

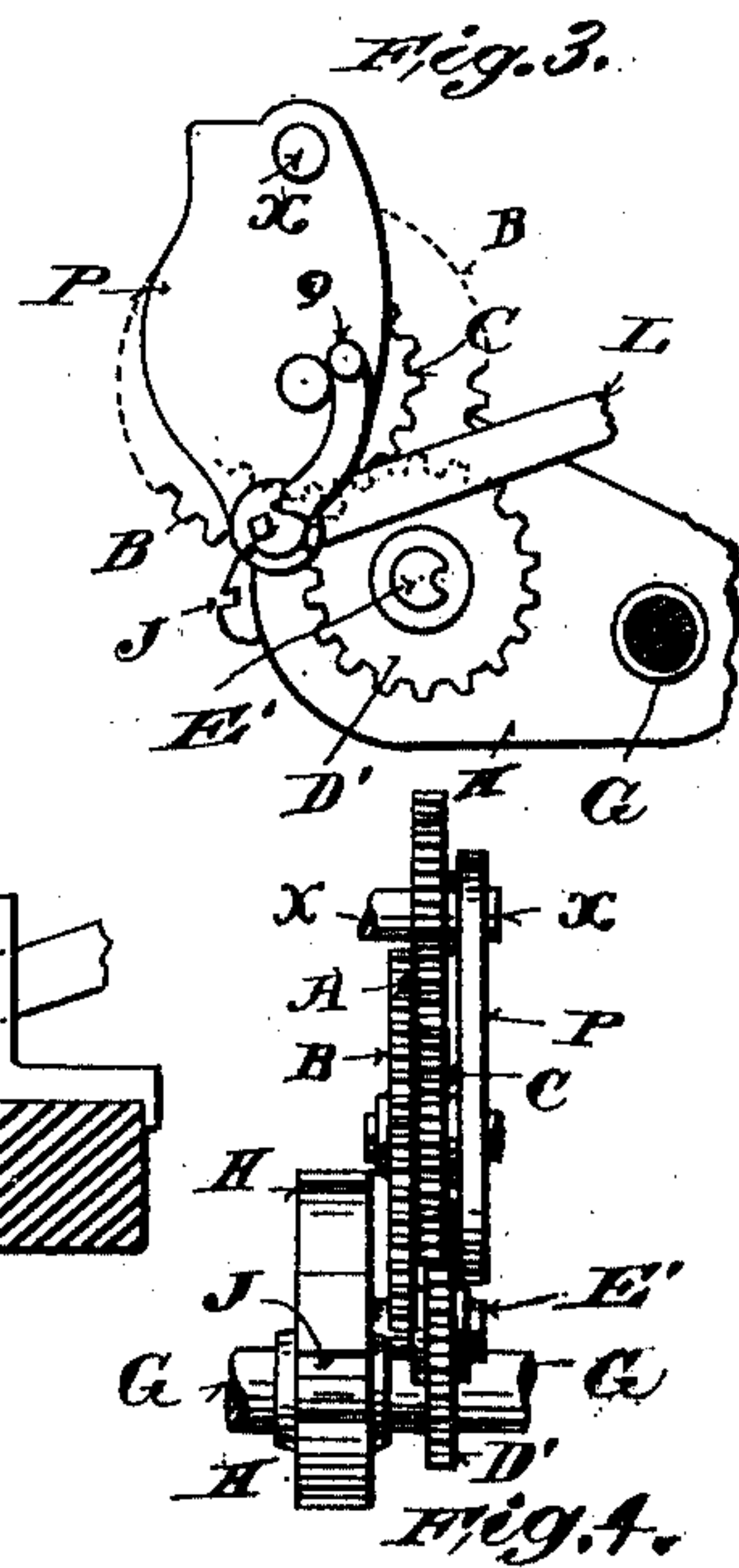
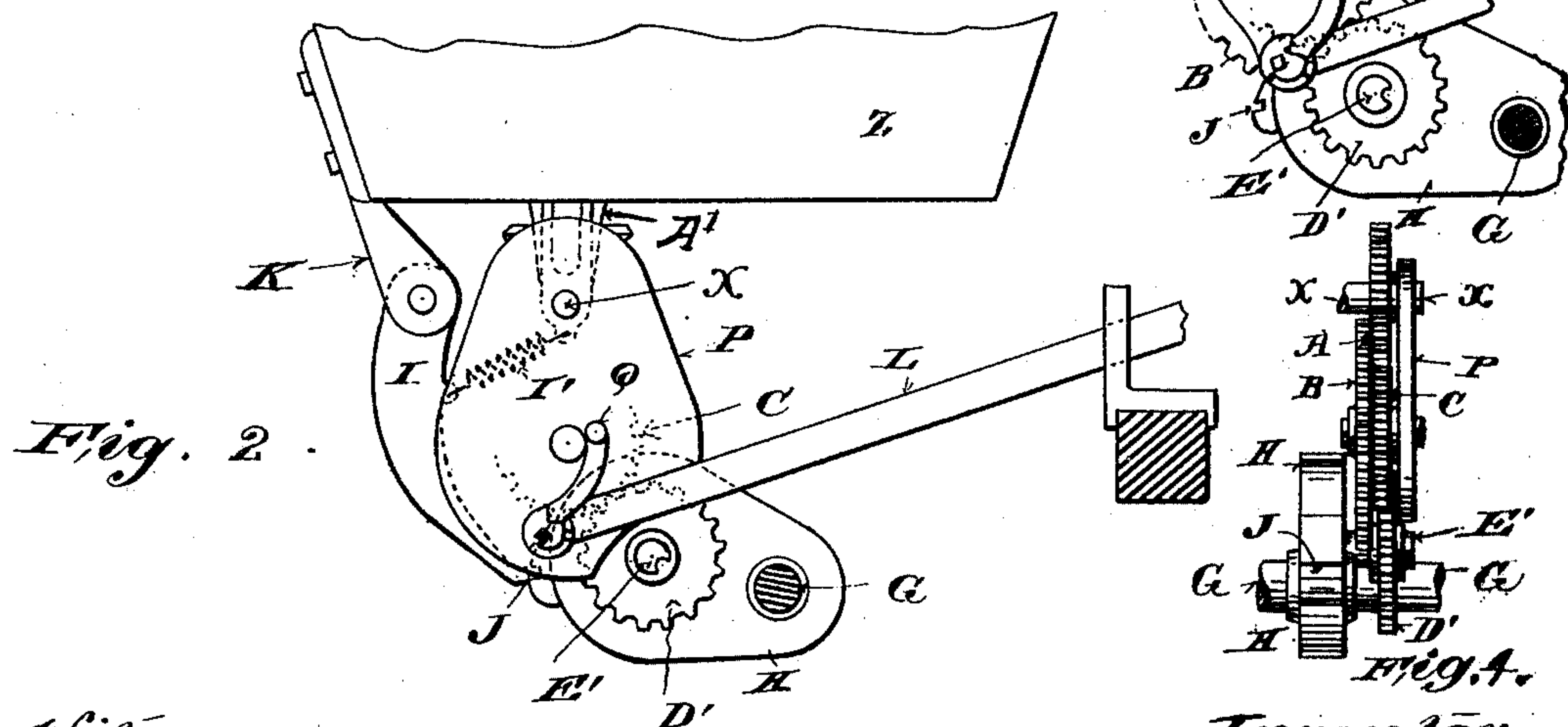
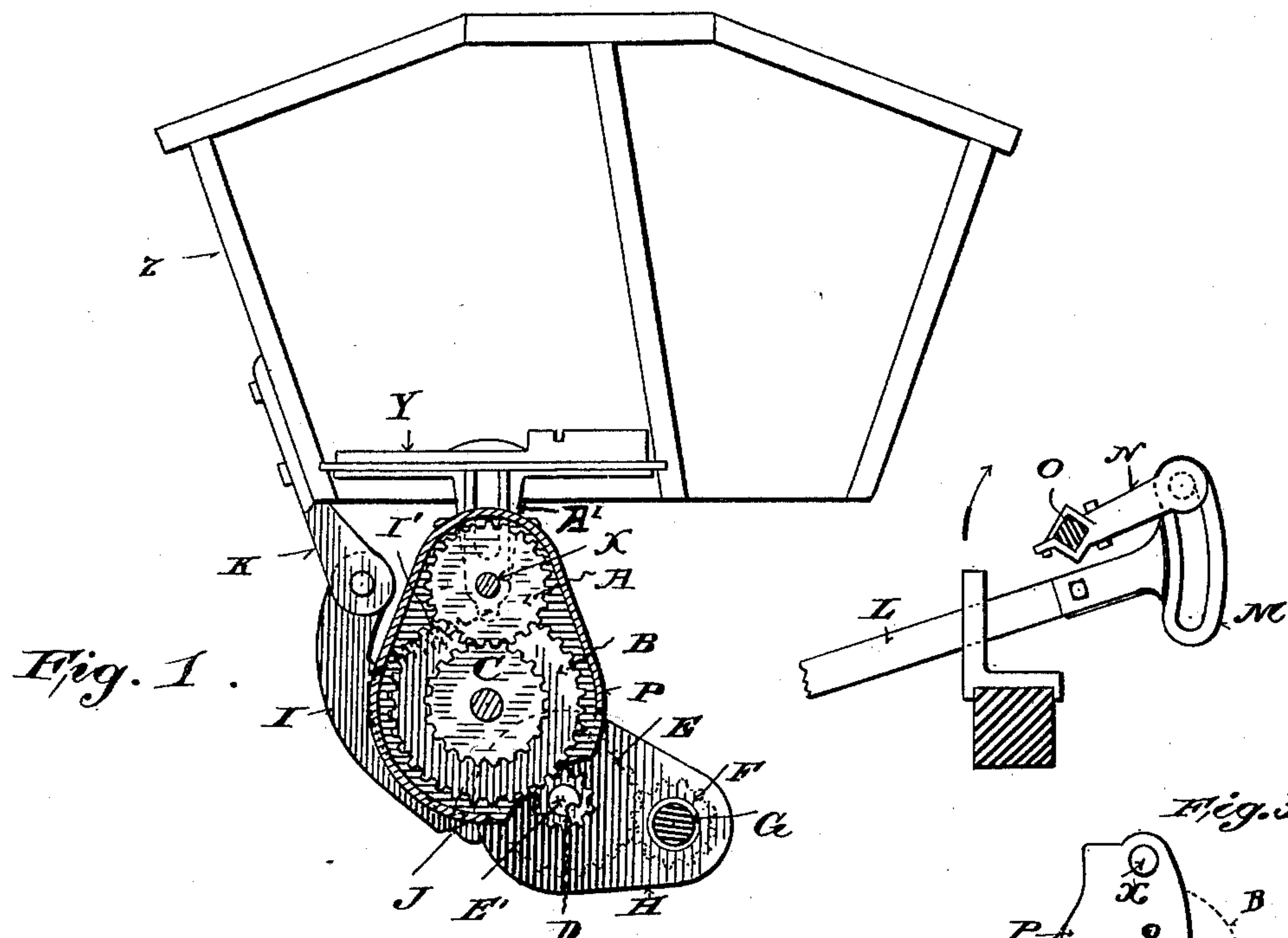
No. 717,154.

Patented Dec. 30, 1902.

E. BASEMAN.
SPEED MECHANISM.

(Application filed June 21, 1902.)

(No Model.)



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UNITED STATES PATENT OFFICE.

ERNEST BASEMAN, OF MACEDON, NEW YORK, ASSIGNOR TO BICKFORD AND HUFFMAN COMPANY, OF MACEDON, NEW YORK, A CORPORATION OF NEW YORK.

SPEED MECHANISM.

SPECIFICATION forming part of Letters Patent No. 717,154, dated December 30, 1902.

Application filed June 21, 1902. Serial No. 112,652. (No model.)

To all whom it may concern:

Be it known that I, ERNEST BASEMAN, a citizen of the United States, and a resident of Macedon, in the county of Wayne and State of New York, have invented certain new and useful Improvements in Speed Mechanisms, of which the following is a specification.

My invention relates to speed mechanisms, and more particularly to that class thereof employed in seeding-machines or grain-drills for changing the rate of distribution of the seed, grain, or fertilizer delivered therefrom. For the purpose of illustration I have shown my invention as more particularly applied to the fertilizer-distributing mechanism; but it will be obvious that it could equally as well be applied to the seed or grain distributing mechanism or to any other mechanisms wherein similar devices for change of speed are required.

My invention consists in the construction and combination of parts now to be described in the specification and as finally pointed out in the claims.

Referring to the drawings, wherein the same parts are designated by the same letters of reference throughout the several views, Figure 1 is a partial view of the hopper and fertilizer-distributor, illustrating the application of my invention thereto, a portion of the upper gear-case being removed to show the parts within more clearly. Fig. 2 is a somewhat similar view showing the outside of the case and the employment of a different change-gear. Figs. 3 and 4 are detail views showing a simpler form of the case or frame in side and front views, respectively.

The fertilizer-wheels or distributing mechanism Y are actuated from the driven shaft X, mounted in the brackets A', attached to the bottom of the hopper Z in the ordinary manner, the distributing mechanism and special connecting means to the shaft X forming no part of my invention. The case or frame P is pivotally mounted upon the shaft X and supports the upper gearing for actuating the shaft. In Figs. 1 and 2 a double case P is shown, comprising a front and back plate suitably connected at the edges, whereas in

Figs. 3 and 4 the case P is shown as a mere frame or hanger and as open at its inner side. The gear-wheel A is fast upon the shaft X and is contained within the case P. A double gear B C is located below the gear A and is suitably journaled by its stud in the case P, as shown in Fig. 1, and in such manner that the smaller gear member C engages and meshes with the gear A upon the shaft X. This arrangement of the gear A and of the double gear B C is not novel and has been used hitherto in the art, the necessary motion being imparted thereto by the engagement of a gear with the larger gear member B. It is a part of the object of my invention to provide means whereby a change of speed may be effected by employing a further change-gear which meshes directly with the gear member C, and thereby secures a higher speed with the smallest possible provision of extra parts. Power for this purpose is obtained from the axle or driving-shaft G, provided with the gear F, which meshes into a gear E, both of which gears F and E (see dotted lines, Fig. 1) are contained within the frame or case H, which is pivotally mounted upon the axle G. The gear E is supported and mounted by the stud E', journaled in the said case H, which stud projects through and from one side thereof, so as to afford a means for the employment of the necessary change-gears, one of which, D, is shown in Fig. 1 as attached thereto and as projecting into the case P and gearing with the larger gear member B of the double gear B C. In Fig. 2 the other change-gear, D', is shown as attached to the stud E' and in dotted lines as meshing with the smaller gear member C of the double gear B C, thereby affording a very simple method of changing the speed of the shaft X. The frame or case H, which is pivotally supported upon the axle G, is maintained in operative position by the pawl I, pivoted at K to the hopper and normally pressed inward by the spring I', attached to the pawl I and hanger A', which pawl I engages with the notch J, formed upon the edge of the case H, in such manner that when the pawl I is withdrawn from engagement therewith the case

H may be swung downwardly, so as to disengage the change-gear D or D' from the gear B C in the case P and to permit the substitution of the other change-gear. When the case H is then restored to its operative position, the new change-gear will at once engage and mesh with the other member of the double gear-wheel B C, the case being automatically engaged and held in its operative position by the spring-actuated pawl I. It will be seen that whichever change-gear D or D' is employed the case H will always occupy the same position.

The case P is pivotally movable about the shaft X, so that when the hoes, disks, or shoes are lifted from the soil it may be swung to disengage its gears from the change-gear on the case H. This disengagement of gears is effected in the following manner: Fast upon the rock-shaft O, whereby the hoes, disks, or shoes are elevated, is the rock-arm N, provided at its end with a stud playing in the slot of the slotted piece M upon one end of the link or strap L, the other end of which is detachably secured in any customary manner—as, for instance, by the locking-arm Q—to the case or hanger P. When the rock-shaft O is turned in the direction of the arrow, so as to elevate the hoes, disks, or shoes, the arm N thereon will be depressed, and by reason of the engagement described with the slotted piece M upon the link or strap L the said strap L, together with the case P, will be moved outwardly, so as to effect the disengagement of the double gear B C, carried thereby, from the change-gear D or D' upon the outside of the case H. When the hoes, &c., are returned to their operative position, the rock-shaft O is turned in the opposite direction, thereby restoring the case P to its normal position.

In Figs. 3 and 4 I have shown a preferred modification of the construction of the case or frame P, as previously mentioned, whereby the inner wall is dispensed with, the double gear B C being journaled by its stud in the single frame. This construction is cheaper, simpler, and lighter than the fully-inclosed case and, moreover, enables the stud E' on the case H to be made shorter, as no allowance need be made for the thickness of the inner wall of the case P.

My invention affords a means for changing speed that is simple and efficient in operation and not only durable, but little liable to get out of order.

Having thus described my invention, its construction, and mode of operation, what I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. In a speed mechanism, a driven shaft

and a gear thereon, a frame or case supported upon the driven shaft and a double gear contained therein, one member of which meshes into the gear upon the driven shaft, combined with a driving-shaft and a gear thereon, a frame or case supported upon the driving-shaft and a second gear contained therein, which meshes into the gear on the driving-shaft, and means whereby said second gear may be operatively connected with either member of the double gear.

2. In a speed mechanism, a driven shaft and a gear thereon, a frame or case supported upon the driven shaft and a double gear contained therein, one member of which meshes into the gear upon the driven shaft, combined with a driving-shaft and a gear thereon, a frame or case supported upon the driving-shaft and a second gear contained therein and meshing into the gear on the driving-shaft, a stud on the second gear and projecting through the frame or case and means whereby said stud may be operatively connected with either member of the double gear.

3. In a speed mechanism, a driven shaft and a gear thereon, a frame or case supported upon the driven shaft and a double gear contained therein, one member of which meshes into the gear upon the driven shaft, combined with a driving-shaft and a gear thereon, a second frame or case pivotally mounted on the driving-shaft and a second gear contained therein and meshing into the gear on the driving-shaft, and connections whereby change-gears may be employed to gear into either member of the double gear, together with means for holding the second frame or case in adjusted position.

4. In a speed mechanism, a driven shaft and a gear thereon, a frame or case pivotally mounted upon the driven shaft and a double gear contained therein, one member of which meshes into the gear upon the driven shaft, combined with a driving-shaft and a gear thereon, a second frame or case mounted upon the driving-shaft and a second gear contained therein and meshing into the gear on the driving-shaft, and connections whereby change-gears may be employed to mesh into either member of the double gear, together with suitably-actuated means for moving the first-mentioned frame or case out of operative position so as to unmesh the double gear therefrom from the change-gear on the second case.

In testimony whereof I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

ERNEST BASEMAN.

Witnesses:

B. G. THOMAS,
D. C. TICKNOR.