

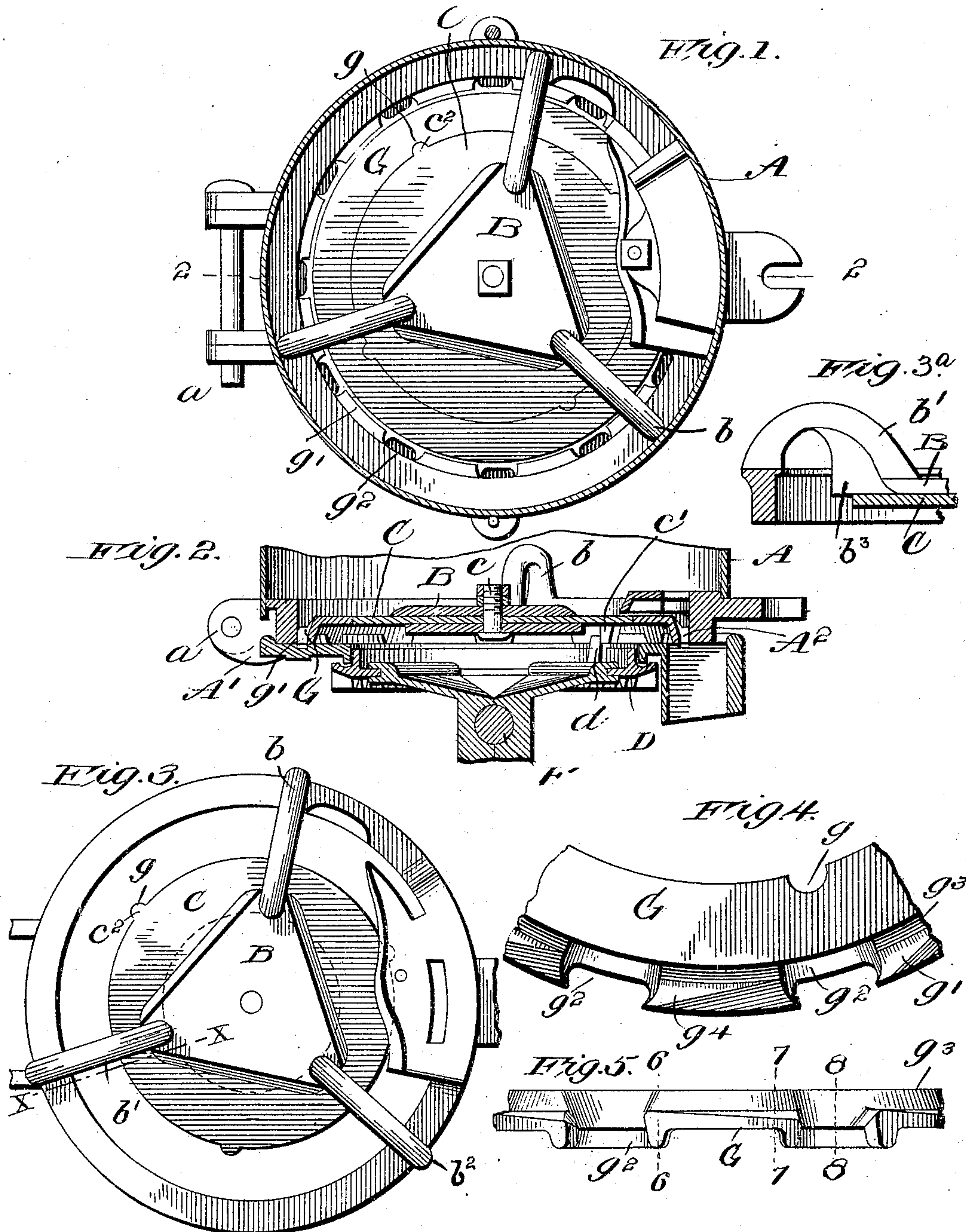
No. 788,344.

PATENTED APR. 25, 1905.

W. L. BEALL.
CORN PLANTER.

APPLICATION FILED JAN. 31, 1905.

2 SHEETS--SHEET 1.



~~WITNESSES:~~

W. H. Kingle.
Post Office.

Fig. 6.

Fig. 7c

Fig. 8.6

INVENTOR

William L. Beall
By Whitaker & French
Attorneys

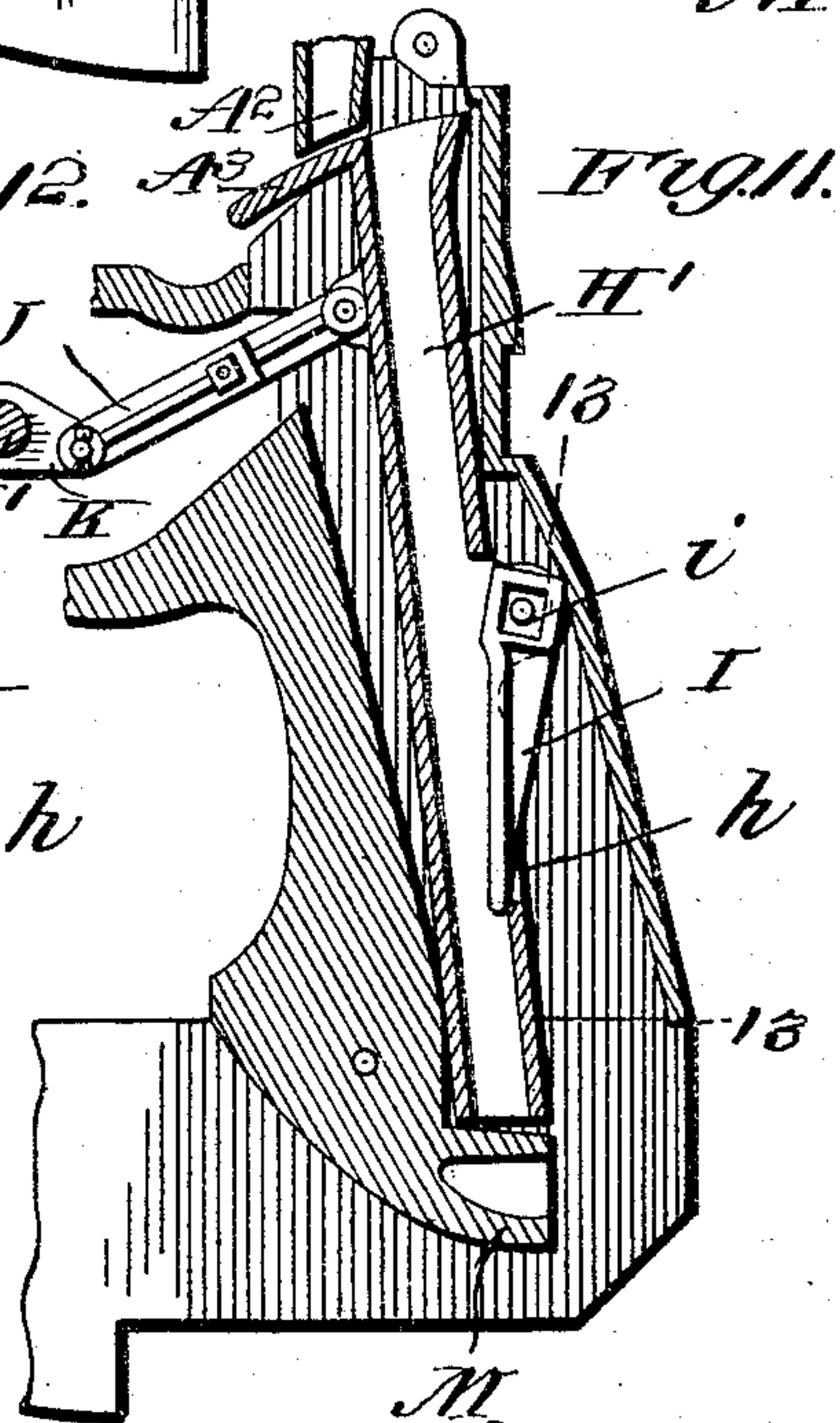
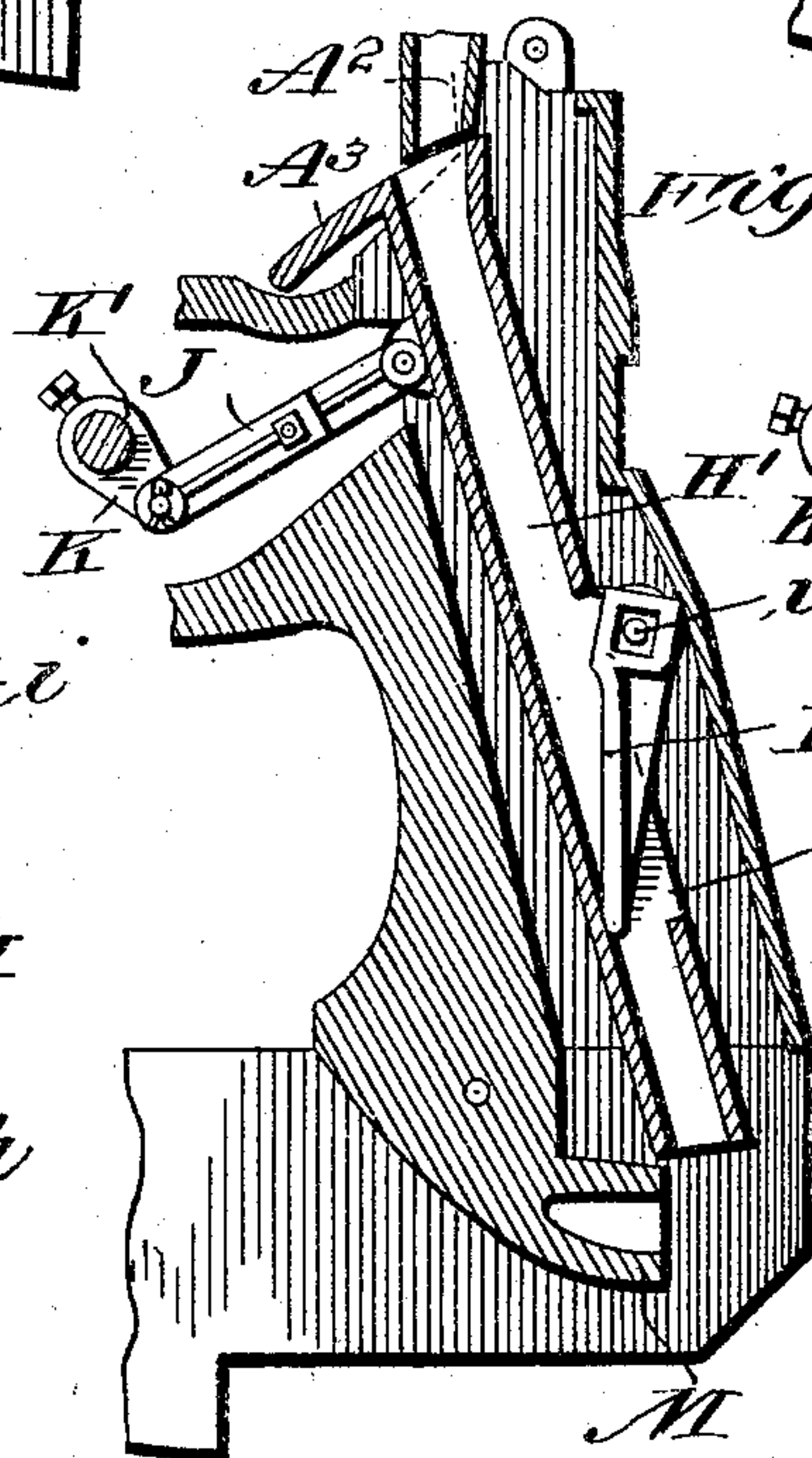
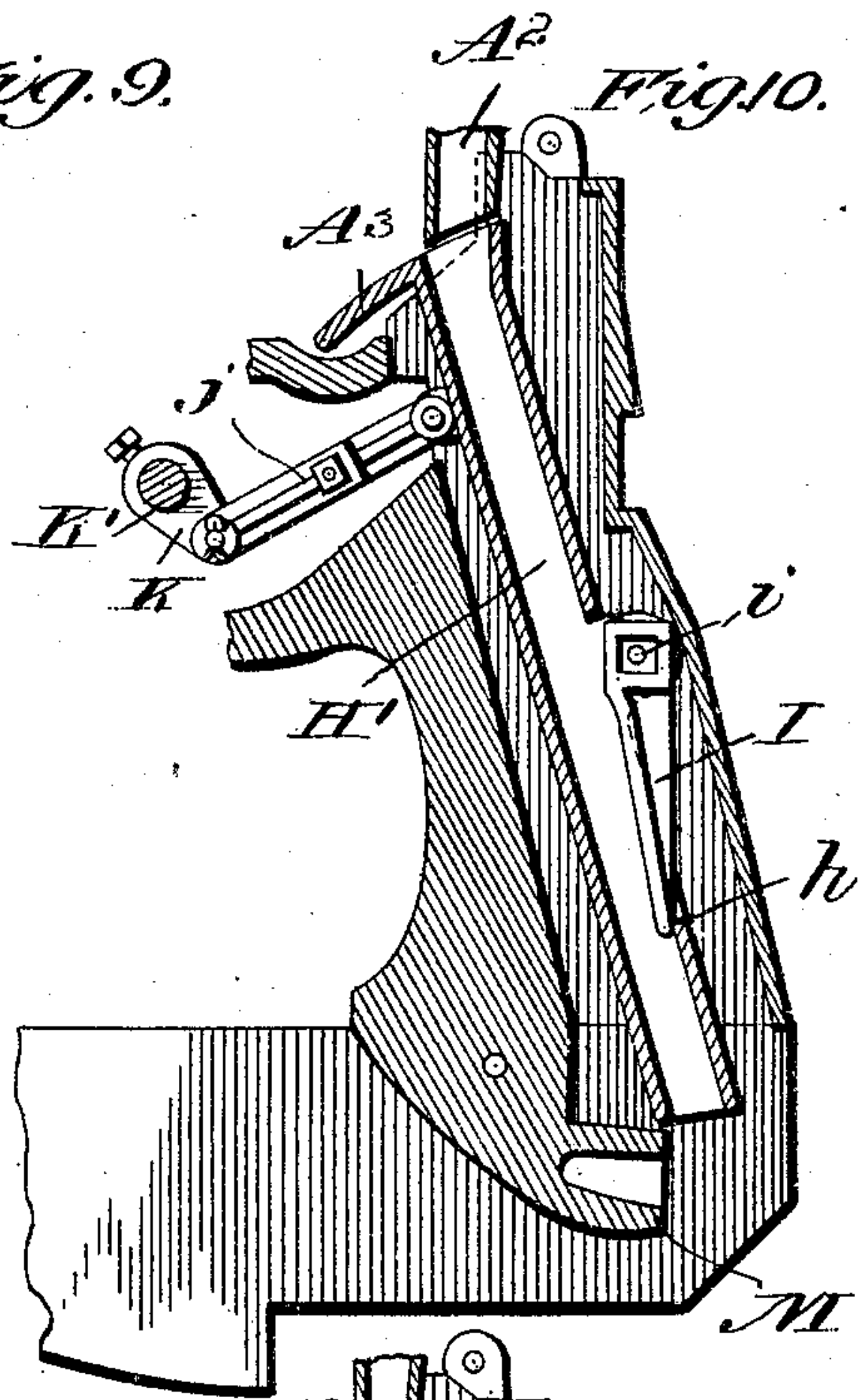
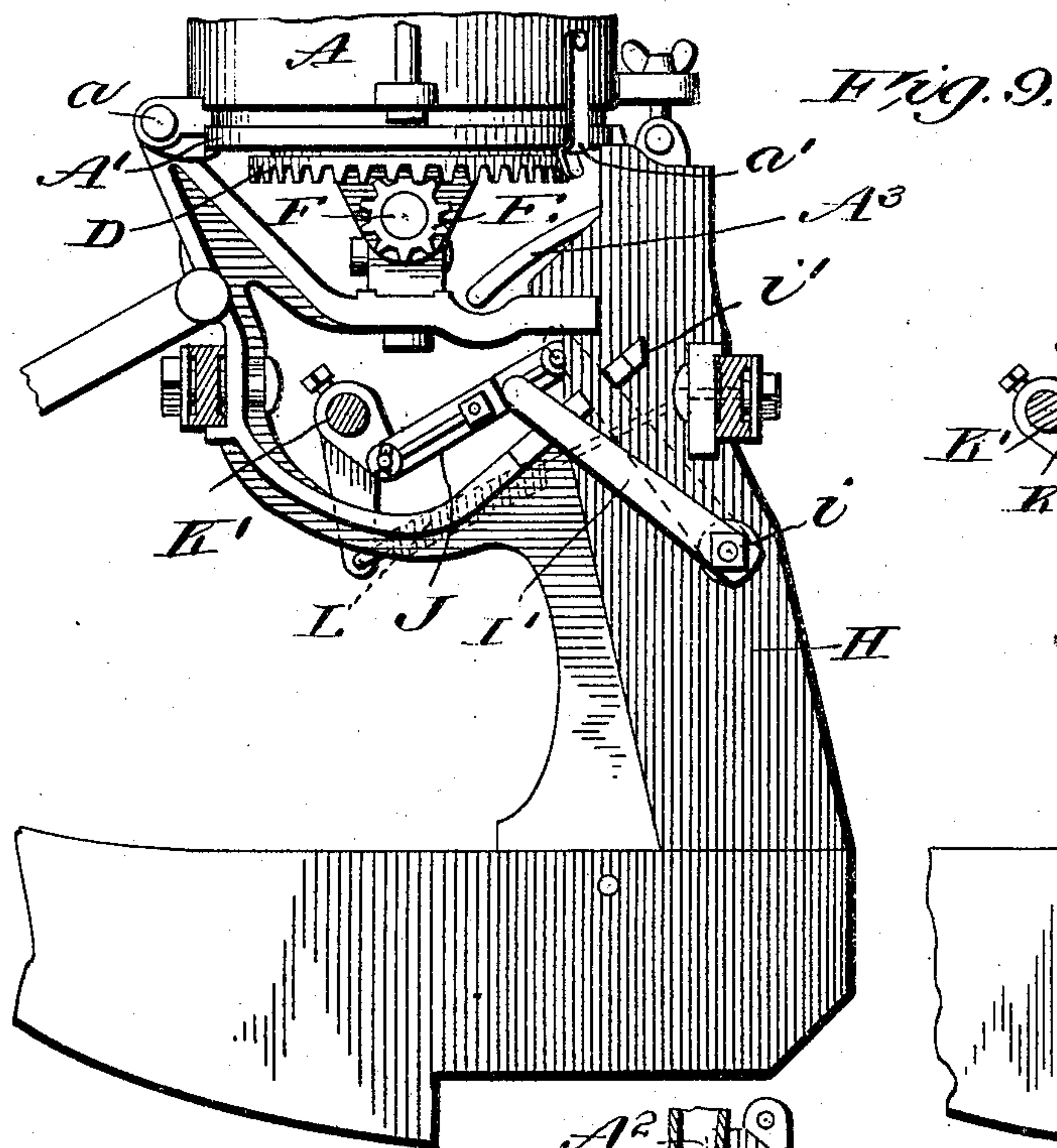
No. 788,344.

PATENTED APR. 25, 1905.

W. L. BEALL.
CORN PLANTER.

APPLICATION FILED JAN. 31, 1905.

2 SHEETS—SHEET 2.



WITNESSES:

WITNESSES:
M^{rs} F. Kaye.
F. H. Hubbard.

INVENTOR

William L. Beall
By Whitaker & Beall
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM L. BEALL, OF ALBION, MICHIGAN, ASSIGNOR TO GALE
MANUFACTURING COMPANY, OF ALBION, MICHIGAN.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 788,344, dated April 25, 1905.

Application filed January 31, 1905. Serial No. 243,479.

To all whom it may concern:

Be it known that I, WILLIAM L. BEALL, a citizen of the United States, residing at Albion, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Corn-Planters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in corn-planters of the type which may be changed at will from check-row planters to drill-planters, or vice versa, and in which edge-drop plates are employed.

My invention has for its object the construction of an edge-drop plate which will more readily and more efficiently fulfil the functions than those heretofore produced, and also has for its further object the improvement of the parts necessary to convert the planter into either a drill or check-row planter.

In order that my improvements may be more thoroughly understood, I have illustrated my invention in the accompanying drawings, and an exact and full description thereof is contained in the annexed specification.

In the accompanying drawings, Figure 1 is a plan view of the hopper with the top or cover removed. Fig. 2 is a section on line 2 2, Fig. 1. Fig. 3 is a view similar to Fig. 1, but with the edge-drop plate and hopper-casing removed. Fig. 3^a is a section on line *x x*, Fig. 3. Fig. 4 is a top plan view of a portion of the edge-drop plate. Fig. 5 is a perspective view of the edge of a portion of the plate. Figs. 6, 7, and 8 are sectional views taken on lines 6 6, 7 7, 8 8, respectively, of Fig. 5. Fig. 9 is a side view, partly in section, of a portion of the hopper and discharge chute. Figs. 10, 11, and 12 are longitudinal sections through the discharge-chute, showing the pivoted tube and pivoted plate in different positions. Fig. 13 is a section through the chute on line 13 13, Fig. 11.

In the several views like letters of refer-

ence designate similar parts of my construction.

A in the drawings designates the hopper of ordinary construction, hinged to the planter-frame at *a*.

B is a horizontal triangular plate within the hopper and located in the center thereof, the same being held in position by inverted-U-shaped braces *b*, *b'*, and *b''*, secured to the hopper, the brace *b'* being provided with a portion *b''*, adapted to guide the kernels into the drop-plate hereinafter described. C is a circular plate, mounted on a pintle *c*, secured to said triangular plate B. Said plate C is provided on its under side with projections *c'*, adapted to be engaged by similar projections *d* on a crown-wheel D, actuated by a pinion E on shaft F, whereby rotary motion may be imparted to said plate C. G is the edge-drop plate of ring shape and adapted to fit over said plate C and having notches *g* adapted to engage projections *c''* on plate C, whereby plate C will impart rotary motion to plate G, said plate G being retained in position by a ring A', hinged to the bottom of the hopper A and supported by a spring-snap *a'*. Said plate G is provided with a depressed rim *g'*, which forms a groove between the raised portion of said plate and the hopper-casing for the reception of kernels of corn to be planted. *g''* represents notches in said plate G, which form cells of suitable size to accommodate one kernel of corn and carry it around to the discharge-opening A², where it is ejected in the usual manner.

As before stated, it is desirable in this class of planters to drop the kernel of corn edgewise, and to accomplish this result I provide the plate with the inclined portion *g''*, which it is obvious, will tend to uptilt the kernels edgewise into the groove *g'*, and in order to further insure an edge-drop this incline *g''* is extended into the cells *g''*, (see Fig. 8,) whereby the tendency to feed the kernels into the cells edgewise is greatly increased.

g'' represents inclined faces between the

cells, which are so constructed that as the plate G is rotated the kernels of corn will fall thereon and be gradually guided from a flat position to an upright position by the time they reach the cells.

The operation of this construction is obvious and is as follows: When the hopper has been filled with kernels of corn and the plate is set in motion, the kernels lying on the plate will be forced against the triangular plate B and will be guided by the edge thereof toward and into the groove g' , whereupon the cells g^2 are filled and deliver the kernels one by one to the discharge-opening A^2 , which registers with the discharge-chute H. Said discharge-chute H is so constructed that the kernels may be discharged therethrough one at a time for drill-planting or may be readily adjusted to collect and discharge a certain number at once for check-row planting. The construction of said discharge-chute H is as follows: H' is a tube pivotally mounted in said chute H and adapted to be thrown into and out of registration with the discharge-opening A^2 , said tube H' being provided with a cut-off projection A^3 , adapted to close said opening A^2 when said tube is thrown out of registration therewith. It is obvious that when said tube is in registration with said opening, as shown in Fig. 10, the kernels of corn will be deposited in the ground as they are dropped by the edge-drop plate G, thus effecting drill-planting. I is a plate pivoted in said chute H at i and adapted to work in an opening h in the tube H', whereby it may be operated to obstruct said tube when the same is in registration with the opening A^2 , as shown in Fig. 12. Said plate I may be operated by a lever I' on the outside of said chute, said lever being retained in position by stops i' . J is a link connecting said tube H' with an arm K on a check-row shaft K', whereby the said tube may be thrown into registration with said opening A^2 by the usual check-row devices, (shown in part,) said tube being normally held out of registration with said opening by a spring L, secured to the planter-frame, as shown in dotted lines, Fig. 9. M is a projection in the lower end of the chute H, adapted to close the end of the tube H' when thrown forward by the spring L. As previously stated, when drill-planting is desired said tube H' is thrown into registration with said opening A^2 and said plate I is withdrawn from the tube, while in case check-row planting is desirable the plate I is thrown into said tube and the tube thrown out of registration with the opening A^2 , as shown in Fig. 11. The operation is then as follows: The feed-plate upon being rotated will in the usual manner discharge the kernels into the opening A^2 , where they will collect until the check-row throws the

tube H' into registration with the opening A^2 , whereupon the kernels will pass down said tube and collect upon plate I, as in Fig. 12, after which the tube H' will be thrown out of registration with opening A^2 by spring L, whereupon the kernels will pass down said tube to the projection M, and, finally, upon the check-row again throwing the tube H' into registration with the opening A^2 the kernels will be discharged from the tube into the ground.

What I claim, and desire to secure by Letters Patent, is—

1. In an edge-drop plate, the combination with a depressed rim provided with a series of seed-cells, of an inclined portion extending from the raised portion of said plate to said depressed rim and into said cells, whereby the kernels of corn are tilted and fed edgewise into said cells, substantially as described.

2. In an edge-drop plate, the combination with a depressed rim provided with a series of seed-cells, of an inclined portion extending from the raised portion of said plate to said depressed rim and into said cells and inclined faces near the edge of said plate between the cells whereby the kernels of corn are tilted and fed edgewise into said cells, substantially as described.

3. In a corn-planter of the kind described, the combination with a hopper provided with a discharge-chute, of an edge-drop plate rotatably mounted in said hopper and adapted to feed the kernels of corn into said chute and a triangular plate stationarily mounted in said hopper above said drop-plate and adapted to force the kernels onto said plate, substantially as described.

4. In a corn-planter of the kind described, the combination with a hopper provided with a discharge-chute, of an edge-drop plate rotatably mounted in said hopper and adapted to feed the kernels of corn into said chute and a triangular plate secured to the hopper-casing by inverted-U-shaped braces, the brace opposite said discharge-chute being provided with a web portion whereby the kernels are guided into said drop-plate, substantially as described.

5. In a corn-planter of the class described, the combination of a hopper provided with a discharge-chute, of a plate rotatably mounted in said hopper and adapted to feed kernels of corn into said chute one by one, a tube pivotally mounted in said chute and adapted to be thrown into registration with the discharge-opening of the hopper for drill-planting, said tube being provided with a projection to close said discharge-opening when said tube is out of registration therewith, said discharge-chute being also provided with a projection constructed to close said tube when out of regis-

tration with said opening, a plate pivoted in
said discharge-chute and extending into said
tube to close said tube when out of registra-
tion with said opening, an arm outside of said
5 chute connected with said pivoted plate, and
means for holding said arm in different posi-
tions whereby said plate may be adjusted into
operative and inoperative positions, and means

for connecting said tube with the check-row
mechanism, substantially as described. 10

In testimony whereof I affix my signature in
the presence of two witnesses.

WILLIAM L. BEALL.

Witnesses:

G. W. BORTLES,

M. L. DEAN.