

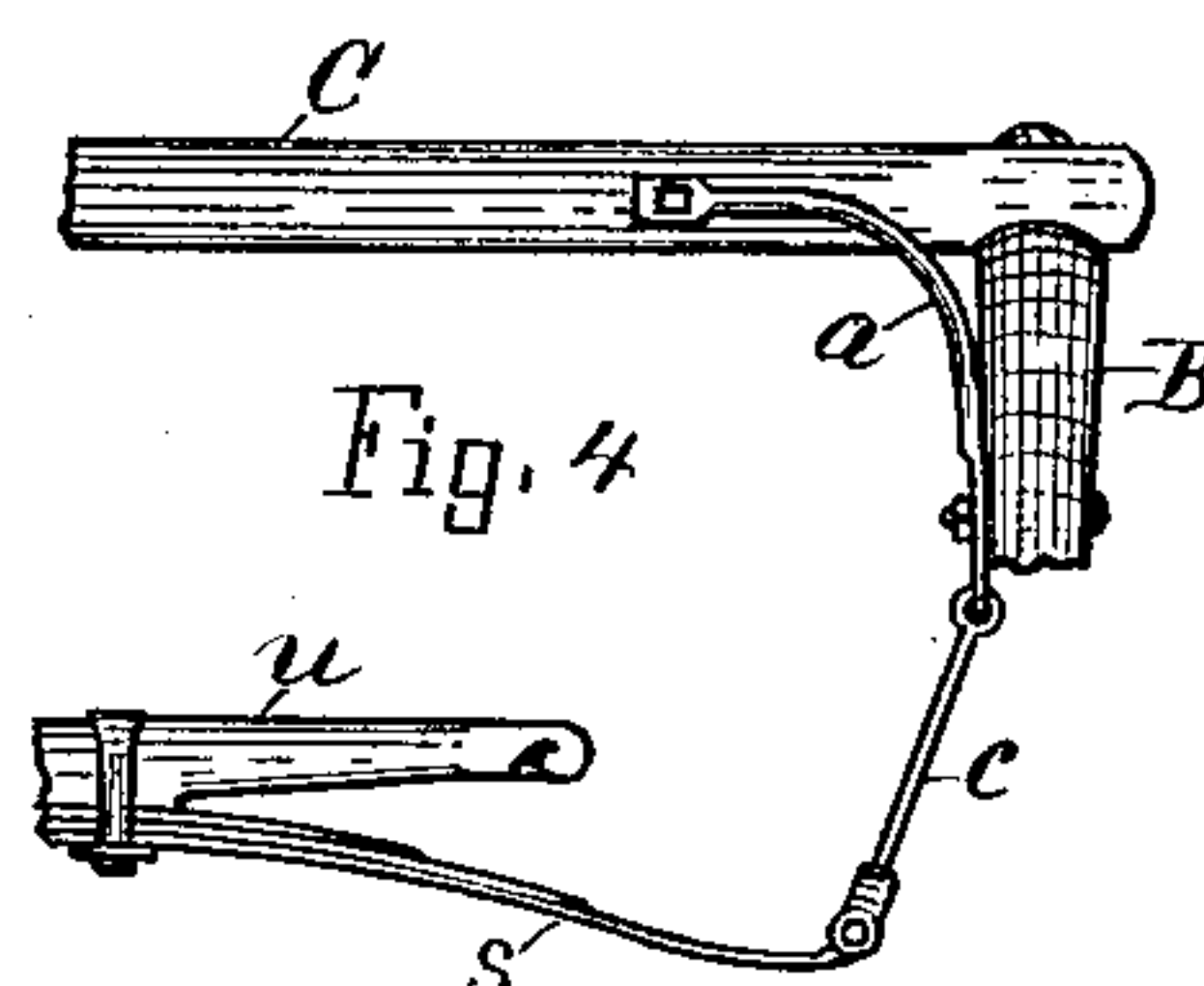
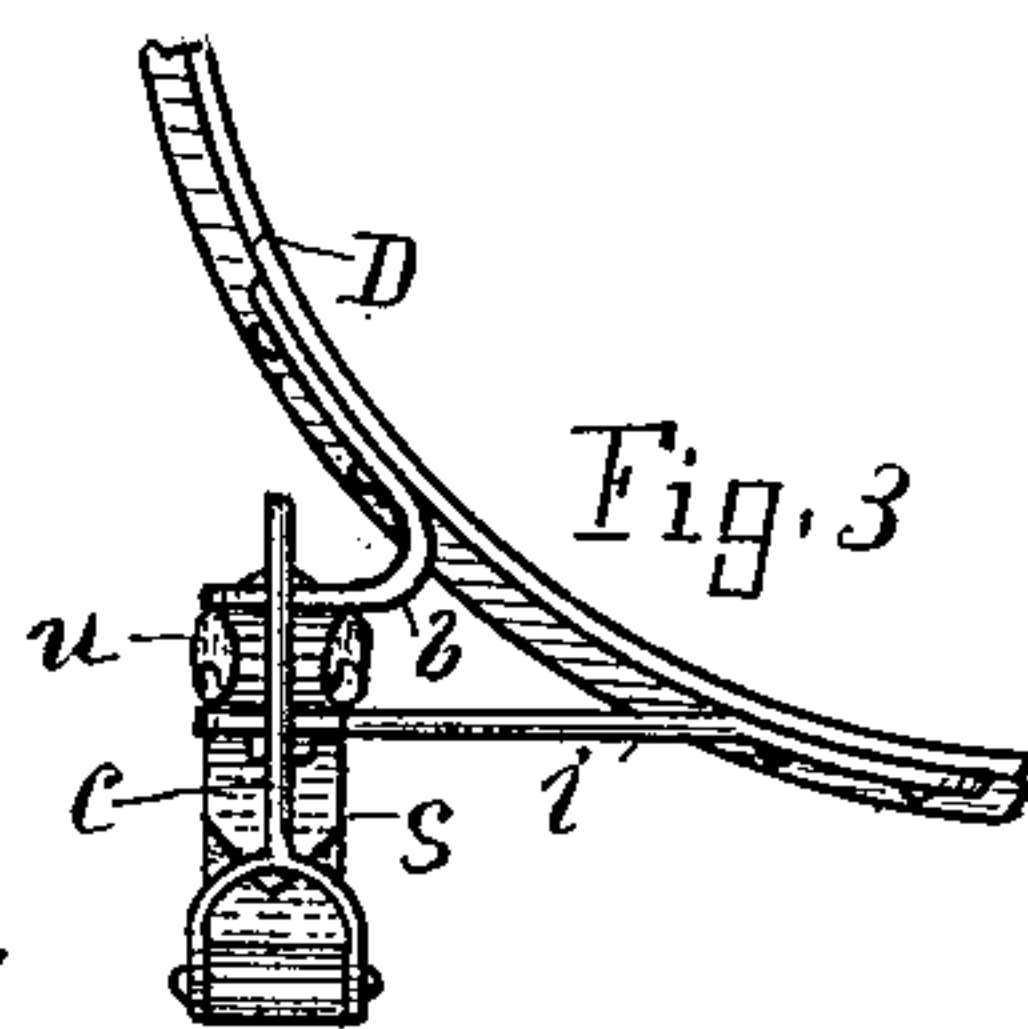
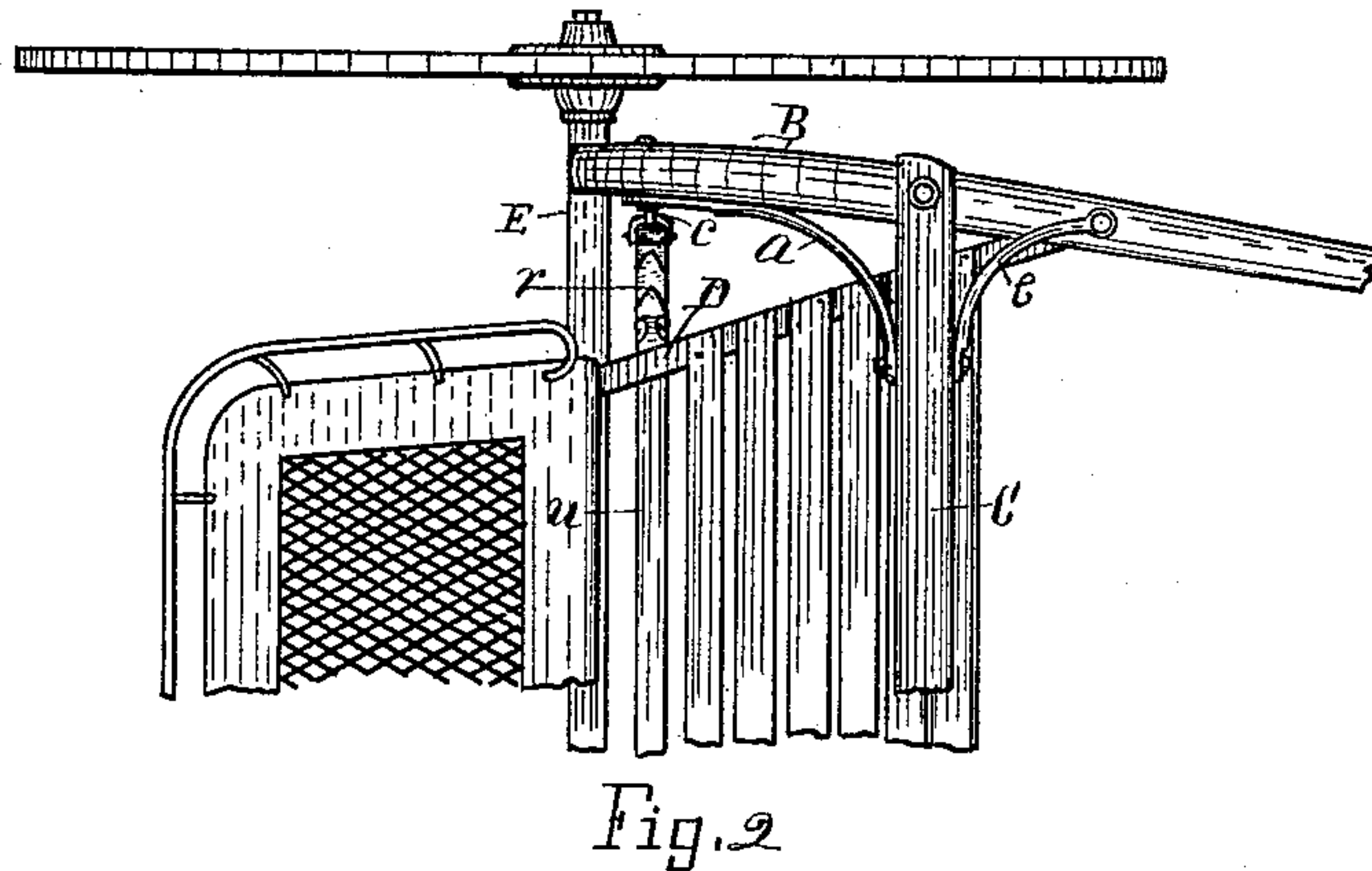
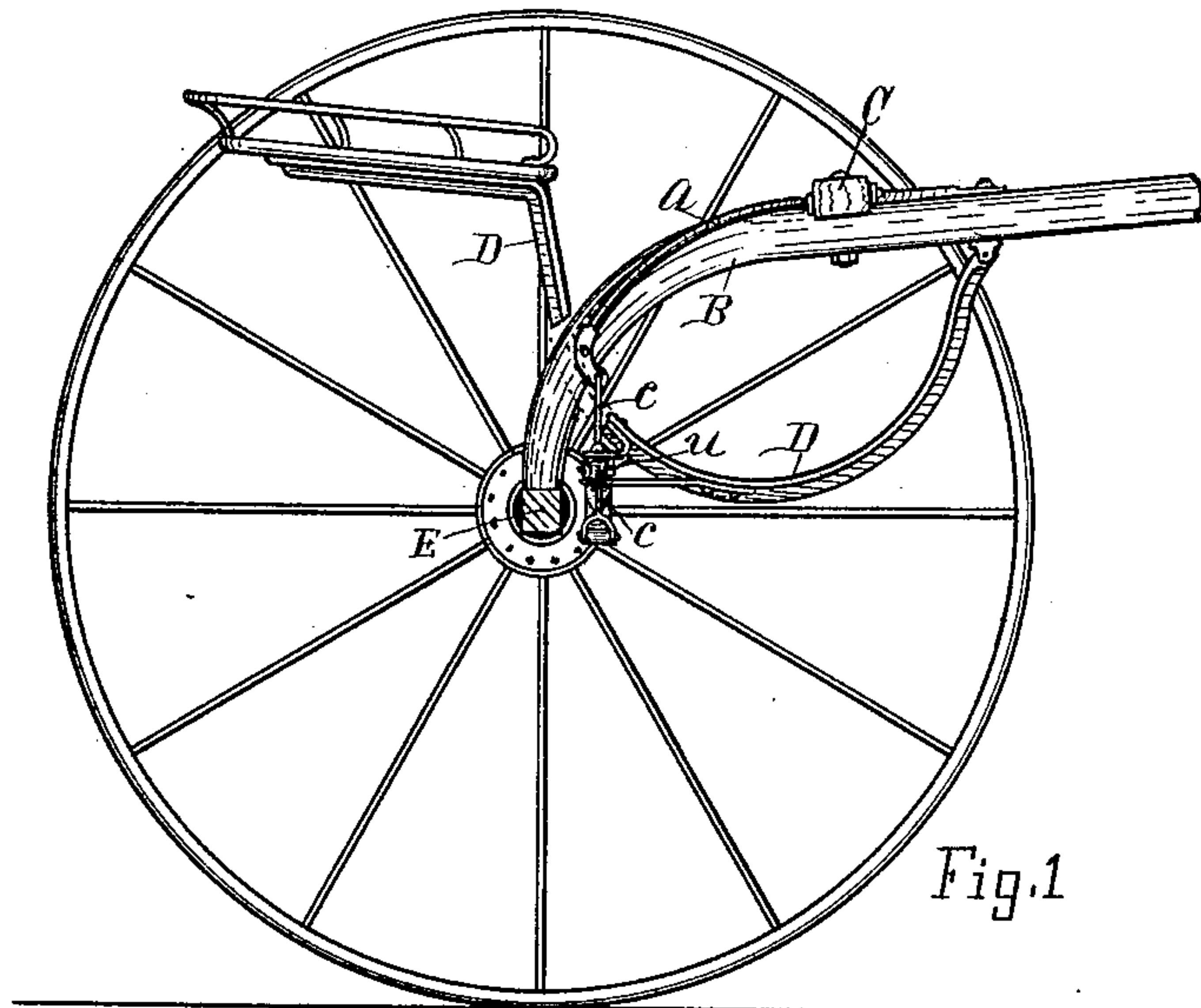
(No Model.)

J. W. PHILLIPS & F. C. STALEY.

TWO WHEELED VEHICLE.

No. 386,494.

Patented July 24, 1888.



Witnesses.
John L. Perkins.
L. Ballou.

Inventor.
John W. Phillips & F. C. Staley.
By *Lucius C. Heit.*
Att'y.

UNITED STATES PATENT OFFICE.

JOHN W. PHILLIPS AND FRANK C. STALEY, OF KALAMAZOO, MICHIGAN.

TWO-WHEELED VEHICLE.

SPECIFICATION forming part of Letters Patent No. 386,494, dated July 24, 1888.

Application filed February 23, 1888. Serial No. 264,948. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. PHILLIPS and FRANK C. STALEY, the former a subject of the Queen of Great Britain, the latter a citizen
5 of the United States, both 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.

10 This invention relates to the ordinary style of two-wheeled vehicles which have bodies or seat bars fulcrumed to the thills at the forward end and elastically supported over the axle.

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

In the drawings forming a part of this specification, Figure 1 is a side elevation with one wheel and thill removed; Fig. 2, plan of about
20 one-half of the vehicle; Fig. 3, lettered details enlarged from Fig. 1; and Fig. 4 shows lettered details from Fig. 1, looking from a point at the left.

Referring to the lettered parts of the drawings, E is the axle; B, the thills; D, the seat bars hinged at forward end to the thills; S, the semi-elliptic spring parallel with the axle, and
25 c are the hangers suspending the ends of said spring, all substantially as heretofore.

30 The seat-bars have each two rearwardly-extended arms, *b i*, Figs. 1 and 3, bolted or otherwise secured to said bars. Between the free ends of the arms *b i* the ends of the spring-bar *u* are bolted. Thus they both attach the body
35 to the spring-bar and brace the body as well.

The thills are made with a single cross-bar, C, instead of double, as heretofore. In lieu of the other cross-bar, we employ a brace and hanger-support, *a*, on each side. These combined brace and hanger-supports are made of
40 metal, one end being attached to the thill cross-

bar near one end, from thence extending obliquely across the angle of the cross-bar and thills, and thence down the bend of the thill and attached thereto.

45 From the point of attachment the lower end terminates in an eye or hook, to which the upper end of the ordinary hanger, *c*, is jointedly attached. The lower end of the hangers *c* are jointedly attached to the ends of the spring S,
50 or, so far as the combined brace and hanger-supports are concerned, any suitable style of spring may be employed.

Braces *e* may be employed, if deemed necessary, Fig. 2, on the front side of the cross-
55 bar C.

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

1. The combination of the axle, spring, 60 spring-bar, and a fulcrumed body having the rearwardly-extended brace-arms between which the ends of the spring-bar are attached, substantially as set forth.

2. The combination of the wheeled axle, the 65 thills having the single cross-bar, the hanger-supports, which also form braces to the thills, said supports being attached to the cross-bar extending across the angle of the cross-bar and thills, thence down the bend of the thills and
70 attached thereto, the fulcrumed body, spring, and the hangers jointedly attached to the lower end of said supports, substantially as set forth.

In testimony of the foregoing we have here-
75 unto subscribed our names in presence of two witnesses.

JOHN W. PHILLIPS.
FRANK C. STALEY.

Witnesses:

C. E. HALL,
L. BALLOU.