

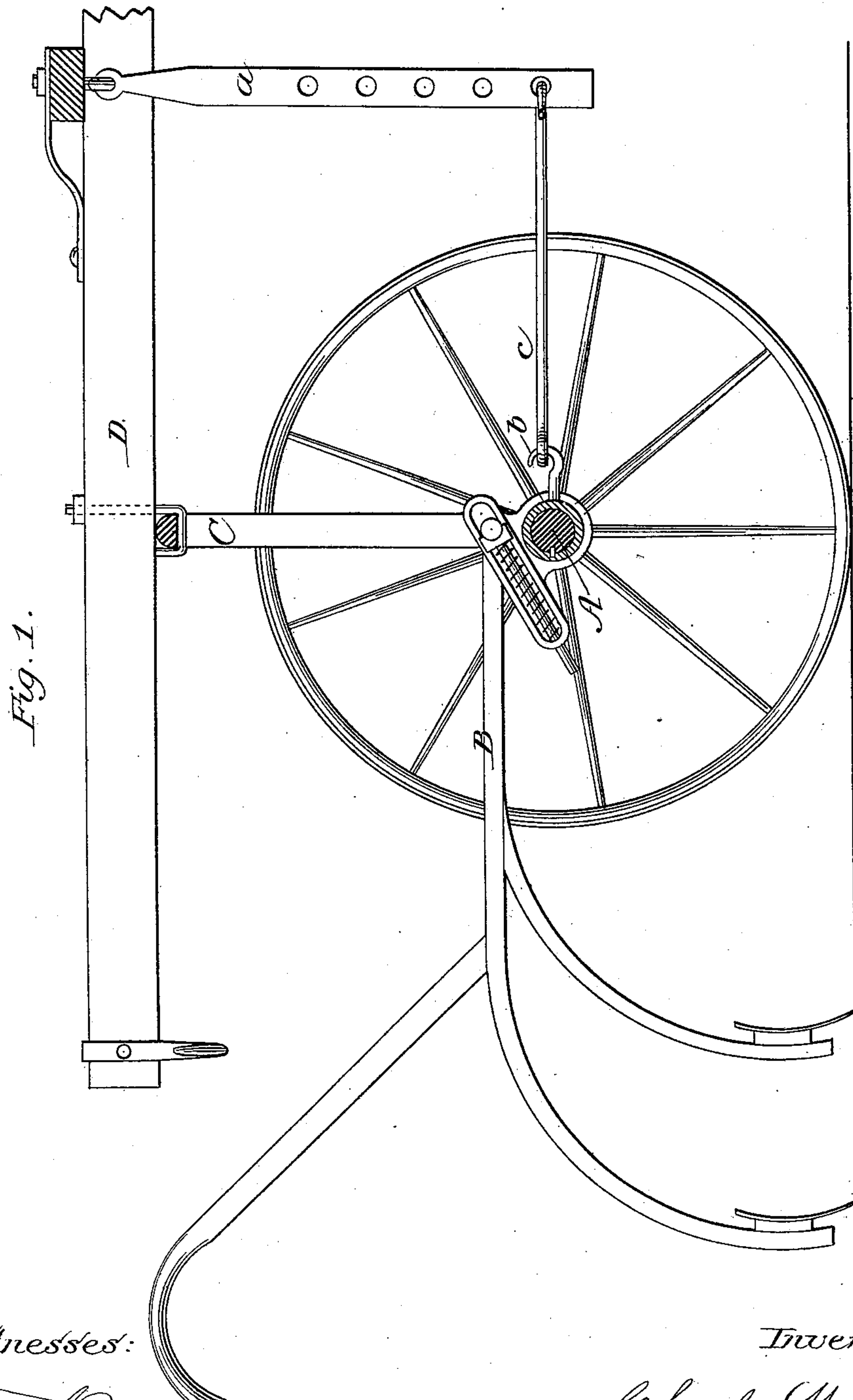
(No Model.)

2 Sheets—Sheet 1.

C. W. POST.
CULTIVATOR.

No. 256,044.

Patented Apr. 4, 1882.



Witnesses:

Frank S. Blanchard
Geo. T. Fisher & Co.

Inventor:

Charles W. Post
By Geo. G. Elliott
Attorney.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

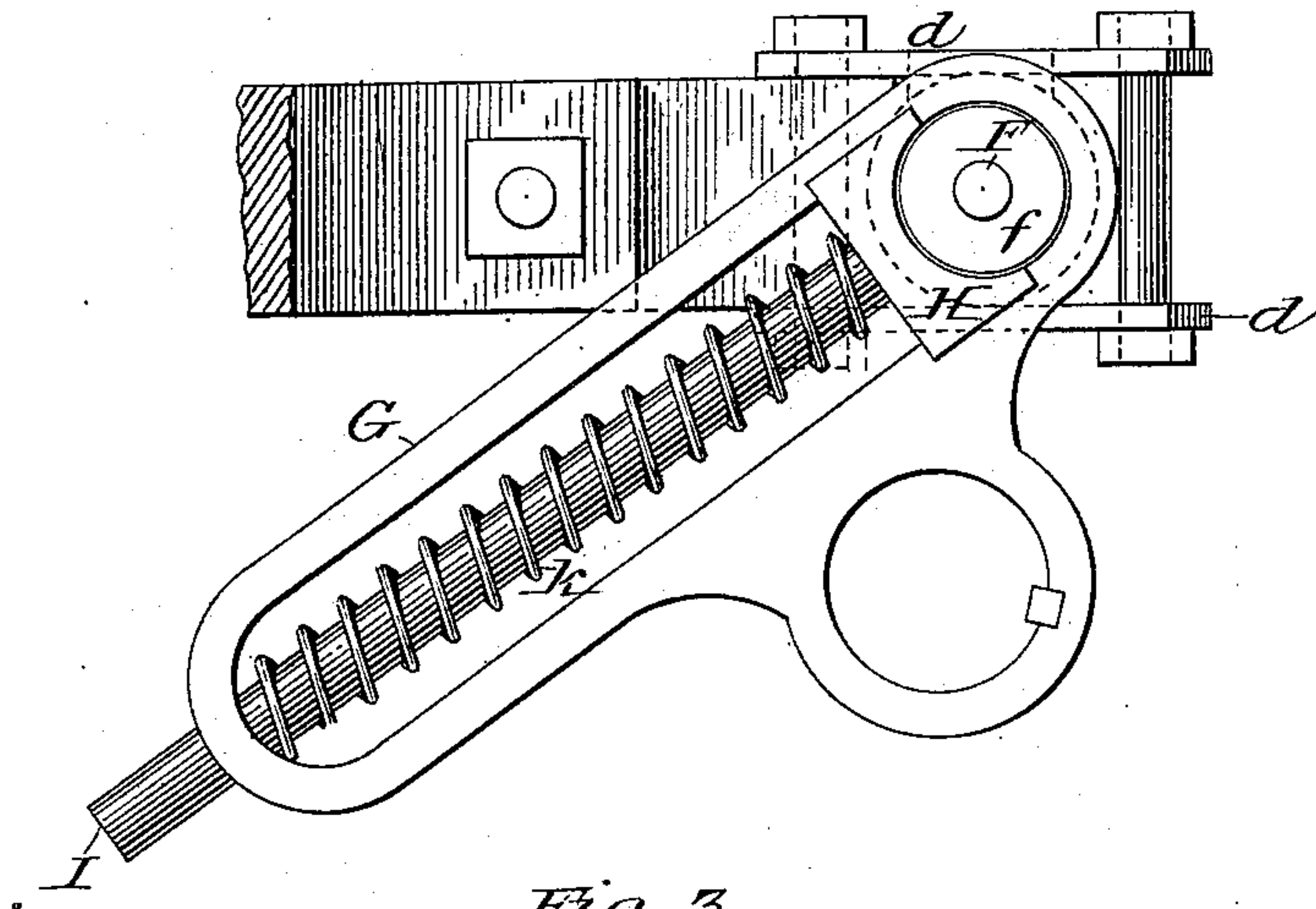
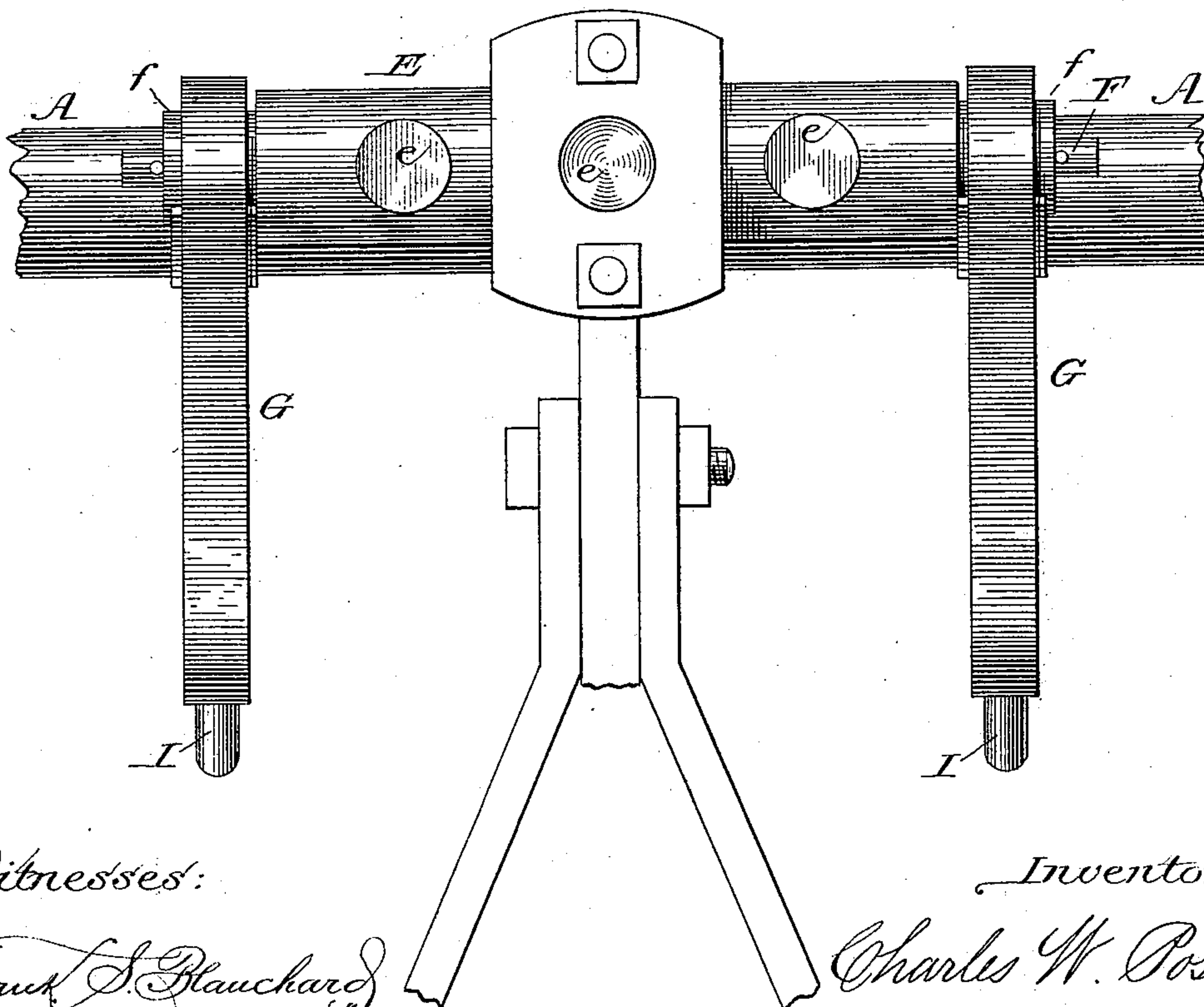


Fig. 3.



Witnesses:

Frank S. Blanchard

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Inventor:

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UNITED STATES PATENT OFFICE.

CHARLES W. POST, OF SPRINGFIELD, ILLINOIS.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 256,044, dated April 4, 1882.

Application filed November 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. POST, a citizen of the United States, residing in Springfield, county of Sangamon, and State of Illinois, have invented certain new and useful Improvements in Cultivators, of which the following is a specification.

My invention relates to wheel-cultivators in which the two parallel beams carrying the shovels may be swung vertically to adjust the depth of the shovels in the soil or raise them out of their operative position when not in use, and laterally, so as to increase or diminish the distance between the beams, to cultivate as near to or far from the row as desired or necessary.

The object of my invention is to cause cultivator-beams, not affected by the hitch, to automatically adjust themselves with reference to the shovels when plowing mixed soil—*i. e.*, hard and soft soil—so that the shovels will resist the tendency of the hard soil to throw them out, and thereby an even depth of furrow be maintained. I attain these objects by devices illustrated in the accompanying drawings, in which—

Figure 1 is a sectional side elevation of a cultivator embodying my invention; Fig. 2, a detail side elevation of the beam, the slotted guide-bracket, and the spring-seated block supporting the beam; and Fig. 3, a detail plan view with the arch and frame of the cultivator removed.

Similar letters of reference indicate the same parts in the several figures of the drawings.

The axle A, beam or drag-bar B, arch C, frame D, perforated hanger *a*, hook *b*, rigid upon the axle, and connected with the hanger by rod *c*, are of the ordinary construction employed in cultivators, and therefore need no detail description.

The beam has bolted to its upper and under faces two plates, *d d*, extending beyond the end of the beam, where they are connected by a bolt, and serve as a clamp to hold the beam to a sleeve, E, extending at a right angle to and beyond each side of the beam, and provided with three or more cast studs, *e*, corresponding with and one of which enters a central perforation in the upper plate.

If desired, the under side of the sleeve may have studs and the lower plate be perforated, or the sleeves be perforated with the studs upon the plates. This connection of the beam with the studs serves to pivot the beam to provide for its lateral swinging movement, while the studs also serve to enable the lateral adjustment of the beam, commonly attained by a sleeve having a flange provided with a series of perforations, to which the beam is held by a bolt passing through the flange and lugs in the end of the beam.

Passing through the sleeve is a shaft, F, the projecting ends of which carry loose anti-friction rollers *f f*, guided in elongated slotted brackets G G, sleeved upon and keyed rigidly to the axle.

The anti-friction rollers have a bearing in and are supported by a block, H, to which are secured rods I I, passing through a central perforation in the lower end of the slotted brackets, said rods serving to guide the blocks and hold a coiled expansion-spring, *k*, bearing respectively against the block and the lower end of the brackets. This spring serves to hold the block and rollers at the upper end of the guide-bracket and maintain the forward end of the beam in a forward but horizontal position when the shovels are operating in soft soil; but when the shovels come in contact with hard soil the resistance met with will cause the forward ends of beam to sink in the bracket and the shovels to take a downward direction and not be thrown out, as in the cultivators now used.

Instead of pivoting the beam to the sleeve, the sleeve may be omitted, when, by flattening the shaft and providing it with studs, the beam may be pivotally secured directly to the shaft; but of course by this construction the beam will have but one bearing vertical swinging movement—namely, the anti-friction rolls—while by the construction shown it has a bearing both upon the rollers and the shaft.

It will be observed that the reciprocating movement of the beam in the guide-bracket of my coupling is in no wise affected by the hitch of the team—that is to say, whether the hitch be high or low the operation of the beam in the bracket will be just the same, for the reason

that the beam is only affected by the character of the soil in contact with the shovels. Furthermore, the operation of the beam in the bracket is automatic, and the result is that the
5 shovels are maintained at an even depth notwithstanding their alternately coming in contact with first soft and then hard ground.

Having thus described my invention, what I claim, and desire to secure by Letters Patent,
10 is—

1. In a cultivator, the combination of the drag-bar with the axle or frame by means of a yielding or movable coupling adapted to permit the front end of the drag-bar to fall or rise
15 as the shovels or teeth encounter a greater or less resistance from the soil, thereby causing the shovels to stand more or less vertical to the ground, substantially as described.

2. In a cultivator, the combination, with the
20 drag-bars, of yielding or movable couplings connecting the drag-bars with the axle, and adapted to permit the forward ends of said drag-bars to fall and the shovels to automatically adjust themselves toward a vertical position as the resistance of the soil increases in-

dependently of the hitch of the team, substantially as described.

3. The combination, in a wheel-cultivator, of the beam or drag-bar and a movable coupling at its front end, the bearing of which reciprocates at an angle of approximately forty-five
30 degrees, substantially as described.

4. The combination, with the axle of a cultivator and the oblique guide-bracket, of the shovel-beam and the shaft to sustain the same
35 in said bracket, substantially as described.

5. The combination, with the shaft supporting the beam and with the oblique guide-bracket, of a spring-seated reciprocating block forming a bearing for said shaft, substantially as de-
40 scribed.

6. The shaft supporting the beam and the slotted oblique guide-bracket, in combination with the reciprocating bearing-block, the guide-rod, and the coiled expansion-spring, substan-
45 tially as described.

CHARLES W. POST.

Witnesses:

JNO. G. ELLIOTT,
WILLIAM C. WHITING.