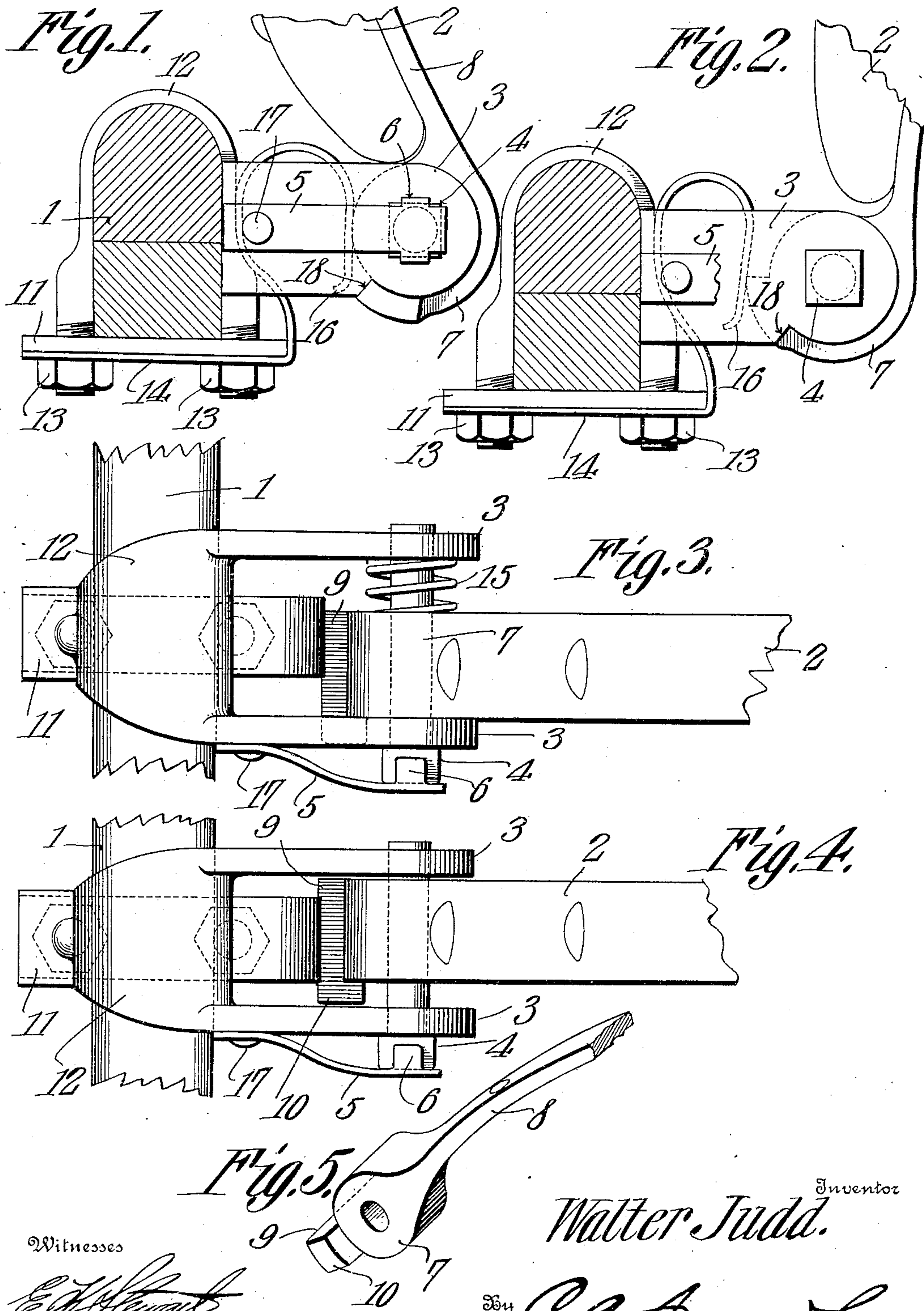


W. JUDD.
THILL SUPPORT.
APPLICATION FILED JAN. 6, 1909.

930,187.

Patented Aug. 3, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

WALTER JUDD, OF EUREKA, CALIFORNIA, ASSIGNOR OF ONE-THIRD TO JOSEPH LONG AND ONE-THIRD TO WARREN B. RIGBY, BOTH OF EUREKA, CALIFORNIA.

THILL-SUPPORT.

No. 930,187.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WALTER JUDD, a citizen of the United States, residing at Eureka, in the county of Humboldt and State of California, have invented a new and useful Thill-Support, of which the following is a specification.

The objects of the invention are, generally, the provision, in a merchantable form, of a device of the above mentioned class, which shall be inexpensive to manufacture, facile in operation, and devoid of complicated parts; specifically, the provision of a thill support of novel and improved construction, and of novel means for mounting and operating the same; other and further objects being made manifest hereinafter, as the description of the invention progresses.

The invention consists in the novel construction and arrangement of parts hereinafter described, delineated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that divers changes in the form, proportions, size, and minor details of the structure may be made, without departing from the spirit, or sacrificing any of the advantages of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings.

In the accompanying drawings:—Figure 1 is a side elevation of my invention, showing the thills uplifted and retained in position thereby; Fig. 2 is a side elevation, showing the thills lowered and in the position which they will assume when the vehicle is in use; Fig. 3 is a top plan, the parts being in the position shown in Fig. 2; Fig. 4 is a top plan of a modified form of my invention; Fig. 5 is a detail perspective of the bearing 7 and its auxiliary parts.

In the accompanying drawings, the numeral 1 denotes the axle of a vehicle, and the numeral 2 the thills thereof. A U-shaped clip 12 is provided, from which extend arms 3, spaced apart and provided near their terminals with aligned apertures through which is passed a bolt 4. Upon the exterior of one of the arms 3 is mounted a spring clip 5, having one of its terminals rotatably mounted upon one of the arms 3 by means of a pin

17, or like device. The free terminal of the spring clip 5 is provided with inturned tongues 6, arranged to engage the terminal of the bolt 4. Journaled for rotation upon the bolt 4 is a bearing 7, of less width than the space between the arms 3, and provided with an arm 8, upon which one side of the thills 2 is mounted. The bearing 7 is provided with a horizontally disposed shoulder 9, having a terminal portion 10 outwardly extended beyond the end of the said bearing.

The terminals of the U-shaped clip 12 are threaded and arranged to receive nuts 13. A plate 11 is transversely mounted upon the terminals of the U-shaped clip 12, and, with the nuts 13, provides a means whereby the device may be clamped to the axle of a vehicle. A spring 14 is shown, which, roughly speaking, takes the shape of the numeral "2." The base of this spring 14 is preferably interposed between the nuts 13 and the plate 11, the free terminal of the said spring 14 being carried upward, brought into contact with one of the arms of the U-shaped clip 12, and downturned between the arms 3 into contact with the bearing 7. As denoted by the numeral 16, the extremity of the spring 14 is backbent to receive the member 9 when the device is moved from the position shown in Fig. 1 to that shown in Fig. 2. A resilient element 15 is disposed about the bolt 4, having one of its terminals in contact with one of the arms 3, and its other terminal in contact with the bearing 7. The lower edge of one of the arms 3 is notched to form a shoulder 18, arranged to engage the terminal 10 of the shoulder 9, as hereinafter described.

Let it be supposed that the parts are in the position shown in Fig. 2; then the operation of the same is as follows:—When the draft animal has been removed from between the thills, the thills are then upturned into the position shown in Fig. 1. As the thills move upward, the shoulder 9 will move downward, freeing itself from the action of the spring 14, the end of the member 10 abutting against and bearing upon the inner face of one of the arms 3 in the operation. When the terminal 10 has passed the shoulder 18, the spring 15 will cause the bearing 7 to move laterally, forcing the terminal 10 of the shoulder 9 outward and into engagement with the shoulder

18. It will thus be seen that when the terminal 10 of the shoulder 9 is in engagement with the shoulder 18 of the arm 3, the thills will be retained in an upturned position and out of the way. When it is desired to release the thills and to lower them, manual pressure is applied, compressing the spring 15, and permitting the terminal 10 to move out of engagement with the shoulder 18, whereupon the thills may be dropped.

It will be seen that when the thills are lowered and in use, the shoulder 9 bears against the terminal of the spring 14, increasing the efficiency of the said spring 14, as an anti-rattling means. When, however, the thills are upturned into the position shown in Fig. 1, the shoulder 9 is free from the spring 14, thereby giving the said spring 14 opportunity to recuperate, and, at the same time, rendering it easy to start the downward motion of the thills 2.

In Fig. 4 I have shown a modified form of my invention. This modification is identical with the form shown in Fig. 3, save for the fact that the arms 3, in Fig. 4, are placed nearer together than they are in Fig. 3, and the member 15, shown in Fig. 3, is dispensed with.

The operation of the device in Fig. 4 is the same as in the case of the form shown in Fig. 3, save for the fact that, as the resilient element 15 is missing, the thills, in Fig. 4, must be slid laterally by manual pressure, to bring the terminal 10 into engagement with the shoulder 18. When it is desired to remove the bolt 4, the free end of the spring clip 5 is pushed outward, freeing the tongues 6 from the bolt 4. The clip 5 is then rotated upon the pin 17, until the free end of the clip is out of alinement with the bolt end, whereupon the said bolt may be withdrawn.

Having thus described my invention, what

I claim as new, and desire to protect, by Letters Patent, is:—

1. In a device of the class described, arms spaced apart and arranged for attachment to a vehicle axle, one of said arms being notched upon its lower edge to form a shoulder; a bearing rotatably mounted between the terminals of the arms and laterally slidable therebetween; a resilient element having one of its terminals arranged for attachment to a vehicle axle, its other terminal being arranged to contact with the bearing; a shoulder projecting from the bearing and arranged to engage the resilient element, said shoulder being laterally extended beyond the bearing and arranged to engage the shoulder upon the arm when the bearing is laterally moved between the arms; and resilient means for imparting lateral movement to the bearing.

2. In a device of the class described, arms spaced apart and arranged for attachment to a vehicle axle, one of said arms being notched upon its lower edge to form a shoulder; a bearing rotatably mounted between the terminals of the arms, and laterally slidable therebetween; a resilient element having one of its terminals arranged for attachment to a vehicle axle, its other terminal being arranged to contact with the bearing; a shoulder projecting from the bearing and arranged to engage the resilient element, said shoulder being laterally extended beyond the bearing and arranged to engage the shoulder upon the arm when the bearing is laterally moved between the arms.

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

WALTER JUDD.

Witnesses:

E. M. FROST,
JOHN McNAUGHTON.