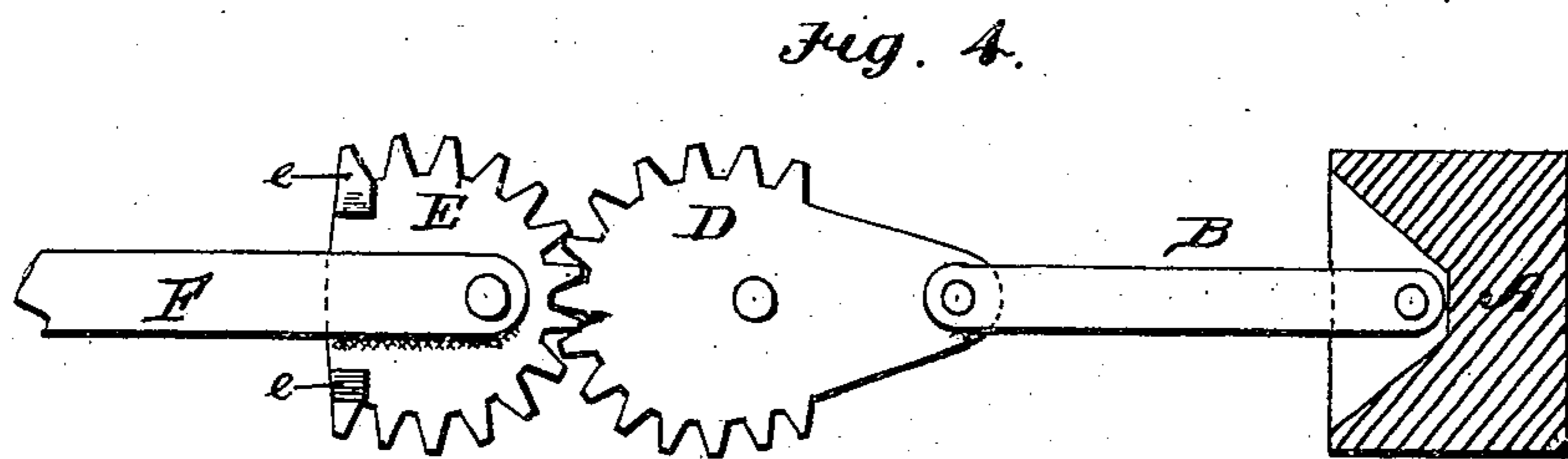
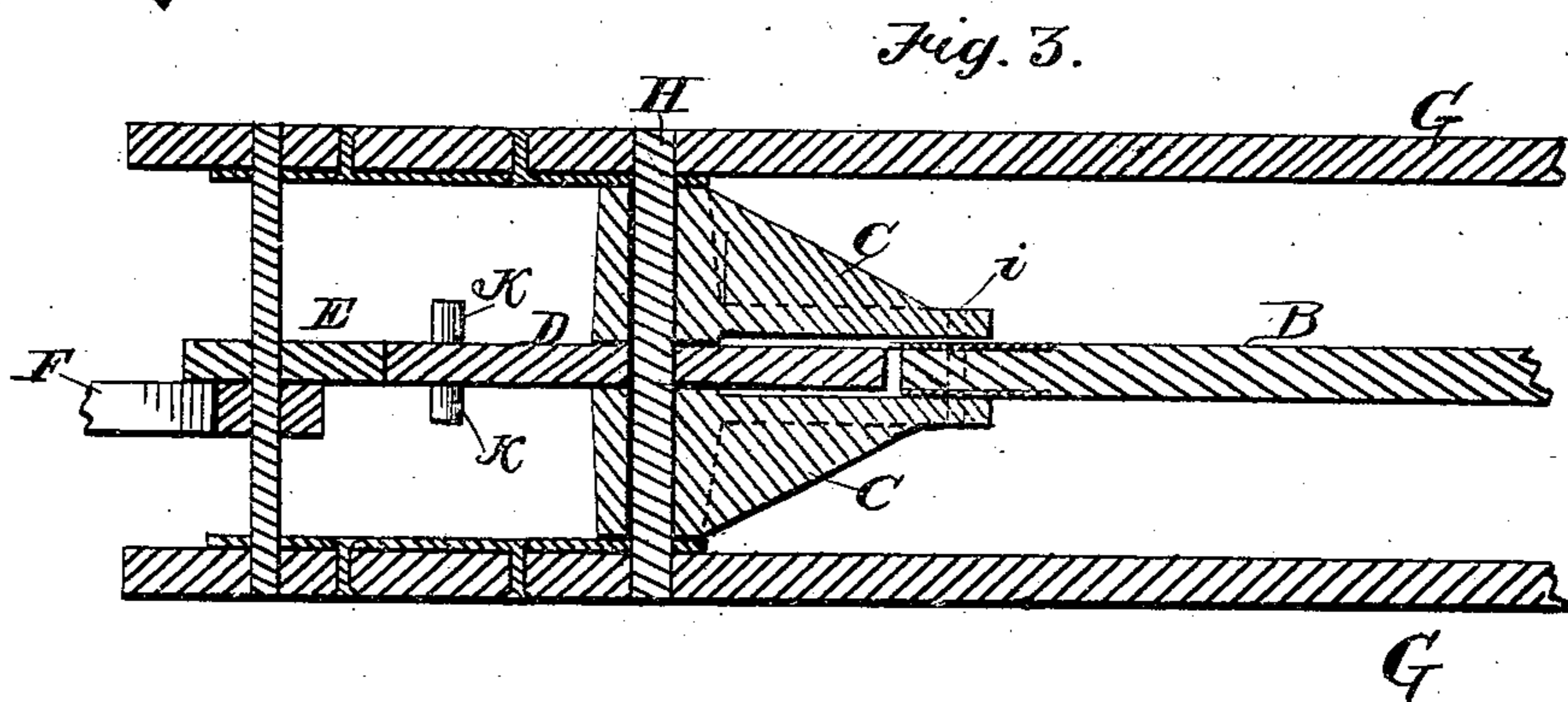
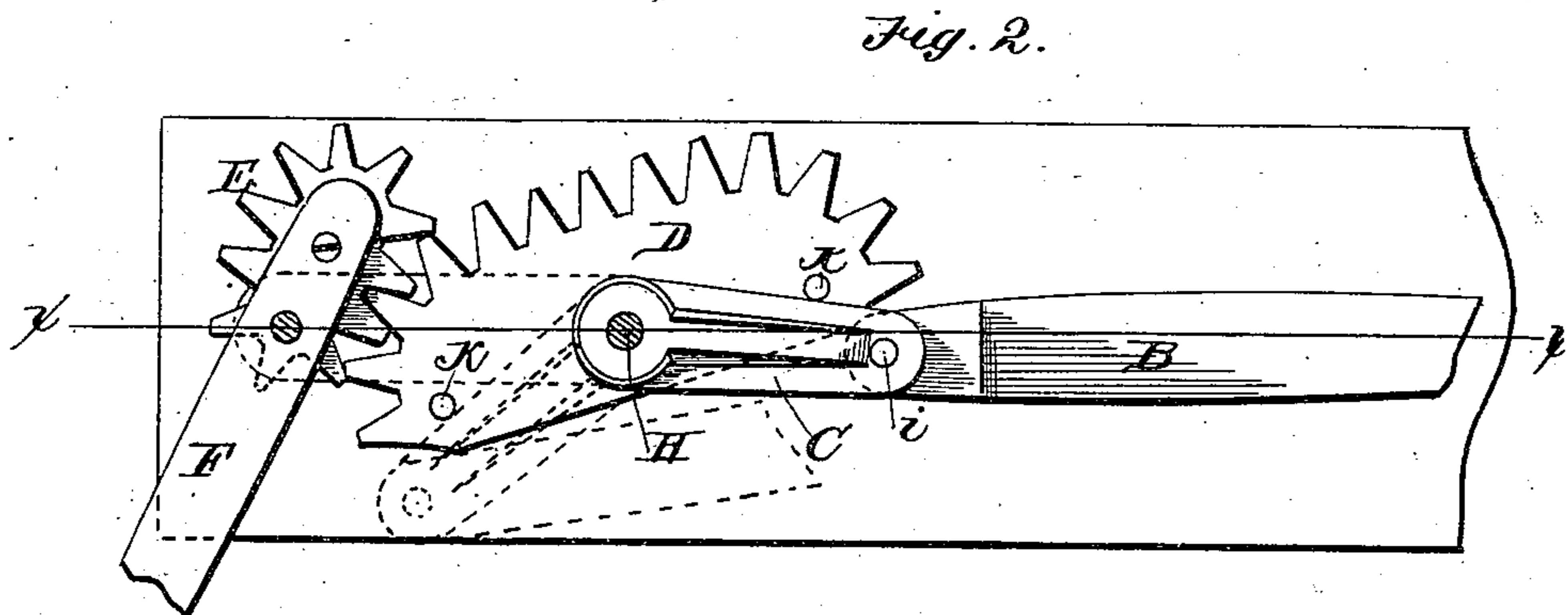
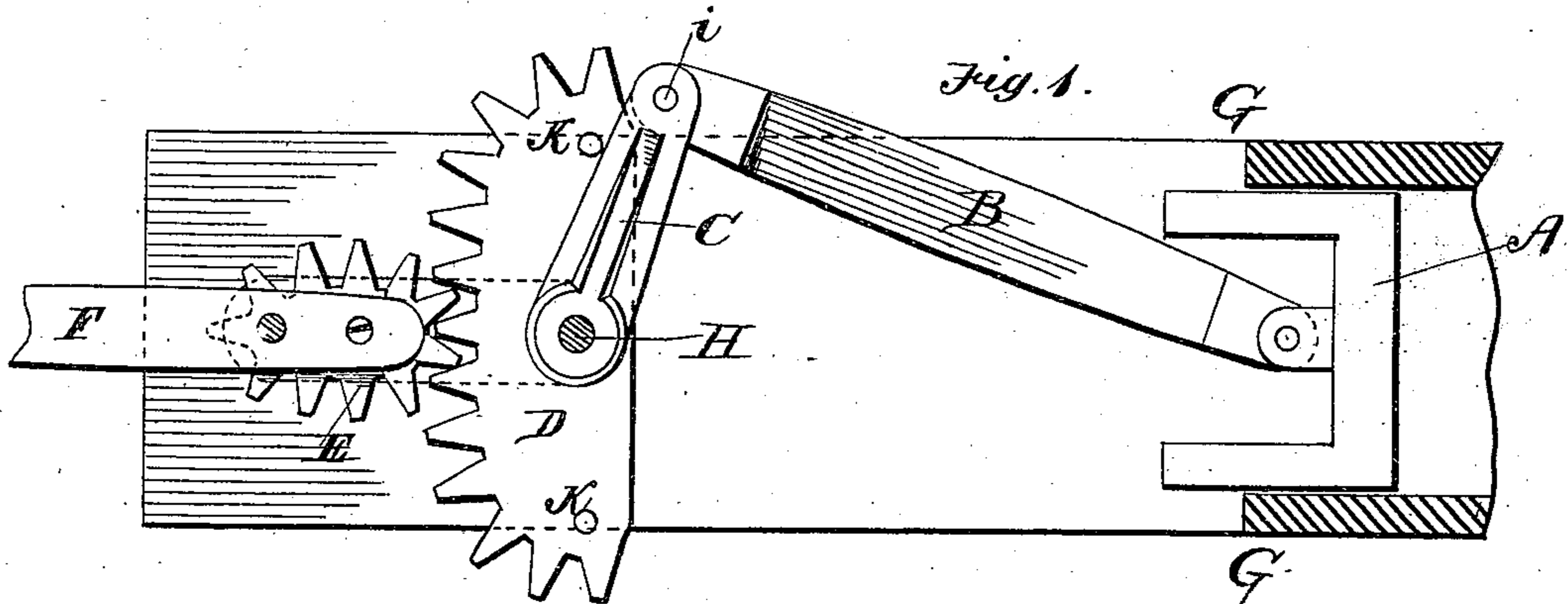


(No Model.)

P. K. DEDERICK.  
Baling Press.

No. 241,196.

Patented May 10, 1881.



Attest,  
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# UNITED STATES PATENT OFFICE.

PETER K. DEDERICK, OF ALBANY, NEW YORK.

## BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 241,196, dated May 10, 1881.

Application filed November 4, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, PETER K. DEDERICK, of Albany, Albany county, New York, have invented a certain new and useful Improvement in Baling-Presses; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents, in plan, the position of the power-gearing when the section of the material is partly pressed. Fig. 2 is a plan view, representing in full lines the position of the power-gearing when the section of material is pressed to its utmost, and in dotted lines the position of the crank and pitman when the traverser is reversed and is ready to advance to press another section. Fig. 3 represents a sectional view taken on the line *x x*, Fig. 2, and Fig. 4 represents a view of a modification.

Similar letters of reference in the several figures denote the same parts.

My present invention relates to improvements in that class of baling-presses for which Letters Patent No. 132,566 and No. 132,639 were granted to me October 29, 1872, and for which numerous other Letters Patent have been granted me since that date; and it relates particularly to improvements upon the devices contained in Patent No. 132,639 and in No. 134,592, of January 7, 1873, and in several applications for patents still pending.

Heretofore, in presses of this character, where I have combined special gearing with a crank-toggle to apply increased power to the traverser, the gearing has been so arranged that the horse traveled in a full circle and pressed one or more sections of material at each round. In the present improvement, however, the horse travels but half-way round, and then reversing travels back to the point whence he started, and his movement in each direction pushes the crank-toggle over its center and causes the traverser to press a section.

The devices which I preferably employ for accomplishing this new mode of operation are shown in the accompanying drawings.

Referring to said drawings, A represents the traverser of the press; B, the pitman; C, the crank, which forms, with the pitman, the toggle;

D, an intermediate cam-gear; E, the power cam-gear, to which the sweep or horse-lever is applied, and G the frame of the press.

The frame, as well as the press-box and bale-chamber of the press, may be constructed in the manner shown in the patents and applications referred to, or in any other suitable manner.

The cam-gear D is provided with lugs K K on either or both of its faces, and has cog-teeth on one side only, as it is intended to turn but part way round. It is located upon a shaft, H, and may be arranged to turn freely thereon, as upon a journal, or it may be secured rigidly to said shaft and the latter made to turn in boxes in the frame above and below.

The crank C is formed of two arms mounted upon the shaft H, one above and the other below the cam-gear D, and secured together at their outer ends by a crank-pin, *i*, to which the pitman is also connected, as shown. Crank C is loosely mounted on its shaft, so that it may swing from right to left or left to right from one lug, K, to the other.

The pitman B is jointed to the traverser A, so as to vibrate out beyond the frame to the right or to the left, and with crank-arm C forms a double-acting toggle.

Cogs or teeth may be formed all or part the way around the power cam-gear E, according to the relative proportions of the two cam-gears. The power-cam E is mounted loosely or rigidly upon a shaft, L, and to it is firmly secured the horse-lever F.

In operation a forkful of hay is placed in the press-box in front of the traverser, and the horse-lever and cam E being moved to the right cause the cam-gear D to move to the left and one of its lugs, K, to strike the crank C and carry it around with it, as shown in Fig. 1, thus causing the traverser to be moved forward to press the charge of material. After the crank C and pitman B come into line with each other and pass the center, the expansion of the pressed material forces the traverser-pitman and crank suddenly back until the crank brings up against the other lug, K, as shown in dotted lines, Fig. 2, the two cam-gears remaining still meanwhile in the position also shown in said figure. The horse

then being reversed—that is to say, driven to the left—the operation is repeated and another section of material pressed, and so on.

5 The toggle formed by the crank C and pitman B is made double-acting in its operation by the employment of the peculiar form of gearing, and the latter may be varied, so as to increase or diminish the power, as required.

10 If desired, the teeth on the cam-gears may be re-enforced at the points where they are subjected to the greatest strain to increase their strength.

15 The horse-lever F might be loosely mounted on the pivot or journal of the power cam-gear E and made to engage alternately with projecting lugs *e e* on said gear, and the crank C firmly secured to the cam-gear D, as in the modification shown in Fig. 4, in which case the backlash or reaction of the traverser would  
20 operate to reverse the cam-gears while the horse-lever remained stationary, the same result being accomplished as in the other case.

I claim as my invention—

1. The combination, with the traverser of a

25 baling-press, of a pitman and crank forming a double-acting toggle, and a cam or plate having projections which alternately engage with opposite sides of the crank as the cam or plate is vibrated to throw the toggle across the center, substantially as described.

30 2. The combination, with the traverser of a baling-press, of a pitman and crank forming a double-acting toggle, a cam-gear having projections which alternately engage with opposite sides of the crank to throw the toggle  
35 across the center, and a power gear and sweep for operating the cam-gear, substantially as described.

40 3. The combination, with the traverser, of the pitman, the two-armed crank, cam-gear mounted on the bearing of the crank between the arms of the crank, and having projections or lugs, as described, with the power gear and sweep, substantially as described.

P. K. DEDERICK.

Witnesses:

W. A. SKINKLE,

R. J. VAN SCHOONHOVEN.