No. 781,311. PATENTED JAN. 31, 1905.

A. E. SUTTON.

VEHICLE SPRING.

APPLICATION FILED SEPT. 2, 1904.

Fig. 1.

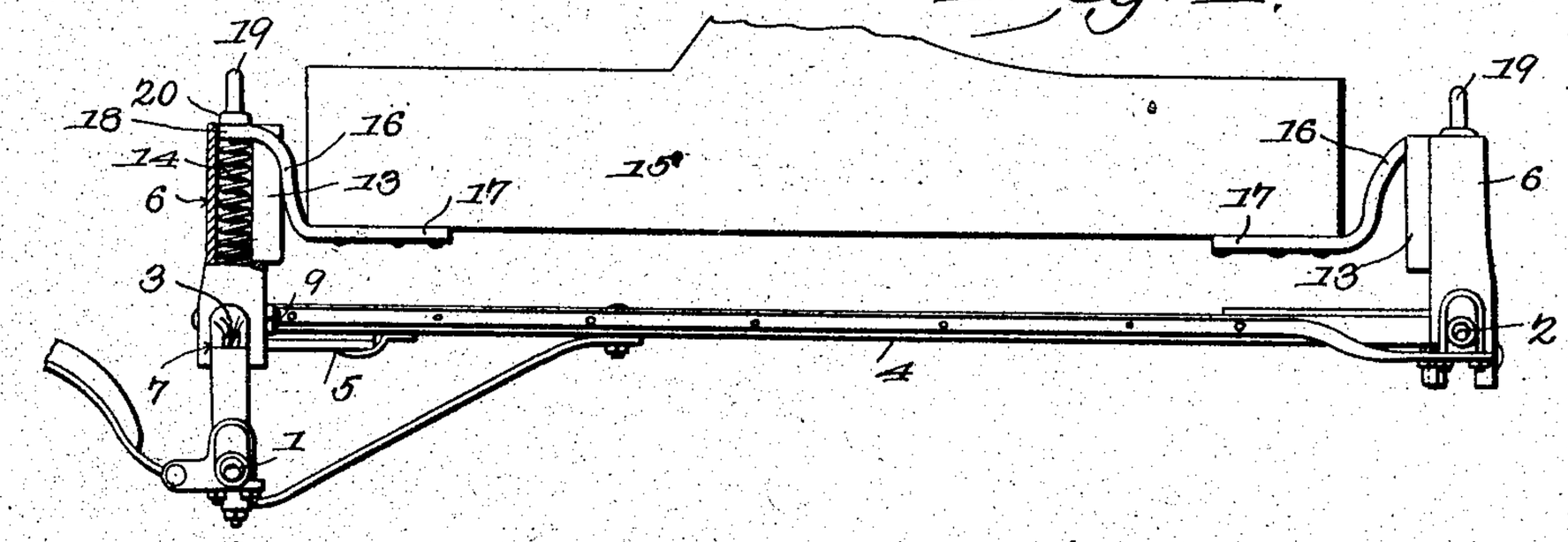


Fig. 3.

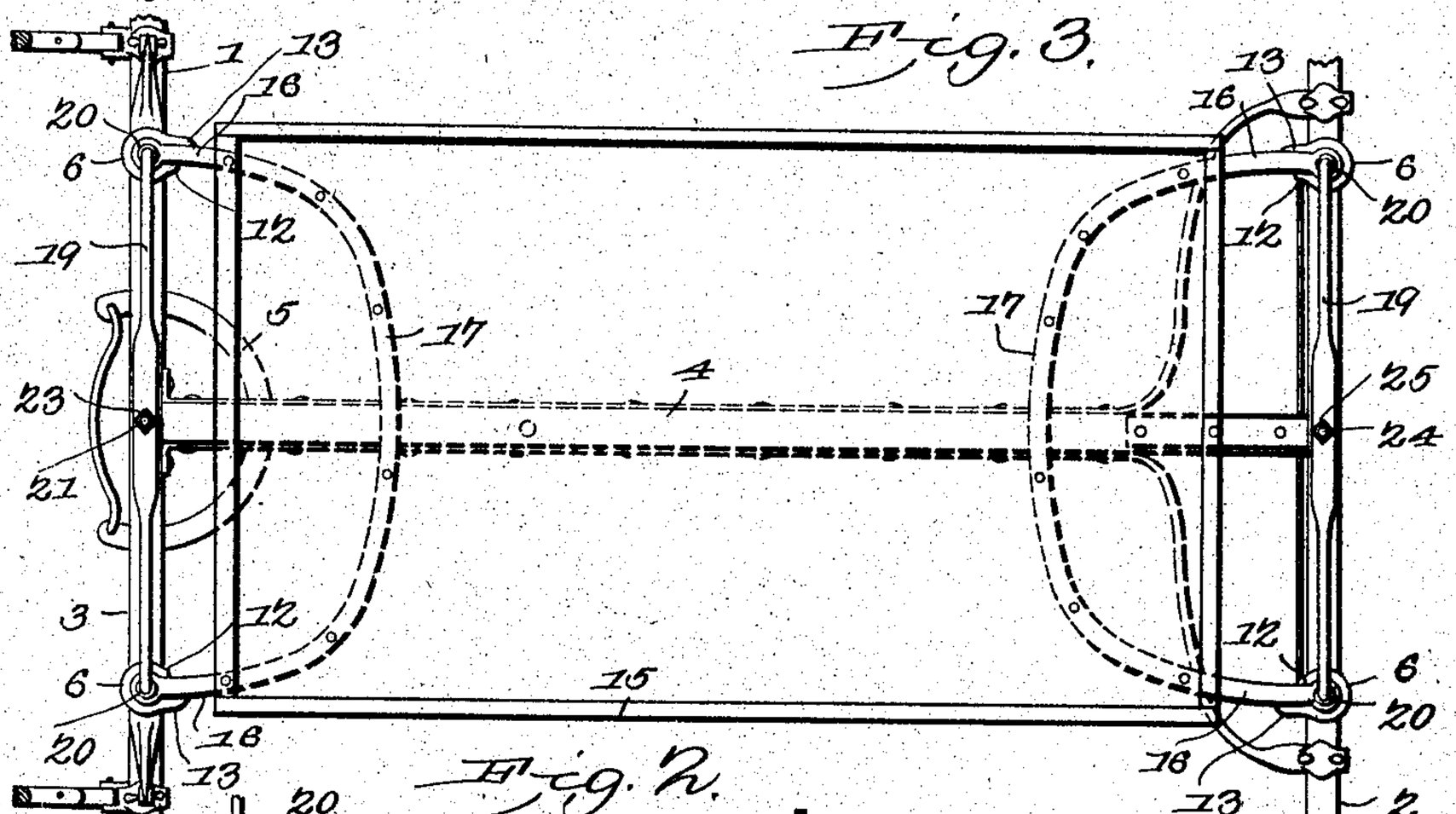


Fig. 2.

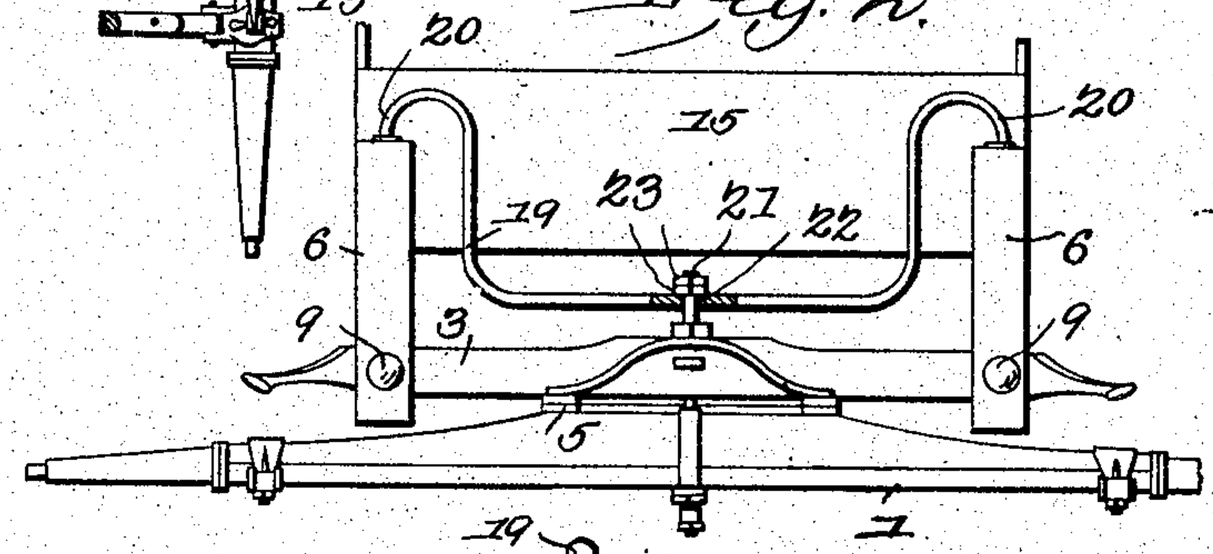


Fig. 4.

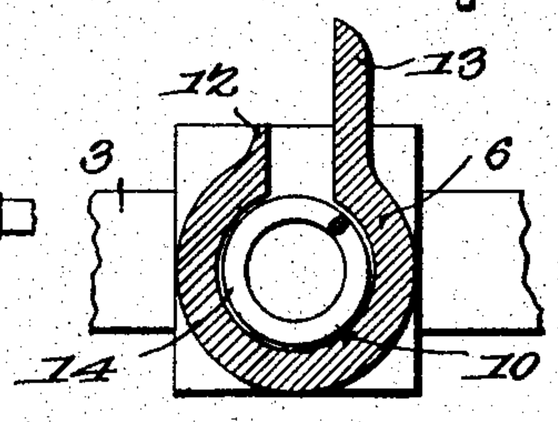
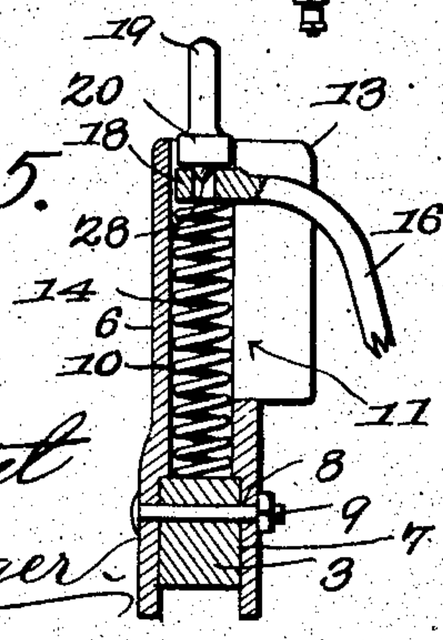


Fig. 5.



Witnesses
E. F. Stewart
Wm. Bagger.

Albert E. Sutton,
Inventor
by Cachow & Co
Attorneys

No. 781,311. Patented January 31, 1905.

UNITED STATES PATENT OFFICE.

ALBERT E. SUTTON, OF THOMAS, WEST VIRGINIA.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 781,311, dated January 31, 1905.

Application filed September 2, 1904. Serial No. 223,153.

To all whom it may concern:

Be it known that I, ALBERT E. SUTTON, a citizen of the United States, residing at Thomas, in the county of Tucker and State of West Virginia, have invented a new and useful Vehicle-Spring, of which the following is a specification.

This invention relates to vehicle-springs, and has for its object to provide a light and durable, readily-yieldable, and adjustable supporting means for the bodies of vehicles, such as buggies and the like.

The invention consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that the right is reserved to any changes or alterations and modifications to which recourse may be had within the scope of the invention and without departing from the spirit or sacrificing the efficiency of the same.

In said drawings, Figure 1 is a side elevation, partly in section, showing the running-gear and body of a vehicle equipped with the improved spring. Fig. 2 is a front elevation. Fig. 3 is a top plan view. Fig. 4 is a horizontal sectional view, enlarged, taken through one of the spring-casings. Fig. 5 is a vertical sectional view, enlarged, taken through one of the spring-casings.

Corresponding parts in the several figures are indicated by like characters of reference.

1 and 2 designate, respectively, the front and rear axles, the former of which in the form of embodiment shown supports a bolster 3, which is connected by the reach 4 with the rear axle, a fifth-wheel 5 being interposed between said bolster and front axle.

6 6 are spring-casings which are connected with the bolster 3 and with the rear axle. Said spring-casings are provided at their lower ends with notches or recesses 7, whereby they are fitted upon the rear axle and the bolster, respectively, the lower extremities of said casings being provided with horizontal perforations 8 for the reception of bolts 9, whereby they are clamped in position. The upper parts of the casings 6 are provided with approximately cylindrical recesses 10, provided with side slots 11, adjacent to the inner and outer sides of which are flanges 12 and 13, which latter are of considerable width. In the recesses 10 are placed helical springs 14 of sufficient strength to support the weight of the loaded vehicle-box.

The vehicle-box 15 is provided at its front and rear corners with brackets 16, which are formed at the ends of yokes or braces 17, extending transversely under the vehicle-box, which is thereby braced and reinforced. The brackets 16, the extremities of which are extended through the slots 11 into the recesses 10 of the spring-casings, are provided at their extremities with horizontally-disposed eyes or enlargements 18, which rest upon the upper ends of the springs 14 and which, being of a diameter greater than the width of the slots 11, will serve to prevent the withdrawal of the brackets 16 from the spring-casings. It is obvious that the springs will thus support the vehicle-body and yield to the pressure of weight placed in the latter.

19 19 designate a pair of yokes, provided at the ends thereof with downturned arms 20. One of these yokes is placed above the bolster upon the front axle, where it is secured by means of a bolt 21, which may be an upward extension of the king-bolt, said bolt extending through a perforation 22 in the yoke, which latter is retained in position adjustably by nuts 23. The yoke 19 placed above the rear axle similarly engages a bolt 24, extending upwardly from said axle through a perforation in the yoke, which latter is held adjustably by means of nuts 25. It will be seen that the downturned ends or arms 20 of the respective yokes, which enter into the upper ends of the spring-casings, will serve to limit the upward movement of the brackets 16 therein. It also follows that by tightening the nuts 23 and 25 the yokes will be forced downwardly, with the effect of compressing the springs within the casings, thereby stiffen-

ing said springs and limiting their expansion, and consequently enabling them to support heavier loads without danger of being racked or otherwise injured. By this simple adjustment the user or occupant of a vehicle equipped with the improved spring device may conveniently and quickly adjust the tension of the springs to the weight which is to be imposed thereon.

The flanges 12 and 13, which extend from the spring-casings adjacent to the slots 11 therein, will serve to limit or entirely prevent lateral play or swaying of the vehicle-body, and the flanges 13, which are formed upon the outer sides of said spring-casings, are made of a width which will enable them to serve as shields or guards for the outer sides of the bracket members 16.

In the form of embodiment of the invention herein shown the enlargements 18 at the extremities of the brackets 16 have been shown in the form of eyes, and the downwardly-extending arms 20 of the yokes 19 have been provided with conical points 28, engaging said eyes. By this construction the latter are properly centered in the spring-casings and displacement of the parts is rendered less liable to occur.

Having thus described the invention, what is claimed is—

1. In a vehicle, spring-casings mounted upon the running-gear and having slotted recesses, springs in said casings, a vehicle-body having brackets extending through the slots of the casings and provided within the latter with enlargements, and vertically-adjustable yokes having downturned arms extending in the recesses of the casing and bearing upon the enlargements of the brackets.

2. In a vehicle, spring-casings mounted upon the running-gear and having slotted recesses, springs in said casings, a vehicle-body having brackets extending through the slots of the casings and provided within the latter with enlargements forming eyes, and vertically-adjustable yokes having downturned arms provided with conical points extending into the recesses of the casing and bearing upon the enlargements of the brackets.

3. In a vehicle, spring-casings mounted upon the running-gear and having slotted recesses and flanges constituting guards adjacent to the sides of the slots, springs in said casings, and a vehicle-body having brackets extending between the flanges through the slots of the casings and supported upon the springs.

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

ALBERT E. SUTTON.

Witnesses:

LENA GEISBERGER,

A. G. KELLEY.