

(No Model.)

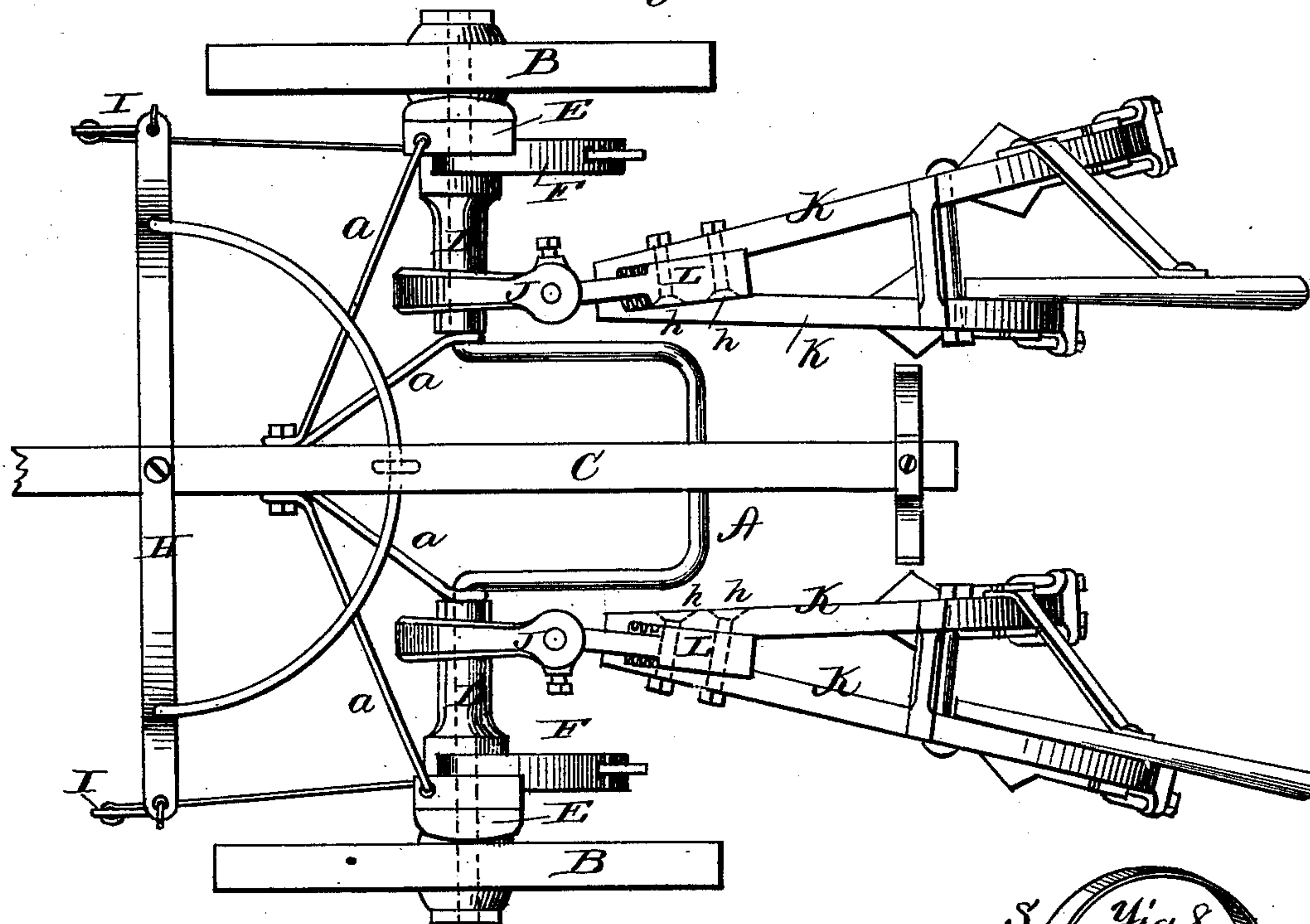
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J. W. HUDSON.  
Wheel Cultivator.

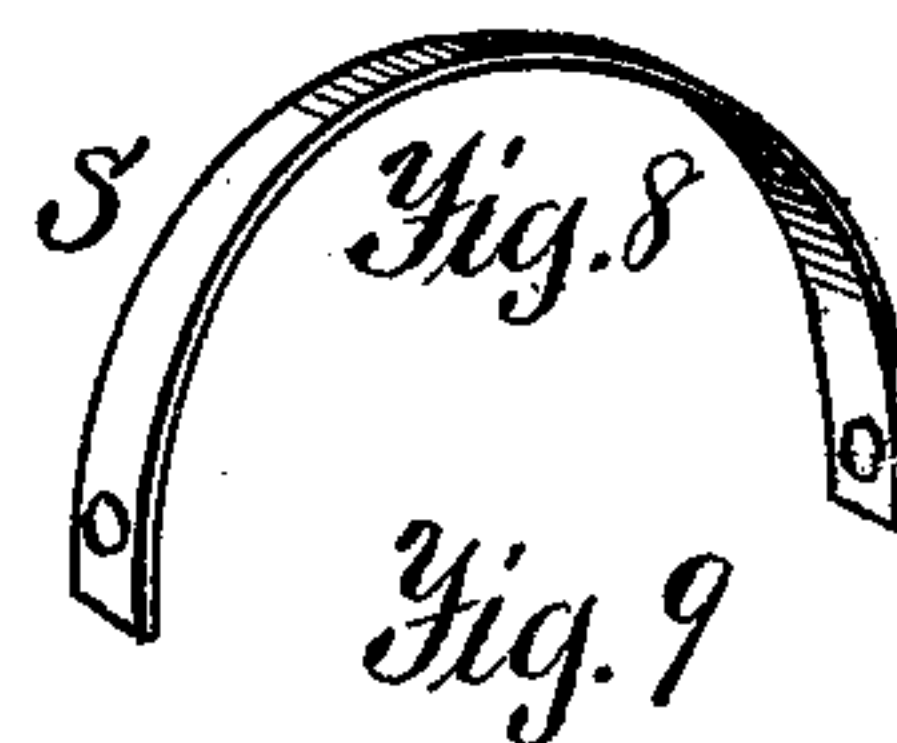
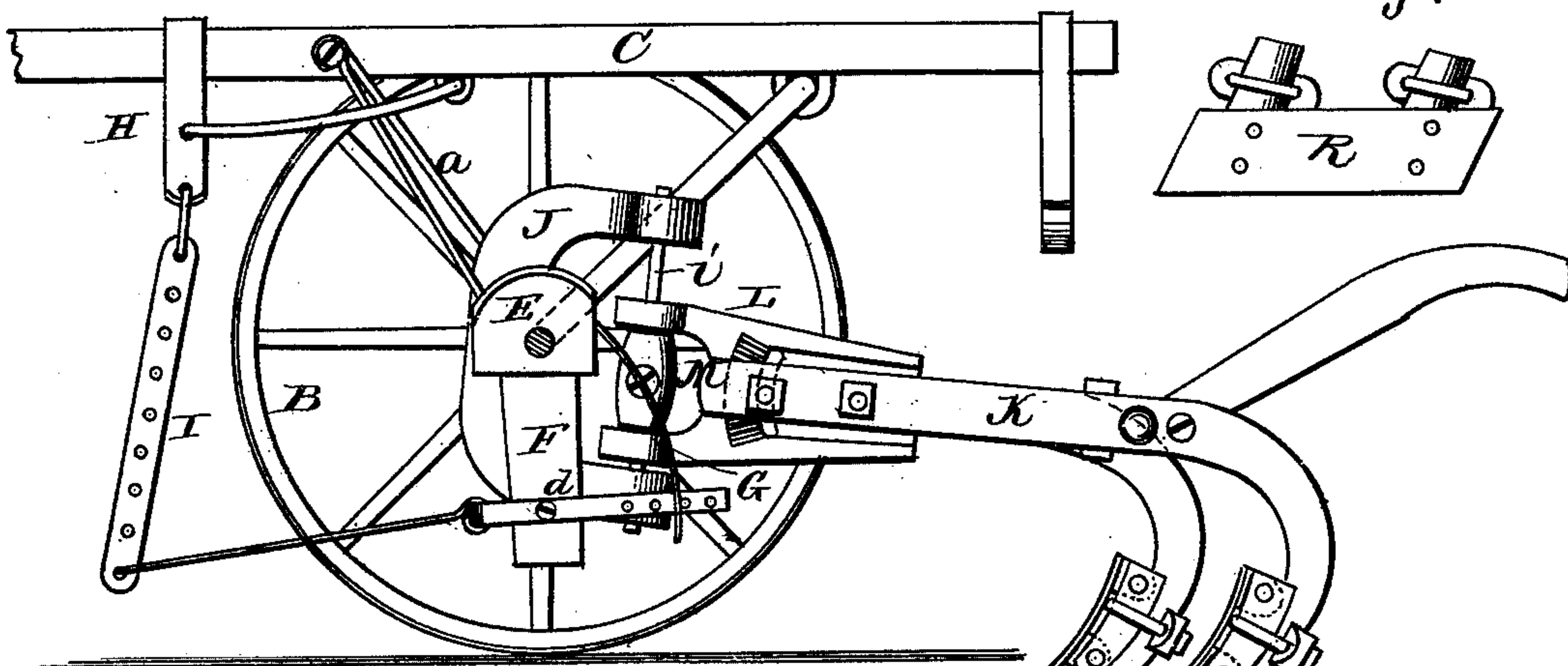
No. 229,534.

Patented July 6, 1880.

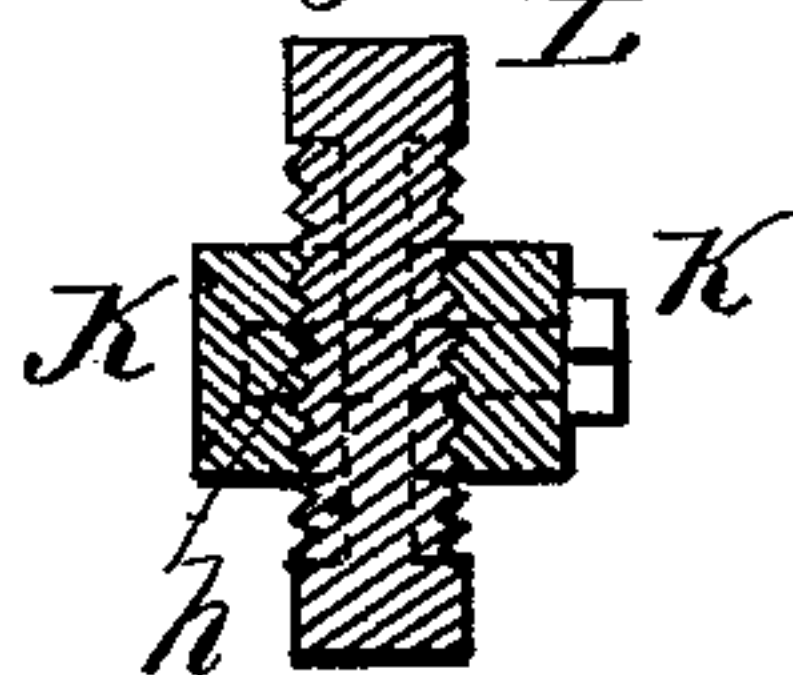
*Fig. 1.*



*Fig. 2.*



*Fig. 10.*



*Witnesses.*  
*A. Ruppert,*  
 *Jas. H. Lange.*

*John W. Hudson.*  
*Inventor.*  
*per Edison Bros.*  
*Attorneys.*

(No Model.)

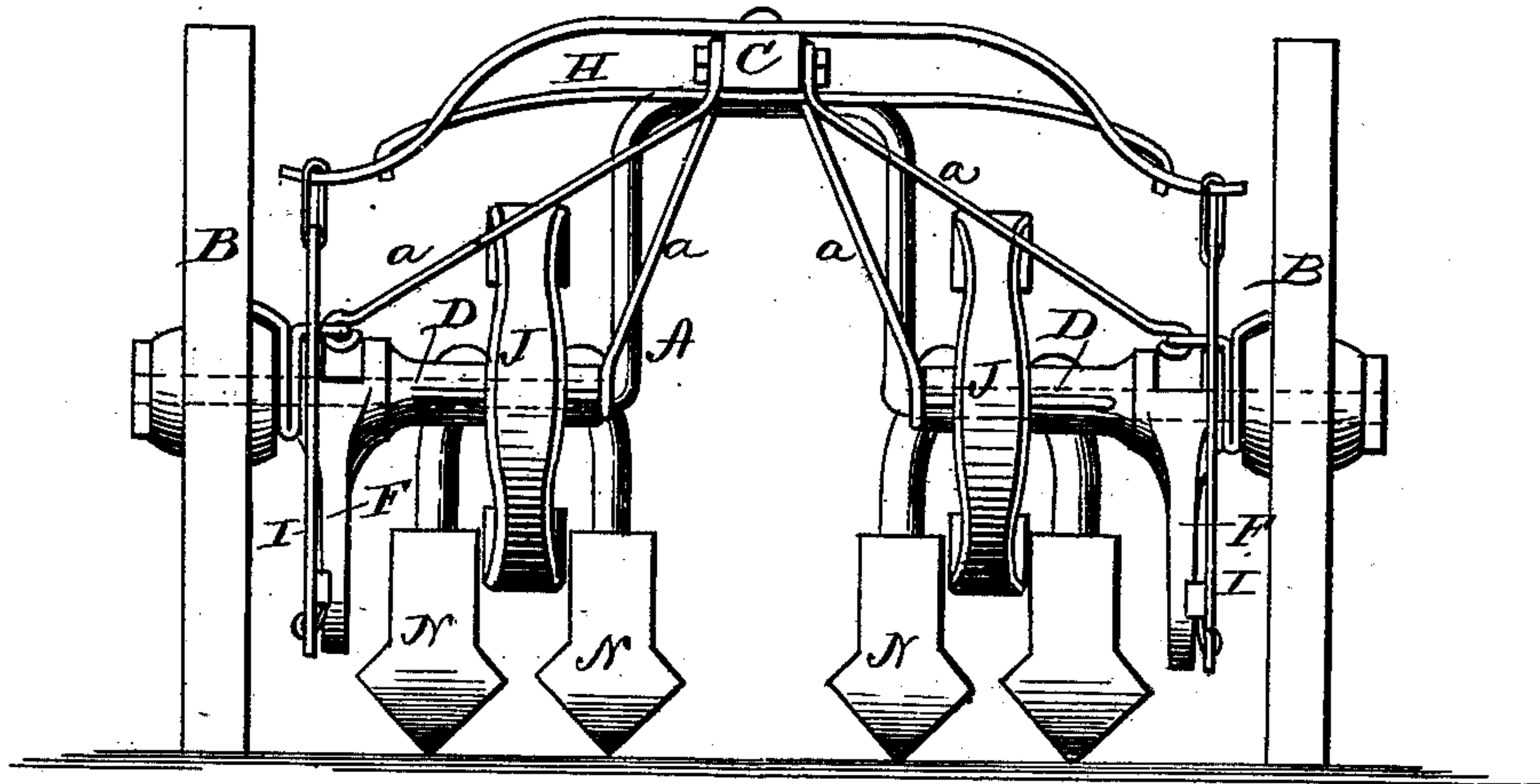
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J. W. HUDSON.  
Wheel Cultivator.

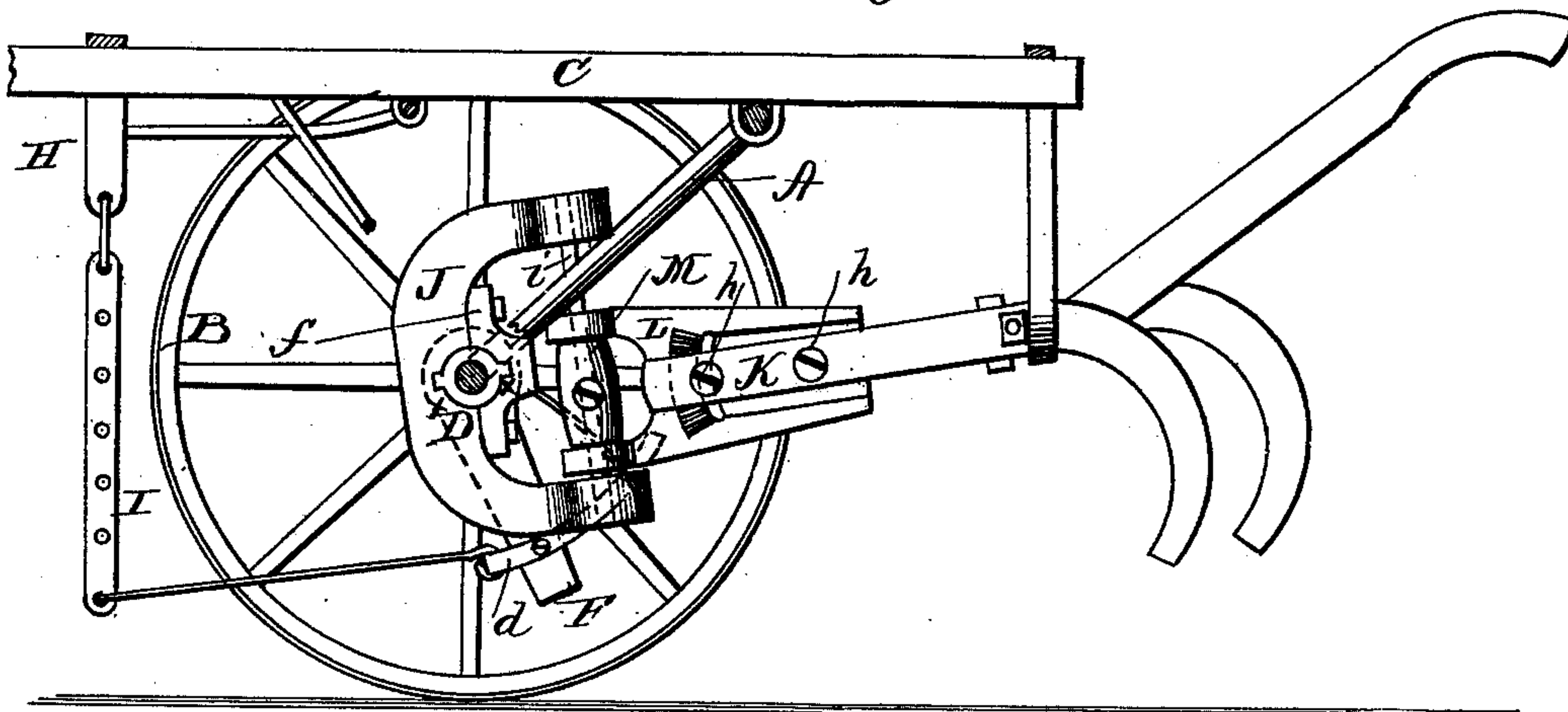
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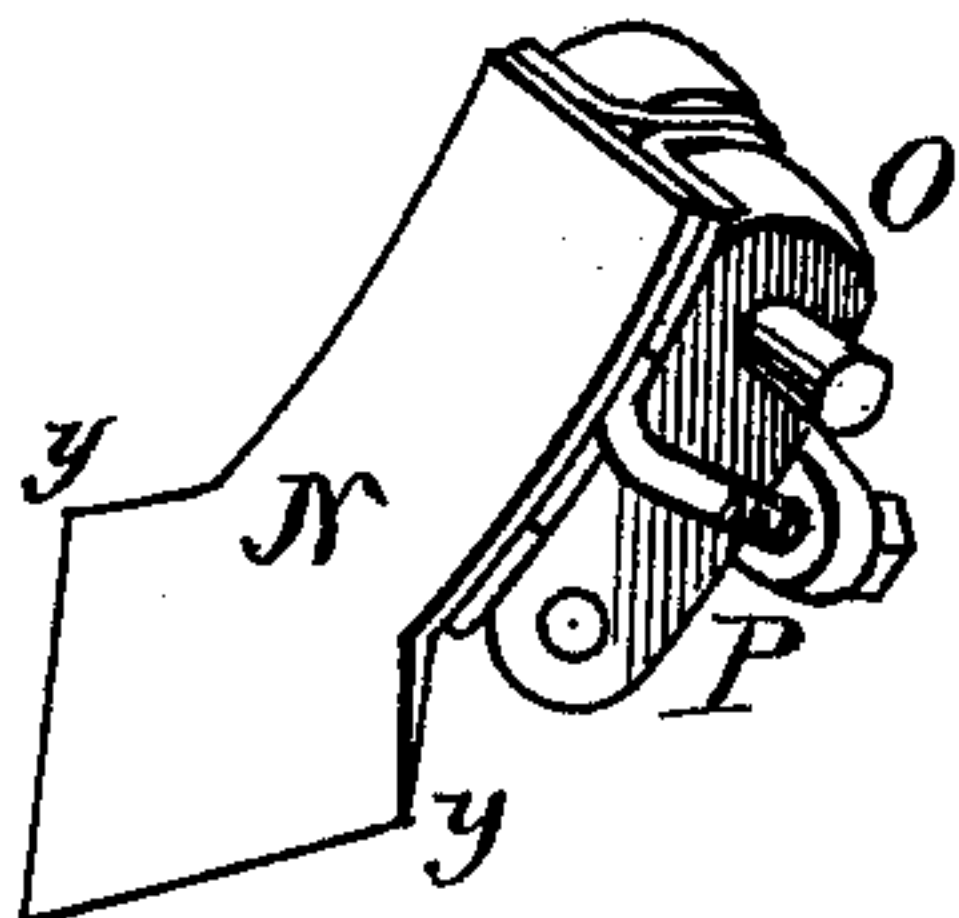
*Fig. 4*



*Fig. 3*

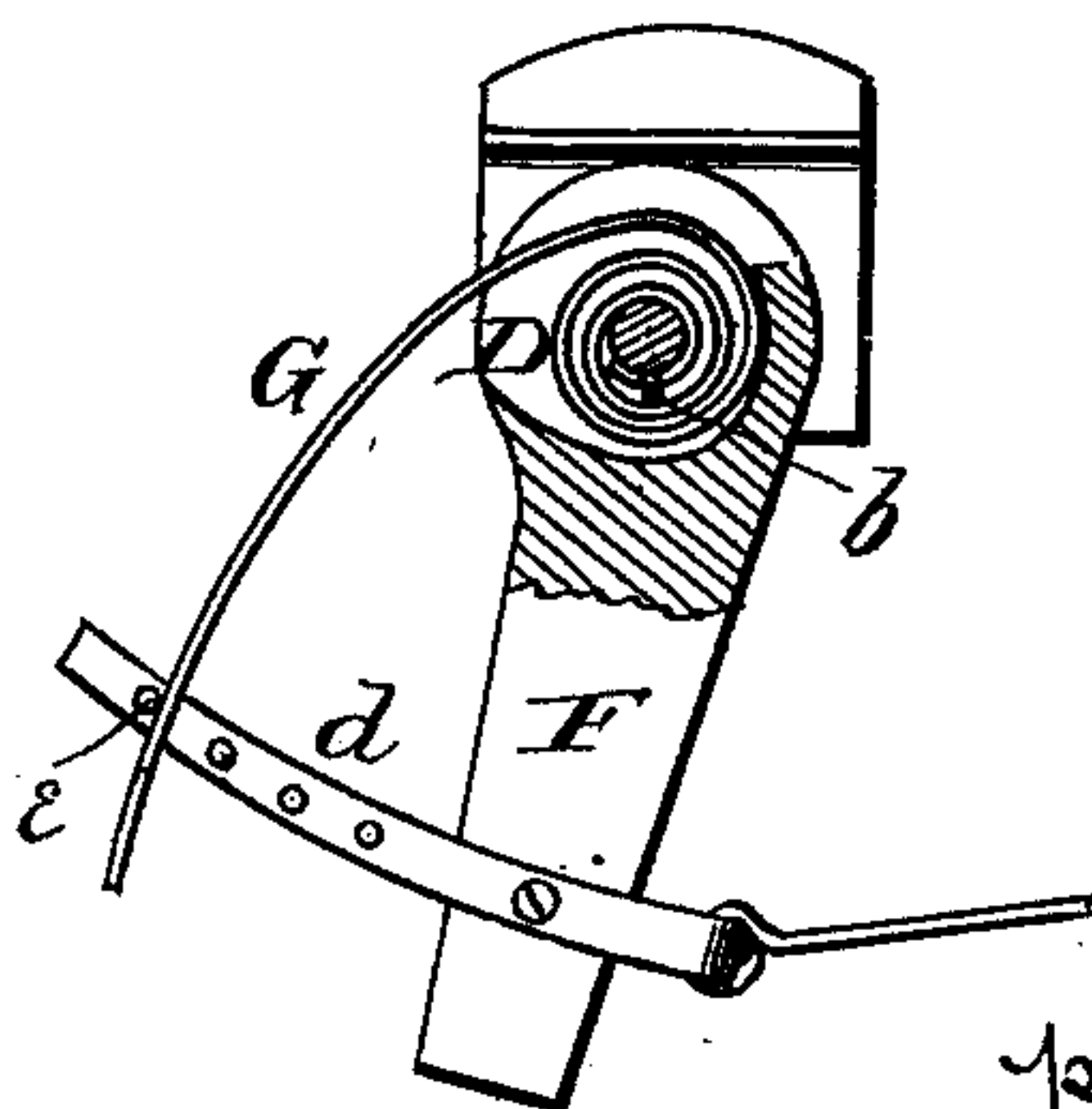


*Fig. 5*

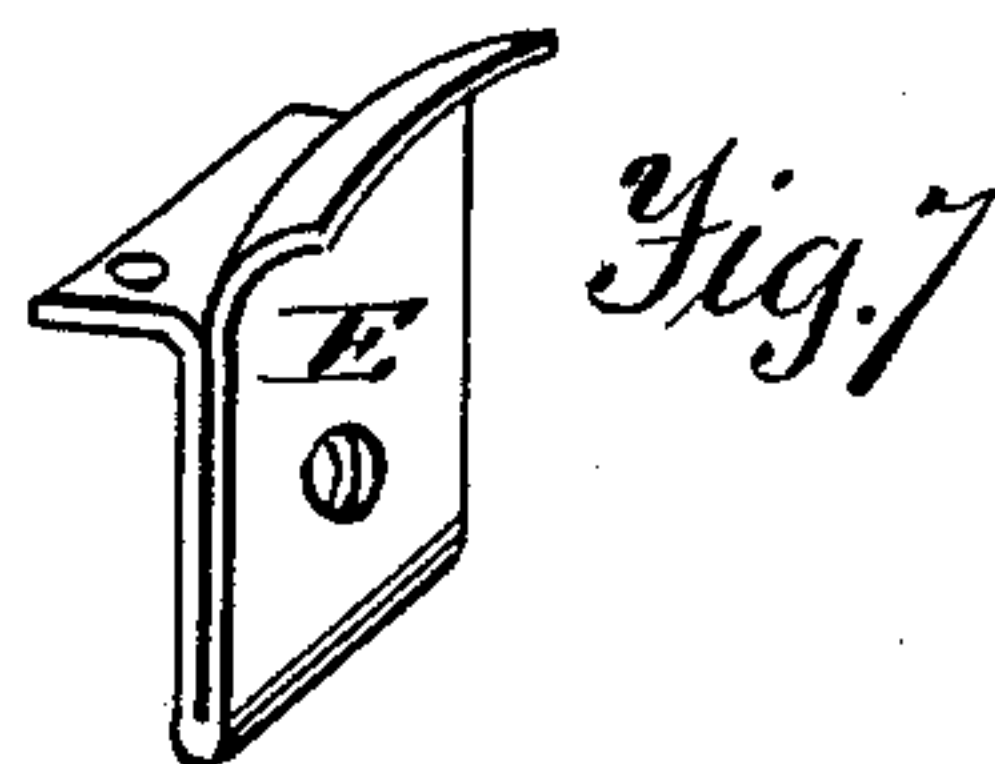


*Witnesses.*  
*A. Ruppert,*  
*Jas. H. Lange.*

*Fig. 6*



*John W. Hudson.*  
*Inventor:*  
*per E. E. E. Bros*  
*Attorneys.*





# UNITED STATES PATENT OFFICE.

JOHN W. HUDSON, OF WELLINGTON, ILLINOIS.

## WHEEL-CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 229,534, dated July 6, 1880.

Application filed March 19, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. HUDSON, of Wellington, in the county of Iroquois and State of Illinois, have invented certain new and useful Improvements in Wheel-Cultivators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a corn plow or cultivator, as will be hereinafter more fully set forth.

In the annexed drawings, to which reference is made, and which fully illustrate my invention, Figure 1 is a plan view of my cultivator. Fig. 2 is a side elevation thereof, showing the plows in the ground. Fig. 3 is a similar view, showing the plow-beams elevated. Fig. 4 is a front view of the machine. Figs. 5, 6, 7, 8, 9, and 10 are detailed views of parts thereof.

A represents the arched axle, provided upon each end with the wheel B, and having the tongue C secured to its center.

From each side of the tongue extend two braces, *a a*, one of which connects with the inner end of the spindle, while the other connects with a flanged plate, E, that is placed on the spindle, and forms a covering for the inner end of the wheel-hub.

Upon each spindle or end of the axle is placed a sleeve, D, to which the plow-beams are coupled by means hereinafter described. At the outer end of the sleeve it is provided with a downwardly-projecting arm, F, and at the top of this arm there is a slot or opening in the sleeve to receive the spring G.

The spring has a slot in one end, which catches on a pin, *b*, in the axle. The spring is then wound around the axle sufficiently to give it the desired tension. The other end of the spring has also a slot, which is passed over a plate or bar, *d*, attached to the side of the arm F, and a pin, *e*, passing through either one of a number of holes in said bar, holds the spring thereon.

The bar *d* is connected with the upright clevis I, which is suspended from the double-tree or eveners H, pivoted on the tongue.

When the plow strikes hard ground the team pulls the levers or arms F forward, overcoming the power of the spring and throwing the plows deeper into the ground; and when the plow strikes mellow ground the draft is lighter and the tension of the spring is relaxed, and then the plows will not run so deep.

The sleeve D is provided with longitudinal ribs *x x*, over which is placed the C-shaped yoke J, forming the forward part of the coupling. This yoke can be moved out or in on the sleeve, as required, to set the plows the proper distance apart to suit the corn by loosening one of the set-screws or bolts that fasten the boxing *f*, as shown in Fig. 3.

K K are the plow-beams, connected at their forward ends by two bolts, *h h*, which pass through them, and also through an intermediate plate, L, which forms the rear part of the coupling. This plate is serrated on both sides, and the extreme forward ends of the plow-beams are correspondingly serrated. The rear bolt, *h*, acts as a pivot for adjusting the beams, while the front bolt works in a slot in the plate, and when tightened the serrations hold the beams from slipping.

The front end of the plate or casting L forms two prongs, which are placed between the two arms of the yoke J, and a rod, *i*, passed through the whole, thus completing the coupling.

On the rod *i*, between the prongs of the plate L, is placed a collar, M, which is fastened by a set-screw to the rod. By this means the plow-beams can be adjusted up or down, as required.

N N represent the shovels, which are constructed as shown in Fig. 5, the point being considerably wider than the body, as seen at *y*, thereby allowing the loose dirt to fall back into the furrow from the shoulders of the shovel. The shovel is fastened to the beam by means of a block, O, and clip P, the shovel being hinged at the lower end of the block and fastened at the top by a break-pin.

For cultivating corn the shovels are removed and a share, R, is attached to each pair of plow-beams, one working right and the

other left. The two pairs of plow-beams are then to be connected by a spring, S, for the purpose of keeping the beams from spreading.

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

1. The sleeve D, cut away for the passage of spring G, the latter attached to bar *d* and coiled around and secured to axle A and arm  
10 F, constructed and arranged as shown and described.

2. The combination of the yoke J, pronged and serrated plate L, adjustable plow-beams

K, rod *i*, and collar M, substantially as and for the purposes herein set forth. 15

3. In combination with two sets of plow-beams, the shares R and connecting-spring S, as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of 20 February, 1880.

JOHN W. HUDSON.

Witnesses:

J. H. POTTER,  
W. V. DOAN.