

(No Model.)

B. F. RIX.
TWO WHEELED VEHICLE.

No. 357,156.

Patented Feb. 1, 1887.

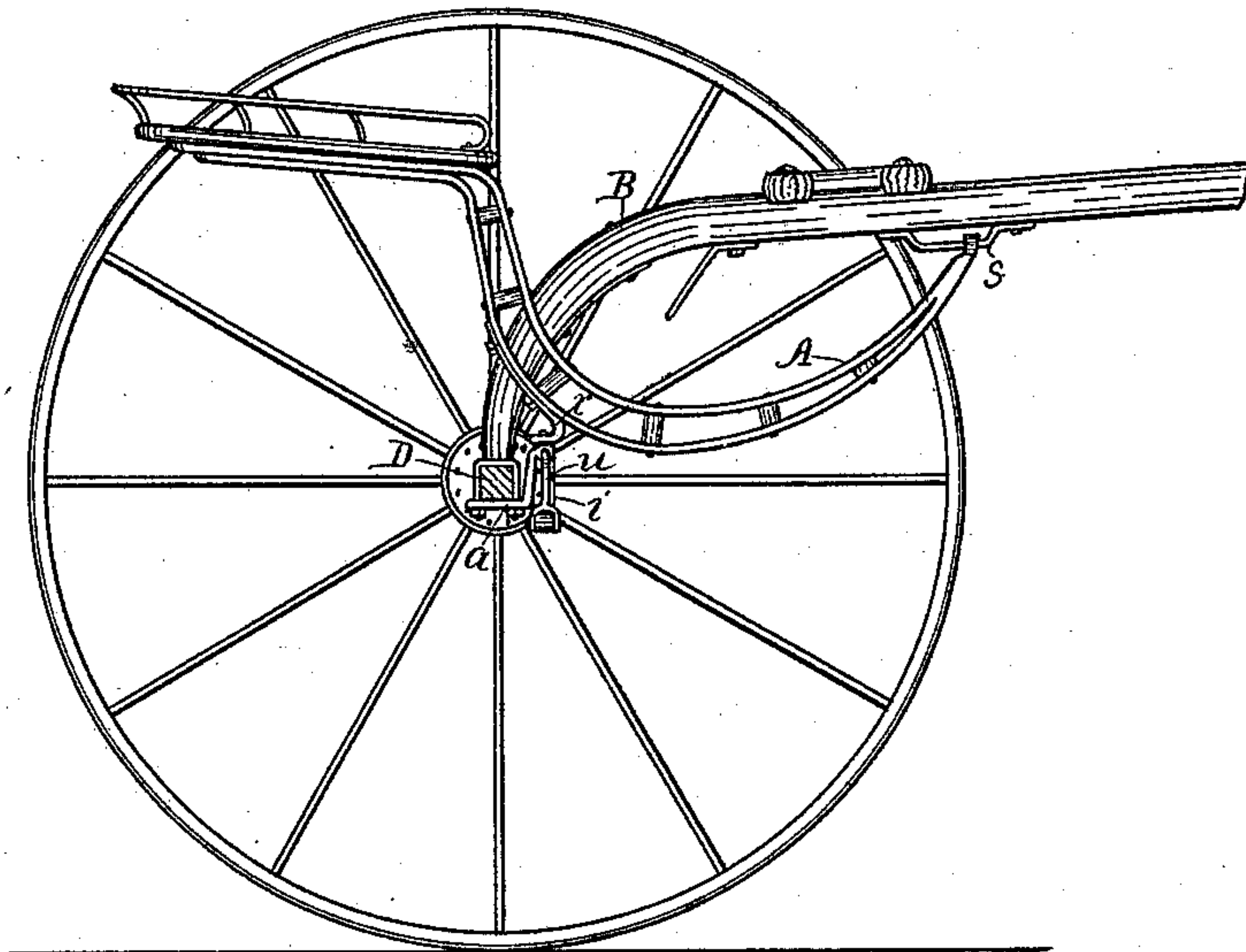


Fig. 1

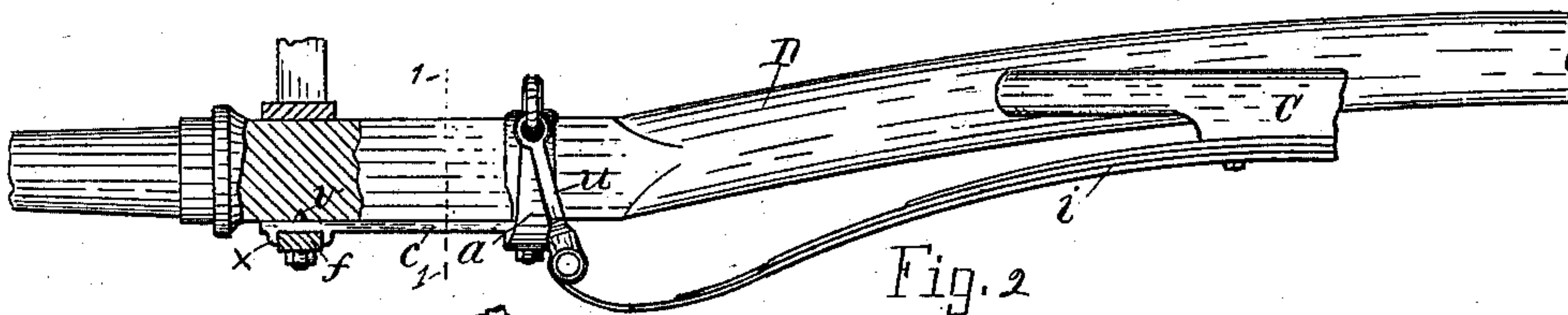


Fig. 2

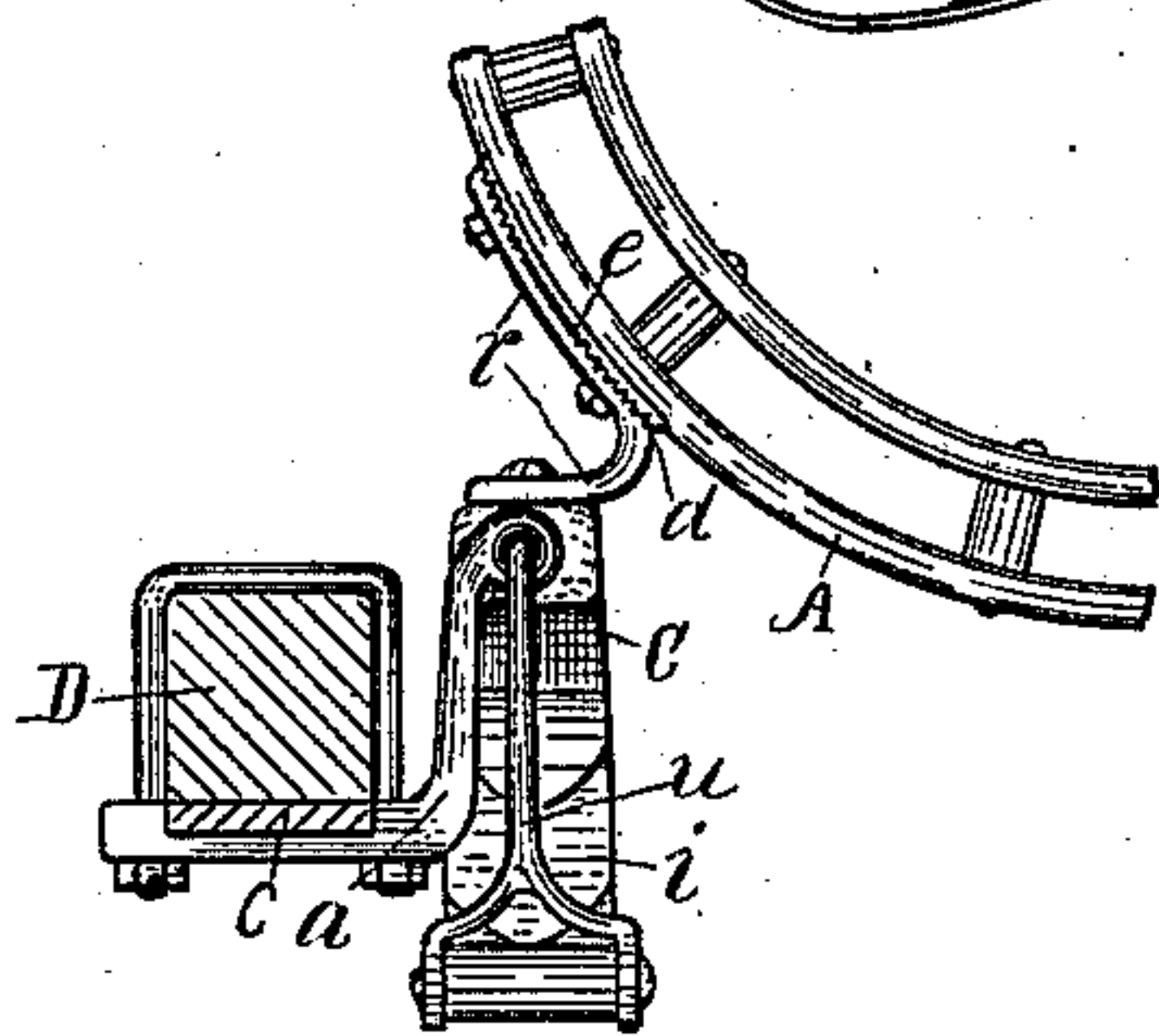


Fig. 3

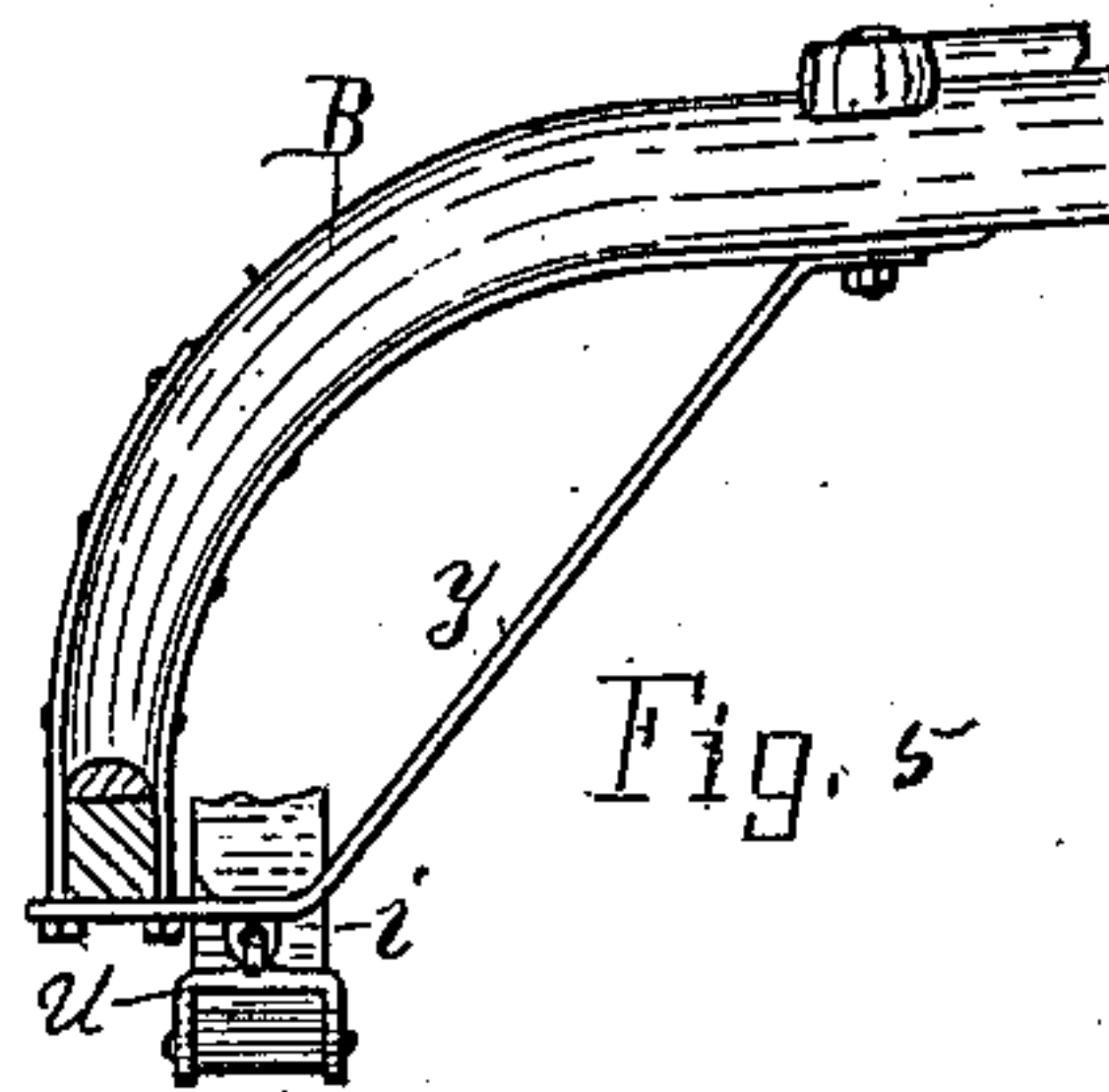


Fig. 5

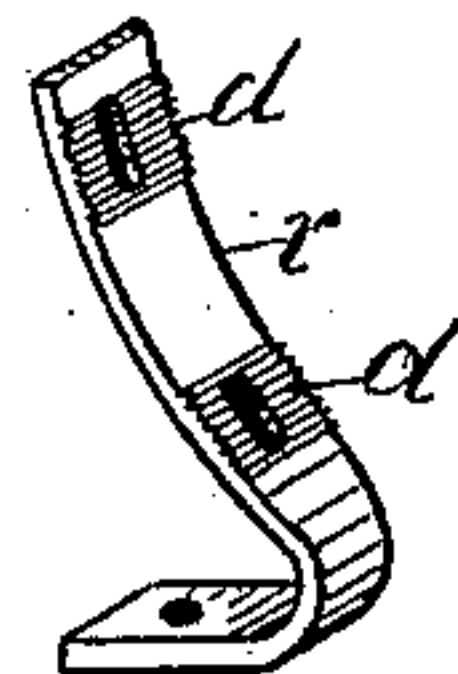


Fig. 4

Witnesses.

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BENJAMIN F. RIX, OF KALAMAZOO, MICHIGAN, ASSIGNOR TO R. ARTHUR STONE, OF SAME PLACE.

TWO-WHEELED VEHICLE.

SPECIFICATION forming part of Letters Patent No. 357,156, dated February 1, 1887.

Application filed December 7, 1886. Serial No. 220,908. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. RIX, a citizen of the United States, residing at Kalamazoo, county of Kalamazoo, State of Michigan, have invented a new and useful Two-Wheeled Vehicle, of which the following is a specification.

This invention relates to the well-known class of two-wheeled vehicles having the body or seat bars supported over the axle and fulcrumed at the forward end to the thills or thill cross-bar.

The objects of the invention will appear in the following description and claims of the improved features.

In the drawings forming a part of this specification, Figure 1 is an elevation with one wheel removed; Fig. 2, an enlarged view of the axle and connecting parts, portions broken away, looking from a point at the right of Fig. 1. Fig. 3 is an elevation of details enlarged from Fig. 1, with the axle in cross-section on the dotted line 1 1 in Fig. 2; Fig. 4, a perspective of a lettered detail in Fig. 3; and Fig. 5 shows a modification from Fig. 3.

Referring to the lettered parts of the construction, B are the thills, D the axle, and A the body, as heretofore constructed.

The construction of one side of the vehicle here shown is of course duplicated on the other side. In this construction I employ the ordinary arched spring, *i*; but I hang said spring from the axle and parallel therewith, by any suitable means which will allow the spring to lengthen and shorten and play forward and back. The means here shown consist in an upwardly-extending bar, *a*, secured to the axle and provided with an eye in the upper or free end. This bar or spring-support *a* may be attached to either side of the square axle D, and extend in any desirable direction therefrom. A short hanger, *u*, is hinged to the free end of the spring-support *a*, and the lower end is hinged to the end of the spring *i*, Fig. 3. The spring is provided in the center of the arch with a spring-bar, C, in length approximately corresponding with the width of the body A. Of course I do not limit my invention to this particular trussed body.

The body at the back side is attached to the ends of the spring-bar C by means of the V-irons *r*, or other suitable means of attaching, so as to support the body by the bolster. These irons *r* are here shown adjustable, so as to raise and lower the body to desired locations, by means of serrations or corrugations *d*, engaging like surfaces on the body at *e*, and by means of the elongated bolt-holes in the upper branch of the irons *r*, Fig. 4; but these irons may or may not be adjustable.

It will be observed that the forward end of the body is hinge-fulcrumed to the thill, so as to allow the body to swing up and down under the weight of the rider. This hinge may be after the ordinary plan, as heretofore; but I find the most satisfactory results, with this spring as here hung, are attained by providing the thills with the elongated couplings *s*, and allowing the eyes at the end of the body to play forward and back on said couplings when the body swings up and down on the spring beneath the weight of the rider. The reason is that the spring is not canted or twisted so much, but springs up and down in more nearly a vertical plane, and a freer spring action is obtained in a spring of a given degree of stiffness. The seat-bars in this construction are relieved of much of the strain heretofore exerted upon them.

Fig. 5 shows how the brace-rod *y* of the thill may serve as an equivalent to the supporting-bar *a* by hanging the shorter hanger *u* to said brace.

Referring to Fig. 2, the bar C on the under side of the axle is integral with that part of the support *a* which serves as a clip-plate. The other end is confined by the clip-plate *f*, which secures the thill to the axle, said plate fitting into a recess on the under side of the bar C. On the top of this end of the bar is a bud, *v*, fitting into a hole in the axle. By this means the clip-plate and its integral bar assist in keeping the thills from lateral displacement, and the thill-clip in turn prevents the bar and its clip from displacement.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a two-wheeled vehicle, the combination of the axle, the spring and spring-bar, bars and hangers supporting said spring from the axle, a vehicle-body fulcrumed at the forward end to the thills, and the adjustable irons
5 attaching the body to the bolster, substantially as set forth.

2. The combination of the thills provided with the elongated couplings, a body fulcrumed
10 at the forward end to said couplings in a manner to slide forward and backward, and a spring hung from the axle and supporting the rear part of the body, substantially as set forth.

3. The combination of the axle, the clip having the laterally-extending bar on the under side of the axle, said bar provided with a
15 bud fitting a hole in the axle and a recess on the lower side, the thills, and thill-clips, substantially as set forth.

In testimony of the foregoing I have hereunto
20 subscribed my name in presence of two witnesses.

BENJAMIN F. RIX.

Witnesses:

R. ARTHUR STONE,
F. W. CORNELL.