

**CULTIVATOR.**

APPLICATION FILED AUG. 25, 1908.

**930,109.**

Patented Aug. 3, 1909.

2 SHEETS—SHEET 1.

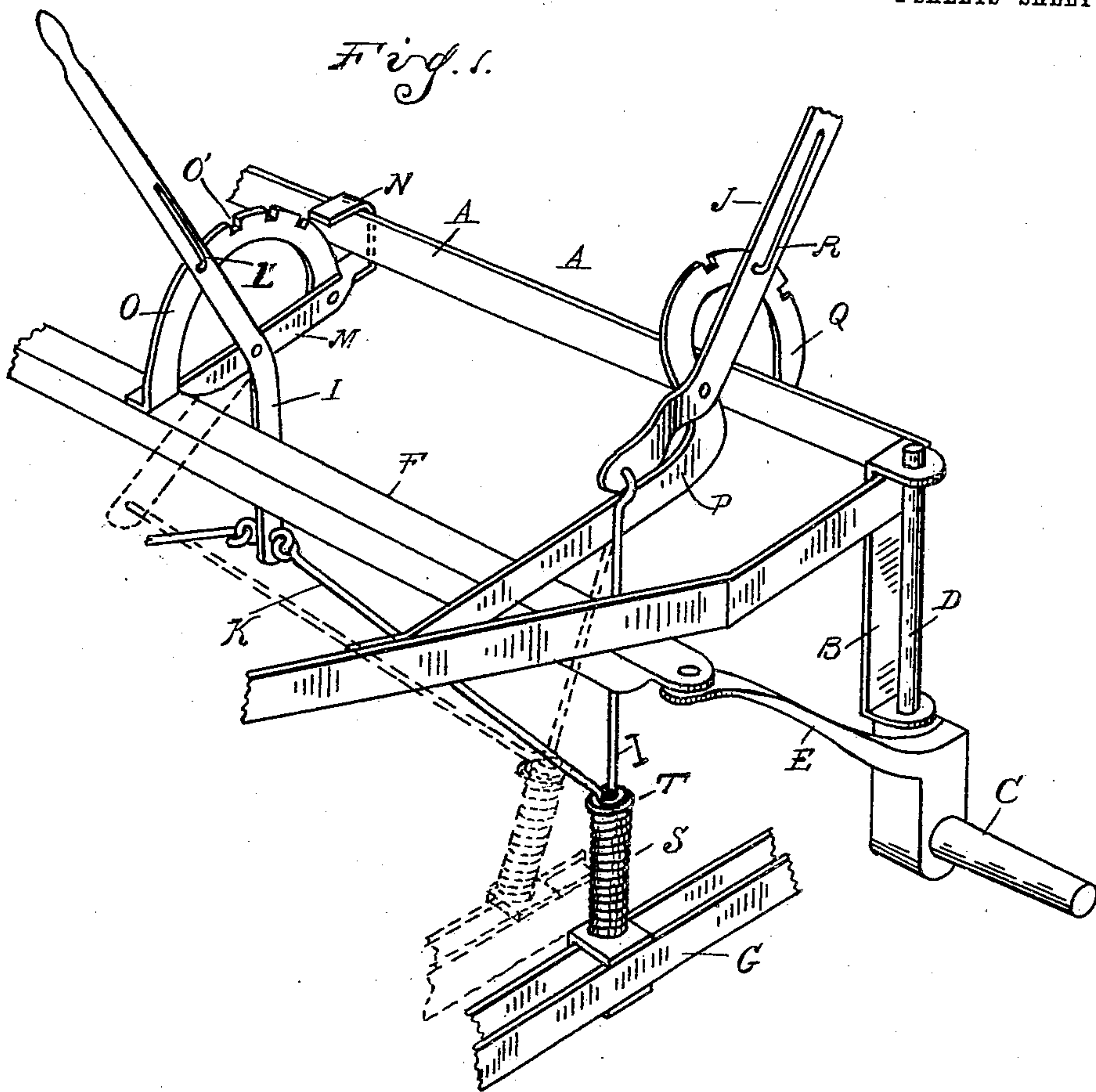
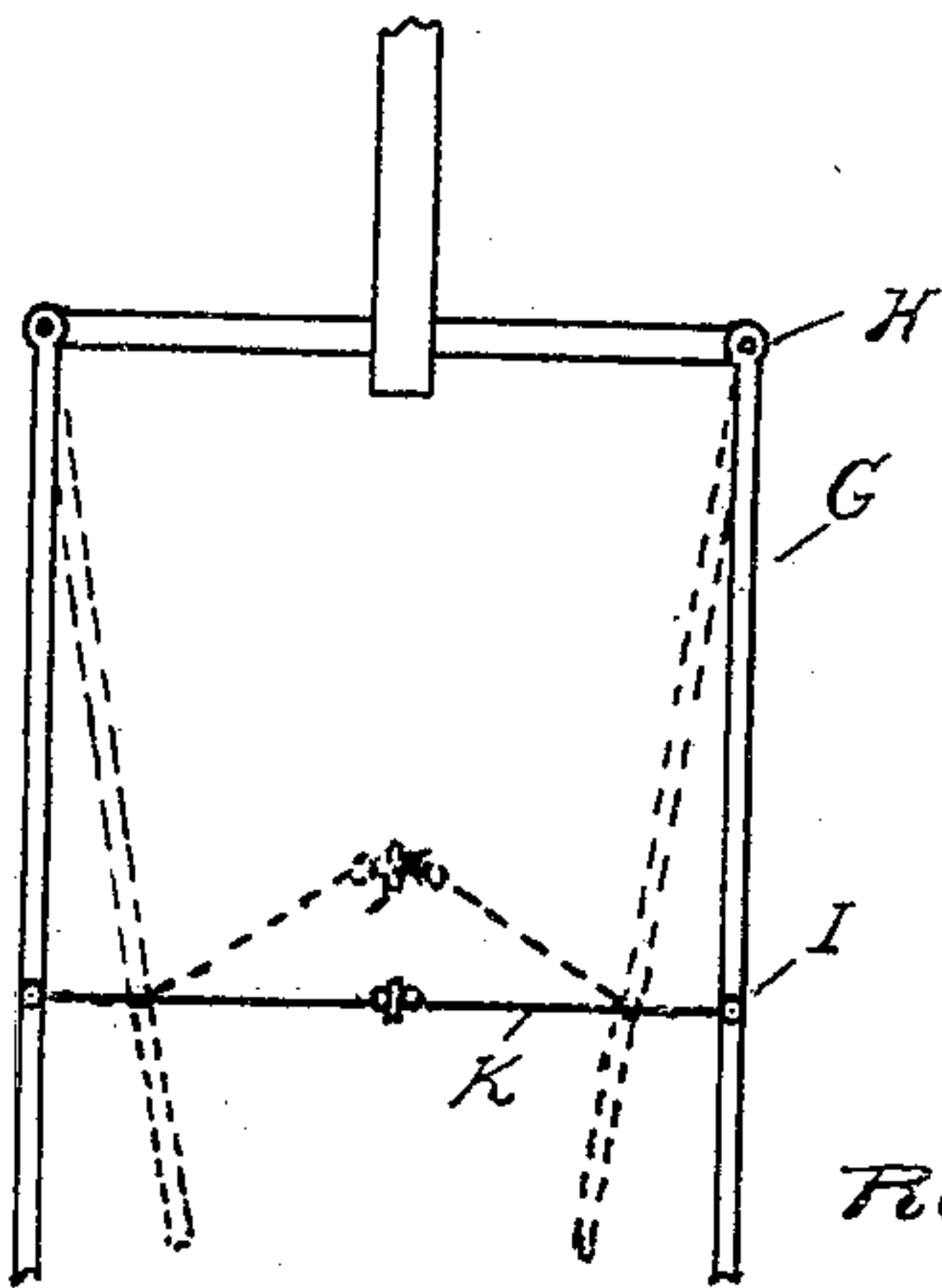


Fig. 2.



Witnesses  
Nelle Kinsella  
James P. Barry.

Inventor  
Robert S. Wells

By Whittier, Hubert Whittier

Attys.

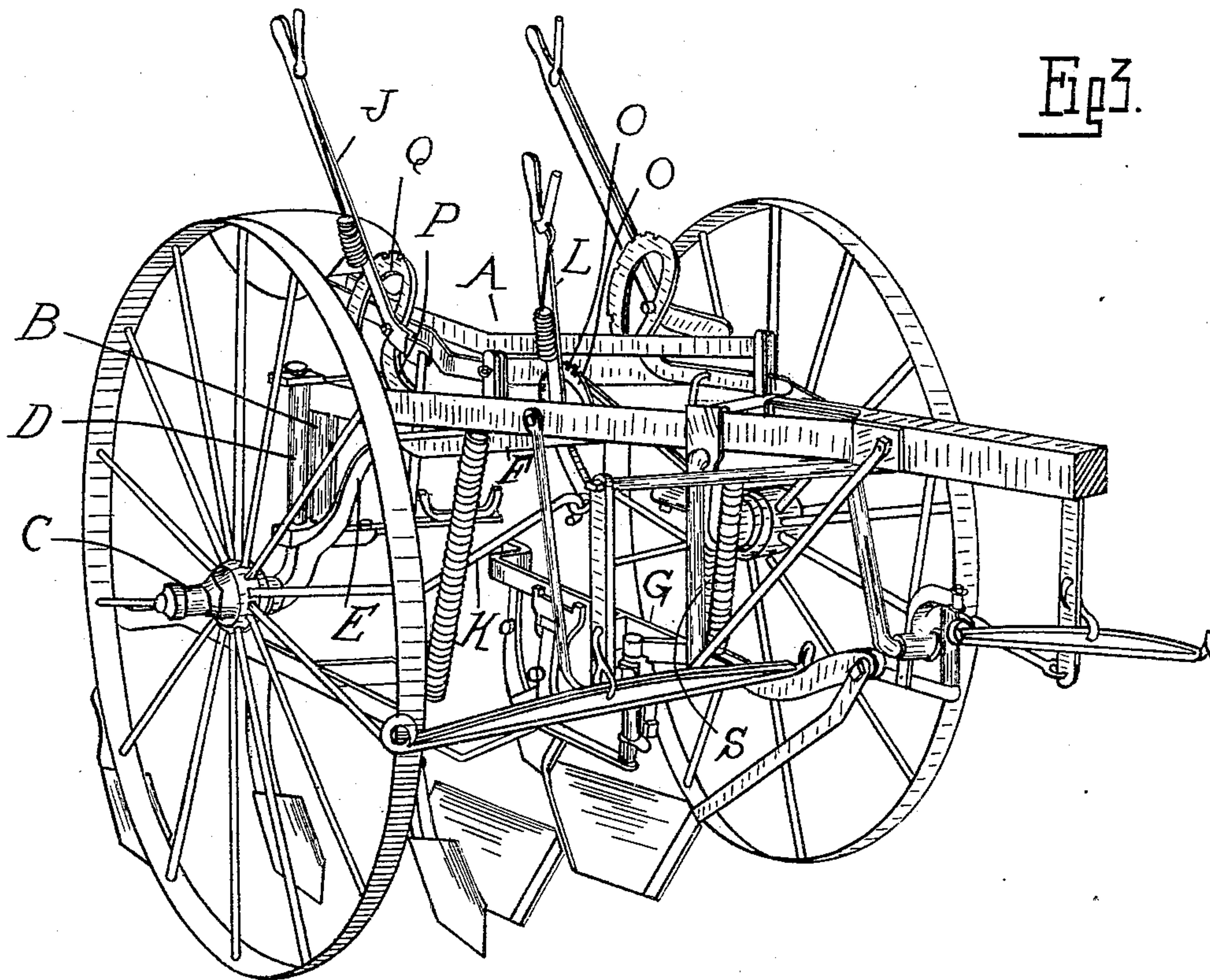
R. S. WELLS.  
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2 SHEETS—SHEET 2.



Witnesses

*W. B. Ford*  
*C. B. Knapp*

Inventor

*Robert S. Wells*

By *Whitman, Hulbert & Whitman*  
*Attys*



# UNITED STATES PATENT OFFICE.

ROBERT S. WELLS, OF DETROIT, MICHIGAN, ASSIGNOR TO AMERICAN HARROW COMPANY,  
OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

## CULTIVATOR.

No. 930,109.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed August 25, 1908. Serial No. 450,168.

*To all whom it may concern:*

Be it known that I, ROBERT S. WELLS, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Cultivators, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The invention relates to wheeled cultivators, and consists in certain features of construction as hereinafter set forth.

15 In the drawings—Figure 1 is a perspective view of a portion of the cultivator frame embodying my improvement; Fig. 2 is a diagrammatic plan view illustrating the operation. Fig. 3 is a perspective view of a cultivator with my invention attached thereto.

20 A is the frame of the cultivator which is supported by depending brackets B from the stub axles C, said axles being provided with a pivot shaft D for engaging said brackets. E is the actuating rock arm for turning said stub axles and F is the connecting cross bar for said rock arms by which they are caused to move in parallelism.

25 G are the cultivator sections pivotally connected at H to the forward portion of the frame and near their rear ends supported by links I.

30 It is usual in the constructions of machines of this class to provide means both for the vertical and horizontal adjustment of the cultivator sections. With the present invention I have simplified the construction of adjusting mechanism by employing the links I for the double function of vertical and horizontal adjustment of the sections. The vertical adjustment is effected by means of a lever J with which the upper end of the link I pivotally engages. The horizontal adjustment is accomplished through the medium of laterally extending links K connected at one end to the links I, and at their opposite ends to an adjusting lever L. The fulcrum for this lever L is carried by the connecting bar F, which couples the rock arm E for the stub axles and consequently any adjustment in the angularity of the axles will at the same time produce a lateral adjustment of the cultivator sections. The lever L is arranged to move in the plane transverse to the plane of the link K and

longitudinally of the main frame of the machine. Thus when said lever is operated the links K will be swung into angular relation and in turn will swing the supporting links I for the sections so as to draw the latter toward each other, as indicated by the dotted lines in Figs. 1 and 2.

To give stability to the fulcrum support for the lever L and for the sector to which said lever is locked in different positions of adjustment, I preferably provide a fulcrum bar M which is connected at one end to the cross bar F and at its opposite end has a sliding engagement with a parallel cross bar of the frame A. As illustrated, the bar M is bent to form a hook N, which engages the bar A' of the frame A. This hook permits not only the slight movement longitudinally of the bar A', but also a lateral movement with respect to said bar. This lateral movement is necessitated by reason of the fact that the cross bar F will vary in its distance from the bar A' in different positions of adjustment of the rock arms E. The bar M has the sector O secured thereto, the sector being notched at O' for engaging with the locking bolt L' of the lever L.

The lever J is fulcrumed upon a bar P forming a portion of the frame A. This bar is bent to form a segmental portion Q notched to engage with the locking bolt R of the lever J. Beyond this segment the bar P is bent downward to form a fulcrum for the lever at the center of the segment, and then extends longitudinally of the frame to form a brace connection therefor. Thus the bar P performs the function of a brace for the frame, a fulcrum for the lever J and a notched sector or segment for said lever.

The links I are provided below the point of connection of the links K with springs S which yieldingly hold the sections G downward. These springs S abut against collars T on the links I, and said collars also form a bearing adjacent to the links K.

With the construction as described, the sections may be adjusted vertically by a movement of the levers J and horizontally by a movement of the lever L, both of which operate upon the links I supporting the sections.

What I claim as my invention is:

1. In a cultivator, the combination with a frame and a cultivator section supported

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therefrom, of means for adjusting said section in relation to said frame comprising a vertically adjustable link, and a link connected to said first mentioned link for swinging the same laterally.

2. In a cultivator, the combination with a frame and a cultivator section supported therefrom, of means for adjusting said section in relation to said frame, comprising a vertically extending link, a lever fulcrumed upon said frame to which said link is pivotally connected, a link attached to said first mentioned link and extending laterally therefrom, and a lever movable in a plane transverse to said last mentioned link for adjusting the latter to swing the first mentioned link, for the purpose described.

3. In a cultivator, the combination with a frame and a cultivator section supported therefrom, of a link extending vertically from said section, a lever for vertically adjusting said link pivotally engaging its upper end, a link engaging said first mentioned link intermediate its ends and extending laterally, a lever movable in a plane transverse to said last mentioned link for adjusting the latter to swing said first mentioned link, and a spring sleeved upon said first mentioned link intermediate the point of attachment of said laterally extending link and the cultivator section, for the purpose described.

4. In a cultivator, the combination of a frame, stub axles pivoted thereto, a bar extending laterally of said frame connected to adjust said stub axles upon their pivots, a cultivator section, a link for supporting said section from the frame, a laterally extending link connected to said section to adjust the same horizontally, and a lever fulcrumed

upon said laterally extending bar for operating said laterally extending link.

5. In a cultivator, the combination of a frame, stub axles pivotally connected to said frame, a bar extending laterally of said frame and connected for adjusting said stub axles upon their pivots, a cultivator section, a link for supporting said section pivotally supported at its upper end from said frame, a link attached to said first mentioned link and extending laterally therefrom, a lever for adjusting said last mentioned link and a fulcrum support for said lever fixedly attached to said laterally extending bar and slidably engaging said frame.

6. In a cultivator, the combination with a frame, stub axles pivotally secured to said frame, a cross bar connected for operating said stub axles on their pivots, said cross bar extending parallel to a bar of said frame, a cultivator section supported upon said frame, a lever for adjusting said section, and a fulcrum support for said lever attached to said cross bar and slidably engaging the parallel bar of the frame.

7. In a cultivator, the combination with a frame, and cultivator sections supported therefrom, of a lever for adjusting said sections, and a bar forming a brace for said frame to which said lever is fulcrumed, said bar having a portion thereof bent into segmental form concentric with said fulcrum and forming a locking engagement for the lever.

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

ROBERT S. WELLS.

Witnesses:

NELLIE KINSELLA,  
HARRY W. GALVIN.