J. BOWDEN.

Clip for Vehicle-Spring.

No. 207,005. Patented Aug. 13, 1878.

Fig 1.

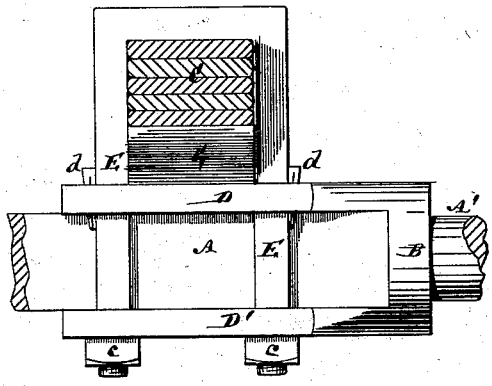


Fig 2.

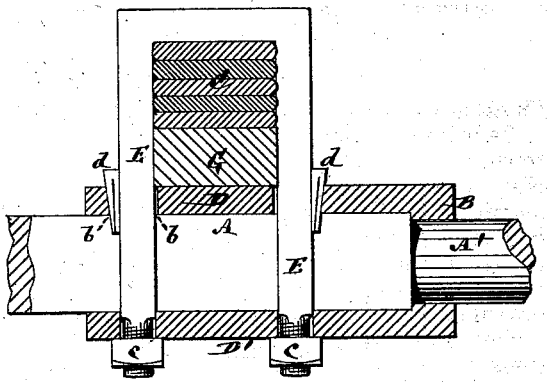
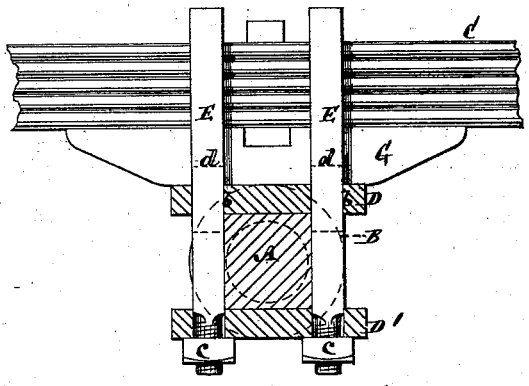


Fig 3.



Witnesses,

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JOHN BOWDEN, OF NEWTOWN, NEW YORK.

IMPROVEMENT IN CLIPS FOR VEHICLE-SPRINGS.

Specification forming part of Letters Patent No. **207,005**, dated August 13, 1878; application filed May 9, 1878.

To all whom it may concern:

Be it known that I, JOHN BOWDEN, of Newtown, in the county of Queens and State of New York, have invented certain new and useful Improvements in Means of Attaching Springs to Axles of Wagons and other Vehicles, of which the following is a description, reference being had to the accompanying drawing, forming part of this specification.

This invention consists in certain combinations of details, in which the collar of the axle against which the wheel of the vehicle works is shrunk on the axle, and has combined with it one or more plates, through which the clips that hold the springs supporting the body of the vehicle are passed, thus making the means which secure the springs, or certain of said means, an integral portion of the axle, whereby the springs are more securely held in place, and by a combination of wedges with one of said plates the springs and blocks on which the springs rest are still more securely clamped, and other advantages are obtained.

Figure 1 represents a side view of one end portion of a wagon-axle in part, with one of the springs on which the body of the vehicle rests in section, and my improved means of attaching said spring applied to the axle. Fig. 2 is an irregular sectional view of the same in direction of the length of the axle, and Fig. 3 a transverse section thereof.

A is the square or body portion of the axle, and A′ its one journal or trunnion end, on which the wheel or axle-box of the latter rotates. B is the axle-collar for the wheel on the inner end of the journal A′. This collar, instead of being independent, as heretofore, of the means by which the spring C is attached to the axle, I forge in one piece with an upper plate, D, and also preferably with a lower plate, D′, applied to the square or body portion of the axle in direction of the length of the latter, and shrink the collar with its attached plate or plates onto the axle. Said plates constitute a portion of the means by which the spring C is attached to the axle, and by the union of the collar B with said plates, or more especially with the plate D, which rests on the upper side of the axle, and the shrinkage of said collar on the axle, a permanent security is obtained for the spring against movement of it in direction of the length of the axle.

The plate D, which may be of any desired length, and of a width so as to extend beyond or over the sides of the axle, has slots *b b* in it for the legs of the clips E E, which secure the spring C, to pass through. Said plate D gives a broad bearing for the block G, on which the spring directly rests, to lie on, and so enables a spring-block made of wood to be used without impairing its durability or exposing it to liability of being cut. The legs of the clips E E also pass through the lower plate, D′, and are secured by nuts *c c* below; but this lower plate might be dispensed with and ordinary independent clip-plates be substituted.

To give increased stability to the spring in its attachment to the axle, keys or wedges *d d*, which are preferably split, are inserted through the slots *b b* on the outside of the staples, and serve to securely clamp or bind the staples tightly against the spring C and block G, on which the spring rests.

I claim—

1. The combination, with the axle A A′ and collar B, shrunk thereon, of one or more plates applied to the axle and attached to or forged in one piece with said collar, and constructed to receive through it or them the clips which hold the spring that supports the body of the vehicle, substantially as specified.

2. The combination of the spring-supporting block G with the plate D and collar B, formed in one piece with said plate and shrunk on the axle, essentially as described.

3. The wedges *d d*, in combination with the slotted plate D, the collar B, formed in one piece with said plate and shrunk on the axle, the clips E E, and the block G, on which the vehicle-spring rests, substantially as specified.

JOHN BOWDEN.

Witnesses:
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