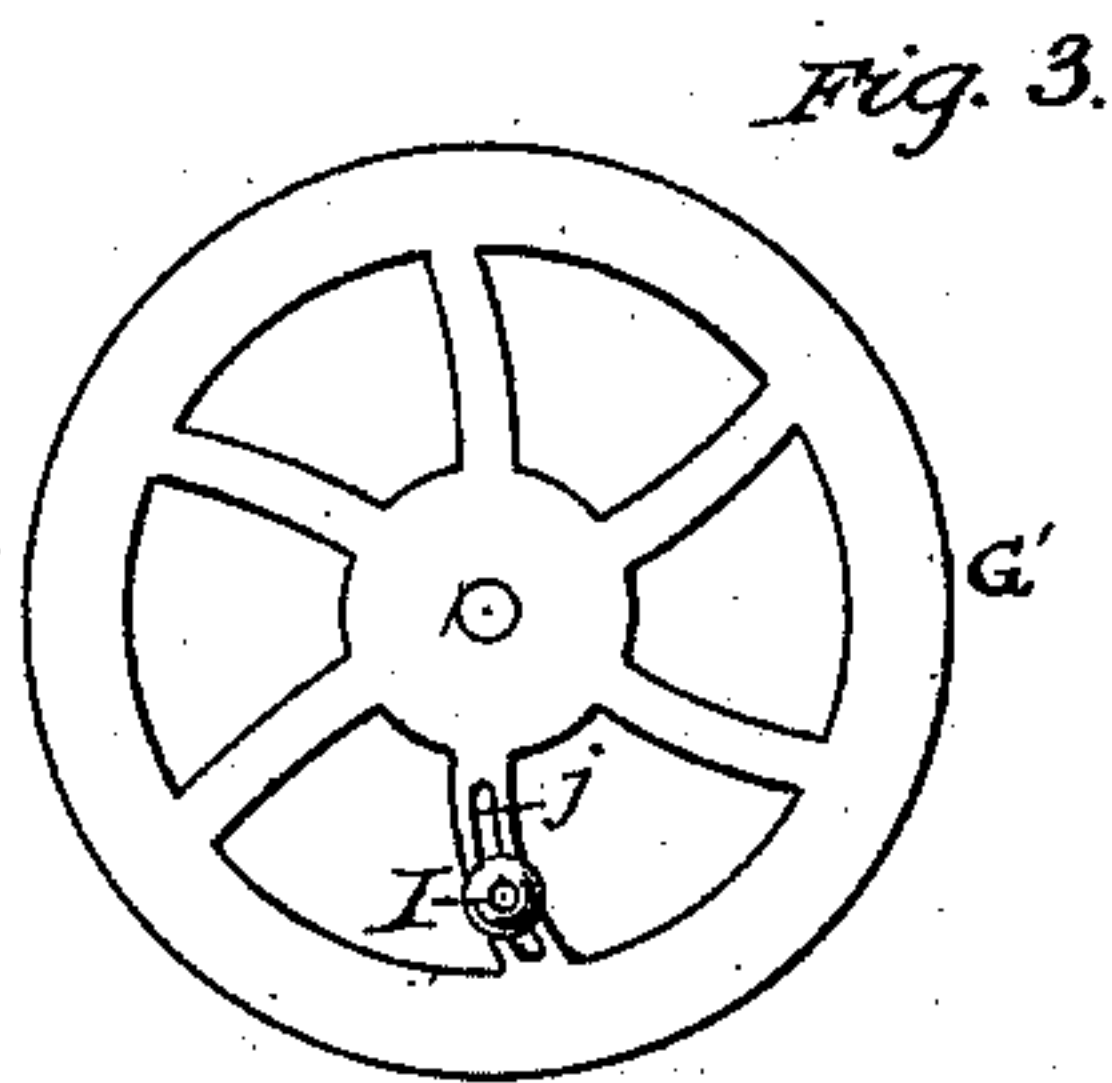
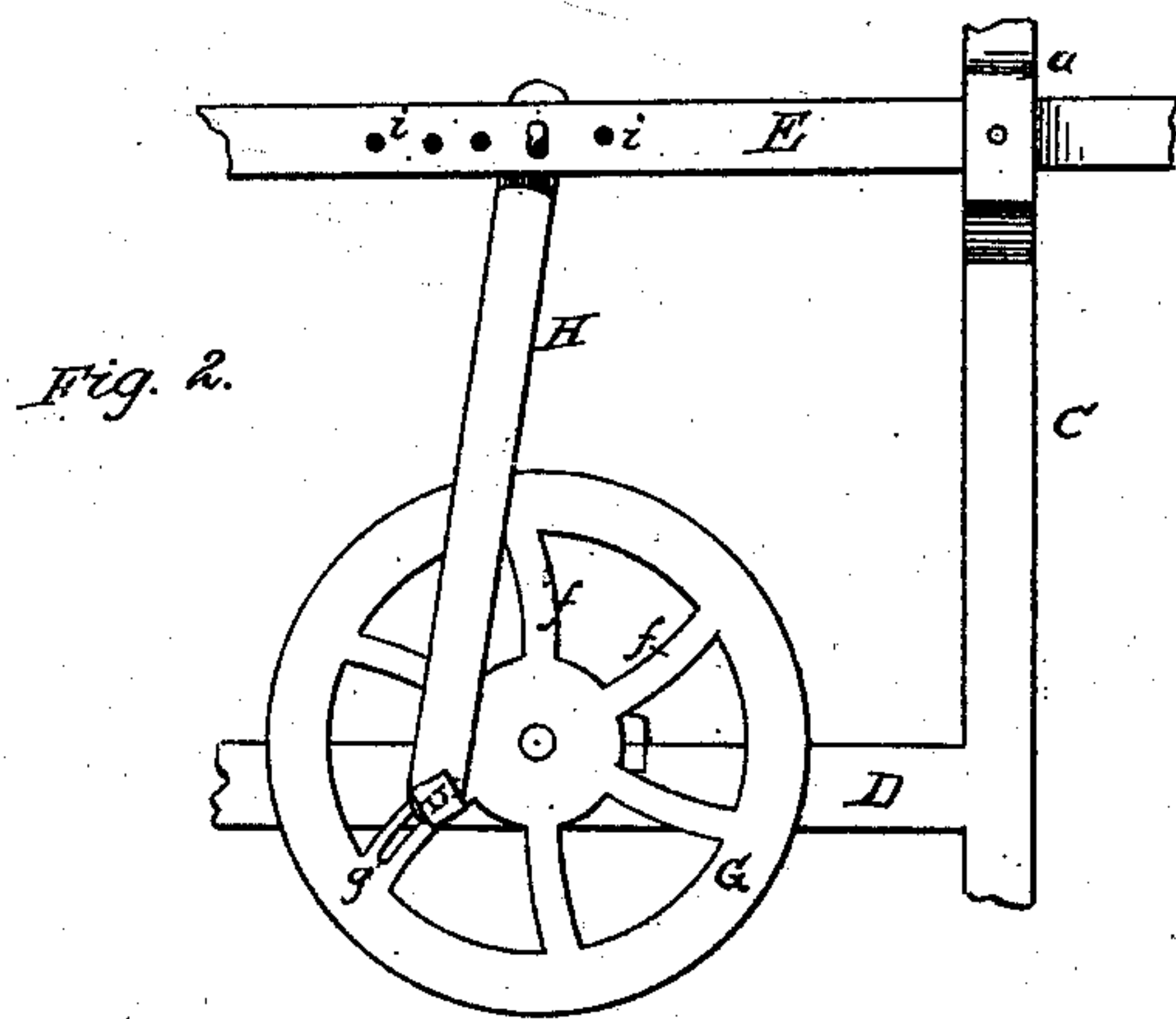
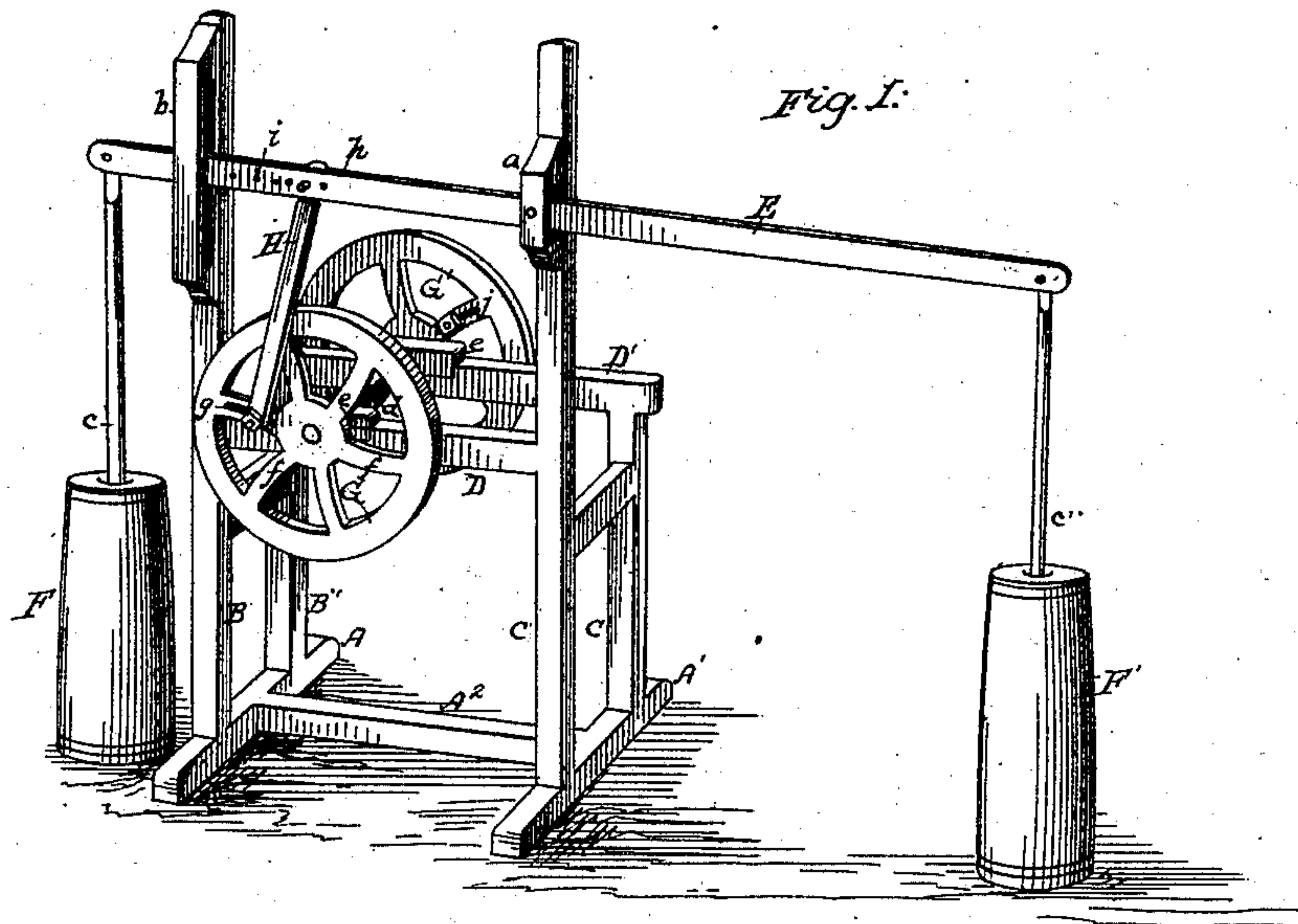


J. REHBEIN,
Churn.

No. 203,193.

Patented April 30, 1878.



WITNESSES:

C. Clarence Poole
L. W. Seely

INVENTOR:

John Rehbein
by Geo. W. Ayer & Co.
attys

UNITED STATES PATENT OFFICE.

JOHN REHBEIN, OF HONESDALE, PENNSYLVANIA.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **203,193**, dated April 30, 1878; application filed April 2, 1878.

To all whom it may concern:

Be it known that I, JOHN REHBEIN, of Honesdale, in the county of Wayne and State of Pennsylvania, have invented a new and useful Improvement in Churns; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to an improvement in reciprocating churns, in which the plunger-rods are reciprocated by means of a walking-beam which is connected to a driving-wheel by a pitman; and its object is to produce a churn where the length of the stroke can be regulated by adjusting the pitman and hand-crank, and where two churns can be operated at the same time with ease of motion and a steady and regular stroke, and will combine durability of construction with power of operation.

My invention therein consists, first, in adjustably connecting the pitman which operates the walking-beam to the drive or balance wheel; second, in the means for adjusting the hand-crank on its crank-wheel; and, further, in the manner of arranging and adjusting the beam, the pitman, and the drive-wheel, for the purpose of changing the length of the stroke.

In the drawings, Figure 1 is a perspective view of the entire device, showing two churns in use. Fig. 2 is a view of the drive-wheel and a portion of the walking-beam, showing the manner of connecting and adjusting the pitman; and Fig. 3 a view of the crank-wheel, with the means for adjusting the handle.

Like letters denote corresponding parts.

My churn may be placed and secured, if desired, upon the floor of a house, and the operating parts are supported by a frame, which is constructed in the following manner:

A A¹ are bed-pieces, which are secured to the floor by bolts, and A² is another bed-piece, mortised or otherwise attached to the pieces A A¹, thus securing the parts firmly together. Four uprights or standards, B' B C' C, are mortised in these bed-pieces, and the entire frame is rendered firmer and stronger by any number of braces. D D' are cross-

pieces connecting the uprights B and C, while the cross-piece D' is fastened at its ends to the uprights B' and C'. The uprights B C are extended to about twice the height of the standards B' C', and on one side of the standard C is pivoted the walking-beam E in a suitable block, *a*. A slotted guide, *b*, is attached to the standard B, and in it the walking-beam reciprocates.

F F' are churns of ordinary construction, except that the plunger-rods *c c'*, to which the dashers are attached, are longer than is usual in churns worked by hand. These plungers are pivoted, at their upper ends, in slots in the ends of the walking-beam, and, by the motion of such beam, are caused to reciprocate.

The power to drive the churn is applied by means of balance or drive wheels. In order to give steadiness and regularity to the motion, two of these balance-wheels, G G', are employed, the axle *d* of which is journaled in proper boxes, *e e*, one on each of the cross-pieces D D'. These wheels are of any suitable construction, and preferably have curved spokes *f*, as shown. In one of the spokes *f* of the wheel G is a curved slot, *g*, extending nearly the entire length of such spoke. By means of this slot the pitman is connected to the wheel, and its position is adjusted, and the length of the stroke thereby regulated.

The pitman H is connected to the drive-wheel by means of a bolt, with proper nuts for holding the bolt at any part of the slot *g*, thus changing at will the length of the stroke. The upper end of the pitman H enters a slot, *h*, which is cut longitudinally in the walking-beam E for a considerable distance between the guide *b* and the block *a* on the standards B and C. In the beam E are holes *i*, passing through such beam where it is slotted, and by means of these holes the upper end of the pitman H can be adjusted in such slot by means of bolts passed through any two of the holes and the upper end of the pitman.

In one of the spokes of the crank-wheel G is another slot, *j*, and in this slot the handle I is adjustably secured, by a proper nut, in such a way that when the nut is loosened the handle can be moved in the slot and the length of the stroke changed, as may be desired.

In the operation of my churn the handle I

is adjusted so as to make a long or short stroke, as desired, and when turned the motion is communicated by the pitman to the walking-beam and plunger-rods. If it is desired to give a long slow stroke, the bolt which passes through the lower end of the pitman is moved through the slot *g* toward the outer end of the spoke, making the distance traveled by such bolt and pitman in its revolution greater, and the length of the stroke is proportionately increased. The upper end of the pitman can also be adjusted in the slot *g* when it is desired to change its position.

This churn, as thus constructed, is easy to work, since the leverage obtained is very great, and with this ease of motion is combined great power. The two drive-wheels give a steady and uniform motion, and by its adjustability the stroke can be varied to suit the convenience of the operator. There is little wear on the operative parts, and it can be manufactured cheaply, and is attractive in appearance.

Having thus described my churn, what I claim as my invention is—

1. In a churn, the combination, with the drive-wheel *G*, of the pitman *H*, adjustable at its lower end in the slot *g*, and at its upper end in the slot *h* of the walking-beam, substantially as described and shown.

2. In a churn, the combination, with the crank-wheel *G'*, of the handle *I*, adjustable in the slot *j* in one of the spokes of said wheel, substantially as and for the purposes set forth.

3. The combination, with the beam *E*, having the slot *h* and holes *i*, of the pitman *H*, adjustably secured in such slot, and the drive-wheel *G*, having the slot *g*, by which the lower end of such pitman is adjusted, substantially as described and shown.

4. In a churn, the combination, with the frame, of the drive-wheel *G*, having the slot *g*, for regulating the stroke of the pitman, and the crank-wheel *G'*, having the slot *j*, for adjusting the handle *I*, substantially as described and shown.

5. In a churn, the combination, with the churns *F F'*, of the walking-beam *E*, pivoted in a standard, and connected at its ends to the plunger-rods of such churns, the pitman *H*, having its lower pivot adjustable upon the drive-wheel *G*, and the crank-wheel *G'*, provided with adjustable hand-crank, substantially as described and shown.

This specification signed and witnessed this 18th day of March, 1878.

JOHN REHBEIN.

Witnesses:

JOHN BRISER,
HENRY BALL.