or bolt *f* is adapted to receive the cylinder or eye *e* of the spring, and the shell containing such pin or bolt has ears or wings *h* with holes therein, by means of which fastening devices *i* are adapted to attach the socket or shackle in or upon the cross-bars, substantially as shown. I prefer to sink the sockets or shackles in the sides of the side bars next adjacent the body of the vehicle, so as to obtain a neat and durable attachment.

By my invention I obtain a longer spring by reason of such spring encircling the side bar, and a longer bearing under the body is thereby secured, so that the side motions of the body are prevented, and such body can be hung lower and nearer the reaches than by any other construction to me known.

By my volute form of spring I obtain resilient resistance to the load in the direction of the length of the spring and also vertically, thus increasing the power and durability of the spring, and producing a vehicle of very easy riding qualities.

What I claim is—

1. The springs *c c*, the side bars, *b*, and the shackles on said side bars for connecting the springs and side bars, combined and arranged substantially as shown and described.

2. The body of a vehicle and side bars therefor, combined with springs attached crosswise of such body and having their ends curved downwardly under and then upwardly over and around the side bars and attached to such side bars at points adjacent to and facing the sides of the body, substantially as described.

3. Sockets or shackles for securing the ends of side-bar vehicle-springs to the side bars, composed of a pintle or bolt adapted to receive the end of a spring and a shell or casing to sustain said pintle or bolt and adapted to be applied in or upon the side bars, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

Witnesses: F. A. ISHAM.

J. C. LAURENCE,  
F. W. GATES.