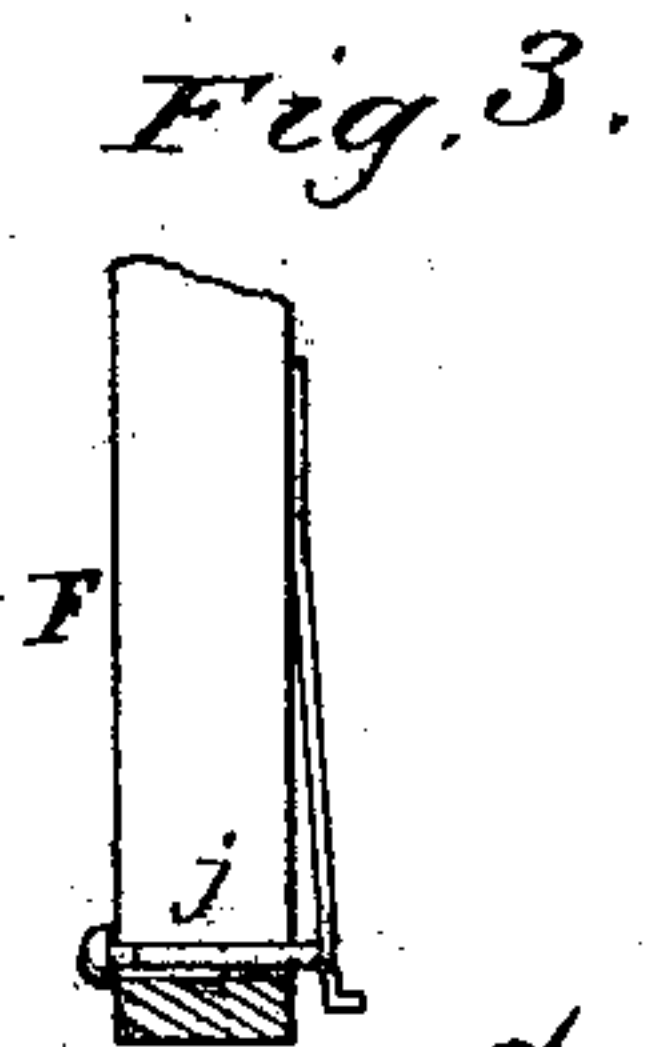
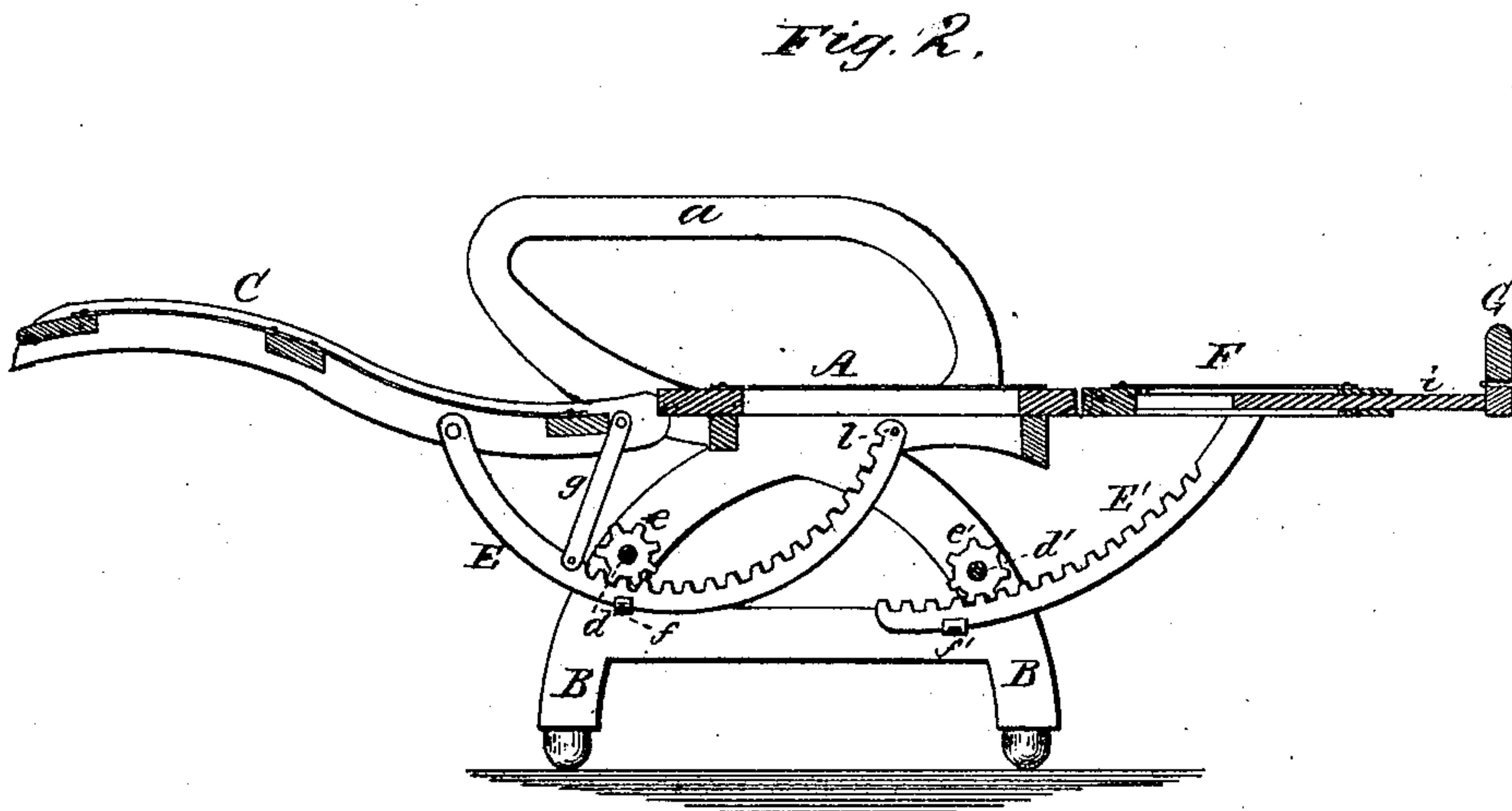
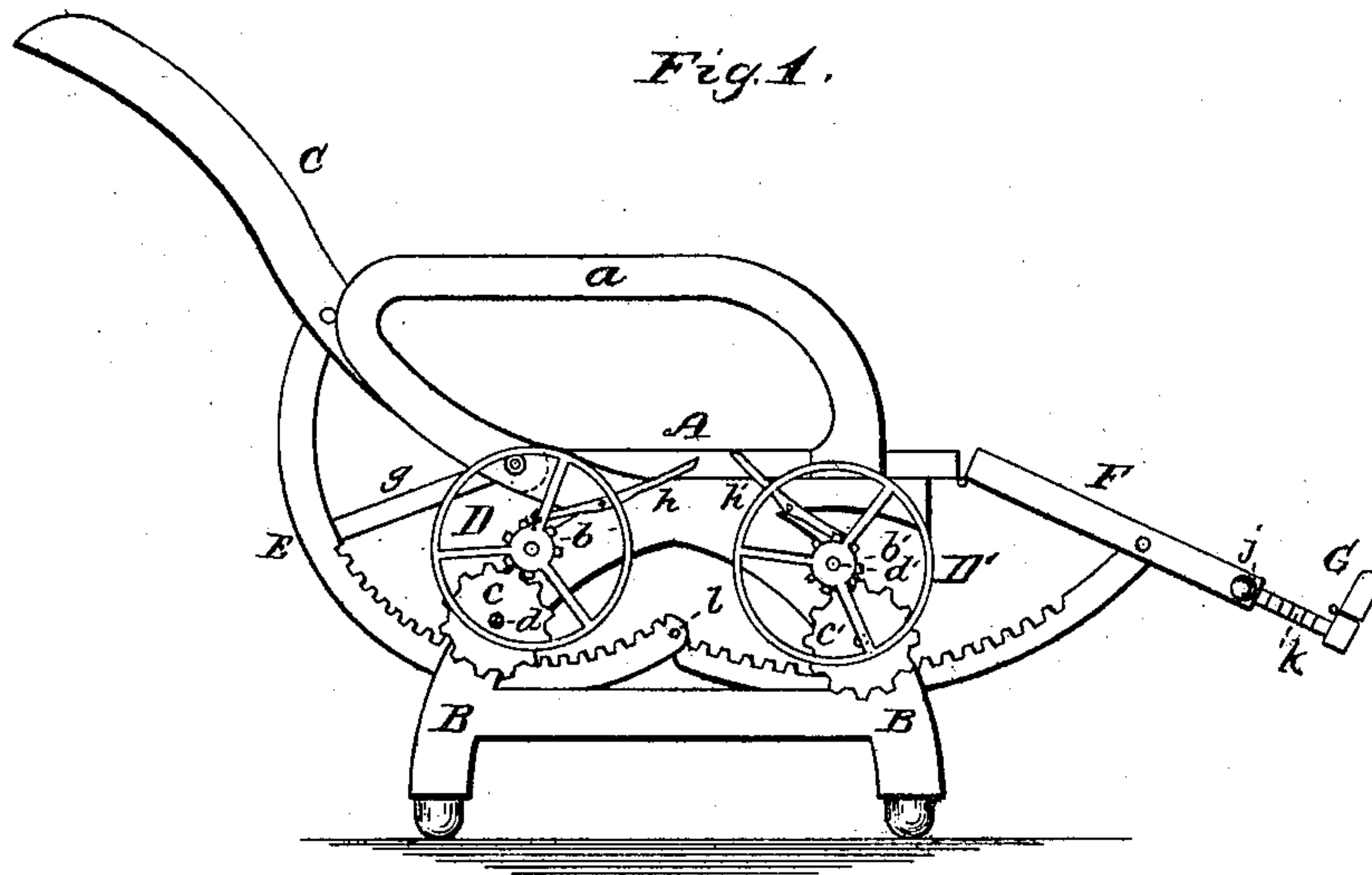


S. H. PLATT.
INVALID CHAIR.

No. 185,189.

Patented Dec. 12, 1876.



WITNESSES
Nat. E. Oliphant,
Geo. R. Porter.

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UNITED STATES PATENT OFFICE.

SMITH HARRISON PLATT, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN INVALID-CHAIRS.

Specification forming part of Letters Patent No. 185,189, dated December 12, 1876; application filed August 9, 1876.

To all whom it may concern:

Be it known that I, SMITH HARRISON PLATT, of Brooklyn, in the county of Kings and State of New York, have invented a new and valuable Improvement in Invalid and Comfort Chairs; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a side elevation of my invention. Fig. 2 is a longitudinal central section of the same. Fig. 3 is a detached plan view of the spring-catch on an enlarged scale.

The object and purpose of the present invention are to provide a chair which is capable, at pleasure, of being converted into a lounge or bed, and also of being adjusted so that a person may recline in any position desired to suit his wants in securing comfort and ease, said adjustments being readily and easily made while in the chair.

This chair is well adapted for the use of patients in hospitals and sick-rooms, as well as for comfort and ease in ordinary cases; and the invention consists in the manner of combining, arranging, and constructing the several parts, whereby these results are accomplished, as hereinafter described, and subsequently pointed out in the claims.

In the accompanying drawings, A represents the seat of the chair, supported upon legs B, in the form of the periphery of a half-ellipse. The seat A has upon each side suitable arms *a*. Pivoted to the rear end of the seat A, or to the lower portion of the arms *a*, is a back, C, which is capable of any angle of adjustment to the seat, from a right angle to a horizontal plane, constituting with the seat a continuous bed-surface, by a hand-wheel, D, the same having upon its inner face a toothed wheel, *b*, meshing with the teeth upon a gear-wheel, *c*, which is rigidly connected to one end of a horizontal rod, *d*, said rod having keyed thereto gear-wheels *e*, the teeth of which mesh with the teeth upon rack-bars E, sliding within fixed guide-plates *f*, the upper ends of said bars E being connected to the back C, and braced by

plates *g*. The guide-plates *f* serve to prevent the bars from being pressed out laterally by any strain coming thereon, and the displacement of the same; and it will be noticed that the bars E, in place of being rigidly connected to the back C, are pivoted, which allows them to yield when any strain is brought thereon, and thereby prevent them from binding and becoming injured. As there is always greater strain upon the back of the chair than on the leg-support, and as the rack-bars are necessarily longer than those used upon the leg-support, they require a brace to give additional security against any lateral strain upon them, by pivoting thereto and to the back of the chair the plates *g*, before referred to. At the free ends of the bars E are stops *l*, to prevent them from passing beyond the teeth of the wheels *e* when the back C assumes a vertical position. The hand-wheel D is retained in any desired position by a loose pawl, *h*, so that all possible changes of the angle of inclination of the back C to the fixed seat A may be made by the occupant of the chair, while either sitting or reclining therein, by simply turning the hand-wheel D. Hinged to the front edge of the fixed seat A is a leg-support, F, capable of any angle of inclination from a horizontal plane with the seat and back to a right angle with the seat, by a mechanism the same as that employed to operate the back C, consisting of the hand-wheel D', toothed wheels *b'*, gear-wheel *c'*, rod *d'*, wheels *e'*, guide-plates *f'*, pawl *h'*, and rack-bars E'. A foot-rest, G, is secured to the leg-support F by an extension-piece, *i*, connected thereto, and which is capable of sliding within a recess formed in the support, and is held in the position placed by a spring-catch, *j*, engaging with the teeth upon a ratchet bar or plate, *k*, secured to, or formed upon, the edge of the extension-piece *i*. By this arrangement the leg-support F may be adapted to any greater length of limbs than is provided for in the length of the leg-support itself.

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

1. The hinged leg-support F, having the spring-catch *j*, in combination with the sliding

piece *i*, carrying ratchet bar or plate *k*, and hinged foot-rest *G*, substantially as and for the purpose set forth.

2. In a reclining-chair, the combination with the back *C*, pivoted to the seat *A*, and carrying the pivoted rack-bars *E*, provided with stops *l* and pivoted brace-plates *g*, of guide-plates *f*, hand-wheel *D*, and gear-wheels *b c e*, substantially as and for the purpose set forth.

3. A reclining-chair consisting of the seat *A*, having the adjustable back *C*, leg-support *F*, foot-rest *G*, extension-piece *i*, serrated bar

k, spring-catch *j*, and the operating mechanism, consisting of the hand-wheels *D D'*, gear-wheels *b b' c c'*, rods *d d'*, with wheels *e e'*, pawls *h h'*, and the pivoted rack-bars *E E'*, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

SMITH HARRISON PLATT.

Witnesses:

JAS. W. PRATT,

ABRAM REQUA.