

No. 760,212.

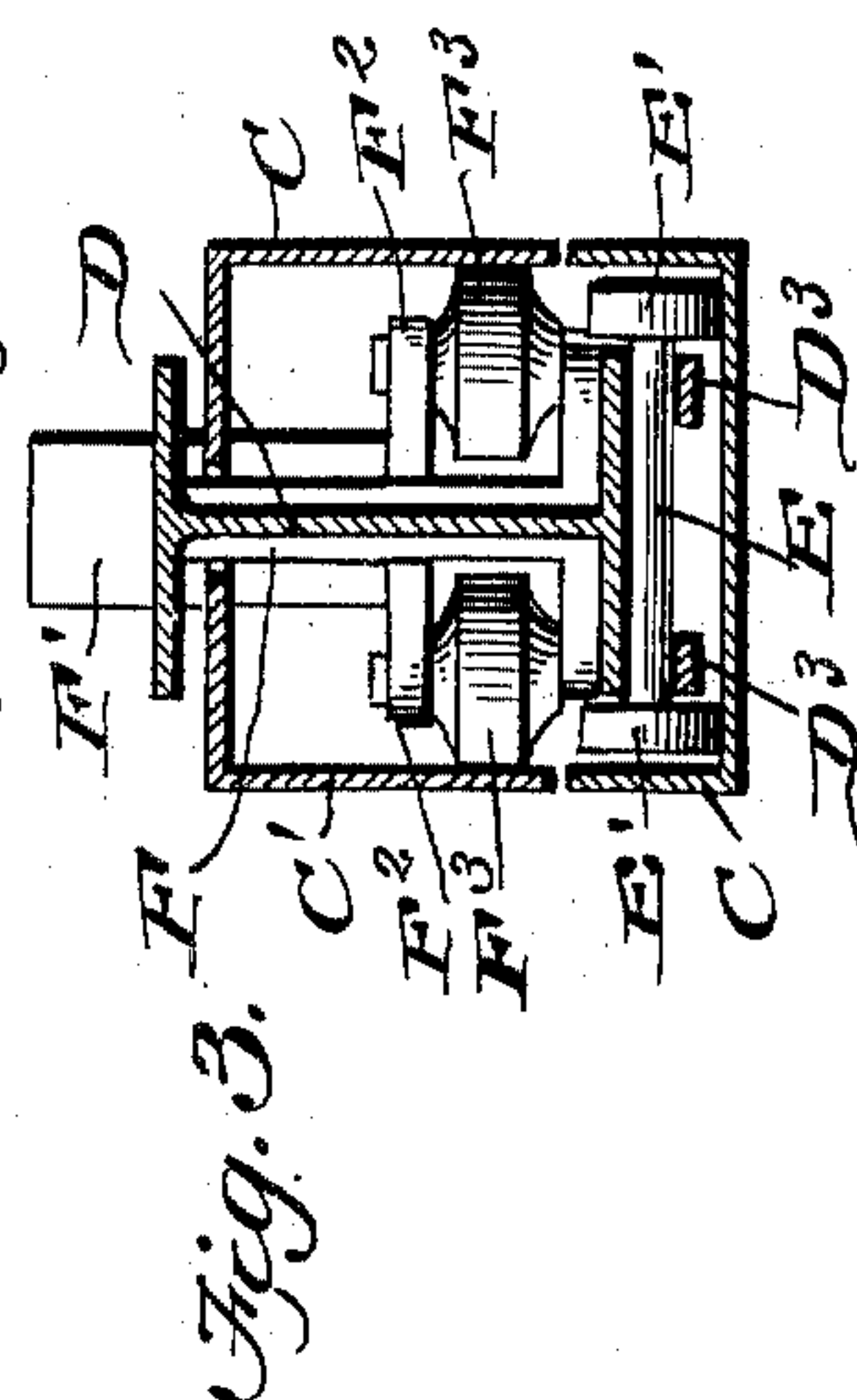
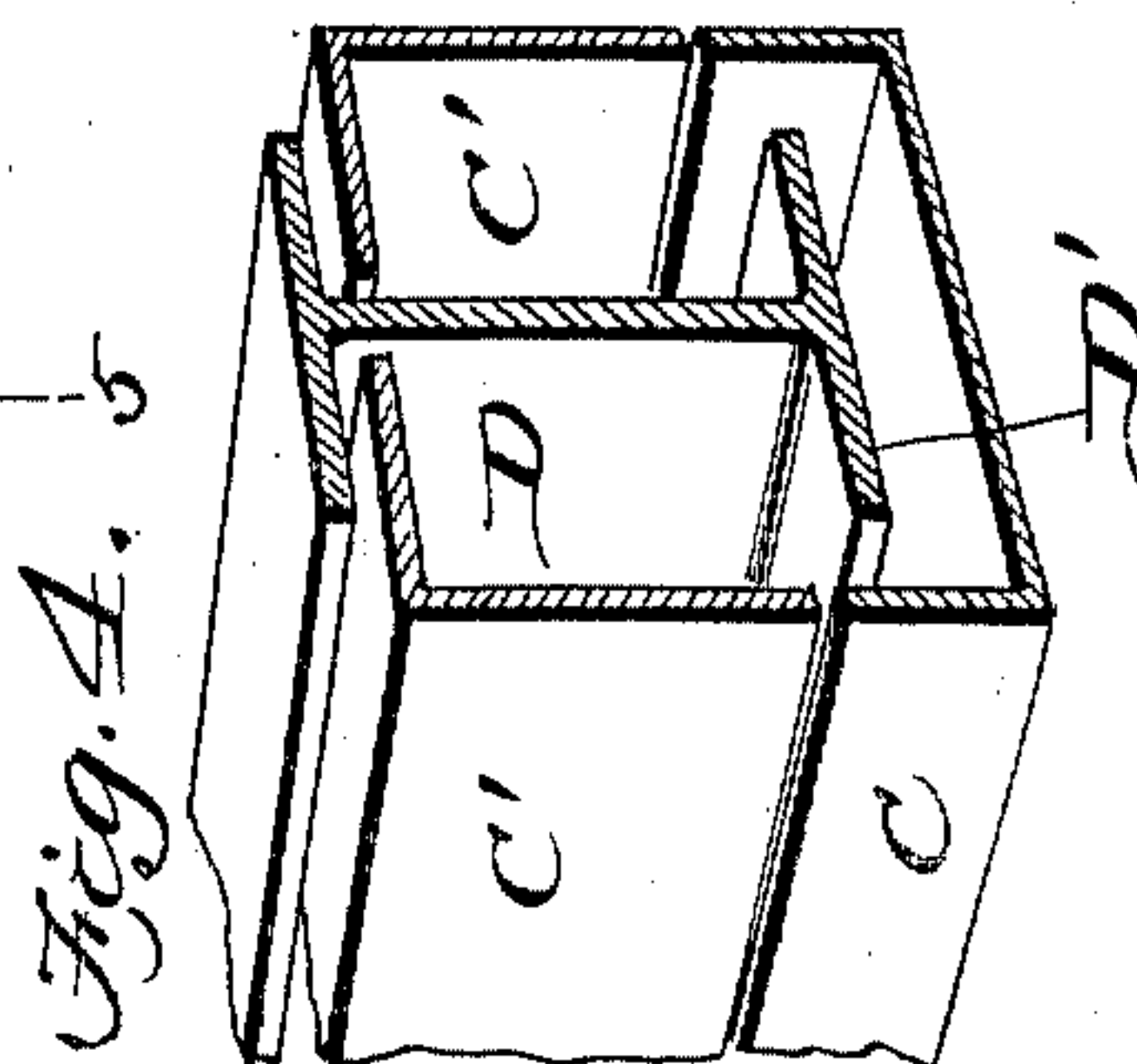
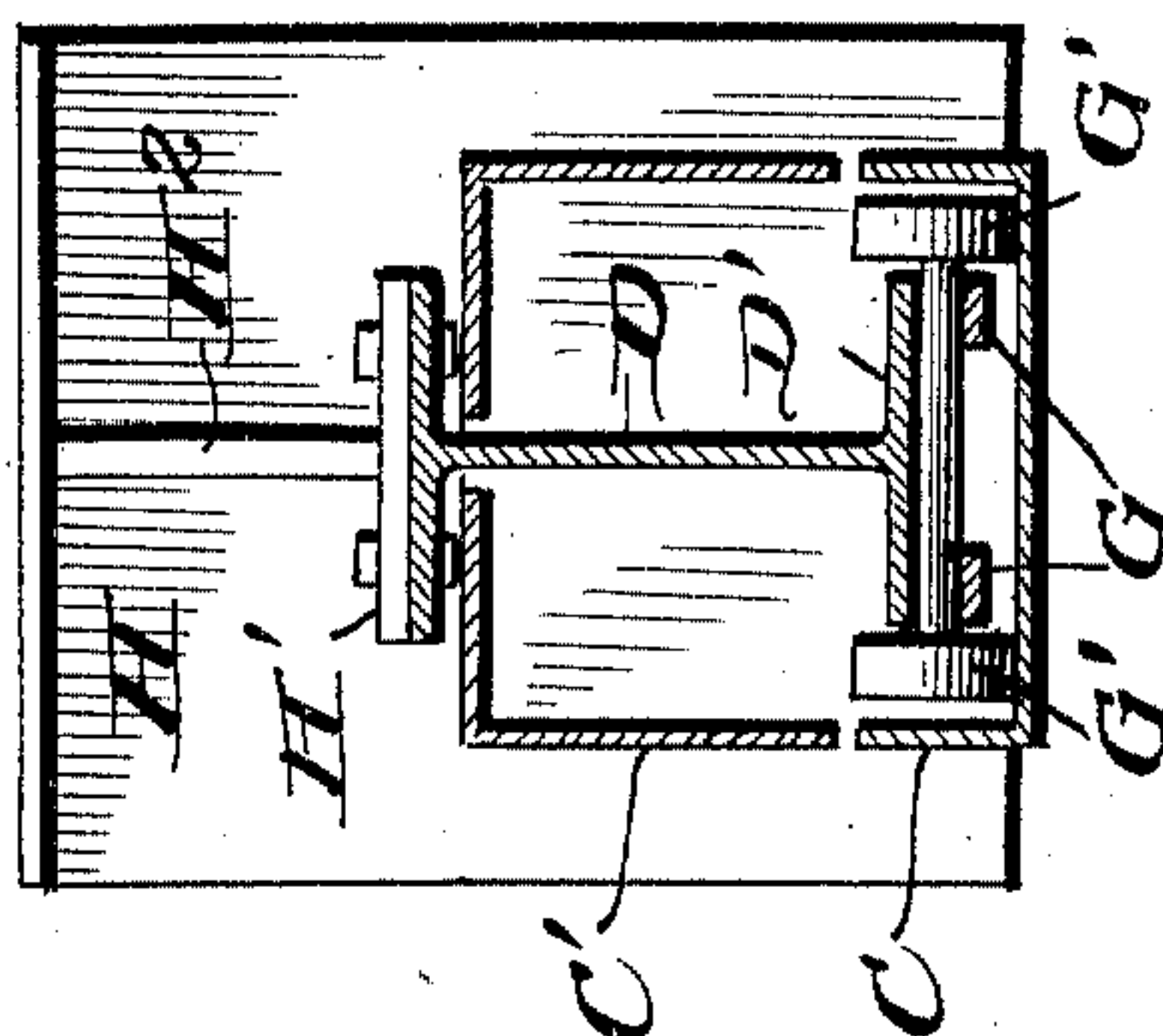
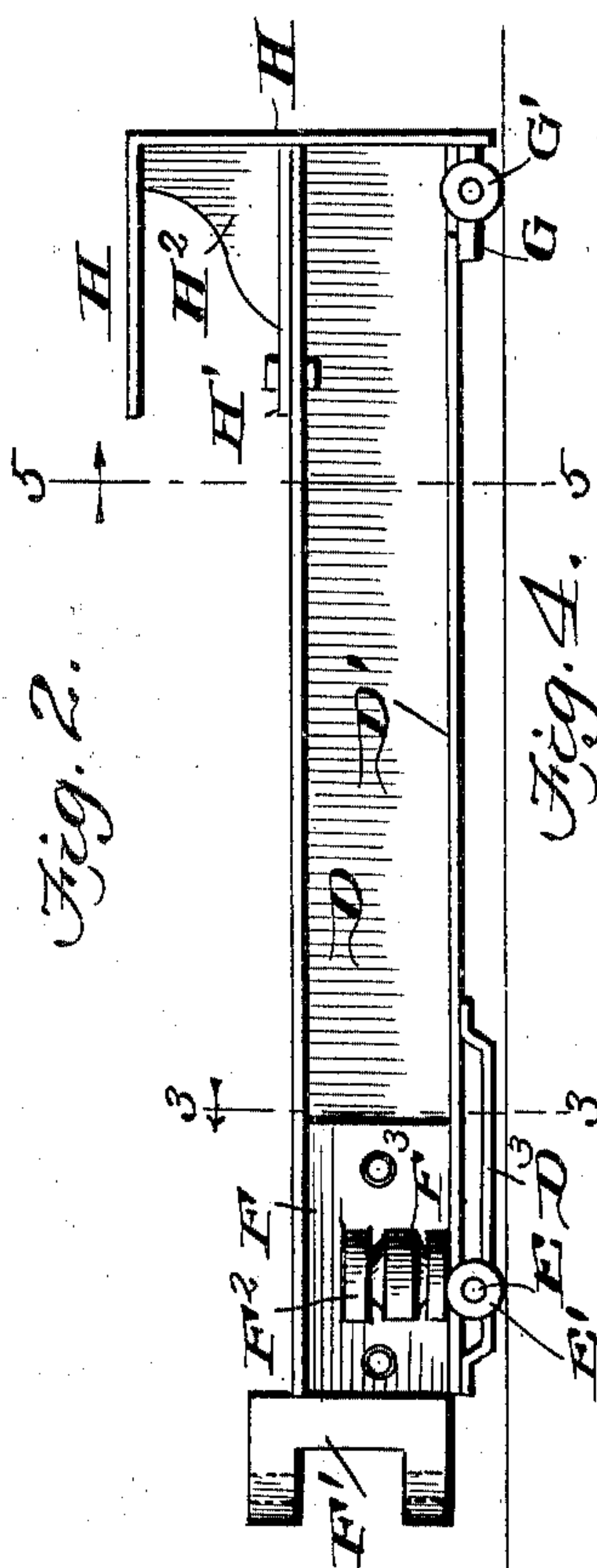
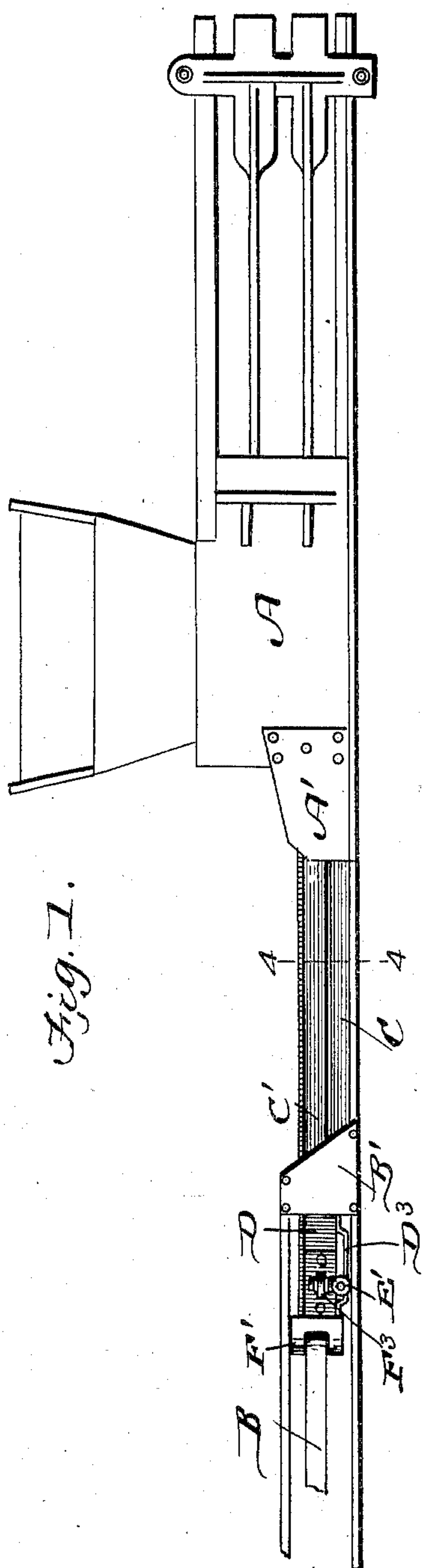
PATENTED MAY 17, 1904.

J. KEMP.

PLUNGER FOR BALING PRESSES.

APPLICATION FILED OCT. 13, 1903.

NO MODEL.



Inventor

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JAMES KEMP, OF KANKAKEE, ILLINOIS.

PLUNGER FOR BALING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 760,212, dated May 17, 1904.

Application filed October 13, 1903. Serial No. 176,863. (No model.)

To all whom it may concern:

Be it known that I, JAMES KEMP, a citizen of the United States, residing at Kankakee, in the county of Kankakee and State of Illinois, have invented a new and useful Plunger for Baling-Presses, of which the following is a specification.

My invention is an improved plunger for use in connection with baling-presses.

The object of my invention is to improve the crossing connection between the baling-chamber and the point where the pitman is connected to the plunger.

It is understood that this plunger is used in combination with a baling-press operated by horse-power, the horse traveling in a circle and stepping over the plunger, which at the point where the horse crosses it works through a suitable casing. It is a plunger of this kind which is the subject of this application for patent.

My invention consists of the novel features of construction and combination of parts hereinafter described, particularly pointed out in the claims, and shown in the accompanying drawings, in which—

Figure 1 is a side elevation showing a press and my improved plunger and crossing attached thereto. Fig. 2 is a side elevation of the plunger detached. Fig. 3 is a section on the line 3 3 of Fig. 2 looking in the direction of the arrow and showing the plunger in the casing. Fig. 4 is a perspective sectional view of the plunger and casing on the line 4 4 of Fig. 1. Fig. 5 is a section on the line 5 5 of Fig. 2 looking in the direction of the arrow and showing the plunger in the casing.

In the drawings, A indicates the press, and B the pitman. The casing extends between the boxing B' and A' and forms the crossing over which the horse steps and through which the plunger works. This casing is formed of a channel-beam C, the flanges of which constitute the lower side portions of the casing. Two angled irons C' constitute the remainder of the casing, the inwardly-extending horizontal portions of the irons C' being spaced apart.

The plunger D consists of an I-beam of the required length, the lower flange resting in

the lower portion of the casing and the upper flange resting above the casing, the intermediate portion of the beam projecting between the angle-irons C'.

Adjacent the rear end of the plunger brackets D³ are arranged on the under side of the flange D', and in these brackets, which are arranged parallel to each other and longitudinally of the plunger, is loosely journaled a shaft E, having at its ends spools or rollers E', which travel on the bottom of the casing. At its rear end plates F are bolted to the sides of the plunger D, and these plates carry a bracket F', arranged vertically in the rear of the plunger and having formed thereon perforated lugs in vertical alinement, and the forward end of the pitman B is pivoted between these lugs in a manner well understood. From each side of the plate F project lugs F² in vertical alinement, and in and between these lugs are journaled suitable rollers F³, adapted to contact with the side members of the angle-irons C', as clearly shown in Fig. 3, and guide the plunger in its movement in the casing. Brackets G are arranged under the forward end of the casing, and in them are journaled rollers G', similar to the rollers E'.

The plunger-head comprises an angled plate H, its vertical face being arranged transverse to the I-beam and its horizontal face extending rearwardly over the plunger and serving to guide the head in the casing. This head is further strengthened and secured to the plunger by a plate H', extending rearwardly from the head, resting on and bolted to the top of the I-beam, and the whole is braced by a web H². The above-described construction makes a very strong and efficient plunger and a convenient crossway for the horses used in operating the press.

It is obvious that if the plunger were entirely inclosed by the casing it would be necessary to either increase the height of the casing, so that the top of the casing would be above the upper flange of the I-beam D, or if the casing were not increased in height to reduce the size of the beam. To increase the height of the casing would increase the height of the crossover and defeat the object of the invention, which is to produce as low a crossing as

possible without sacrifice in strength and efficiency of the plunger, and, furthermore, to increase the size of the casing would increase to some extent the weight to be hauled from one place to another in changing location of the press. To reduce the size of the beam would involve risk of the beam bending under the strain placed on it and binding in the casing. Also were the plunger reduced in height or arranged too low it would throw the direct pressure against the lower portion of the bale, and to secure the greatest efficiency in the device the plunger should be as near as possible in line with the center of the bale. To bring the plunger as near as possible in line with the center of the bale and at the same time keep the crossover as low as possible, it is found advantageous to construct the casing and plunger as herein set forth.

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

1. The combination with a casing having a longitudinally-slotted top, of an I-beam plunger, the lower flange of said plunger resting in the casing and the upper flange above the casing, the intermediate portion of the beam, extending through the slot, and rollers on the lower flange of the beam adapted to travel on the bottom of the casing.

2. A device of the kind described comprising a casing consisting of a channel-beam

forming the bottom and lower sides of the casing, angled irons forming the top and upper sides of the casing, said irons being spaced apart, and an I-beam plunger having its central vertical portion resting between the angle-irons.

3. A plunger of the kind described comprising an I-beam, plates arranged on the sides of the beam adjacent one end, parallel lugs in vertical alinement carried by each plate, a roller journaled between each pair of said lugs, a bracket arranged at the rear of the beam and having lugs in vertical alinement, and a pitman pivoted between said lugs.

4. The combination with a longitudinally-slotted casing, of an I-beam plunger adapted to work in the casing and having its upper portion extending through the slot above the casing, rollers on the plunger, an angled head-plate at the forward end of the plunger, the vertical face of the plate extending transversely to the plunger and the horizontal face of the plate extending rearwardly above the plunger, a plate parallel to the horizontal face, said plate extending rearwardly from the vertical face and resting on the top of the plunger, and a web connecting said plate and the two faces of the head-plate.

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Witnesses:

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