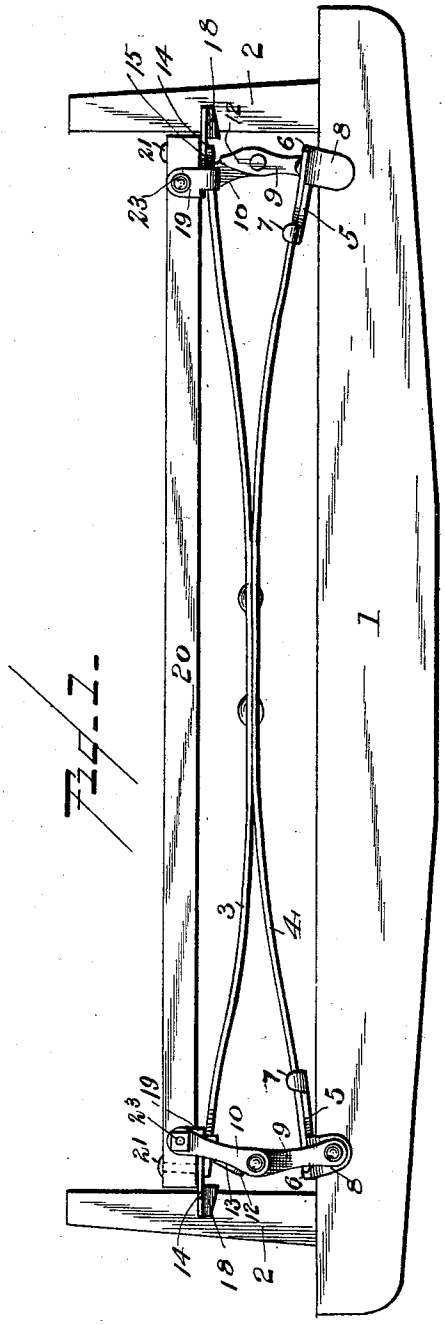
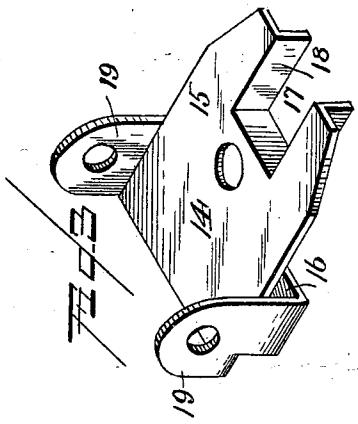
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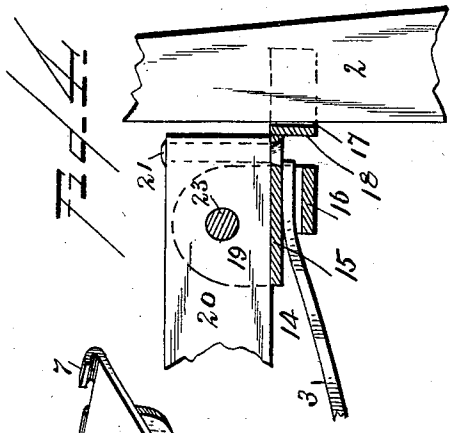
# T. G. MANDT.

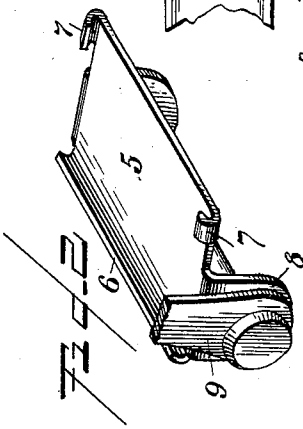
## WAGON BOLSTER SPRING.

No. 593,946. Patented Nov. 16, 1897.









Witnesses:
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# UNITED STATES PATENT OFFICE.

TARGE G. MANDT, OF STOUGHTON, WISCONSIN.

## WAGON BOLSTER-SPRING.

SPECIFICATION forming part of Letters Patent No. 593,946, dated November 16, 1897.

Application filed June 7, 1897. Serial No. 639,720. (No model.)

*To all whom it may concern:*

Be it known that I, TARGE G. MANDT, a citizen of the United States, and a resident of Stoughton, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Wagon Bolster-Springs; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to bolster-springs for wagons; and its object is to provide an improved construction of the same which shall possess superior advantages with respect to efficiency in use.

The invention consists, essentially, in two oppositely-curved spring-metal plates or leaves secured together at or near their centers and the lower plate or leaf provided at each end with slidable or movable shoes having downwardly-depending lugs which engage with two sides of the bolster, to one of which lugs is pivoted a lever provided with a projection or stop, a lever pivoted to said lever and to a shackle having a loop with which the end of the upper leaf or plate engages, as hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a bolster-spring constructed in accordance with my invention. Fig. 2 is a detail perspective view of one of the shoes detached. Fig. 3 is a similar view of one of the clips. Fig. 4 is a detail sectional view.

In the said drawings the reference-numeral 1 designates a wagon-bolster provided at each end with a standard 2, as usual, for holding the wagon-body in place and preventing the same from shifting laterally.

The numerals 3 and 4 designate two oppositely-curved spring plates or leaves secured to each other at or near the center, forming a compound spring. To the lower leaf or plate at each end is secured a shoe 5, consisting of a metal plate having the outer ends turned up at right angles, forming a flange 6, and the sides formed at the inner end with flanges 7. The ends of the plate or leaf are riveted to these plates and bear against said flanges. The said shoes are also formed with downwardly-depending lugs 8, which loosely embrace the bolster. Pivoted to one of said lugs of each shoe is a lever 9, which in turn is pivoted to a lever 10, pivoted to a lug on a shackle, hereinafter described, forming a toggle-joint connection between the two plates or levers. The levers 9 are formed with extensions 12, projecting beyond the pivots which connect them with the levers 10, and are provided with projections 13, which engage with said levers 10 and serve as stops.

The numeral 14 designates two shackles, consisting of plates 15, provided with loops 16, through which the ends of the upper spring plate or leaf loosely pass. These plates at their outer ends are formed with slots 17 and flanges 18, which embrace the standards 2. They are also formed with lugs 19, which embrace the ends of a transverse movable bar 20, upon which the wagon-body rests. These shackles are secured to said bar by rivets 21, and also by the pivots 23, by which the levers 10 are connected with the lugs 19.

In use the upper and lower springs will roll upon each other, the shoes 5 sliding on the bolster. Upon the rebound the movement of the springs will be limited by the toggle-levers and the stops or projections 13.

Having thus fully described my invention, what I claim is—

In a bolster-spring for wagons, the combination with the bolster, the oppositely curved or bowed spring plates or leaves, secured to each other at the center, the movable shoes, having upwardly-extending flanges and downwardly-depending lugs, the levers pivoted to said lugs, provided with extensions and stops or projections, of the movable bar, the shackles secured thereto provided with loops and lugs, and the levers pivoted to said shackles and pivotally connected with said first-mentioned levers, substantially as described.

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

TARGE G. MANDT.

Witnesses:
B. E. WAIT,
KNUTE C. BUCKEY.