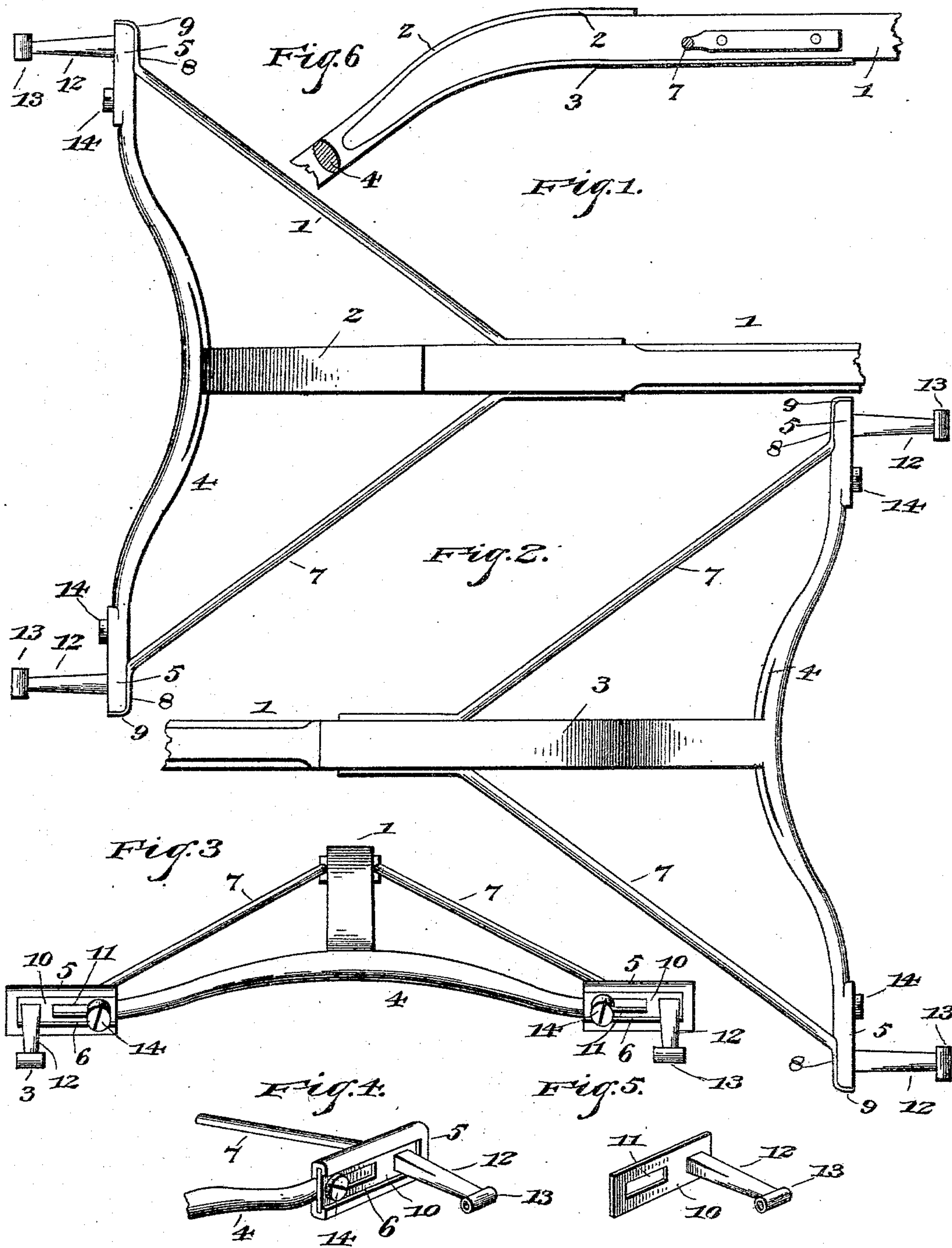


(No Model.)

A. STAIR.  
VEHICLE POLE COUPLING.

No. 515,451.

Patented Feb. 27, 1894.



Witnesses  
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# UNITED STATES PATENT OFFICE.

ADAM STAIR, OF MOUNT EATON, OHIO.

## VEHICLE-POLE COUPLING.

SPECIFICATION forming part of Letters Patent No. 515,451, dated February 27, 1894.

Application filed May 12, 1893. Serial No. 473,989. (No model.)

*To all whom it may concern:*

Be it known that I, ADAM STAIR, a citizen of the United States, residing at Mount Eaton, in the county of Wayne and State of Ohio, have invented a new and useful Adjustable Pole-Coupling, of which the following is a specification.

This invention relates to improvements in adjustable pole couplings, and has for its object to provide shiftable poles for vehicles that can be used in connection with either wagons or sleighs or with vehicles of different widths. Devices of this class have been used more or less in the art, but owing to inherent defects they have not become universally employed, and the essential feature of the present invention is to cure these defects as much as possible, and to also make a device of the nature set forth as nearly practicable as possible.

The object of the present invention, also, is to provide an improved construction that will permit of a ready attachment and detachment as well as adjustment, and also to strengthen the parts of the pole-connections or couplings.

With these and other objects in view, the invention consists of the construction and arrangement of the parts thereof as will be hereinafter more fully described and claimed.

In the drawings: Figure 1 is a top plan view of a vehicle pole and its connections embodying the invention. Fig. 2 is a bottom plan view of the same. Fig. 3 is a rear end elevation. Fig. 4 is a detail perspective view of a part of the device. Fig. 5 is a detail perspective view of one of the stub thill-irons and its connected shoe. Fig. 6 is a detail sectional view showing the forwardly projecting curved arms of the curved cross-bar.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

Referring to the drawings, the numeral 1 designates the pole or tongue, which may be provided with a whiffle-tree and singletrees, as may be found desirable. At its rear end the said pole or tongue is held between a pair of forwardly-projecting curved arms 2 and 3, respectively bearing upon the upper and lower sides thereof and secured thereto, the said arms extending from the center of a curved cross-bar 4, having its opposite ends flattened and provided with upper and lower parallel

overhanging or grooved guides or flanges 5, to form seats 6, for a purpose which will be more fully hereinafter referred to. Secured to the opposite sides of the pole or tongue are the front ends of a pair of rearwardly-diverging braces 7, whose extreme rear ends are flattened, as at 8, and bear against the front outer end-portions of the seats 6, and are turned over, as at 9, to form outer end closures for the said seats 6.

Within the seats 6 are adjustably mounted shoes 10, that consist of flat plates of metal having slots 11 therein, and formed therewith or connected thereto are stub thill-irons 12, having rear coupling-sleeves or heads 13, as the case may be. Engaging the slots 11, and extending into the seats 6, are set-screws 14, by means of which the shoes 10 are held in their adjusted position as well as the stub thill-irons carried thereby.

The operation will be readily understood. In changing the pole from a wagon or carriage to a cutter, or vice versa, the set-screws 14 will be loosened and the shoes 10 moved either inwardly or outwardly to accommodate the width of the thill couplings; or if it is desired to make the coupling directly with a cutter or sleigh, the shoes are moved inwardly toward each other and the set-screws again tightened.

The device as herein set forth is also useful in adjusting the pole to one side or the other of a cutter or sleigh to compensate for drifts or grades and to bring the horses nearer one side than the other for evident purposes.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having described the invention, what is claimed as new is—

1. In a pole or tongue coupling, the combination of a rear cross-bar having forwardly-projecting arms secured to the pole or tongue, and the opposite ends flattened and provided with upper and lower grooved guides or flanges, a pair of braces secured to the pole or tongue at their front ends and extended rearwardly and bent over the ends of the said guides to form closures for the same, slotted shoes mounted in said guides or flanges fitting in the grooves thereof and carrying rear-



wardly-projecting stub thill-irons having rear connecting ends, and set-screws adjustably engaging the said slotted shoes, substantially as described.

5 2. In a pole or tongue coupling, the combination of a rear cross-bar having seats at the opposite ends thereof provided with upper and lower grooved guides or flanges, a pair of  
10 ably mounted in the said seats and fitting in

the grooves thereof and having rearwardly-extending stub thill-irons, and set-screws engaging said shoes, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 15 the presence of two witnesses.

ADAM STAIR.

Witnesses:

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SAMUEL D. COULTER.