

(No Model.)

J. W. COATES.
TWO WHEELED VEHICLE.

No. 394,060.

Patented Dec. 4, 1888.

Fig. 1

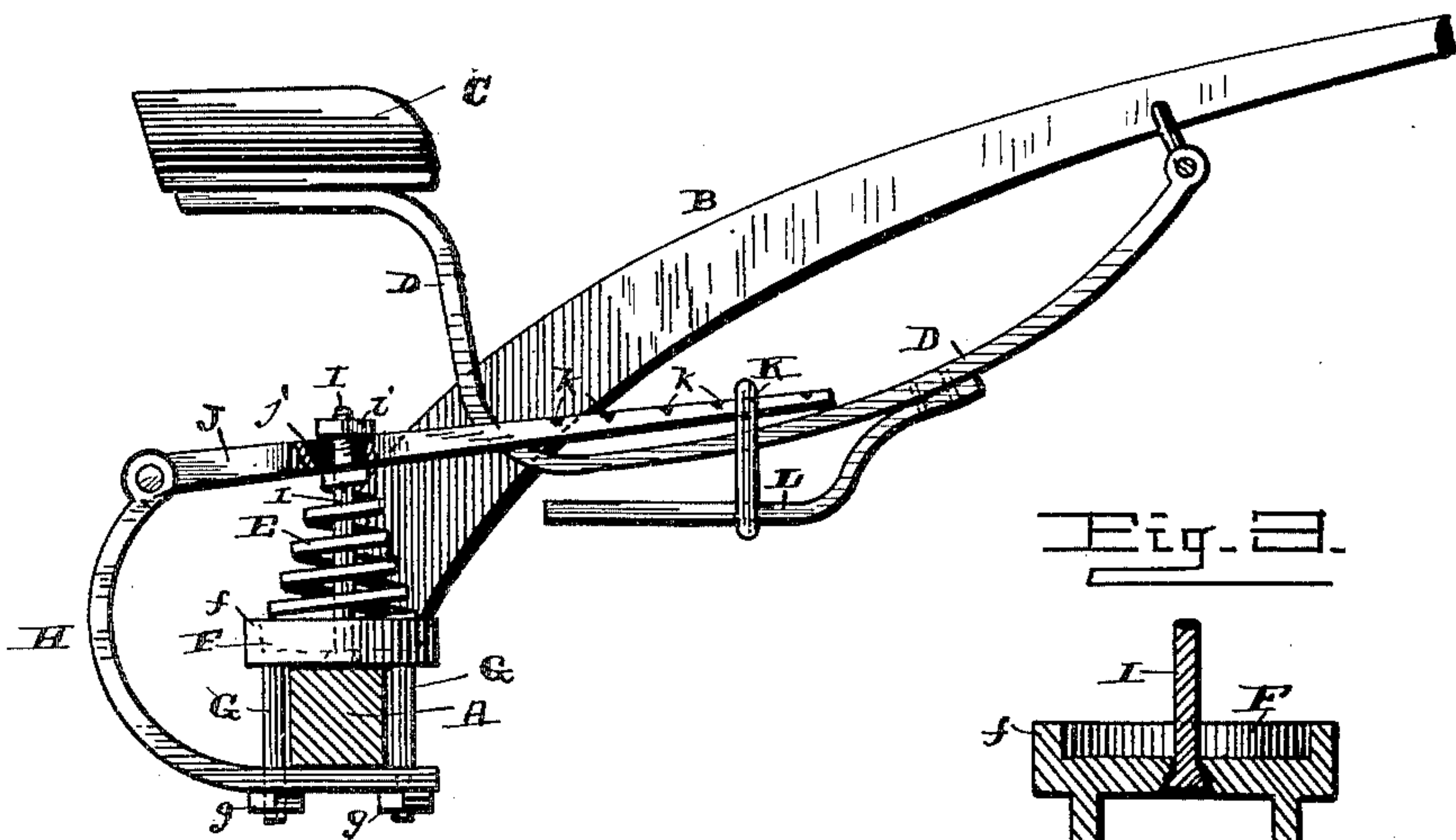


Fig. 3

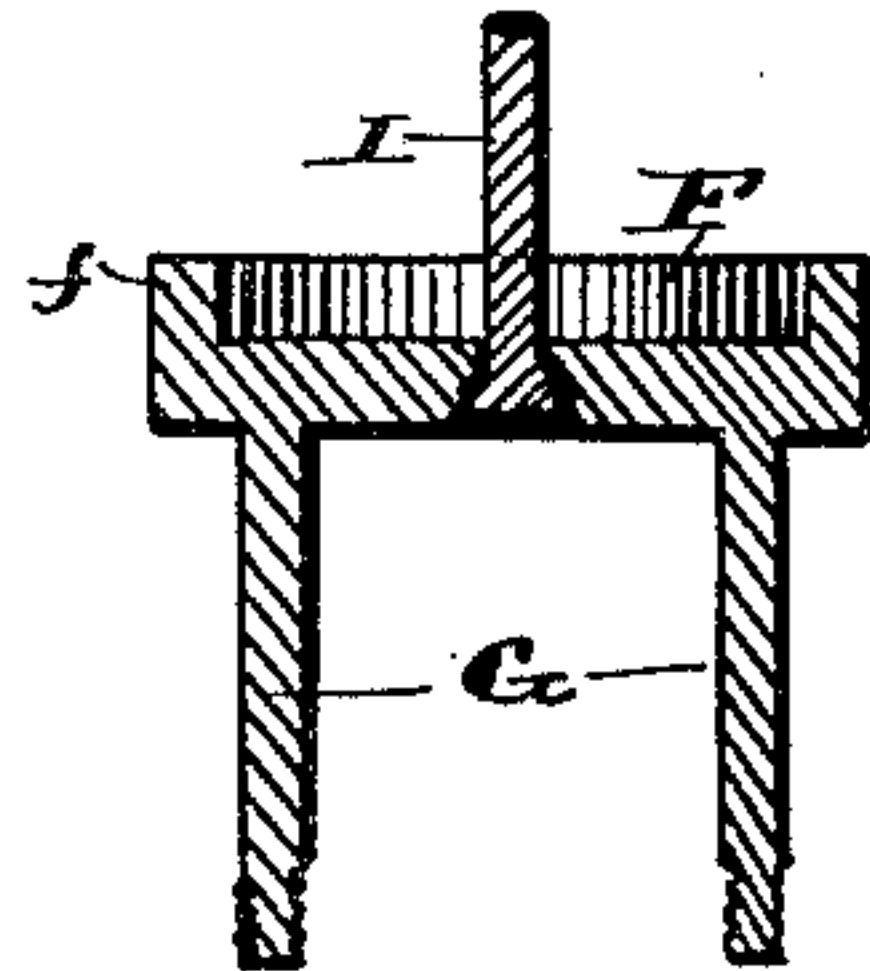


Fig. 2

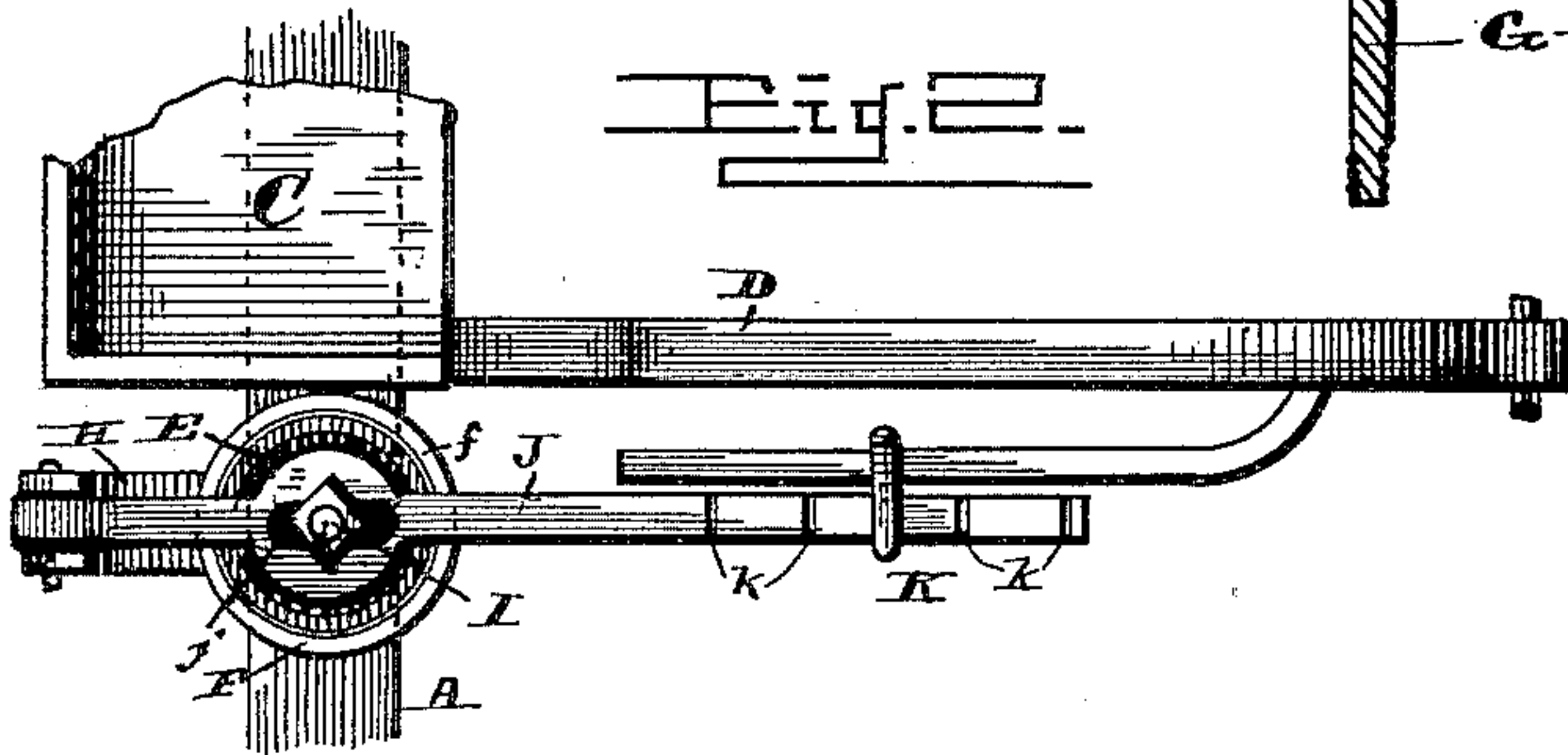
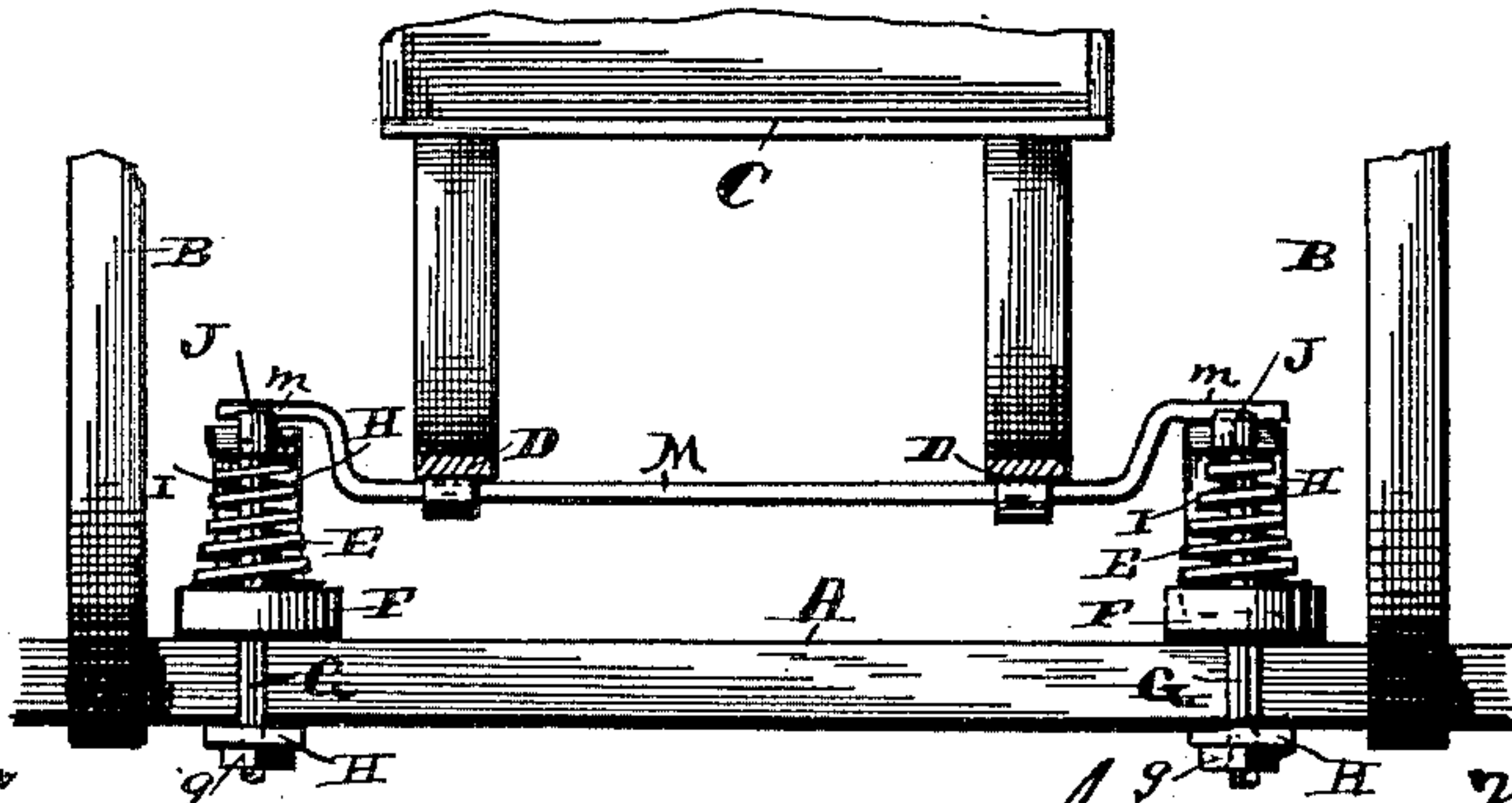


Fig. 4



Witnesses,

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Inventor,

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By his Attorney W. Alexander

UNITED STATES PATENT OFFICE.

JAMES W. COATES, OF SOUTH BEND, INDIANA.

TWO-WHEELED VEHICLE.

SPECIFICATION forming part of Letters Patent No. 394,060, dated December 4, 1888.

Application filed May 9, 1888. Serial No. 273,317. (No model.).

To all whom it may concern:

Be it known that I, JAMES W. COATES, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Two-Wheeled Vehicles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a side view of a two-wheeled vehicle having my improvements applied, the wheels being removed. Fig. 2 is a top plan view of the spring devices. Fig. 3 is a detail vertical sectional view of the same. Fig. 4 is a detail view of a modification.

This invention is an improvement in two-wheeled vehicles; and its object is to provide improved adjusting spring-supports for the body or seats, as is hereinafter clearly described.

Referring to the drawings by letter, A represents the axle; B, the thills connected therewith, and C the body or seat mounted upon forwardly-curved bars D, which are pivotally connected to the thills at their forward ends.

E E are coiled springs, preferably conical, as shown, and mounted on the axle at each side of body C.

F are socket-plates, having upstanding peripheral flanges and depending studs G, which embrace the axle, and are screw-threaded on their lower ends.

H are upwardly-curved brackets, the lower ends of which are perforated for the passage of studs G, on which the brackets are secured by bolts g, as shown, the plates and brackets thus forming clips bolted to the axle and mutually contributing to retain each other thereon.

Springs E are seated in plates F, as shown, and are thereby kept from slipping out of place.

I are rods rising centrally from plate F through perforations in the plates, being kept therein by their heads. These rods pass axially through the springs and prevent the latter swaying too far laterally.

J are levers pivoted at rear to the upper ends of brackets H, and extending forward be-

yond and over the springs, being slotted at j for the passage of rod I, and retained thereon by a head or nut, i, as shown. The levers are thus partly supported by the springs. The levers J extend forward to and above the adjoining bars D, and are notched on their upper edges, as shown at k, for engaging and holding a link, K, which also engages a projecting arm or bracket, L, secured to bars D, as shown.

By means of links K the bars D are suspended from levers J, so that it will be apparent that the principal weight of the body C is transferred to the springs E E. By varying the point of engagement of links K with the levers and arms, the degree of strain on the springs can be varied and the body adjusted to suit a heavy or light load. The socket-plates and brackets H may be secured to the axle independently of each other, if desired.

In place of the links K and arms L, the device shown in Fig. 4 may be employed. In this figure a rod, M, is secured transversely under bars D, and its opposite ends, m m, are cranked, as shown. The short horizontal end of the cranked portion being engaged in the notches of the corresponding lever J, the rod being permitted to oscillate, its point of engagement with the levers J can be varied, as is obvious.

Having described my invention, I claim—

1. In a two-wheeled vehicle, the combination of the body and axle with springs mounted on the axle, the levers pivoted to supports in rear of said springs and extending forward beyond the same, and being supported by the springs, and adjustable connections between said levers and body, all constructed and arranged substantially in the manner and for the purpose described.

2. The combination of the body-bars and axle with the brackets, the levers pivoted to said brackets, and the springs mounted on the axle in front of the pivots of the levers and supporting and controlling said levers, and the connections between said levers and body-bars, all constructed and arranged substantially as and for the purpose described.

3. The combination of the axle and body-bars, and the arms on said bars, with the brackets attached to the axle, the levers pivoted thereon, the springs supporting said le-

vers, and the adjustable connection between said levers and arms, all constructed and arranged substantially in the manner and for the purpose described.

5 4. The combination of the axle, thills, and body-bars with the brackets, the levers pivoted thereto, the supporting - springs, the socket-plates for said springs, and the connections between said levers and body-bars, all constructed and arranged substantially in the manner and for the purpose described.

10 5. The combination of the axle, thills, and body-bars having projecting arms with the

brackets, levers pivoted thereon, the springs, socket-plates therefor, the rods rising from 15 said plates, and the adjustable links connecting the levers with the arms of the bars, all constructed and arranged substantially in the manner and for the purpose described.

In testimony that I claim the foregoing as 20 my own I affix my signature in presence of two witnesses.

JAMES W. COATES.

Witnesses:

JAMES DU SHANE,

CHAS. WOLVERTON.