

No. 854,921.

PATENTED MAY 28, 1907.

R. A. ARMSTRONG.

PLOW.

APPLICATION FILED DEC. 3, 1906.

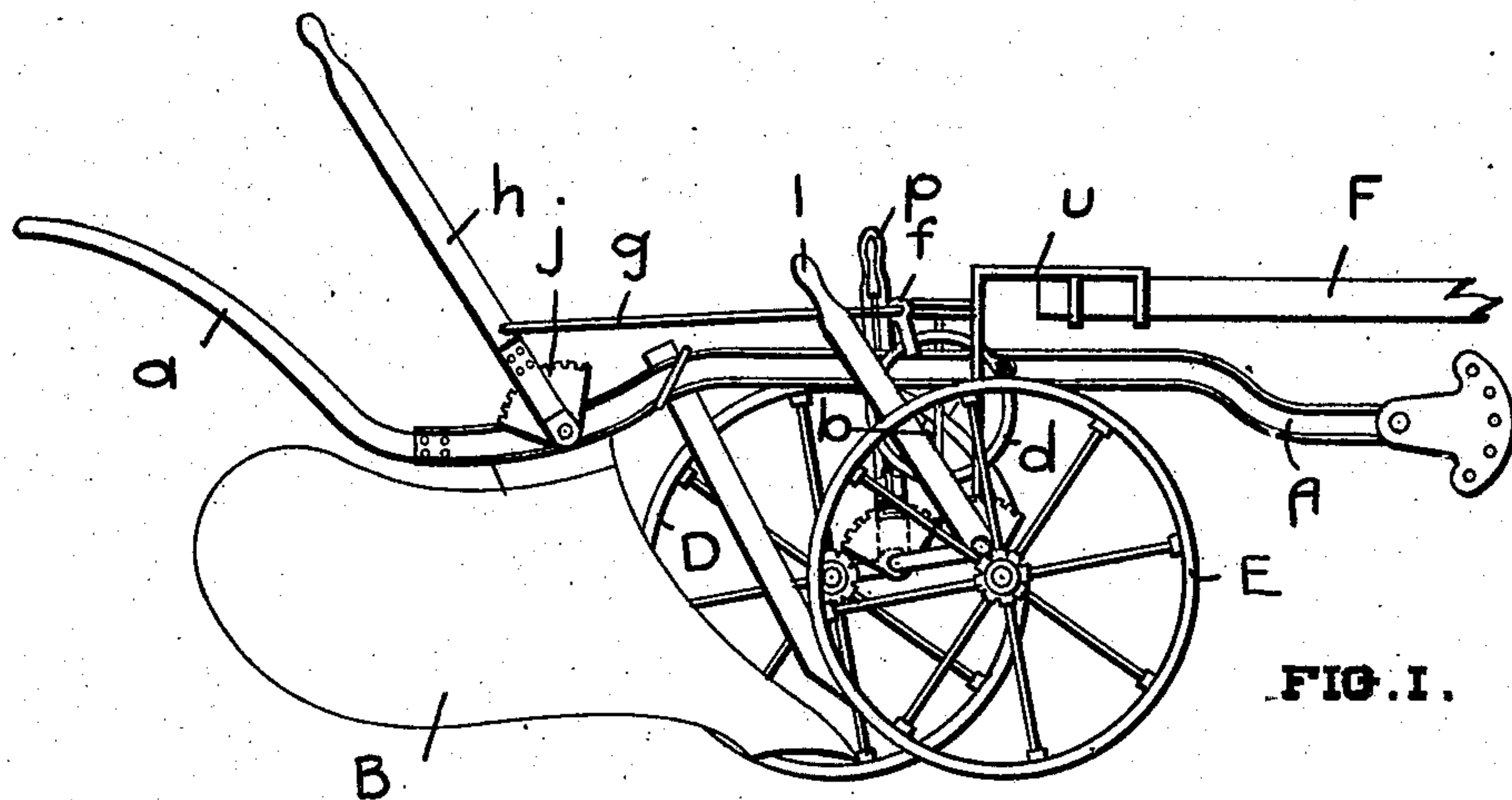


FIG. 1.

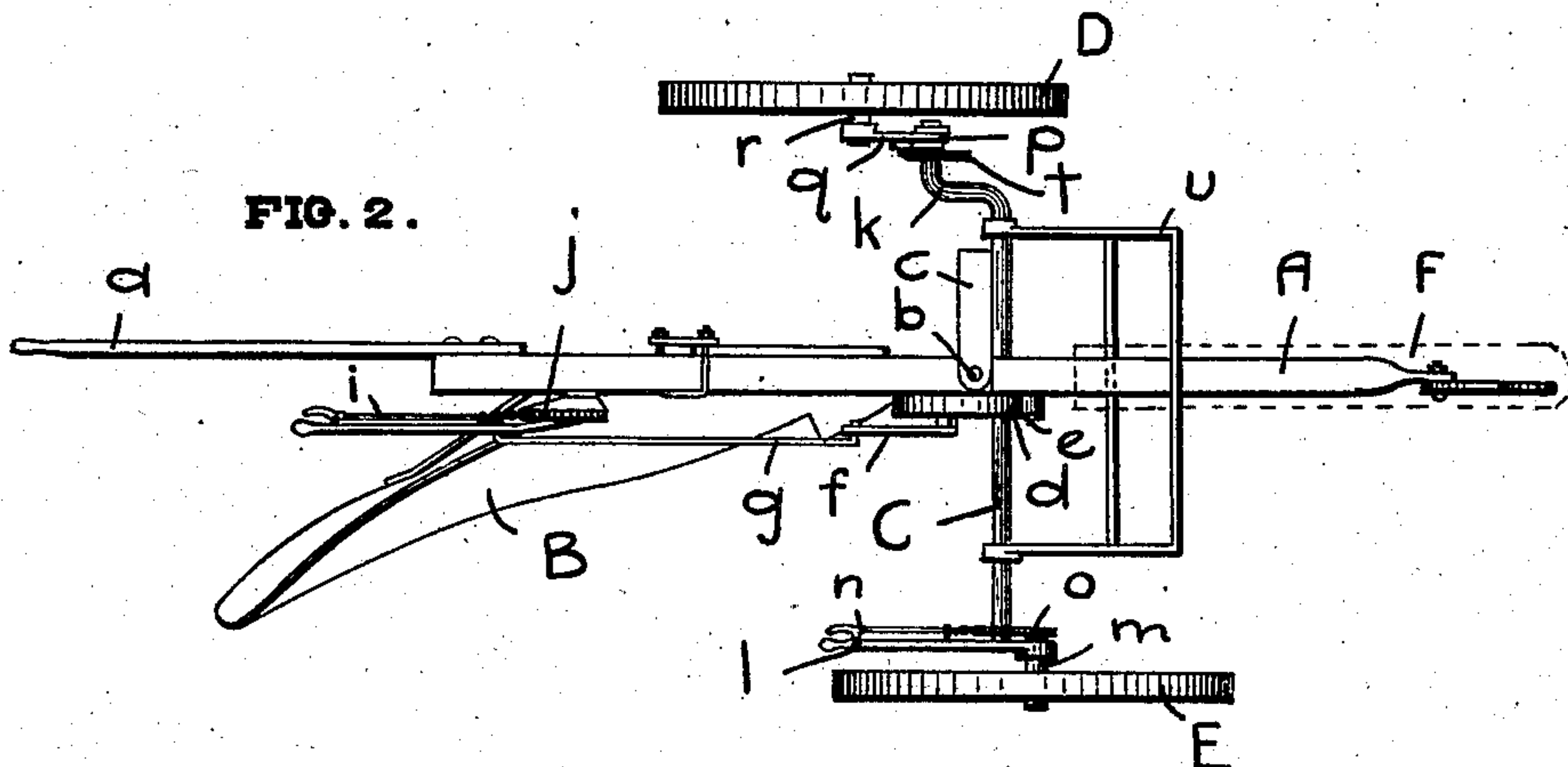


FIG. 2.

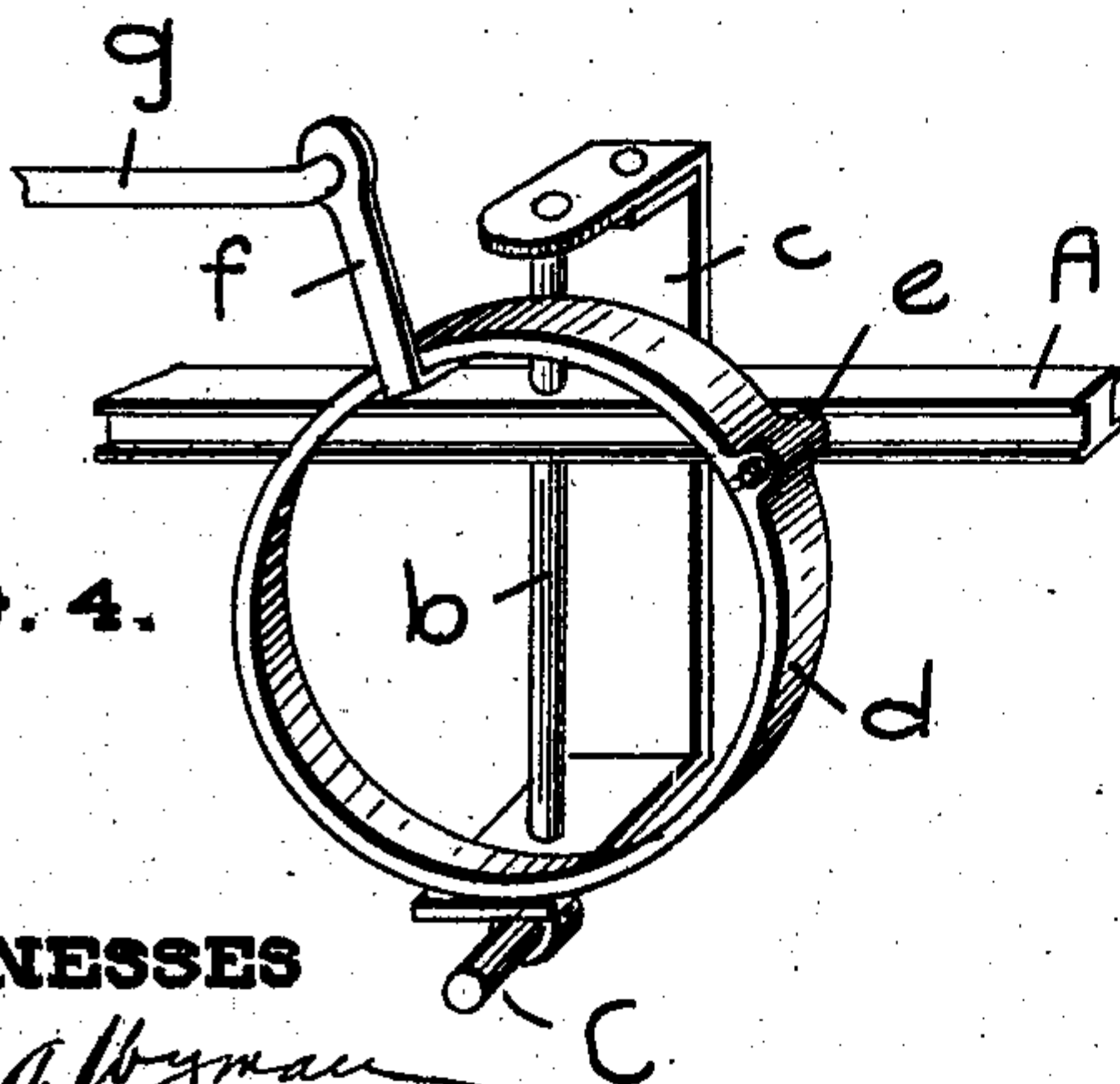


FIG. 4.

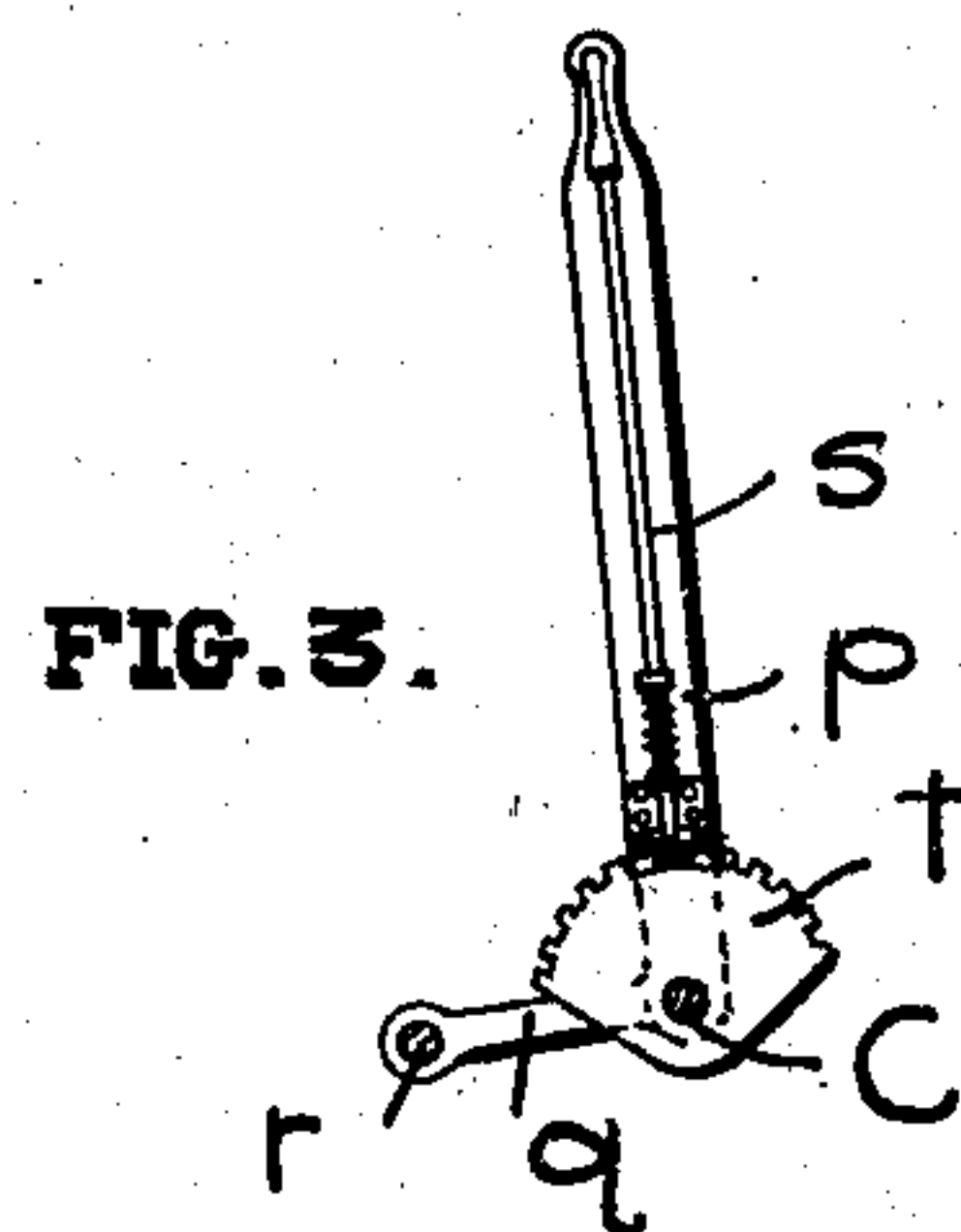


FIG. 3.

WITNESSES

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ROBERT ALVEN ARMSTRONG, OF AVONMORE, ONTARIO, CANADA.

PLOW.

No. 854,921.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed December 3, 1906. Serial No. 346,181.

To all whom it may concern:

Be it known that I, ROBERT ALVEN ARMSTRONG, of Avonmore, in the county of Stormont, Province of Ontario, Canada, farmer, have invented certain new and useful Improvements in Plows, of which the following is a specification.

My invention relates to improvements in plows, and the objects of my invention are to devise a plow particularly adaptable for use on rough or unbroken ground which will make a cut of constant depth independent of any unevenness in the ground and which when striking a stone or other obstacle will tilt and thus lessen the force of the blow, further objects being to provide means for adjusting the supporting and guiding wheels whereby any permanent unevenness in the ground may be counterbalanced; and it consists essentially of the improved construction hereinafter more particularly described and specifically set forth in the accompanying claims.

Figure 1 is an elevation of my plow. Fig. 2 is a plan view of the same. Fig. 3 is a detail of the means for adjusting the wheel on the crank end of the axle bar. Fig. 4 is an enlarged perspective detail of the connection between the plow beam and the axle bar.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is a plow beam of usual construction and B is the plow which downwardly extends from the rear of the plow beam. The plow beam has a handle *a* secured to the rear thereof for convenience in tilting the same as hereinafter explained.

C is the axle bar which is connected to the beam substantially at the center thereof whereby both sides thereof will be evenly balanced. The connection between the beam and axle bar as shown in detail in Fig. 4, consists of a vertically extending standard *b* secured in the ends of a U-shaped bracket *c* secured to the axle bar and which extends through a hole provided in the beam. The beam is thus vertically movable in relation to the axle bar and this movement is accomplished by means of a ring *d* pivoted at *e* to the beam and the under side of which bears on a portion of the bracket *c*. An arm *f* is secured to or formed integral with the ring and outwardly extends therefrom, the said arm being connected by a rod *g* to a lever *h* pivoted to the plow beam in a convenient position to be operated from the

rear of the plow and held at any adjusted position by a latch *i* engaging an arc *j*. Thus by movement of the lever *h* the ring *d* may be revolved about its pivoting point which will raise or lower the beam relative to the axle bar.

The axle bar C is of the usual construction with the crank *k* at one end thereof.

In accordance with my invention each of the wheels D and E is adjustably secured to the axle. This connection is slightly different for each wheel. For the wheel E it comprises a lever *l* which journals the end of the axle intermediate of its length and has secured at its extremity a stub shaft *m* on which the wheel E is supported. The lever is held in any adjusted position by means of a latch *n* engaging an arc *o* secured to the axle. By this means the wheel *m* may be tilted forwardly or rearwardly below the axle without raising or lowering the plow appreciably. This adjustment I find to be of advantage when stones or other obstacles are encountered as the wheel may be raised over them.

The connection between the axle and the wheel D as shown in detail in Fig. 3 consists of a lever *p*, the end of which journals the axle which has an off-set or crank *q* at substantially right angles thereto in the end of which a stub shaft *r* is secured which supports the wheel D. As before the lever is held in any adjusted position by the latch *s* co-acting with the arc *t* secured to the axle. The wheel D is therefore adjustable vertically. This adjustment will be found extremely useful when plowing near the end of a field or along a continuous ridge where one side should be higher than the other. As usual the tongue or pole F is connected to the axle *b* by a bracket *u*.

It will thus be seen that in my plow the point of the plow lies substantially under the point at which the beam is pivoted causing it to very readily tilt when encountering obstacles. The depth of cut taken by the plow is always constant since it is the difference in depth between the beam of the wheels and the point of the plow. The supporting wheels accommodate themselves to any irregularities in the ground causing the plow to do likewise. The depth of cut may be regulated by the adjustment of distance provided for between the plow beam and the axle bar.

I have found that a plow such as I have

described may be used with advantage on the roughest kinds of ground on which an ordinary plow would entirely fail to operate. The guide wheels prevent the plow digging
5 deeply into the ground and the manner of pivoting the beam prevents any serious injury to the plow in encountering a stone or like obstacle.

It will readily be understood that while I
10 have described with great particularity of detail one specific embodiment of my invention yet certain changes might be made therein within the scope of the appended claims without departing from the spirit of
15 my invention.

What I claim as my invention is:

1. In a plow the combination with the plow beam and the plow downwardly extending from the rear end of the same, the
20 axle bar, wheels on the same, of a ring pivoted to the beam and connected to the axle bar, means for revolving the ring and means for connecting the beam to the axle bar with freedom of vertical movement as and for the
25 purpose specified.

2. In a plow the combination with the plow beam and plow downwardly extending from the rear end of the same, the axle bar and wheels thereon of a ring pivoted to the beam and connected to the axle bar, means
30 for tilting the ring, vertical extending standards secured to the axle bar and extending through a hole in the beam as and for the purpose specified.

3. In a plow, the combination with the
35 plow beam and the plow, the axle bar and the wheels thereon, of an adjustable connection between the plow beam and the axle bar, a lever pivoted to the rear of the plow beam, and means operated by the tilting of
40 the lever for raising and lowering the plow beam with reference to the axle bar, as and for the purpose specified.

Signed at Avonmore, in the Province of Ontario, Canada, this 23d day of Novem-
45 ber, 1906.

ROBERT ALVEN ARMSTRONG.

Witnesses:

LORNE BETHUNE,
OSCAR FULTON.