

No. 819,860.

PATENTED MAY 8, 1906.

P. L. CREIGHTON.
WEIGHING AND SACKING MACHINE.

APPLICATION FILED JAN. 17, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

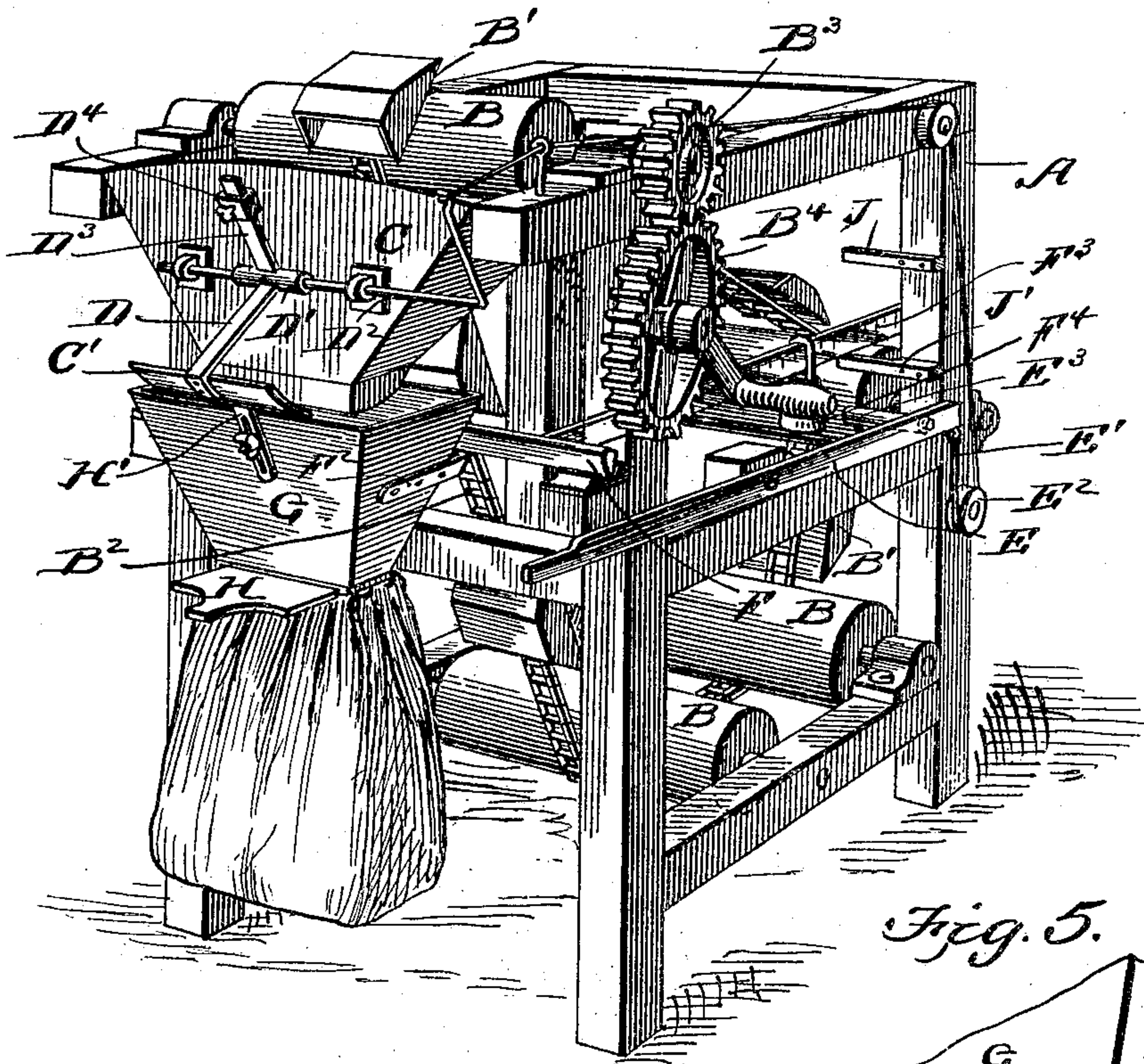
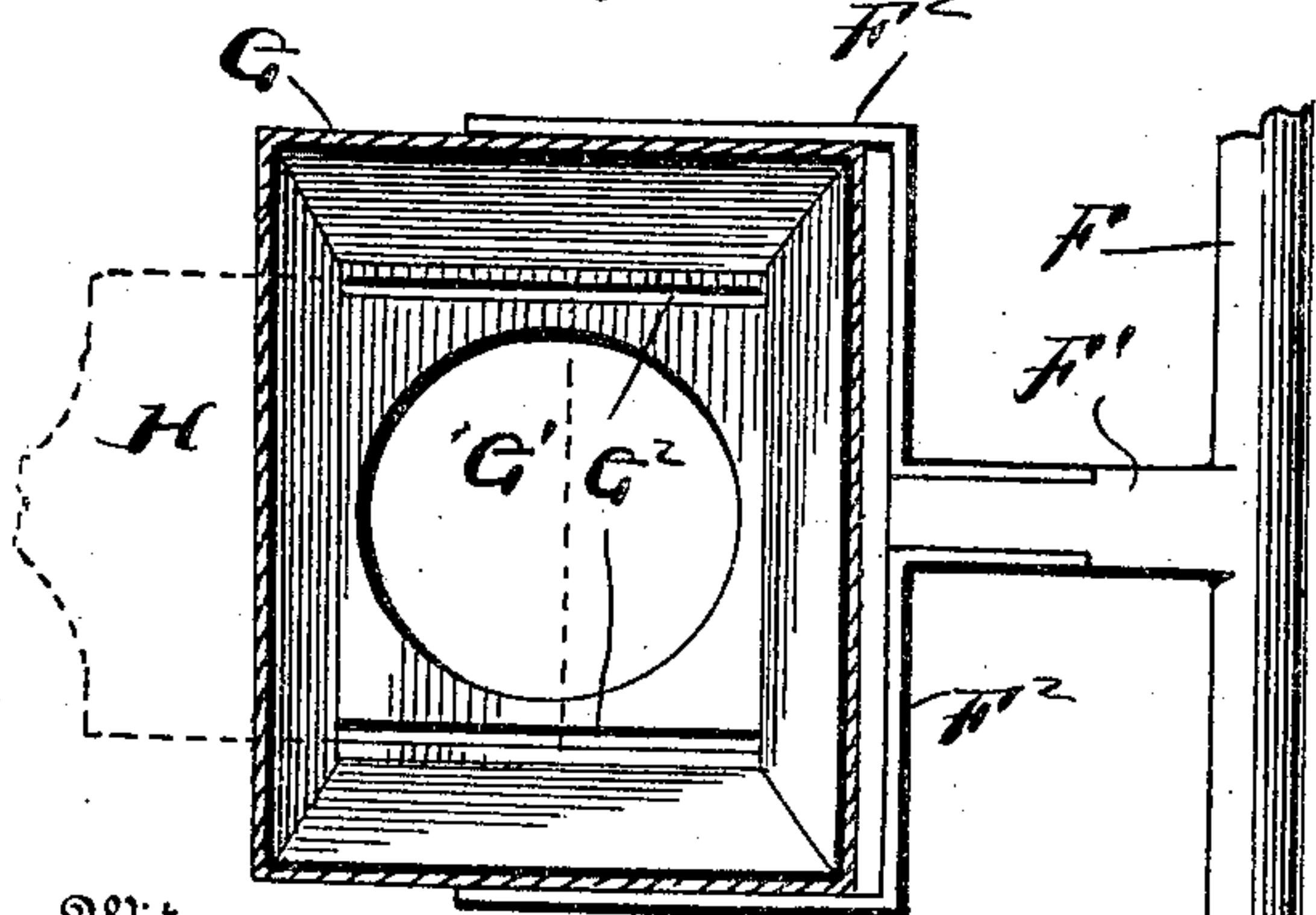


Fig. 4.



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Fig. 5.

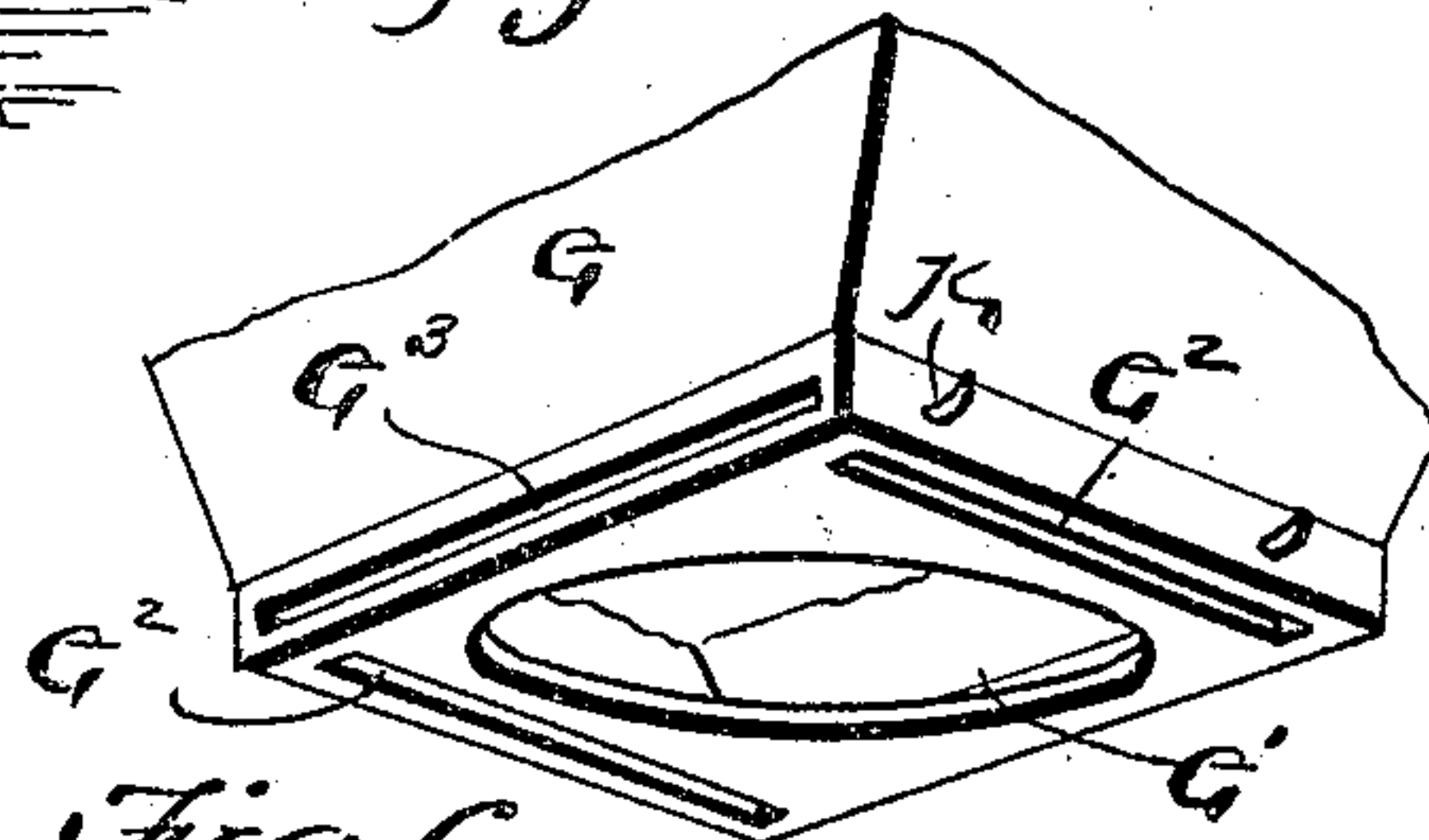


Fig. 6.

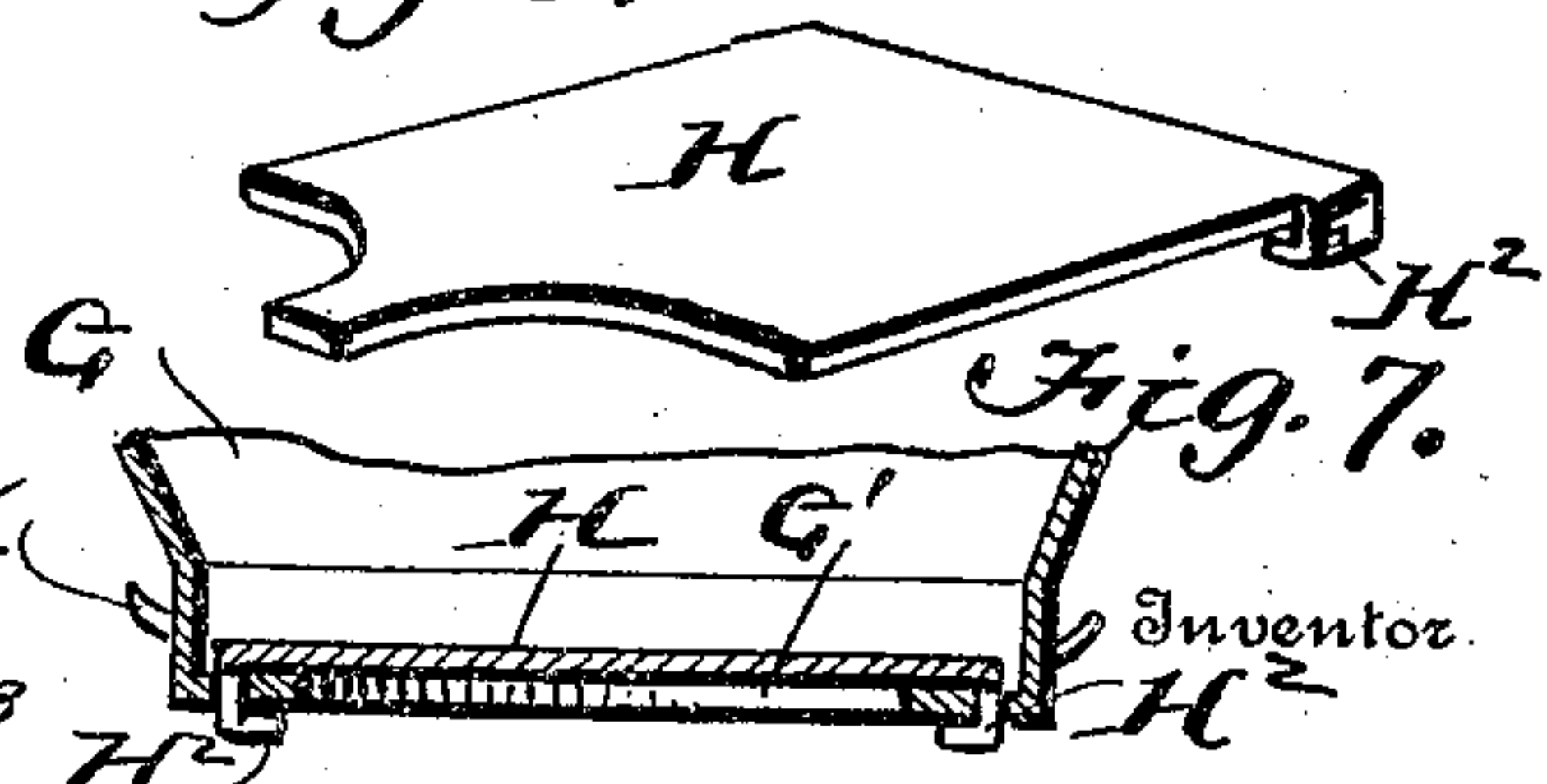


Fig. 7.

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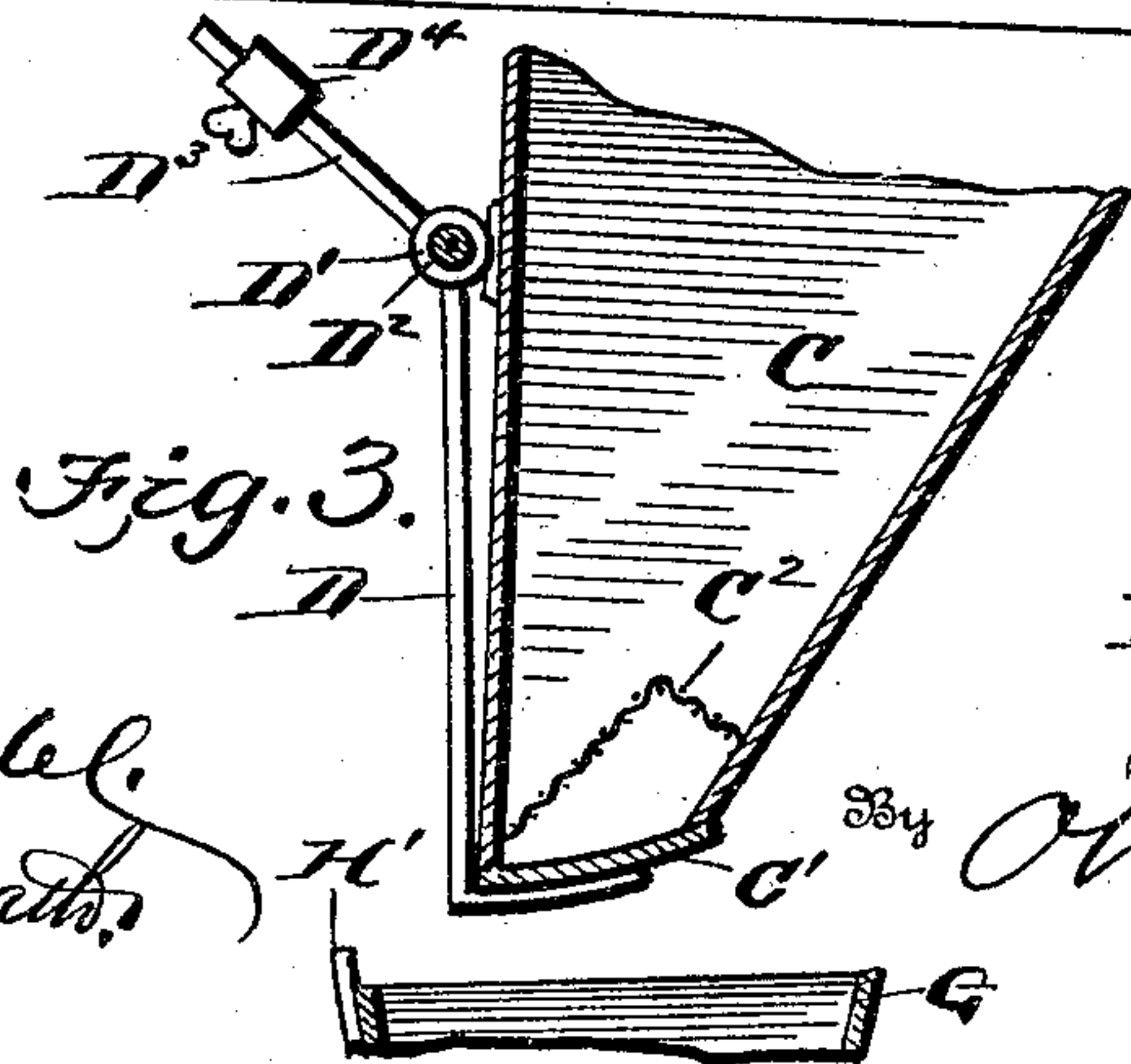
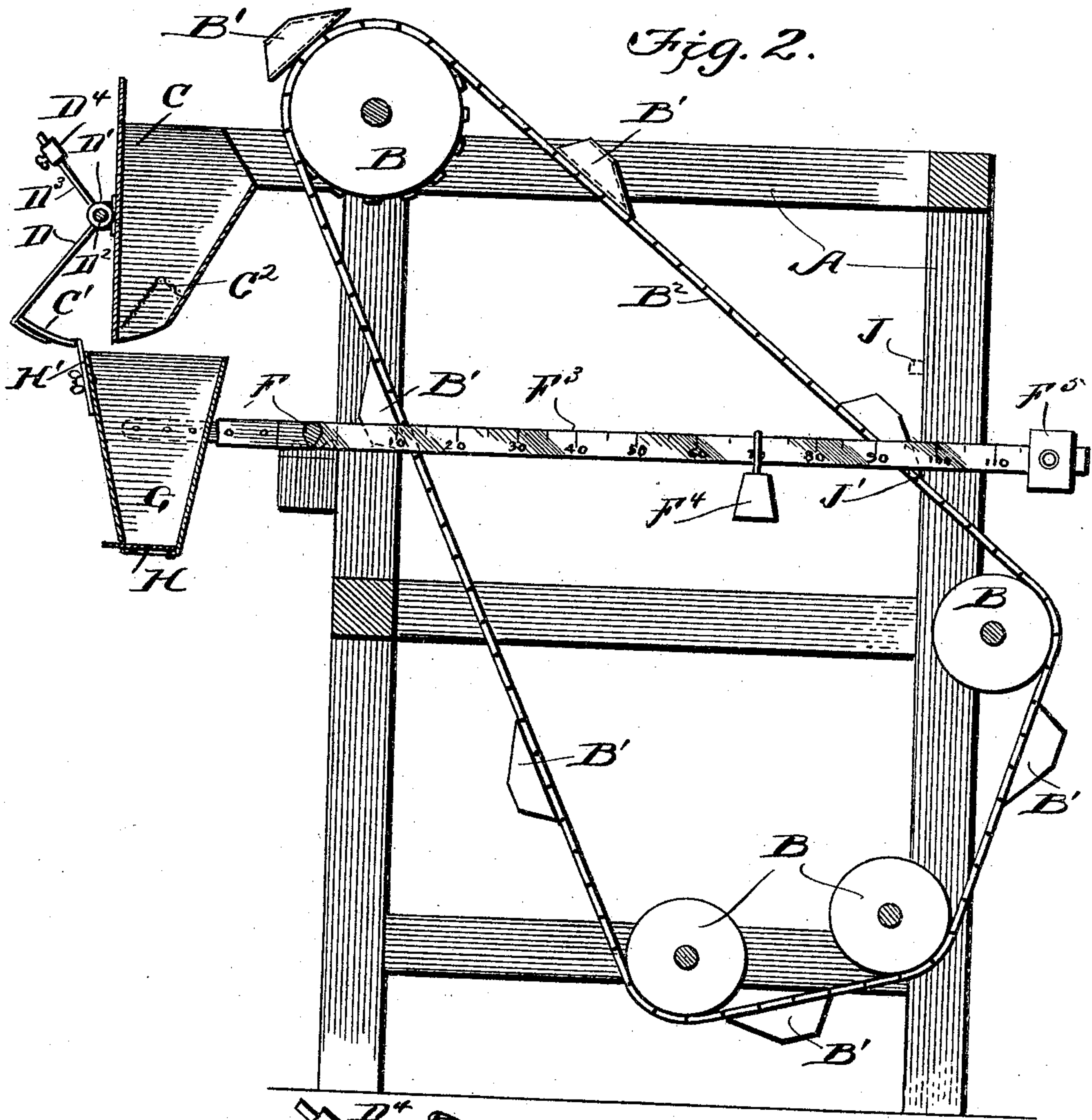
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2 SHEETS—SHEET 2.



Witnesses
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UNITED STATES PATENT OFFICE.

PETER L. CREIGHTON, OF HARRISVILLE, RHODE ISLAND.

WEIGHING AND SACKING MACHINE.

No. 819,860.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed January 17, 1905. Serial No. 241,488.

To all whom it may concern:

Be it known that I, PETER L. CREIGHTON, a citizen of the United States, residing at Harrisville, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in a Weighing and Sacking Machine, of which the following is a specification.

This invention relates to a device for sacking a predetermined amount, by weight, of a material to be weighed and sacked—as, for example, cornmeal—and is designed for use in stores, warehouses, freight-yards, &c.

The object of the device is to provide means whereby one can readily and quickly sack the material, each sack containing a predetermined amount of material.

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

Figure 1 is a perspective view of the machine, a sack being shown in position. Fig. 2 is a central vertical section. Fig. 3 is a vertical sectional view of the hoppers, the lower hopper being broken away. Fig. 4 is a horizontal section through the lower hopper. Fig. 5 is a detail perspective view of the lower portion of the lower hopper as seen from below. Fig. 6 is a detail perspective view of the slide. Fig. 7 is a detail sectional view through the slide and lower portion of the lower hopper.

In the drawings, A represents a frame having braces, bearing-blocks, &c., as may be desired. In the frame is journaled a plurality of rollers B, over which runs an endless conveyer B², which carries buckets B' of any desired construction adapted to convey the material to be weighed and sacked to an upper hopper C, carried by the front of the frame A and in a position to receive the contents of the buckets as they pass the highest point of their flight. At its lower end the hopper C is normally closed by a curved plate C', and an angled screen C² is arranged in the hopper C. An angled arm D is connected to the curved plate C', the arm being carried by a sleeve D', secured on an angled shaft D², rotatably mounted on the front side of the hopper C. The sleeve D' also carries a forwardly-projecting arm D³, on which is placed an adjustable weight D⁴. A lever E is pivoted intermediate its ends to one side of the frame A and at its rear end is connected

to an end of a cord E', the forward end of the lever forming a handle. The cord E' runs over rollers E² and connects to the angled end portion of the shaft D². A knife-edge bar F is mounted on suitable bearings carried by the frame A and forms the fulcrum for a scale-beam F³. The bar F has a forwardly-projecting arm F', to the sides of which are secured angled bars F², which embrace and hold a lower hopper G in alinement with the discharge end of the upper hopper C. The bottom of the hopper G has a circular opening G' formed therein, which is closed by a slide H. The slide has lateral angled flanges H², which engage and slide in parallel slots G², formed in the bottom of the hopper G, the body portion of the slide H working through a slot G³, formed in the front face of the hopper G. The hopper G also carries on its front face an adjustable upwardly-projecting arm H', adapted to project into the path of the curved plate C' and prevent it from falling into its normal position after being lifted and closing the bottom of the hopper C. A movable weight F⁴ is placed on the scale-beam F, and a counterpoise-weight F⁵ is also adjustably placed on the scale-beam. Stop-pins J and J' limit upward and downward movement of the rear end portion of the scale-beam. A stud-pin E³, carried by the lever E, is in position to lift the rear end portion of the scale-beam when the forward end of the lever is forced downward.

The operation of the device is as follows: The weight F⁴ is set to the desired amount and the slide H pushed in, closing the bottom of the hopper G. The handle portion of the lever E is forced downward, and this movement draws the cord E' and pulls the angled portion of the shaft D² rearward, thus partially rotating the shaft and sleeve D'. This draws upwardly and forwardly the curved plate C', opening the bottom of the hopper C. The same movement of the lever brings the stud-pin E³ into engagement with the scale-beam F and lifts the same slightly, which causes the hopper G to move downwardly, and this movement effectually clears the curved plate C' of the arm H'. As soon as the lever is released the scale-beam drops to its normal position, when the hopper G is empty, and the arm H' moves upward in the path of the curved plate C' and prevents it from falling back and closing the lower end of the hopper C. When the desired weight of

material has been deposited in the hopper G by the buckets B', the scale-beam and hopper will tilt downwardly, the rear end of the scale-beam rising and being limited in its upward movement by the stop-pin J. This downward movement of the hopper G withdraws the arm H', which is adjustable, from the path of the curved plate C' and the latter falls by gravity and closes the bottom of the hopper C. A sack is then hung on the hooks K, carried by the hopper G in the usual manner, the slide H is withdrawn, and the contents of the hopper G are discharged into the sack. To break the force of the fall of material into the hopper G and furnish a steady flow, I place the screen C² in the hopper C.

The rollers B may be driven in any desired manner; but in the hand form of the device shown I provide the gear-wheels B³ and B⁴, the latter of which is provided with a common handle and the former connected to the roller B at the top of the frame A. The handle of the gear-wheel B⁴ is turned by the operator after setting the scale and forcing down the forward end of the lever E.

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

1. In a weighing and sacking machine, a stationary hopper, a shaft mounted upon said hopper, a sleeve fixed upon said shaft, radially-extending arms carried by the sleeve, an adjustable weight upon one of said arms, a plate carried by the other arm adapted to swing into position to close the lower end of the hopper, a vertically-movable hopper arranged beneath and in alinement with the stationary hopper, an adjustable arm carried by the movable hopper and adapted to project into the path of the plate when the movable hopper is in its normal position and to prevent said plate from swinging into a closed position, and means for rotating the

shaft and lifting the plate from the closing position.

2. A machine of the kind described comprising an upper hopper, a scale-beam, a lower hopper carried by the scale-beam, a slide adapted to close the bottom of the lower hopper, an angled shaft rotatably carried by the upper hopper, a sleeve mounted thereon, arms projecting from said sleeve at right angles to each other, an adjustable weight on one of said arms, a curved plate carried by the other arms and adapted to fall by gravity and close the bottom of the upper hopper, means for rocking the angled shaft and raising the curved plate, means carried by the lower hopper for holding the said plate in a raised position while the lower hopper is in its normal position, a weight on the scale-beam, means for limiting movement of said beam, and an endless conveyer adapted to feed material to the upper hopper.

3. A device of the kind described comprising a frame, an endless carrier, buckets on the carrier, a hopper carried by the frame adapted to receive the contents of the buckets, an angled shaft carried by the hopper, a sleeve on the shaft, arms carried by the sleeve, an adjustable weight on one arm, a curved plate adapted to close the lower end of the hopper on the other arm, a pivoted lever, a cord connected at one end to the lever and at the opposite end to the angled shaft, a hopper suspended below the first-mentioned hopper, a slide adapted to close the bottom of the suspended hopper, said hopper having a limited downward movement, an arm carried by the hopper and adapted when in its normal position to extend into the path of the curved plate, and means for governing the downward movement of the suspended hopper.

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Witnesses:

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