No. 750,893. PATENTED FEB. 2, 1904.

C. E. RIGGS.

VEHICLE STEP.

APPLICATION FILED JUNE 13, 1903.

NO MODEL.

Fig. 1.

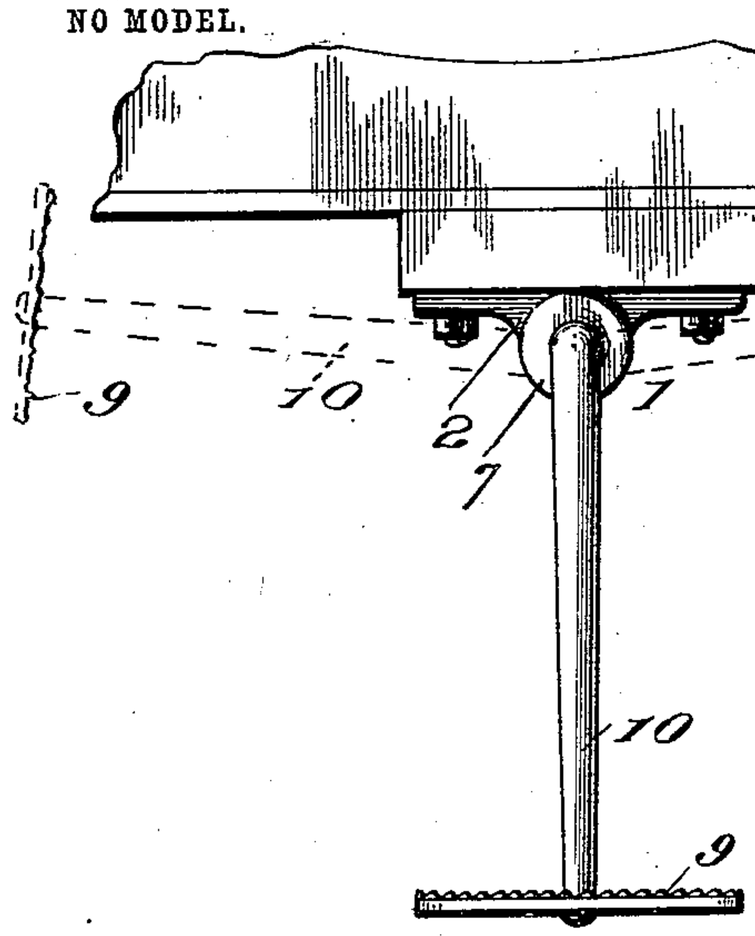



Fig. 2.

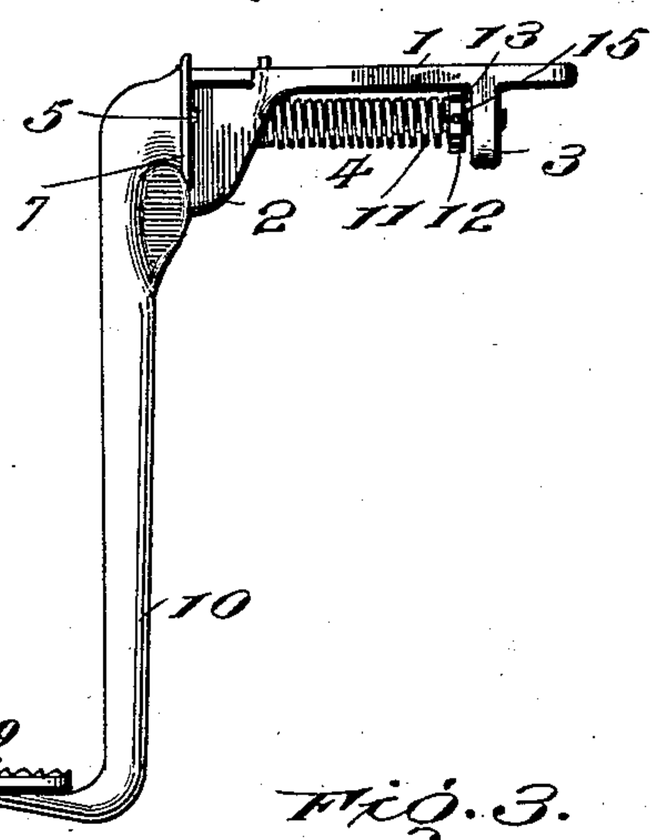



Fig. 5.

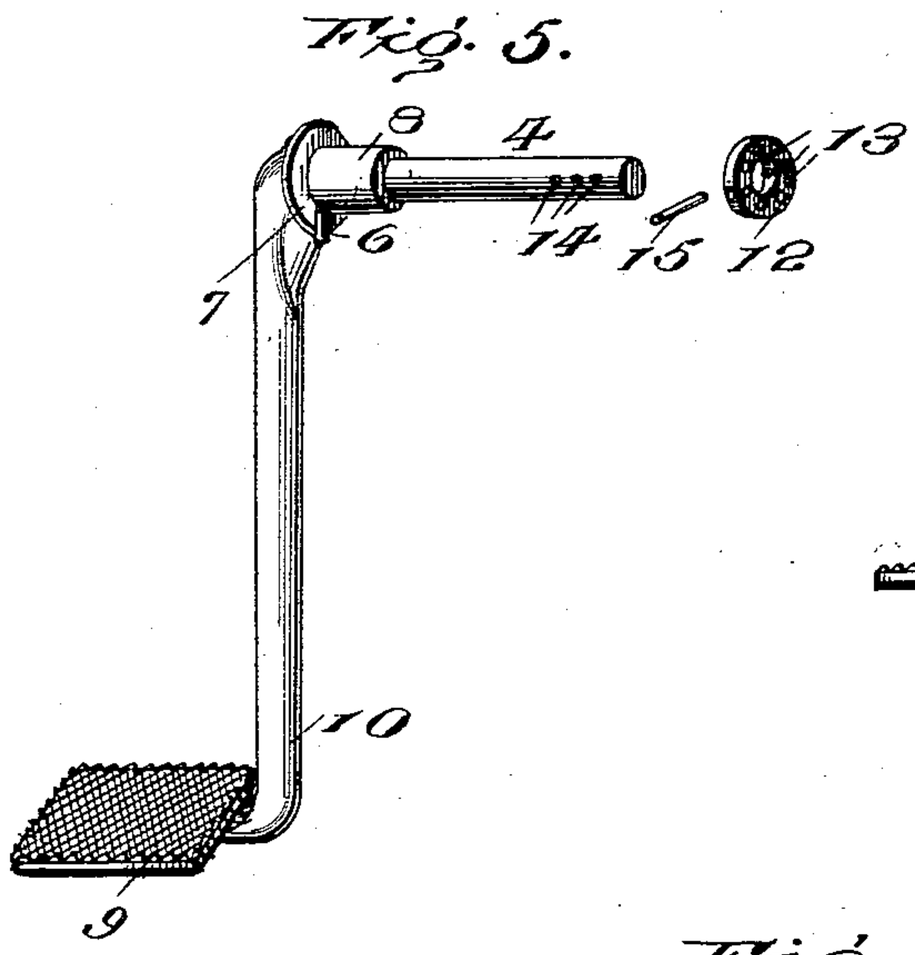



Fig. 3.

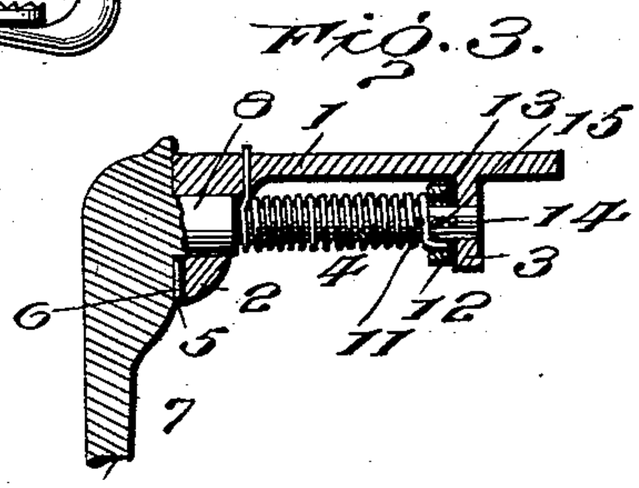
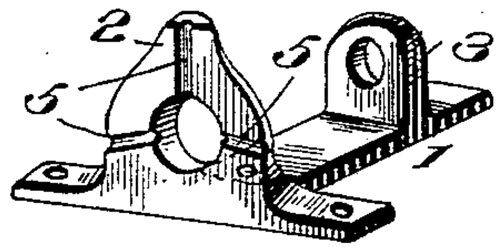



Fig. 4.

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No. 750,893. Patented February 2, 1904.

# UNITED STATES PATENT OFFICE.

CHARLES E. RIGGS, OF McCRORY, ARKANSAS

## VEHICLE-STEP.

SPECIFICATION forming part of Letters Patent No. 750,893, dated February 2, 1904.

Application filed June 13, 1903. Serial No. 161,392. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES E. RIGGS, a citizen of the United States, residing at McCrory, in the county of Woodruff and State of Arkansas, have invented certain new and useful Improvements in Vehicle-Steps, of which the following is a specification.

Steps as ordinarily constructed and applied to vehicles are frequently bent, broken, and otherwise injured by reason of their rigid connection with the body of the vehicle.

This invention interposes a pivotal and yielding joint of peculiar formation between the step and vehicle-body, so as to admit of the step turning when meeting with an obstruction, whether the vehicle is advancing or backing. Another desideratum is a connection possessed of stability and capable of sustaining the weight and strain imposed thereon when a person is entering or leaving the vehicle.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a front view of a vehicle-step embodying the invention, the dotted lines indicating the position of the step when swung either forward or rearward. Fig. 2 is a side elevation. Fig. 3 is a longitudinal section of the joint formed between the step and bracket on a larger scale. Fig. 4 is a detail perspective view of the bracket. Fig. 5 is a detail perspective view of the journal or upper end portion of the step.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The bracket 1 is preferably of T form in plan view and is provided with pendent lugs 2 and 3, forming bearings in which the journal 4 of the step is mounted. The bracket 1 is adapted to be secured to the vehicle-body in any substantial way by bolts or like fastenings passed through openings in the members of the bracket. The outer lug 2 is provided in its front space or side with three notches or depressions 5, one of which is in vertical position and the other two horizontally arranged at diametrically opposite points. These notches or depressions 5 coöperate with a projection 6 at the base or shoulder 7 of the journal 4, so as to hold the step either vertical, as indicated by the full lines in Fig. 1, or horizontal when swung either forward or backward, as indicated by the dotted lines in said Fig. 1. The outer or front lug 2 is larger and heavier than the inner lug 3, and the opening thereof is of greaterd iameter, so as to receive the enlarged portion 8 at the outer end of the journal 4.

The step 9 projects laterally from the shank 10 in the accustomed way, said shank being provided at its upper end with the journal 4. The angle formed between the shank 10 and journal 4 is thickened for safety and strength, and the shoulder 7, formed at the root of the journal 4, bears against the lug 2, so as to limit the inward movement of the step and likewise assist in bracing the joint. The journal 4 is mounted so as to turn freely in the lugs 2 and 3 and to have a limited sliding movement therein to permit of the projection 6 riding out of any one of the notches or depressions 5 when swinging the step from any one of the three positions indicated by the full and dotted lines in Fig. 1.

A stout spring 11 is mounted upon the journal 4, and its end portions are bent and are connected to, respectively, lug 2 and journal 4. This spring normally exerts a rearward pressure upon the journal 4, so as to hold projection 6 within any one of the notches or depressions 5. By having the terminals of the spring connected in the manner stated the step is normally held in vertical position, and should the same be moved laterally either forward or rearward by striking an obstruction, so as not to reach a horizontal position, the spring will automatically return the step to a normal position after the obstruction has been cleared. However, should the step be moved either for-

ward or rearward, so as to reach a horizontal position, the projection 6 will enter one or the other of the horizontal notches or depressions 5 and hold the step in such position, as indicated by the dotted lines in Fig. 1, until released by the application thereto of sufficient force to cause the projection 6 to ride out of the horizontal notch or depression 5, with which it is in engagement. A collar 12 is adjustably secured to the inner end of the journal 4 and is provided with a series of openings 13 to receive the rear end of the spring 11, thereby providing for varying the tension thereof, as may be required. A series of openings 14 are provided in the length of the journal 4 to receive the pin 15, by means of which the collar 12 is adjustably connected to the journal. The spring 11 may be compressed more or less by adjustment of collar 12 upon the journal, so as to exert a greater or less degree of inward pressure upon the journal to hold projection 6 in any one of the notches 5, so as to offer more or less resistance to the movement of the step when meeting with an obstruction.

Having thus described the invention, what is claimed as new is—

1. In a vehicle-step, a bracket, a step having a journal mounted to turn and slide in said bracket, a spring coöperating with said bracket and journal and adapted to normally hold the step in a given position and to exert a longitudinal pressure upon the journal, and interlocking means between said journal and bracket normally held in engagement by the said spring, substantially as set forth.

2. In a vehicle-step, the combination of a bracket, a step having a journal mounted to turn and slide in said bracket, interlocking means between the journal and bracket, a spring mounted upon the journal and connected at one end to the bracket, and means for adjustably connecting the opposite end of the spring to the journal, substantially as set forth.

3. In a vehicle-step, the combination of a bracket, a step having a journal mounted to turn and slide in said bracket, interlocking means between the journal and bracket, a spring mounted upon the journal and connected at one end to the bracket, a collar adjustably mounted upon the journal, and means for adjustably connecting the opposite end of said spring with said collar, substantially as described.

4. In combination, a bracket provided with pendent lugs, a step having a journal mounted in said lugs to turn and slide therein, interlocking means between the journal and a lug of the bracket, a spring mounted upon the journal and located between the lugs and connected at one end to one of said lugs, and means for adjustably connecting the opposite end of the spring to the journal, substantially as specified.

5. In combination, a bracket provided with pendent lugs, the outermost lug having a series of notches, a step having a journal mounted in said lugs to turn and slide therein and having a shoulder at its base to bear against the outermost lug of the bracket and having a projection extended from said shoulder to enter any one of the said notches, a coil-spring mounted upon the journal and secured at one end to a lug, and a collar adjustable upon the journal and provided with a series of openings for engagement therewith of the opposite end of the spring, substantially as described.

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

CHARLES E. RIGGS. [L. S.]

Witnesses:
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