(No Model.)

B. W. JUSTICE & W. A. JOHNSTON.

VEHICLE AXLE.

No. 598,786. Patented Feb. 8, 1898.

Fig. 1.

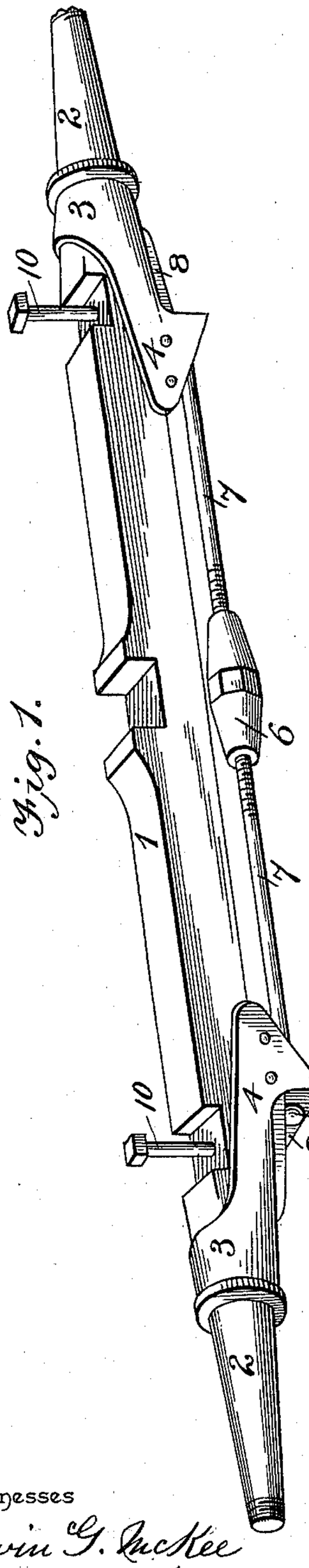


Fig. 2.

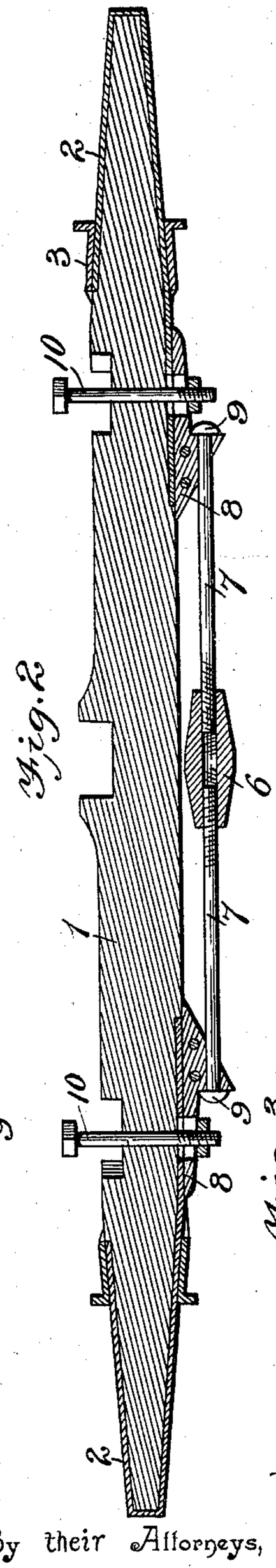


Fig. 4.

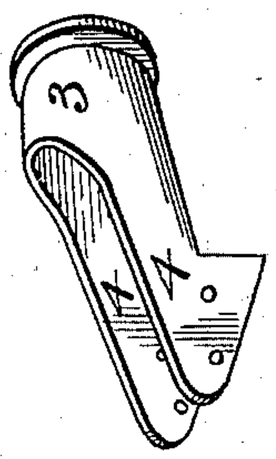
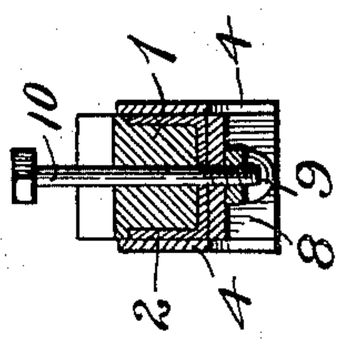


Fig. 3.



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UNITED STATES PATENT OFFICE.

BERNARD W. JUSTICE AND WILLIAM A. JOHNSTON, OF NARROWS, VIRGINIA.

VEHICLE-AXLE.

SPECIFICATION forming part of Letters Patent No. 598,786, dated February 8, 1898.

Application filed June 9, 1897. Serial No. 640,014. (No model.)

To all whom it may concern:

Be it known that we, BERNARD W. JUSTICE and WILLIAM A. JOHNSTON, citizens of the United States, residing at Narrows, in the county of Giles and State of Virginia, have invented a new and useful Vehicle-Axle, of which the following is a specification.

The invention relates to improvements in vehicle-axles.

The object of the present invention is to improve the construction of vehicle-axles and to provide a simple, inexpensive, and efficient device which will be capable of supporting an axle and enabling the same to withstand heavy strains.

A further object of the invention is to provide such a device which will be adapted to be readily applied to broken or injured axles to enable the same to be used without further repairing and to obviate the necessity of providing a new axle.

The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a vehicle-axle constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view. Fig. 4 is a detail perspective view of one of the sleeves.

Like numerals of reference designate corresponding parts in the several figures of the drawings.

1 designates an axle consisting of a wooden body and provided at its ends with skeins 2, secured to the axle and receiving sleeves 3, which form the collars or shoulders of the spindles of the axle. The collars consist of annular flanges or enlargements of the outer edges of the sleeves 3, and the latter, which are tapered to conform to the configuration of the axle-skeins, engage the inner tapering portion thereof and snugly embrace the same.

Each sleeve 3 is provided with a pair of arms 4, located at opposite sides of the axle and connected by an adjusting device which is adapted to strain the parts to any desired tension, whereby the axle is firmly supported. The adjusting device comprises a central turnbuckle 6, having right and left hand threaded openings, and rods 7, having their inner ends correspondingly threaded and fitting in the threaded openings of the turnbuckle. The outer ends of the rods pass through perforations of blocks 8 and are provided with heads 9 to engage shoulders thereof. The blocks 8, which are oppositely tapered, as shown, fit against the lower face of the axle and are secured between the arms 3 by rivets or other suitable fastening devices. They are also supported by bolts 10, which pass through the axle and which are employed for securing the hounds to the same. The blocks 8 and the axle-skeins are provided with elongated openings to receive the bolts 10 in order that the latter may not interfere with the adjustment of the parts.

The turnbuckle is designed to be provided with a central polygonal portion or wrench-seat, and it is capable of rotation to strain the parts to the desired tension, and it forms, with the blocks, rods, and sleeves, a perfect support for the axle. This support is adapted to be applied to an ordinary axle should it become broken or strained, and it will brace such an injured axle, so that it may be used for hauling loads as heavy as those hauled before it was broken.

It will be seen that the device is simple and comparatively inexpensive in construction, that it is adapted to be readily applied to that class of axles which consist of a wooden body and metal skeins, and that it will afford a firm support for the same. It will also be clear that it may be readily applied to such an axle after the same has been broken or otherwise injured, and that when so applied the axle will be capable of sustaining as great a weight as it could before it was broken.

What we claim is—

1. The combination with an axle, of axle-skeins tapering toward their outer ends and fitting on the ends of the axle, the tapering sleeves fitting on the inner portions of the skeins, forming collars for the same and engaging the said skeins detachably, said sleeves being provided with integral inwardly-extending arms, and an adjustable device connecting the arms of the sleeves, whereby the latter and the skeins are retained on the axle, substantially as described.

2. In a device of the class described, the

combination with an axle provided with tapering skeins, of tapering sleeves arranged on the inner portions of the skeins, engaging the same and forming collars for them, said sleeves being provided with arms arranged in pairs at opposite sides of the axle and depending below the same, blocks located below the axle and secured between the depending portions of the arms, and an adjusting device connecting the blocks, substantially as and for the purpose described.

3. In a device of the class described, the combination with an axle, of tapering skeins arranged on the ends of the axle, the tapering sleeves engaging the inner portions of the skeins and retaining the latter on the axle, said sleeves being provided with inwardly-extending arms arranged in pairs and depending below the axle, blocks arranged on the lower face of the axle, secured between the depending portions of the arms and provided with longitudinal slots, bolts mounted on the axle and arranged in the slots, rods disposed longitudinally of the axle and passing through perforations of the blocks and engaging the same, and means for connecting the rods, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

BERNARD W. JUSTICE.
WILLIAM A. JOHNSTON.

Witnesses:
C. J. FRENCH,
J. A. PAINTER.