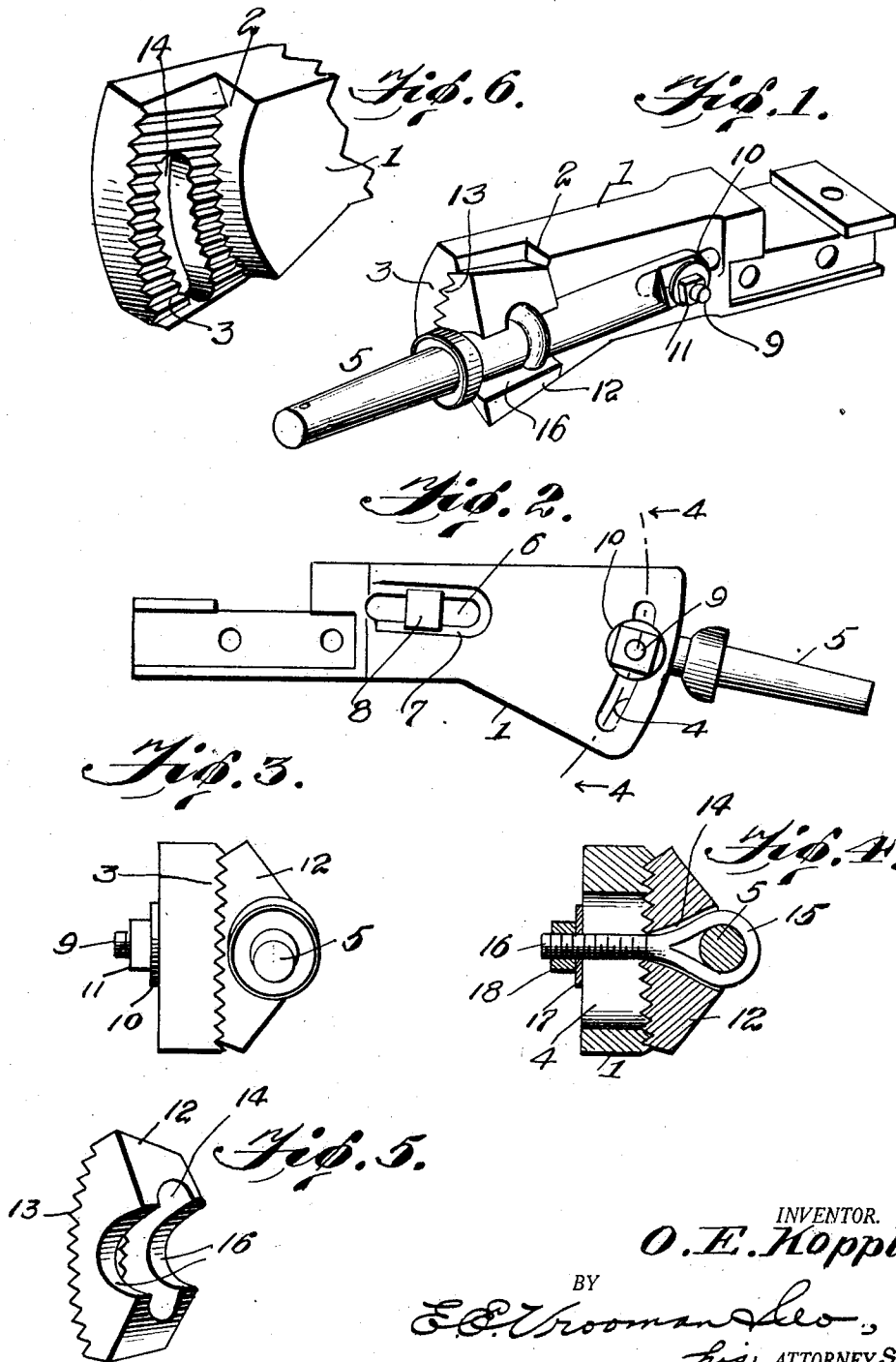


O. E. KOPPLIN.
STUB AXLE ADJUSTMENT DEVICE.
APPLICATION FILED FEB. 3, 1921.

1,396,128.

Patented Nov. 8, 1921.



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UNITED STATES PATENT OFFICE.

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STUB-AXLE ADJUSTMENT DEVICE.

1,396,128.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, OTTO E. KOPPLIN, a citizen of the United States, residing at Marion, in the county of Guadalupe and State of Texas, have invented certain new and useful Improvements in Stub-Axle Adjustment Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a stub-axle adjustment device, and the object of the invention is the construction of a simple and efficient stub-axle structure, whereby the stub-axle can be efficiently adjusted in a vertical plane, as well as in a transverse plane with respect to the machine.

With this and other objects in view, my invention comprises certain novel combinations, constructions and arrangements of parts as will be hereinafter described, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims.

In the drawings:

Figure 1 is a perspective view of a device constructed in accordance with the present invention, while

Fig. 2 is a view, in elevation, of the same device, looking at the back thereof.

Fig. 3 is an end view of the device.

Fig. 4 is a sectional view, taken on line 4-4, Fig. 2, and looking in the direction of the arrows.

Fig. 5 is a perspective view of the adjustable plate.

Fig. 6 is a fragmentary, perspective view of the frame, showing the toothed face.

Referring to the drawings by numerals, 1 designates the frame which constitutes a part of an agricultural machine, such as a sulky plow. The frame 1 is reduced, at 2, and is provided with a toothed face 3. In the toothed face 3 is an elongated, vertically-extending aperture 4; this aperture 4 is slightly curved for permitting the vertical adjustment of the stub-axle 5, as hereinafter explained. In the frame 1 is a longitudinally-extending, elongated, aperture 6, which aperture 6 is at right angles to the aperture 4. In the rear face of the frame 1 is formed a groove or socket 7, Fig. 2, in which the head 8 of the bolt 9 is seated. The bolt 9 extends through the inner end of the stub-axle 5, and on the bolt 9 is a washer 10 and a nut 11.

The adjustable plate 12 is provided with a toothed face 13 adapted to engage the toothed face 3 of the frame 1. This plate 12 is provided with an elongated, longitudinally-extending aperture 14 in which the eye 15 of the eye-bolt 16 is seated, Fig. 4. The plate 12 is also provided with a socket 16 in which rests the stub-axle 5. A washer 17 and a nut 18 are placed upon the bolt 16 for retaining the plate 12 in an adjustable position upon the toothed face 3, and also for retaining the stub-axle in an adjusted position upon the plate 12.

By adjusting plate 12 vertically on the frame 1, the stub-axle 5 can be raised and lowered, and by loosening nut 18, the axle 5 can be adjusted through the eye 15 to different positions, transversely of the plate 12 and longitudinally of the frame 1.

By means of my device, the stub-axle can be adjusted to a nicety, and held securely in an adjusted position by tightening the parts of the device through the medium of the nuts and bolts employed, as specified.

While I have described the preferred embodiment of my invention, and have illustrated the same in the accompanying drawings, certain minor changes or alterations may appear to one skilled in the art to which this invention relates, during the extensive manufacture of the same and I, therefore, reserve the right to make such alterations or changes as shall fairly fall within the scope of the appended claims.

What I claim is:

1. In a device of the class described, the combination of a frame provided with a vertically-extending aperture near its outer end and with a longitudinally-extending aperture intermediate its ends, a bodily movable stub-axle upon said frame, and means engaging the stub-axle and positioned in said apertures for retaining the stub-axle in adjusted positions.

2. In a device of the class described, the combination of a frame provided with a pair of elongated apertures arranged at an angle to each other, a stub-axle engaging said frame, means in said aperture securing the stub-axle to the frame, and said securing means being adjustable in the apertures for retaining the stub-axle in a vertically-adjustable position with reference to the frame and in a longitudinally-adjusted position with reference to said frame.

3. In a device of the class described, the combination of a frame, a plate on said frame, a stub-axle extending across said plate, and means on said frame and said
5 plate for permitting the stub-axle to be adjusted across the plate and retained in an adjusted position upon the plate and frame.

4. In a device of the class described the combination of a frame, an adjustable plate
10 on said frame, a stub-axle on the frame and plate, and means on the frame and plate for permitting the stub-axle to be adjusted transversely of the plate and to be retained in an adjusted position upon the plate.

15 5. In a device of the class described, the combination of a frame, an adjustable plate on said frame, an eye-bolt extending through said plate and frame, a stub-axle on said plate and extending through the eye-bolt,
20 and means on the frame and engaging said stub-axle for fastening the same in an adjusted position.

6. In a device of the class described, the combination of a frame, a plate on said
25 frame, said plate provided with an axle-receiving socket, a stub-axle in said socket, and means surrounding the stub-axle and extending through the plate and the frame for retaining the axle in a fixed position
30 upon the plate.

7. In a device of the class described, the combination of a frame, a plate on said frame, said plate provided with an axle-receiving socket and with an elongated aperture,
35 an eye-bolt in said elongated aperture, a stub-axle in said socket and extending through said eye-bolt, and means on the

frame for retaining the axle in an adjusted position upon the plate.

8. In a device of the class described, the
40 combination of a frame, a stub-axle engaging said frame, means on the frame for vertically adjusting the axle and securing the same in different vertical positions with reference to the frame, and means on the frame
45 and engaging said axle for permitting adjustment of the axle longitudinally of the frame and securing the same in different positions with reference to the longitudinal axis of the frame.
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9. In a device of the class described, the combination of a frame provided near its outer end with a vertically-extending elongated aperture, an adjustable plate on said frame and provided with an elongated aperture registering with the vertically-extending
55 aperture of the frame, said plate provided with an axle-receiving socket, an eye-bolt having its eye registering with the socket of the plate being positioned in the elongated aperture of the plate and in the vertically-extending aperture of the frame, a bodily movable stub-axle in said socket and extending through the eye of the bolt, a nut
60 on the bolt and pressing against the frame for causing the eye of the bolt to tightly grip the stub-axle and retain the same in the socket, and fastening means carried by the frame and engaging the stub-axle near its inner end.
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In testimony whereof I hereunto affix my signature.

OTTO E. KOPPLIN.