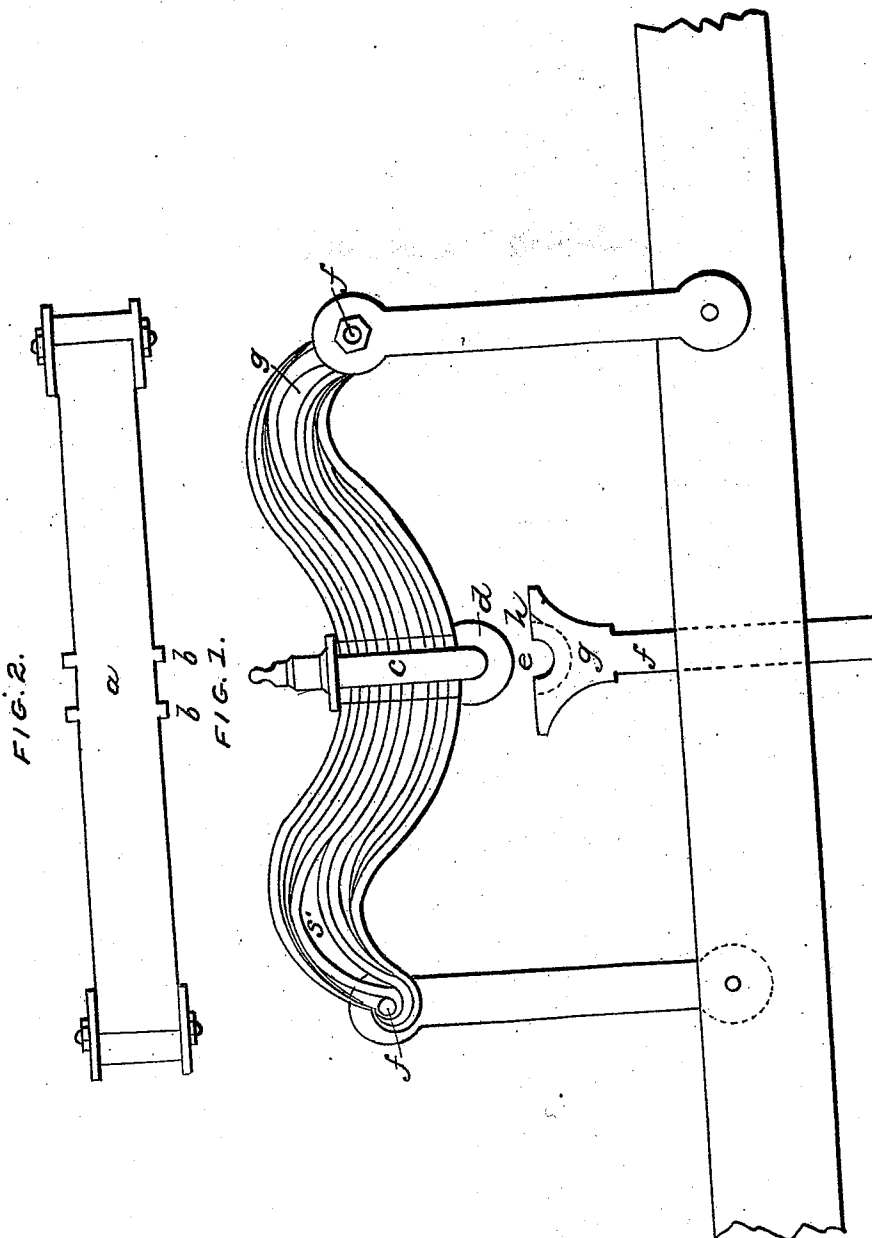


Spring for Locomotives, &c.

No. 605.



UNITED STATES PATENT OFFICE.

JOHANNES OBERHAUSSER, OF CHARLESTON, SOUTH CAROLINA.

METHOD OF MAKING THE SPRINGS FOR LOCOMOTIVE-ENGINES, RAILROAD-CARS, AND OTHER CARRIAGES.

Specification of Letters Patent No. 605, dated February 15, 1838.

To all whom it may concern:

Be it known that I, JOHANNES OBERHAUSSER, of the city of Charleston, in the State of South Carolina, have invented an improvement in the mode of making the springs for locomotive-engines, and which is also applicable to passenger-cars on railroads and other carriages; and I do hereby declare that the following is a full and exact description thereof.

Figure 1 in the accompanying drawing represents one of my springs as attached to the frame, or carriage, of an engine, or car; and Fig. 2, one of the leaves of which the spring is composed, detached from the series, for the purpose of showing the form of the middle part, where the straps are received which constitute the principal means of attaching the leaves together.

In constructing my spring the leaves are made without holes, or notches to receive corresponding checks or projections on those with which they are in contact, as usually practised. In Fig. 2, *a* is the center of one of the leaves, and *b, b*, are projecting jogs or shoulders on each side of the leaf, between which the straps are to be received which connect the springs at this part. In Fig. 1 they are shown as combined together, *c*, being the strap which passes between the jogs or shoulders *b, b*; the straps are drawn up by screw nuts at the upper ends. At their lower ends the straps are connected together by the piece *d*, which constitutes the under plate of said straps, upon which the lower leaf of the spring rests. The lower side of this connecting piece is finished so as to constitute a semicircular bearing *e*, running from side to side of the spring. A stout quadrangular slide *f*, passes through the carriage, the expanded head of which *g*, is hollowed out so as to adapt it to the curvature of the lower bearing, furnishing the means of vibrating play to relieve the spring in case of any sudden jolt; this curvature is considerably larger than that shown at *d*, and is represented by the dotted lines *h, h*, there being a shoulder at each side of the head *g*, to retain this curved bearing in place. The advantage of this kind of support over that commonly adopted will be manifest, as being much more firm and secure and tending more to keep the engines or cars, in equilibrium.

The number and dimensions of the leaves constituting the spring may be varied, and it may undergo other alterations without changing the characteristics by which it is distinguished. The following dimensions and general form and combination, are such as belong to a spring which I have constructed, and are given as furnishing a good general guide. The lowermost leaf is a scant inch in thickness, in the middle tapering regularly each way to scant three eighths at each end. The next three leaves are of the same thickness in the middle, and taper off in like manner to a scant quarter of an inch at the ends. Next is another larger leaf scant inch in the middle, and tapering to three eighths at the end. These leaves constitute what I denominate the lower portion of the spring, the leaves composing which are bent round at their ends, as shown at *f'*, Fig. 1; the leaves constituting the upper portion are so bent as to leave spaces *g, g*, between the two portions; an arrangement which I deem very useful, in rendering the spring more lively, although it is not absolutely necessary to it as it may be constructed in other respects upon the plan devised by me, without this division into two parts. The upper and lower leaves of the upper portion are of the same thickness with the lower leaf of the lower portion, (scant inch) and like that taken off to three eighths at their ends. Between these are three other leaves which are tapered off to a scant quarter of an inch, and are in their dimensions similar to the three so tapered in the lower portion. The leaves constituting the upper portion are curved at their ends, as shown at *h*. These leaves before being bent measure forty inches in length but when finished the spring is thirty inches long. The breadth of the leaves in the middle is four inches. The end curvatures by which the two portions are there combined, and interlocked, form a circle to receive the bolt, or pin which connects them with the straps, or standards, by which they are attached to the carriages.

What I claim as constituting my improvement is—

1. The manner of connecting the leaves of this spring by means of straps passing up between jogs or shoulders and secured by nuts, without the aid of mortises or notches,

and corresponding projections as usually employed.

2. I claim also, the mode of forming the center bearing of this spring, making it a
5 semicylinder, which is received into a corresponding cavity on the head of the slide, constructed and operating as above.

3. I likewise claim the manner of dividing it into two or more portions, connected and combined at their ends as set forth.

J. OBERHAUSSER.

Witnesses:

W. THOMPSON.
LINTON THORN.