J. R. LANTZ & T. L. MITCHELL.

Wagon-Axle.

No. 167,843. Patented Sept. 21, 1875.

Fig. 1.

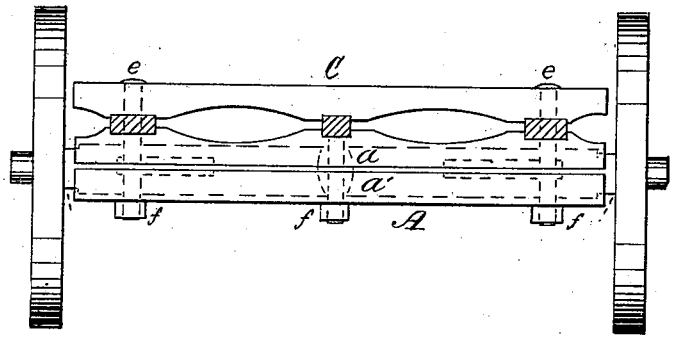


Fig. 2.

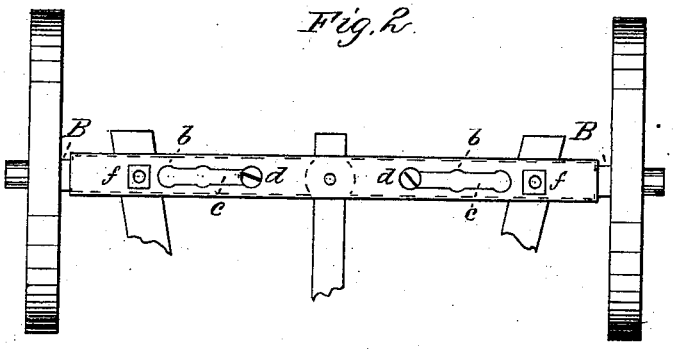


Fig. 3.

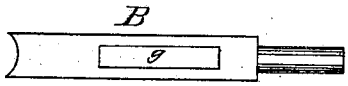
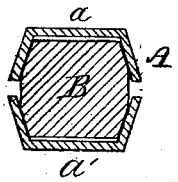


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE

JOSEPH R. LANTZ AND THOMAS L. MITCHELL, OF MARROWBONE, ILL.

IMPROVEMENT IN WAGON-AXLES.

Specification forming part of Letters Patent No. **167,843**, dated September 21, 1875; application filed July 21, 1875.

To all whom it may concern:

Be it known that we, JOSEPH R. LANTZ and THOMAS L. MITCHELL, of Marrowbone, in the county of Moultrie and State of Illinois, have invented a new and valuable Improvement in Adjustable Axles; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a side view of my invention. Fig. 2 is a view showing the under side of the axle and box. Fig. 3 is a detached view of one of the axle-sections. Fig. 4 is an end sectional view, on an enlarged scale, of the box and axle.

This invention relates to extension or adjustable axles for wagons or other vehicles; and consists in a divided axle of octagonal shape, its sections fitting in a hexagonally-formed sectional box, by which construction the axle-sections may be locked in place, after being adjusted to the desired gage of treads, by tightening up of the box upon the axle; also additionally securing it by set-screws upon the ends of the axle-sections, working in elongated slots formed in the upper section of the box, as will be hereinafter more fully set forth.

In the drawings, A represents the box, of any suitable metal, but preferably of malleable cast-iron, and is formed in two sections, *a a'*, the side pieces flaring outwardly sufficiently to correspond when together with the flaring sides of the octagonal-shaped axle-sections B. The upper section *a* of the box A is formed with elongated slots *b* and shoulders *c*, against which the heads of suitable set-screws *d* abut to prevent them from sliding or moving in the slots when screwed down, the set-screws being secured to the ends of the axle-sections B. Headed bolts or rods *e* connect the frame C to the box, and also serve as clamps to bring together, and tighten up, the sections *a a'* upon the axle-sections B by screw-nuts *f*.

The axle-sections B, when of octagonal form, together with the hexagonal-shaped sectional box A, as described, prevent the possibility of any rattling of the axle-sections within the box, as the box-sections *a a'* are firmly held and clamped around the axle by the clamping-rod *e*.

To admit a free lateral adjustment of the axle-sections B within the box, they are formed with elongated slots *g*, for the passage of the bolts or rods *e*.

In place of the set-screws *d* a right-and-left hand screw-rod may be employed, connected to the lower section of the box, and parallel thereto, while the ends of the axle-sections are provided with downwardly-projecting plates with screw-threaded openings, into which the right-and-left handed screw-rod works in adjusting the axle-sections within the box.

The construction is very simple, adding no material cost to the manufacture of vehicles, and the operation of adjusting and setting the axle-sections requires but a moment's time, it only being necessary to loosen the screw-nuts *f* sufficiently to relieve the pressure of the sections *a a'* upon the box B, and raise the set-screws *d*, when the axle-sections may be easily adjusted within the box to the required distance, after which the nuts *f* are screwed back in place, and the set-screws turned down until their heads are seated against the shoulders *c* of the elongated slots *b*.

Having now fully described the construction and operation of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The octagonal-shaped axle-sections B, in combination with the hexagonal box A, formed in sections *a a'*, and bolt or rod *e*, for tightening and clamping the sections upon the axle, substantially as specified.

2. The hexagonal box A, composed of the sections *a a'*, the latter having slot *b* and shoulders *c*, in combination with the octagonal axle-sections B and set-screw *d*, substantially as and for the purpose set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JOSEPH R. LANTZ.
THOMAS L. MITCHELL.

Witnesses:
LOUIS A. HALE,
BENJAMIN JONES.