No. 848,388. PATENTED MAR. 26, 1907.

J. E. NILSSON.

HORSE DETACHER.

APPLICATION FILED OCT. 17, 1905. 2 SHEETS—SHEET 1.

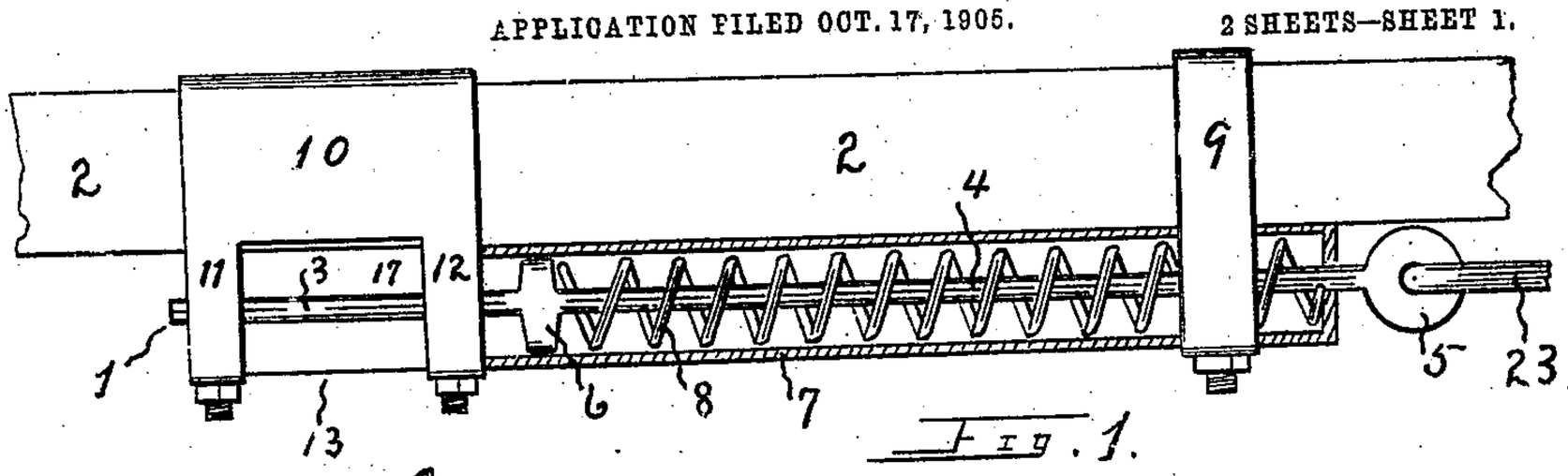


Fig. 1.

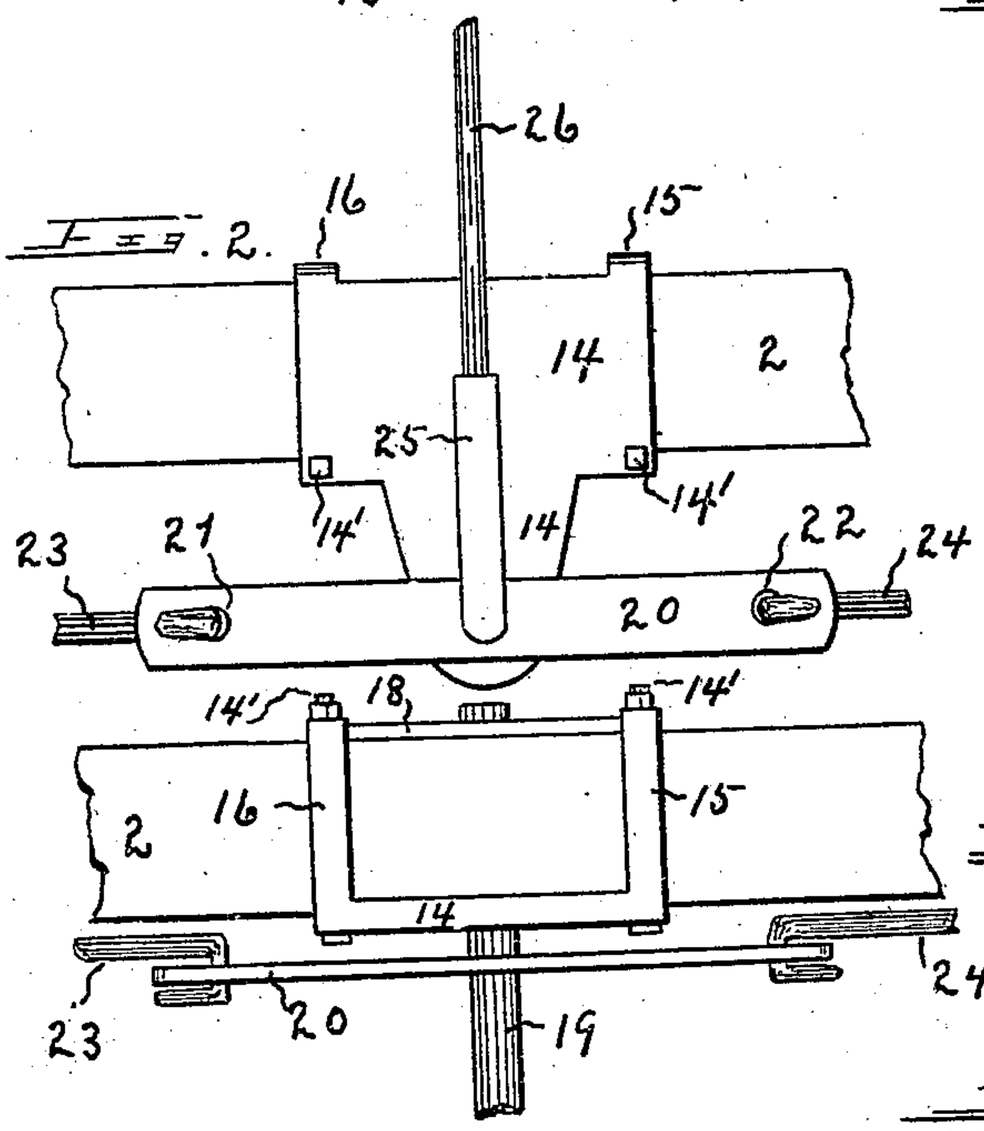


Fig. 2.

Fig. 3.

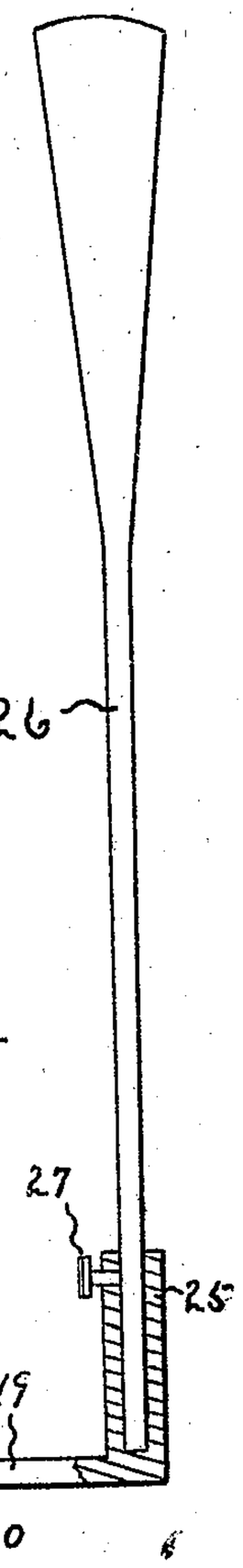


Fig. 4.

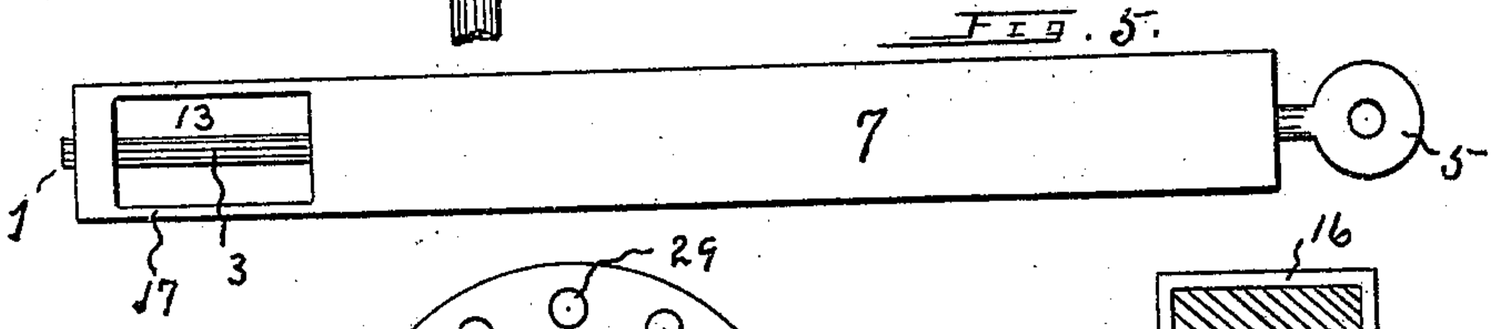


Fig. 5.

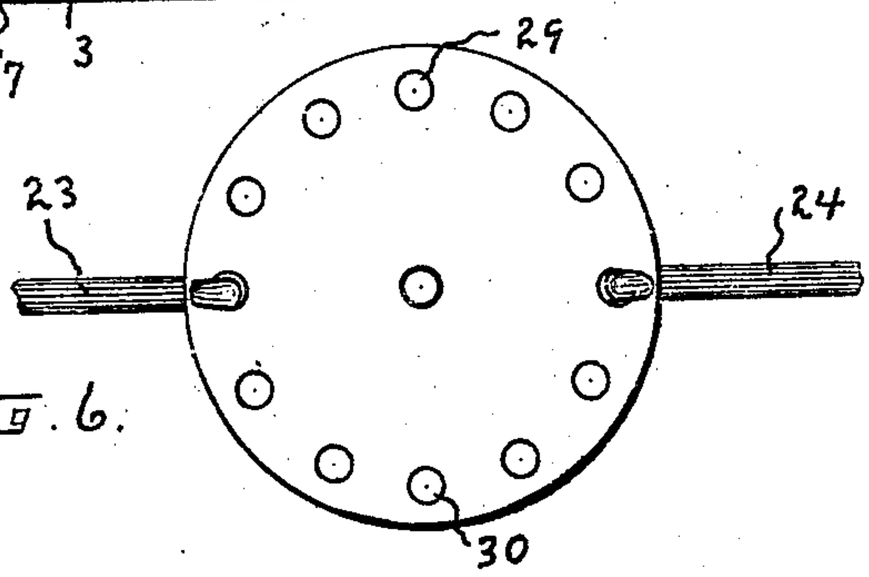


Fig. 6.

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2 SHEETS—SHEET 2.

Fig. 7.

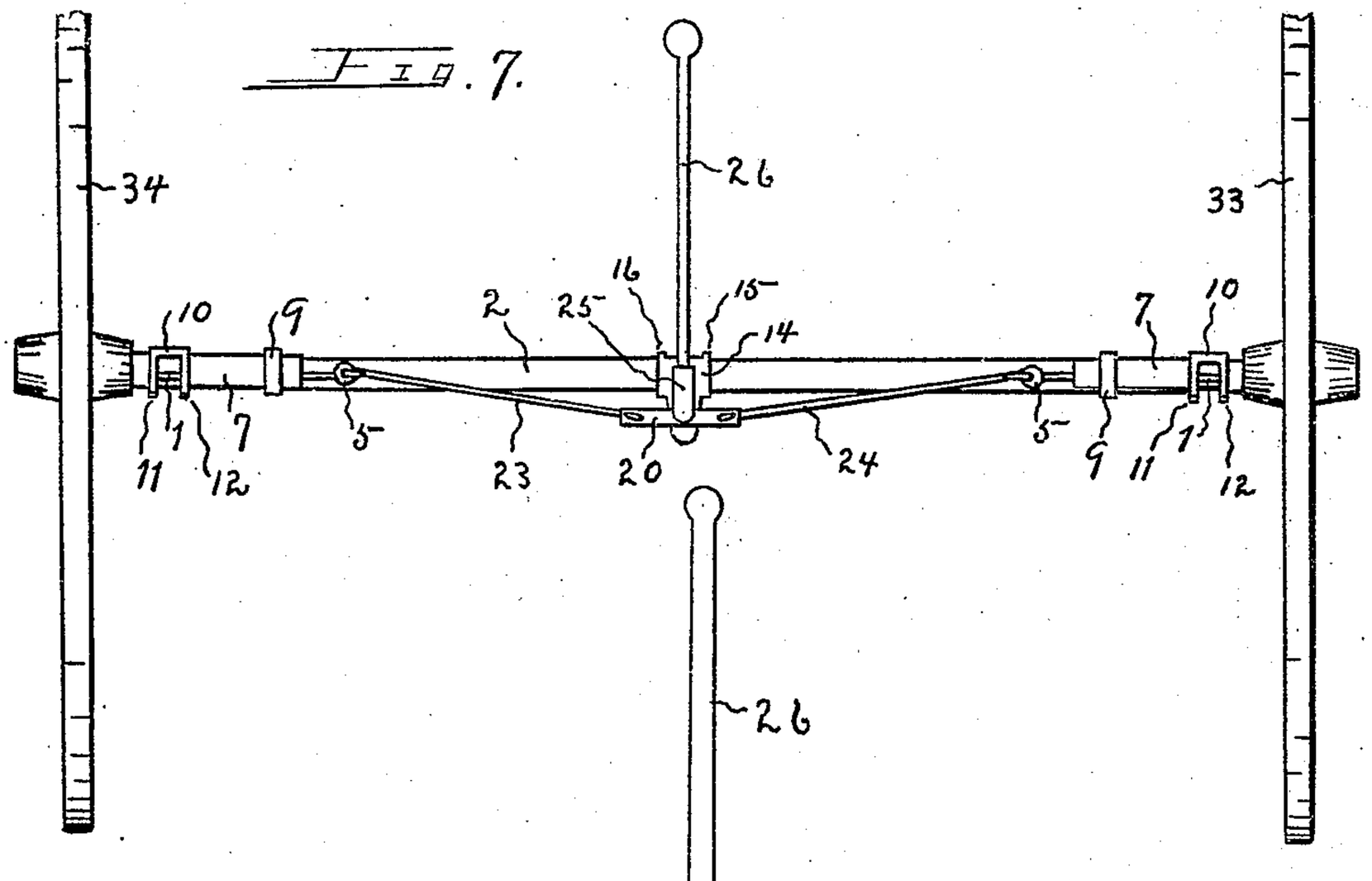



Fig. 8.

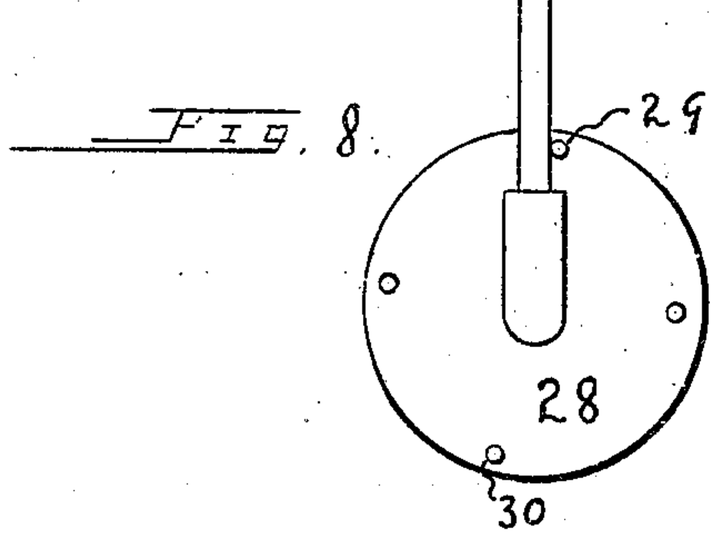
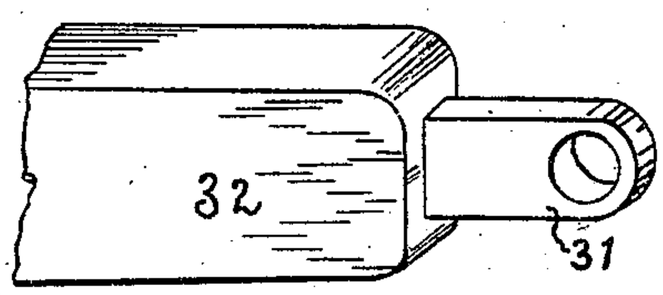



Fig. 9.

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# UNITED STATES PATENT OFFICE.

JOHN EDWARD NILSSON, OF SIOUX FALLS, SOUTH DAKOTA.

## HORSE-DETACHER.

No. 848,388. Specification of Letters Patent. Patented March 26, 1907.

Application filed October 17, 1905. Serial No. 283,095.

*To all whom it may concern:*

Be it known that I, JOHN EDWARD NILSSON, a citizen of the United States, residing at Sioux Falls, in the county of Minnehaha and State of South Dakota, have invented certain new and useful Improvements in Shaft-Adjusting Devices for Vehicles, of which the following is a specification.

My invention relates to improvements in shaft-adjusting devices for vehicles, and has reference to a means for the ready attachment of shafts to carriages and light-running vehicles and the detachment thereof.

The object of the invention is to furnish a device composed of springs and levers by use of which the shafts may be readily attached or detached by a person when within or out of the vehicle and in part to operate as a safety appliance in case of runaways, since by movement of a lever a person within the vehicle may cause instant detachment of the horse or team from the vehicle.

The invention presents convenient axle-fastenings for use in attaching levers and incased springs thereon, so that the invention may be readily placed upon any vehicle at very little expense.

With these and other objects in view the invention presents a novel construction and arrangement of parts, as disclosed herein and illustrated by the drawings, wherein—

Figure 1 represents a plan view of axle-clips, vehicle-axle, and spring-incased bolt, the case being in section. Fig. 2 represents a vertical front view of the central portion of a vehicle-axle, the operating-bar 26, and double-ended link 20. Fig. 3 is a plan view of Fig. 2. Fig. 4 is a side view of operating-bar 26, mounted upon a vehicle-axle, the axle and socket being in section. Fig. 5 represents a side view of the casing shown in Fig. 1. Fig. 6 represents a modification of the invention, being a substitution of a disk for the double-ended link 20. Fig. 7 represents a vertical front view of a vehicle-axle with my invention mounted thereon, the vehicle-wheels being partly broken away. Fig. 8 represents the modification shown by Fig. 6, illustrating the relative position of parts; and Fig. 9 is a perspective view of a shaft-thill.

Referring to the several figures in the drawings, the numeral 1 represents slidable rods, which I mount upon the face of the front vehicle-axle 2 near and upon the inner side, horizontally considered, of wheels 33 and 34. Each sliding rod 1 consists of the thill-engaging end 3, the spring-supporting part 4, the eye 5, and lug 6, and is seated within an inclosing case 7, and upon each sliding rod is seated the spring 8. Each inclosing case 7 has a convenient and secure mounting upon axle 2 by means of the axle-clip 9 in connection with axle-clip 10, having the inclosing arms 11 and 12.

Each case 7 is provided with a lower floor 17 and with an opening 13 at the front to permit the introduction therein of the thill 31 of the shaft 32, the arms 11 and 12 being separated sufficient for this purpose, and as thus constructed the inclosing cases, with spring and sliding rod therein, may be attached to any vehicle, the sliding rod being adapted to slide longitudinally therein, subject to the resiliency of spring 8.

Upon the front of the axle, midway between the inclosing cases, is mounted the vertically-disposed apron 14, rigidly sustained thereon by the integrally-formed arms 15 and 16, secured by bolts 14′. The apron 14 extends somewhat below and is reinforced at the rear of the axle by the plate 18, Fig. 4, extending downward an equal distance therewith to furnish a suitable bearing for the shaft 19, pivotally mounted in said apron and plate 18.

Closely adjacent to the apron 14 and rigidly mounted upon shaft 19 is the double-ended link 20, each end thereof having the apertures 21 and 22, and I employ the links 23 and 24, which extend from their pivotal mountings upon the double-ended link 20 along the axle in a direction toward the wheels and have a pivotal mounting within the eye 5 of each sliding rod.

The shaft 19 extends horizontally a suitable distance in front of axle 2 in a direction at right angles thereto, and integrally thereon at its outer end is constructed the upwardly-projecting socket 25, within which is removably mounted the operating-bar 26 and held rigid therein, as by means of set-screw 27.

It will be understood from the description that operating-bar 26 is adapted to have a swinging movement upon a plane vertically adjacent to the axle in a direction substantially parallel with said axle in front of the vehicle, and the length of shaft 19 determines the distance which the operating-bar will occupy in such front position, generally depending upon the form of the vehicle-box, or perhaps the curvature of the dashboard.

The swinging movement of operating-bar 26 will cause a corresponding motion of double-ended link 20, carrying links 23 and 24, by a swing in either direction and causes withdrawal of sliding rods 1 from chambers 13, which releases thills 31.

The form of operating-bar 26, as shown, is adapted for use where the front of the vehicle-box and dashboard form approximately a right angle to the axle. Various curved or angular forms are employed, however, in constructing these parts, and therefore socket 25 is employed, so that operating-bars may be used which have forms to correspond to any desired curvature, and an operating-bar of any curve or length may be rigidly held within socket 25 and operated in the manner mentioned.

It will be noted that the parts are arranged so that they are not obtrusive and do not interfere with the movement of the vehicle while describing curves, as when "turning a corner." Also operating-bar 26 is convenient in arrangement and position, so that in case of danger a person within the vehicle by moving this lever may cause the vehicle to become detached from a runaway team. Also when attaching the shafts to a vehicle the operator simply moves this lever in either direction, which allows the thills to be readily coupled to the vehicle.

It is not considered a departure from the invention to employ disk 28, substantially as shown, with a series of apertures near its outer rim, within which to mount links 23 and 24, such disk to be rigidly mounted upon the shaft 19 and to perform the same function as the double-ended link, as illustrated by Figs. 6 and 8, links 23 and 24 to be mounted within apertures 29 and 30 of the disk, and this construction I employ as a modification of the double-ended link in order to obtain any adjustment desired in the mounting of links 23 and 24, also to obtain a more immediate movement horizontally of said links by action of the operating-bar.

What I claim as my invention is—

1. A device of the character described, in combination, comprising a vehicle-axle having inclosing cases mounted thereon; a resiliently-mounted sliding rod seated in each inclosing case and having thill-engaging outer ends; a vertically-disposed apron secured upon the vehicle-axle between the inclosing cases and having an extended part below said axle; an upwardly-extending operating-bar having an angularly-formed shaft upon its lower end pivotally mounted upon the extended part of said apron; a double-ended link transversely disposed with reference to said operating-bar and rigidly mounted upon said shaft, and having a link connection between each of its ends and the inner ends of said resiliently-mounted sliding rods.

2. In combination, a device as described, comprising a vehicle-axle and inclosing cases; said inclosing cases being secured upon the axle by means of clip 9, and by axle-clip 10 having arms 11 and 12 transversely encircling the axle and inclosing cases; a resiliently-mounted sliding rod seated in each inclosing case and having thill-engaging outer ends; a vertically-disposed apron secured upon the vehicle-axle between the inclosing cases and having an extended part below said axle; an upwardly-extending operating-bar having an angularly-formed shaft upon its lower end pivotally mounted upon the extended part of said apron; a double-ended link transversely disposed with reference to said operating-bar and rigidly mounted upon said shaft, and having a link connection between each of its ends and the inner ends of said resiliently-mounted sliding rods.

3. A device of the character described, in combination, comprising a vehicle-axle having inclosing cases mounted thereon; a resiliently-mounted sliding rod seated in each inclosing case and having thill-engaging ends; a vertically-disposed apron having arms 15 and 16 passing transversely and secured upon the vehicle-axle between the inclosing cases, and having an extended part below said axle; an upwardly-extending operating-bar having an angularly-formed shaft upon its lower end pivotally mounted upon the extended part of said apron; a double-ended link transversely disposed with reference to said operating-bar and rigidly mounted upon said shaft, and having a link connection between each of its ends and the inner ends of said resiliently-mounted sliding rods.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN EDWARD NILSSON.

Witnesses:

PETER O. NATESTAD,

S. G. MARSON.