

(No Model.)

D. E. CHANDLER & J. C. WILLIAMS.
Sulky.

No. 238,851.

Patented March 15, 1881.

Fig. 1.

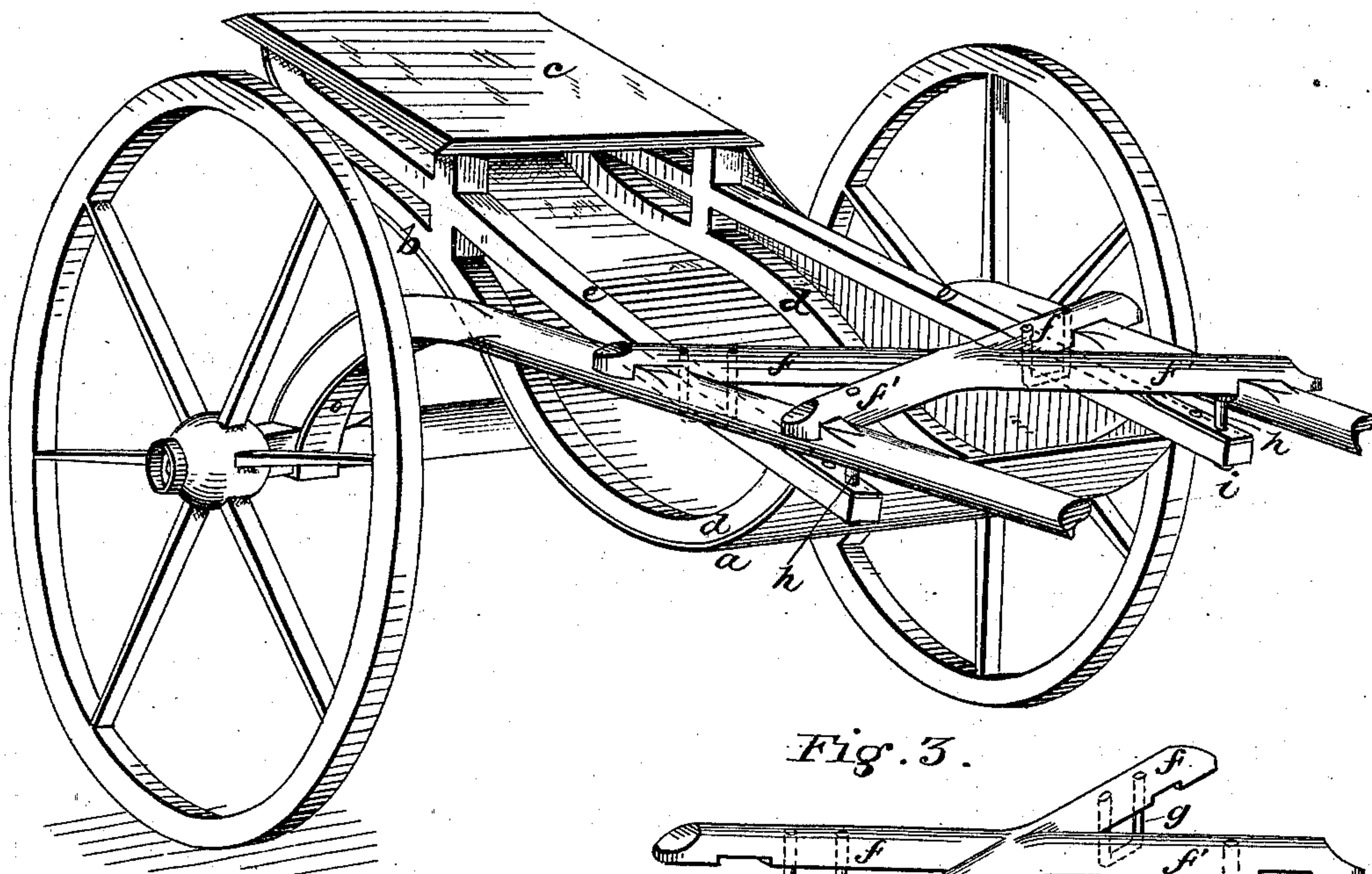


Fig. 3.

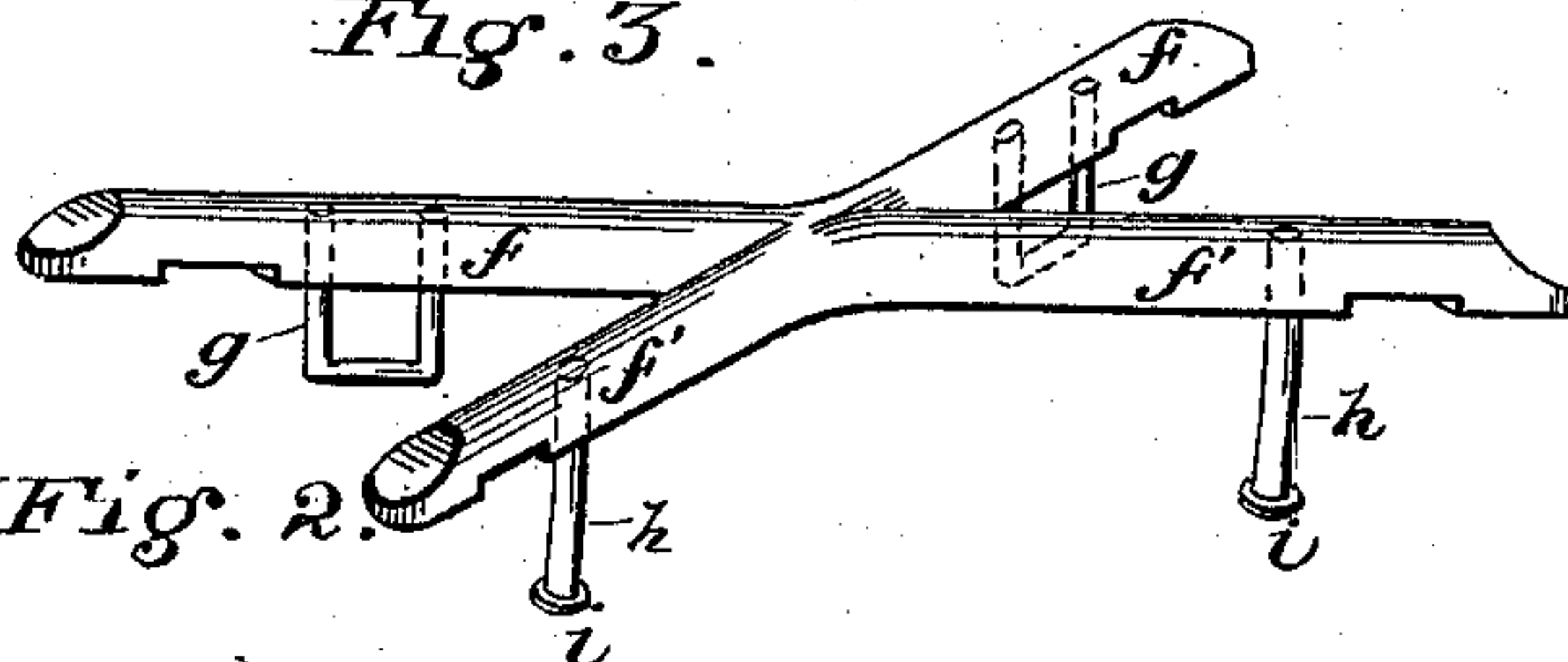


Fig. 2.

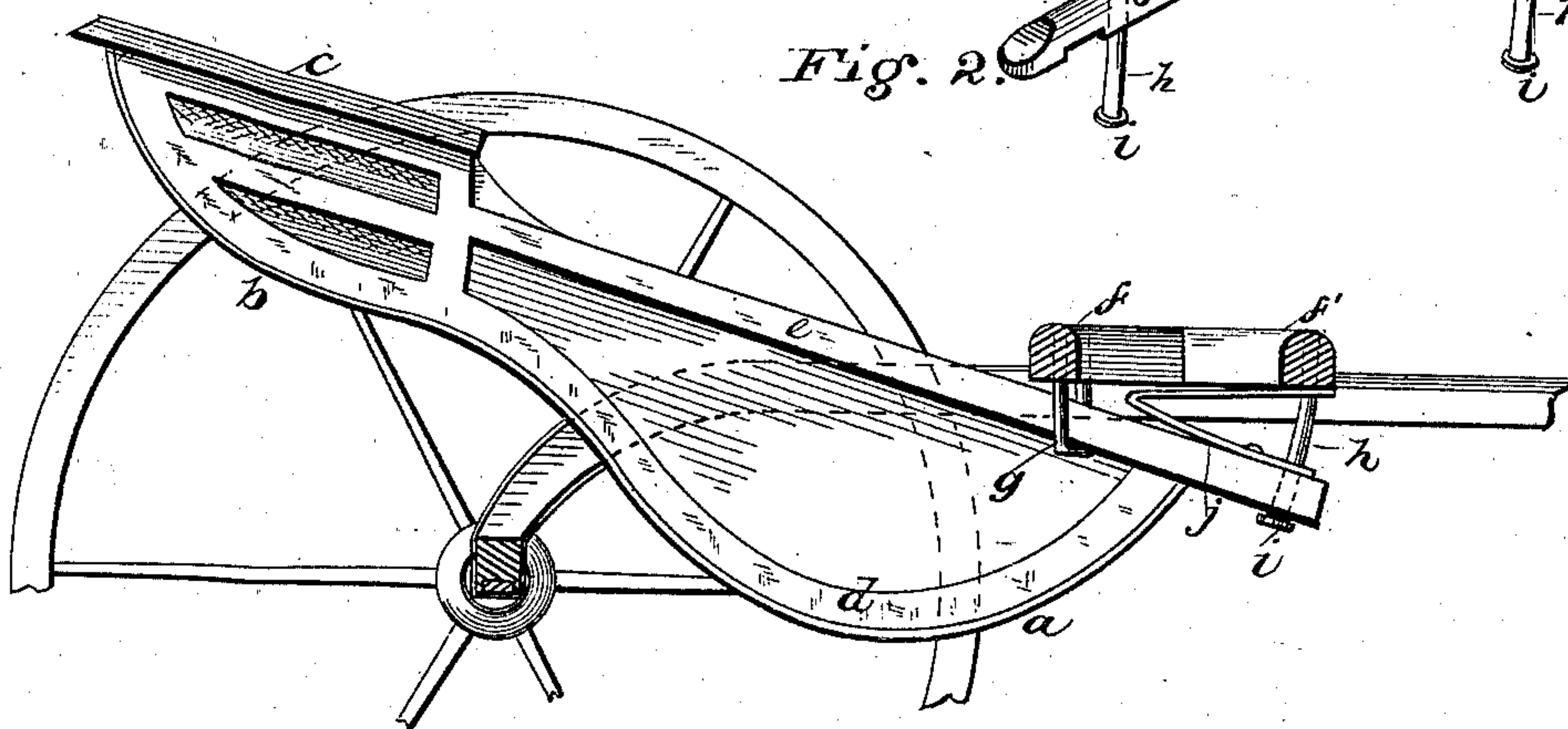
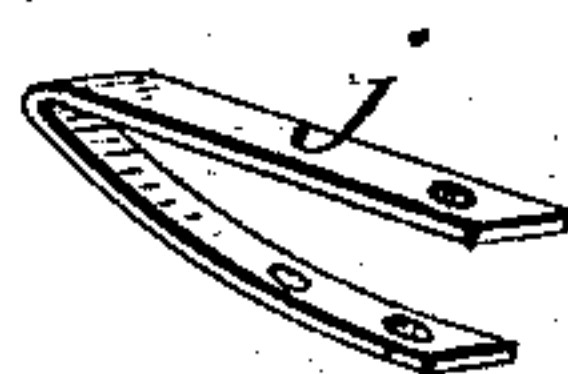


Fig. 4.



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DAVID E. CHANDLER AND JAY C. WILLIAMS, OF AURORA, ILLINOIS.

SULKY.

SPECIFICATION forming part of Letters Patent No. 238,851, dated March 15, 1881.

Application filed January 15, 1881. (No model.)

To all whom it may concern:

Be it known that we, DAVID EMERY CHANDLER and JAY CADEY WILLIAMS, citizens of the United States, residing at Aurora, in the county of Kane and State of Illinois, have invented new and useful improvements in Sulkies or other Two-Wheeled Vehicles, of which the following is a specification.

Our invention relates to improvements on sulkies or other two-wheeled vehicles in which a seat-supporting frame or body is hinged to the cross-bar of the shafts; and the objects of our improvements are to connect the seat-supporting body to the cross-bars of the shaft, so as to obtain a low-down seat over the axle; to provide means by which the seat-supporting body has two points of attachment at each front corner, one in advance of the other, to brace it laterally; to give freedom for the vertical movement of the front ends of the body upon springs arranged in advance of hanging fulcrum-bearings for the seat-body, and to brace the shafts by the same means by which the body is braced against side swing or movements. I provide a double or X-shaped cross-bar as a means of supporting the seat-body at its front corner, as a means of supporting the hanging fulcrum-bearings for the body, and as a means for the arrangement and support of springs at the front ends of the seat-supporting body at its front points of attachment.

Referring to the accompanying drawings, Figure 1 represents a view, in perspective, of our improved sulky; Fig. 2, a vertical longitudinal section of the same; Fig. 3, the double-branched cross-bar, and Fig. 4 the spring.

The shafts are rigidly secured to the axle, and the seat-supporting body is hung between the shafts in a low-down position and free of direct support upon the axle. The seat-body is preferably curved, as shown, the foot-portion *a* being a little below a horizontal plane with the axle, and the seat-supporting part *b* curving upward over and in rear of the axle, so that the position of the seat *c* will be in rear of the axle. The body-sills *d* are of corresponding curved form with the body, and rails *e e* extend from the seat above the sills and are firmly secured to their front ends, making a strong seat-supporting frame.

As a means of supporting the body we em-

ploy a double or X-shaped cross-bar—that is, a cross-bar having two branches, *f f'*, firmly secured to each shaft in a manner to brace them much better than is possible by a single cross-bar. The manner of supporting the seat-body in connection with such a cross-bar forms the special matter of our improvement.

The seat-body has a low-down position between the shafts and the body. Side rails, *e e*, extend beneath the branches of the cross-bar, and by means of these side rails the body is connected to the rear branches, *f*, of the cross-bar by hangers, loops, or other means, which will form depending fulcrum-bearings *g*, upon which the seat-body is suspended and is free to rock. The front ends of the side rails are connected to the front branches, *f'*, of the cross-bar by vertical rods *h*, fixed to and depending from said cross-bar branches, and, passing through the front ends of the body-rails, are provided with a head, *i*, on their lower ends, so that the seat-body, turning freely on the fulcrum-bearings as fixed points of attachment to the cross-bar, will be free to move up and down upon the front rods or points of attachment. It is at these front rod attachments of the body-rails that the springs *j* are secured to said rails and in positions to press against the under sides of the said cross-bar front branches, so that the force of the springs will be constantly to press the front of the seat-body down; but as the heads of the rods form the limit to such descent the seat is thereby maintained in a low-down and proper position for the driver to mount. The position of the springs gives them a free and easy action under the rocking of the body upon fixed fulcra in rear of the springs.

The springs may be of any suitable form and kind, and secured in any suitable manner, so long as they tend to depress the front of the seat-supporting body upon its suspending fulcrum-bearings.

As shown, the rods pass through the ends of the springs, and the latter extend back upon the rails and occupy positions between the branches of the cross-bar; but this construction is not essential, as loop-hangers may be used in place of the rods.

The branches of the cross-bar, while serving to brace the shafts, serve also to brace the

seat-supporting body at two points of attachment, one in advance of the other on each side, against side movements, which are so racking upon pivot or hinge fastenings, or
5 upon single fastenings of any kind. The cross-bar has the form of the letter **X**, and the body-rails, crossing beneath the forked ends, are secured to each by the hangers *g* and the rods *h*, thus giving a double bracing attachment to
10 each side of a seat-supporting body having no direct support upon the axle.

It is obvious that instead of using the springs upon the front ends of the body-rails a single spring may be used to support the seat directly upon the axle, in connection with the
15 double front points of attachment of the body to the cross-bar.

We claim—

1. In a sulky or two-wheeled vehicle, the
20 combination of the shafts and the seat-supporting body with a double or **X**-shaped cross-bar, from which said seat-supporting body is suspended and braced at two points of attachment at each side of its front end, substantially as described, for the purpose specified.
25

2. In a two-wheeled vehicle or sulky, the combination of the seat-supporting body and a double or **X**-shaped cross-bar, from which
30 the seat-supporting body is suspended and braced, substantially as described, with springs secured upon the front ends of the rails of said seat-body, and in advance of the fulcrum-

bearings for said body and beneath the said cross-bar, substantially as described, for the
35 purpose specified.

3. In a two-wheeled vehicle or sulky, the combination of the seat-supporting body, a double or **X**-shaped cross-bar, from which the seat-supporting body is suspended and braced,
40 and springs secured upon the front ends of the rails of said seat-body, substantially as described, with stops depending from the front branches of said **X**-shaped cross-bar in advance of the fulcrum-bearings for said body,
45 whereby to limit the depressing action of said springs upon the front of said seat-supporting body.

4. The combination, in a two-wheeled vehicle or sulky, of the seat-supporting body,
50 the double or **X**-shaped cross-bar, the fulcrum suspending-bearings *g*, and the front stop-rods, *h i*, both depending from said cross-bar and forming attachments for the body and the
55 springs *j* secured to the front ends of said body at points in advance of its fulcrum-bearings and beneath said cross-bar, all constructed and arranged substantially as described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing
60 witnesses.

DAVID E. CHANDLER.
JAY CADEY WILLIAMS.

Witnesses:

C. W. REYNOLDS,
D. B. JACKSON.