

No. 891,191.

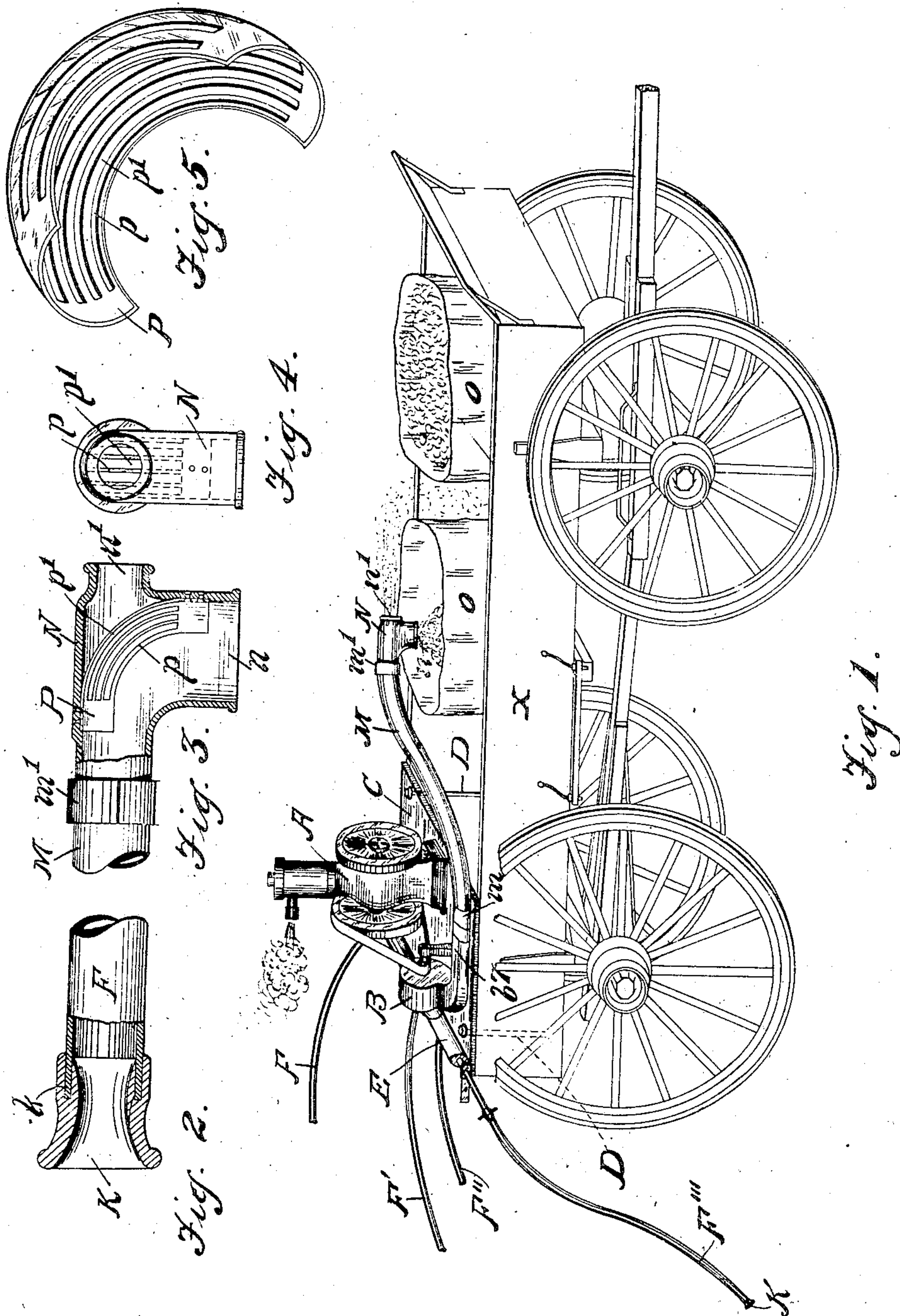
PATENTED JUNE 16, 1908.

C. B. SHINN & F. L. DENTON.

COTTON PICKER.

APPLICATION FILED NOV. 12, 1907.

2 SHEETS—SHEET 1.



Witnesses,
 Fordyce W. Brown.
 W. H. Hale.

Inventors,
 Charles B. Shinn.
 Frederick L. Denton.
 by Atty. N. Dubois.

No. 891,191.

PATENTED JUNE 16, 1908.

C. B. SHINN & F. L. DENTON.

COTTON PICKER.

APPLICATION FILED NOV. 12, 1907.

2 SHEETS—SHEET 2.

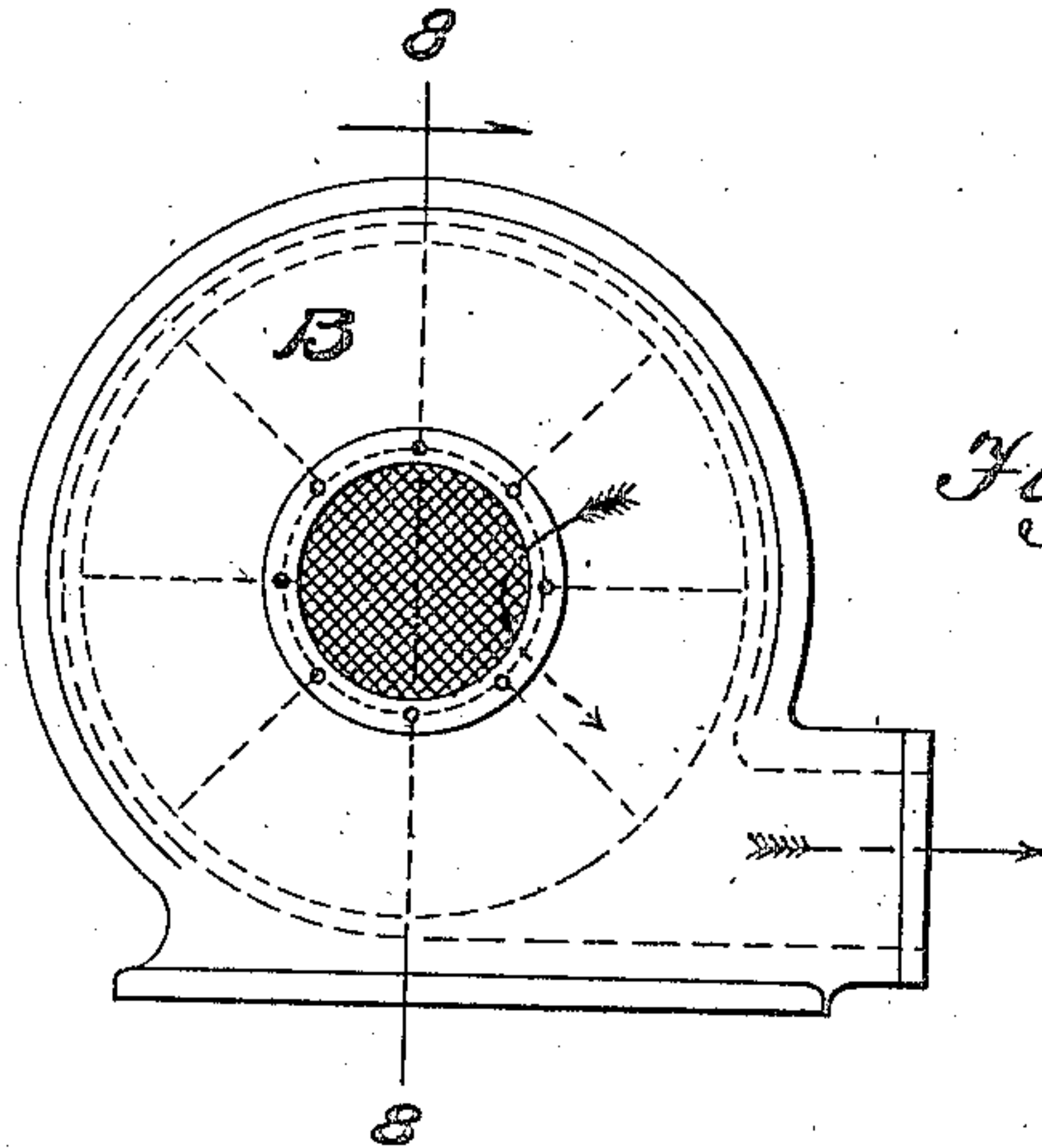


Fig. 6.

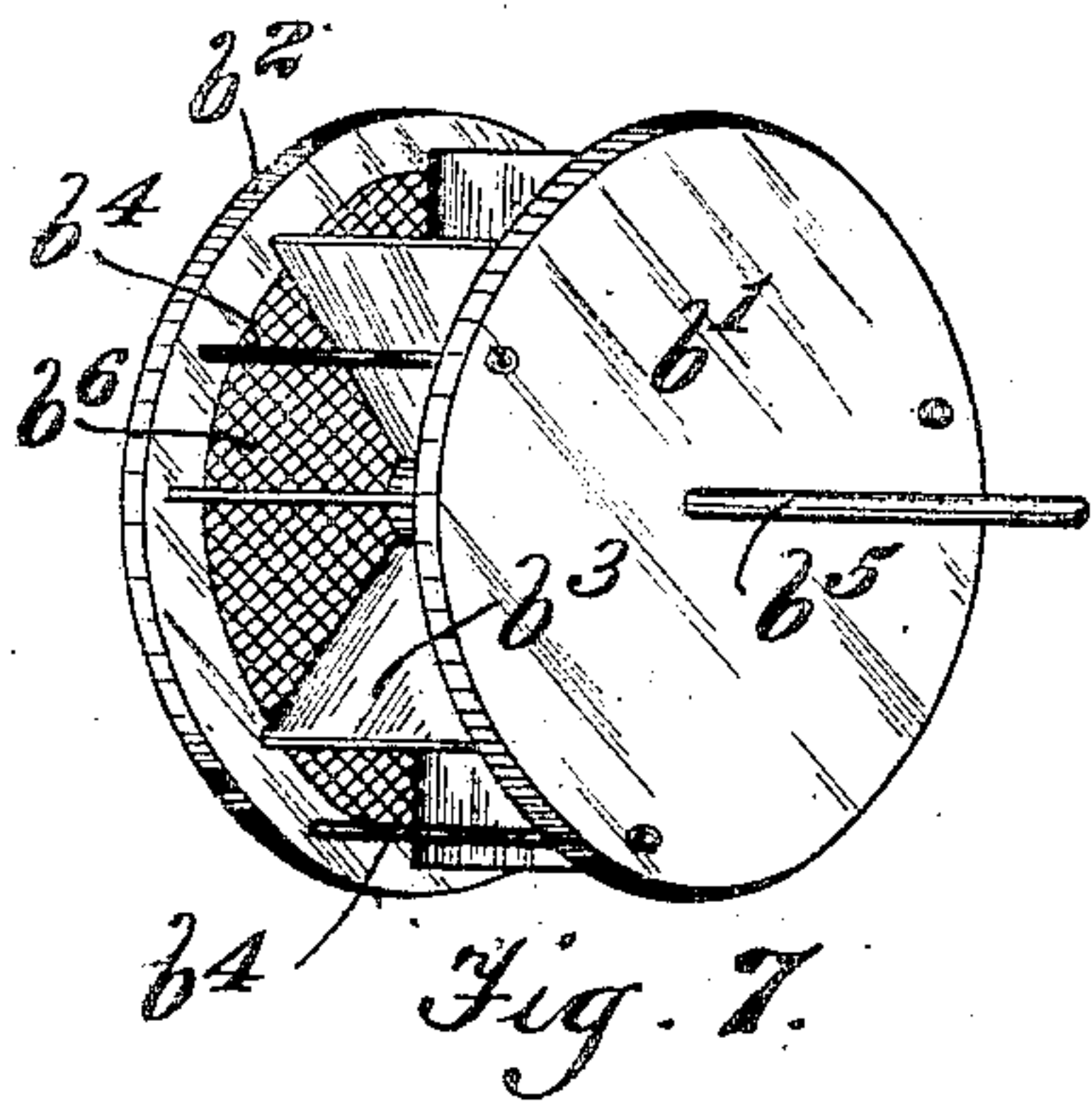


Fig. 7.

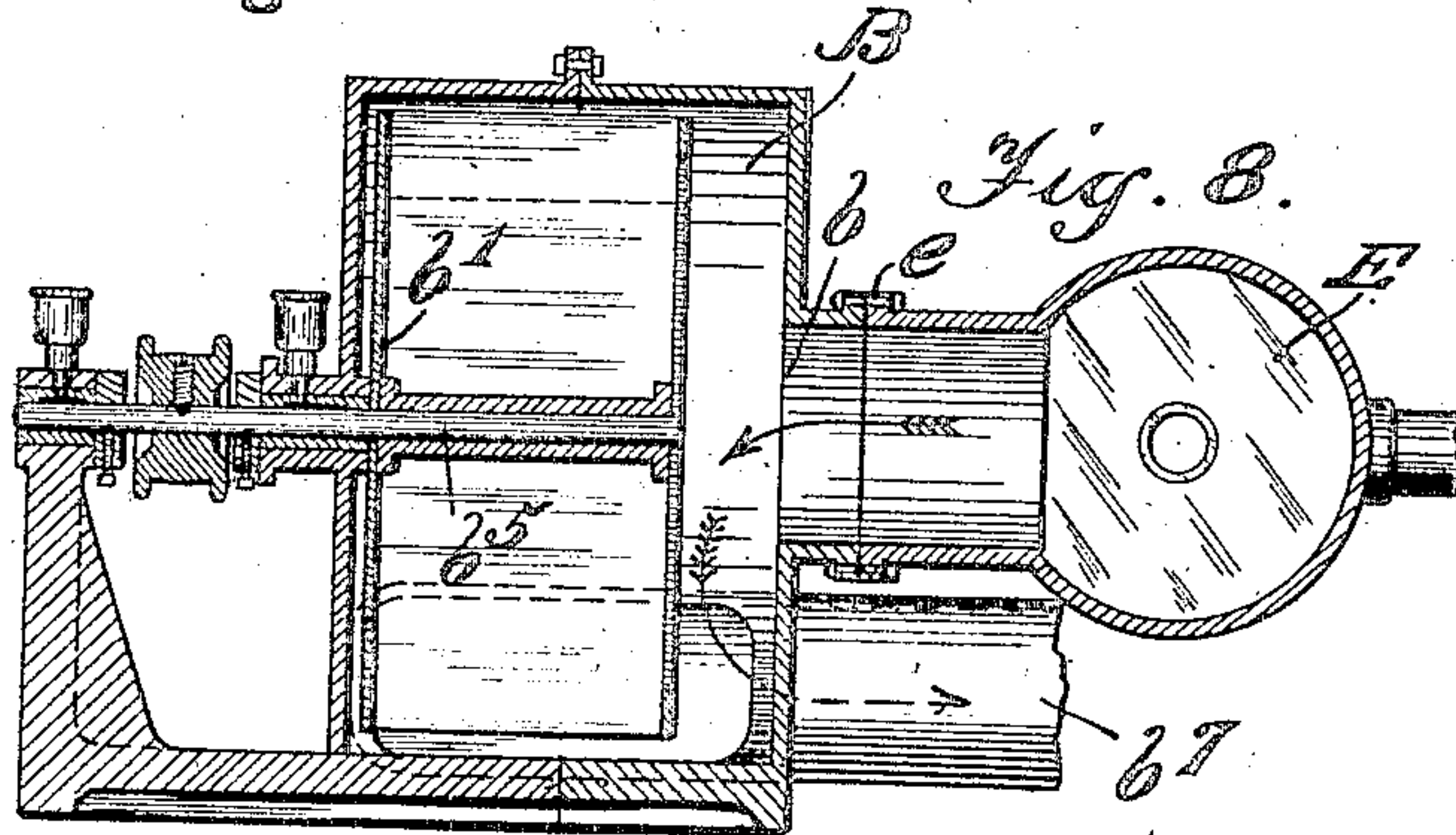


Fig. 8.

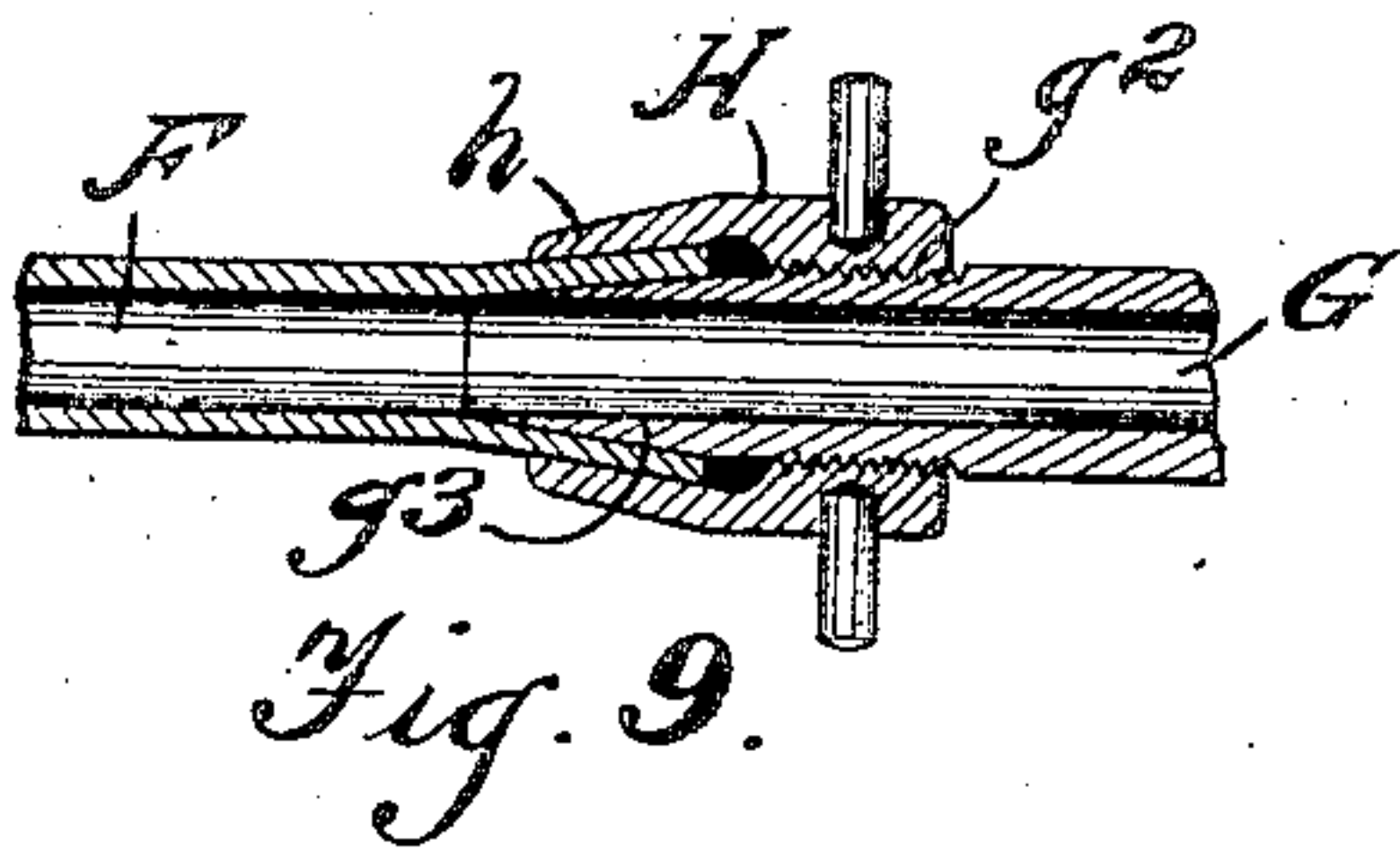


Fig. 9.

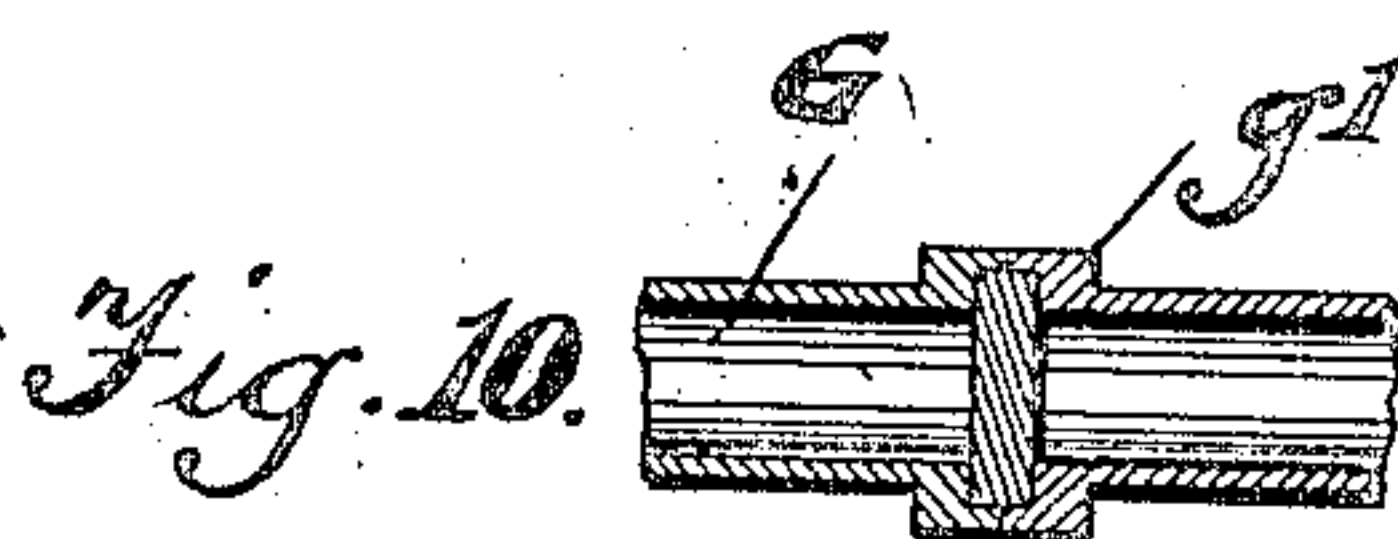
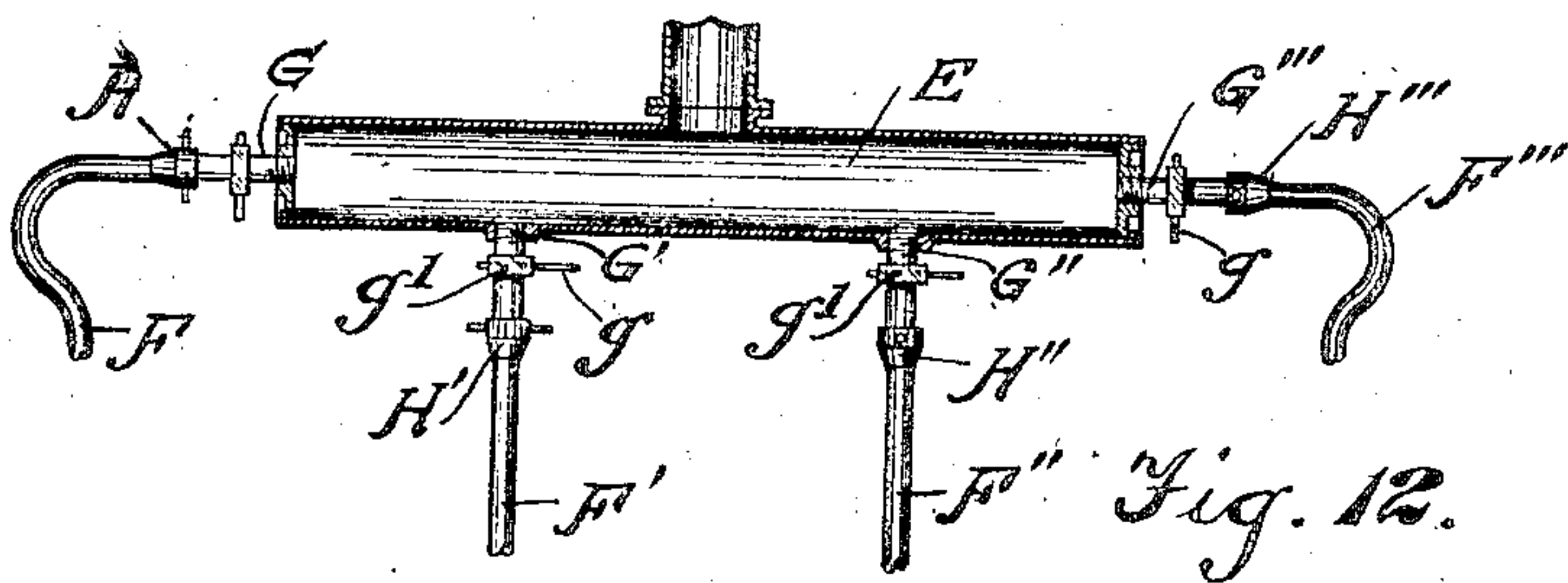


Fig. 10.



Witnesses,

Fordyce W. Brown

W. H. Hale

Inventors,
Charles B. Shinn.
Frederick L. Denton.
by Atty. N. Dubois.

UNITED STATES PATENT OFFICE.

CHARLES B. SHINN AND FREDERICK L. DENTON, OF SPRINGFIELD, ILLINOIS, ASSIGNORS,
BY DIRECT AND MESNE ASSIGNMENTS, OF ONE-TENTH TO MICHAEL J. MEAGHER, TWO-
TENTHS TO THOMAS F. MEAGHER, ONE-TENTH TO PATRICK ALLEN, ONE-TENTH TO
DANIEL D. MORGAN, OF SPRINGFIELD, ILLINOIS, AND ONE-TENTH TO ELBRIDGE C. COOK;
OF INDIANAPOLIS, INDIANA.

COTTON-PICKER.

No. 891,191.

Specification of Letters Patent.

Patented June 16, 1908.

Application filed November 12, 1907. Serial No. 401,826.

To all whom it may concern:

Be it known that we, CHARLES B. SHINN and FREDERICK L. DENTON, citizens of the United States, residing at Springfield, in the county of Sangamon and State of Illinois, have invented a new and useful Cotton-Picker, of which the following is such a full, clear, and exact description as will enable others skilled in the art to make and use our said invention.

This invention relates to cotton pickers and the general purpose of the invention is to provide means adapted to pull the fiber, by air suction, from the bolls of the growing cotton plants and deposit it in suitable removable receptacles carried along with the machine.

More specific purposes of the invention are to provide a fan of improved construction adapted to produce air-suction in the suction tubes and also adapted to convey the fiber through the fan without clogging the fan; to provide means for supporting on the rear part of the bed of an ordinary farm wagon, the fan and an engine for driving the fan; to provide suction-tubes of improved construction; to provide simple and effective means for connecting the suction-tubes with the fan and to provide means for controlling the operation of the suction-tubes respectively.

With these ends in view our invention consists in the novel features of construction and combinations of parts shown in the annexed drawings to which reference is hereby made and hereinafter particularly described and finally recited in the claims.

Referring to the drawings in which similar reference letters and characters designate like parts in the several views; Figure 1 is a perspective view of the complete apparatus in position on a farm wagon; Figs. 2, 3, 4 and 5 illustrate, on an enlarged scale, details of the suction-tubes and the discharge head. Fig. 6 is an enlarged side elevation of the fan; Fig. 7 is an enlarged perspective view of the fan blades and connected parts; Fig. 8 is a vertical section through the fan on the line 8-8. of Fig. 6; Fig. 9 is an enlarged sectional view through one of the couplings connecting the suction-tubes with the gate-pipes; Figs. 10 and 11 are enlarged sectional detail views of one of the gates controlling the operation of the suction-tubes; and Fig. 12 is an

enlarged horizontal axial section through the drum and shows the gate pipes in connection with the drum and the suction-tubes in connection with the gate-pipes respectively.

The engine A, and the fan B, are fixed on a suitable platform C which extends across the rear part of the wagon bed X, and is secured thereon by bolts D extending through the platform and through the bottom of the wagon bed. A drum E is connected with the induction pipe b of the fan B by a suitable coupling e. The fan B is equipped with a rotor comprising a disk b¹, a ring b², and wings b³ all secured on the shaft b⁵ and connected together by bolts b⁴. A screen b⁶ is secured on the ring b² and prevents the fiber from winding on and clogging the wings of the fan. Gate-pipes G, G', G'' and G''' screw into suitable openings in the drum E and are provided with perforated gates g slidable transversely in suitable boxes g¹, to open or close the passage through the gate-pipes. The gate-pipes have, at their outer ends, screw-threaded parts g² and tapering parts g³. Couplings H, H', H'' and H''' having internally tapering parts h, screw onto the parts g² of the gate-pipes respectively. The suction-tubes F, F', F'' and F''' fit on the tapering parts g³ of the gate-pipes. Couplings H, H' etc., surround the tubes and screw onto the gate-pipes and firmly connect the tubes with the gate-pipes respectively. At the free end of each of the tubes F, F' etc., is an outwardly flaring ring K, suitably connected with the tube and having an annular channel k accommodating the end of the tube as clearly shown in Fig. 2. The flaring part of the ring K admits the cotton boll and renders the suction most effective in detaching the fiber from the boll. The delivery pipe M is connected with the outlet pipe b' of the fan, by a suitable coupling m. At the free end of the outlet pipe M is a discharge-head N connected with the pipe by a coupling m¹. The head N is preferably T shaped as shown in Fig. 3, and has an outlet opening n, of greater sectional area than the sectional area of the pipe M; through which the cotton is discharged, and a smaller orifice n' for the discharge of dirt extracted from the cotton as hereinafter described. A segmental concavo-convex screen-plate P having slots p separated by bars p¹, serves to deflect the cotton

entering through the tube M and guides it downward through the opening *n*; and the slots *p* in the plate permit the passage of dirt and its discharge through the orifice *n'*. The discharge opening *n* being of enlarged area as described, the cotton becomes loosened as it passes downward along the plate P, and the air pressure behind the cotton and propelling it, expels leaves, stems, pebbles or other dirt, through the slots *p* and the orifice *n'*. This feature is of practical advantage because it admits of cleaning the cotton during its passage through the head. The cotton discharged through the head is received in sacks O or other suitable receptacles which may be removed at pleasure.

In the drawings are shown a drum equipped with four suction-tubes; that being a convenient number to operate upon and pick the cotton from both sides of a central row and one side of a row on each side of said central row; when the wheels of the wagon are running between rows and the wagon is passing over the central row; it is obvious however that a greater or less number of suction-tubes may be used, within the scope of the invention.

The operation of the apparatus is as follows:—A team hitched to the wagon pulls the wagon across the field with the wheels traveling between the rows as described. Operators, one for each suction-tube, carry the free ends of the suction-tubes in their hands and walking behind the wagon apply the rings K to the bolls as they are reached in succession, as the wagon moves slowly along the rows; and the suction in the tubes induced by the fan, driven by the engine A, draws the fiber from the bolls, carries it through the fan B, and through the delivery pipe M and the discharge head and discharges it into the receptacles O. If it be desired to place one of the

tubes in dis-use the gate *g* of the gate-pipe with which that tube is connected, will be pushed inward so that the gate will lie across and close the opening of the gate-pipe communicating with the tube.

Having fully described our invention what we claim as new and desire to secure by Letters Patent is:

1. The combination of a wagon bed, a platform extending crosswise of the wagon bed, bolts detachably connecting said platform with said wagon bed, removable receptacles within the wagon bed, a fan mounted on said platform, an engine on said platform connected to operate said fan, a drum connected to communicate with the interior of said fan, suction tubes connected to communicate with said drum, an outlet pipe connected to communicate with the discharge opening of said fan; and a discharge head connected with said delivery pipe and adapted to discharge into the removable receptacles in the wagon bed.

2. The combination of a segmental concavo-convex deflector provided with slots separated by bars; a discharge head having a discharge opening for fiber and an orifice for the discharge of dirt; means for securing said deflector in said discharge head; a delivery pipe connected with said discharge-head, a fan adapted to discharge into said delivery pipe; a drum communicating with said fan; and suction tubes communicating with said drum.

In witness whereof we have hereunto subscribed our names at Springfield Illinois, this 17th day of August, 1907.

CHARLES B. SHINN.

FREDERICK L. DENTON.

Witnesses:

FORDYCE W. BROWN,
W. K. HALE.