

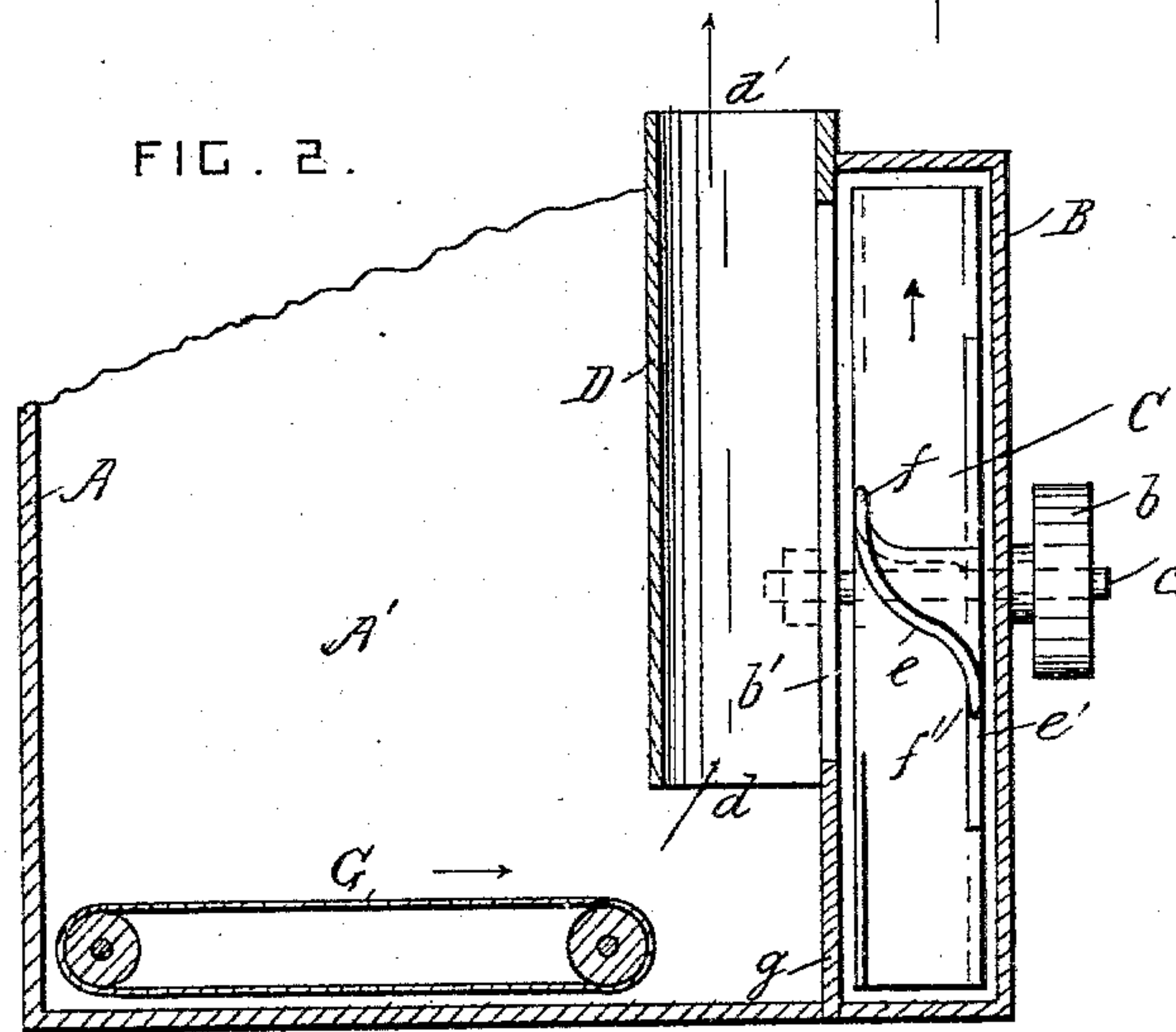
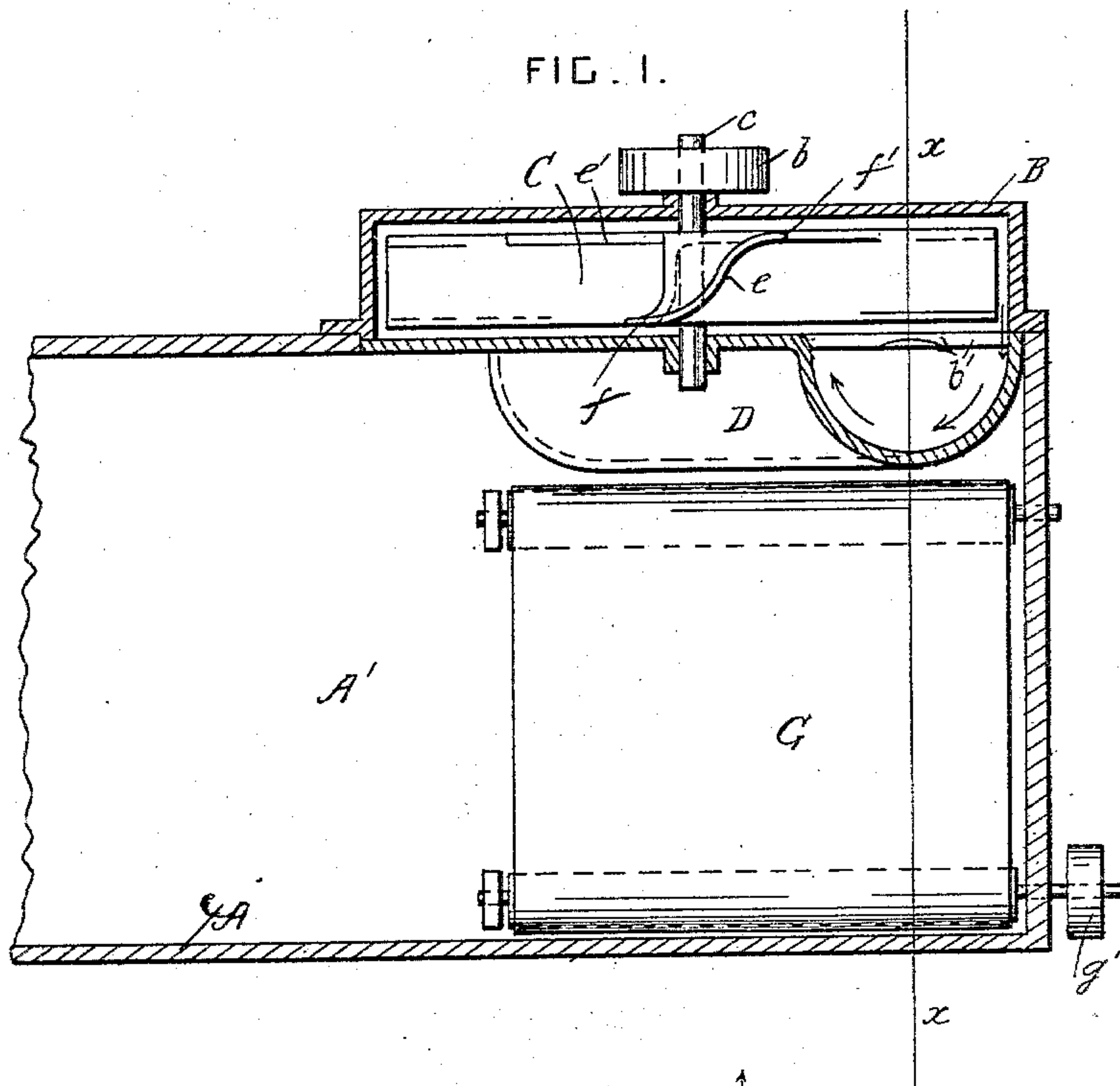
(No Model.)

2 Sheets—Sheet 1.

L. D. PARMLEY.  
PNEUMATIC STRAW STACKER.

No. 589,853.

Patented Sept. 14, 1897.



WITNESSES  
Thomas C. Pole  
B. C. Pole

INVENTOR  
Lemuel D. Parmley  
by Herbert W. Jenner.  
Attorney

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FIG. 3.

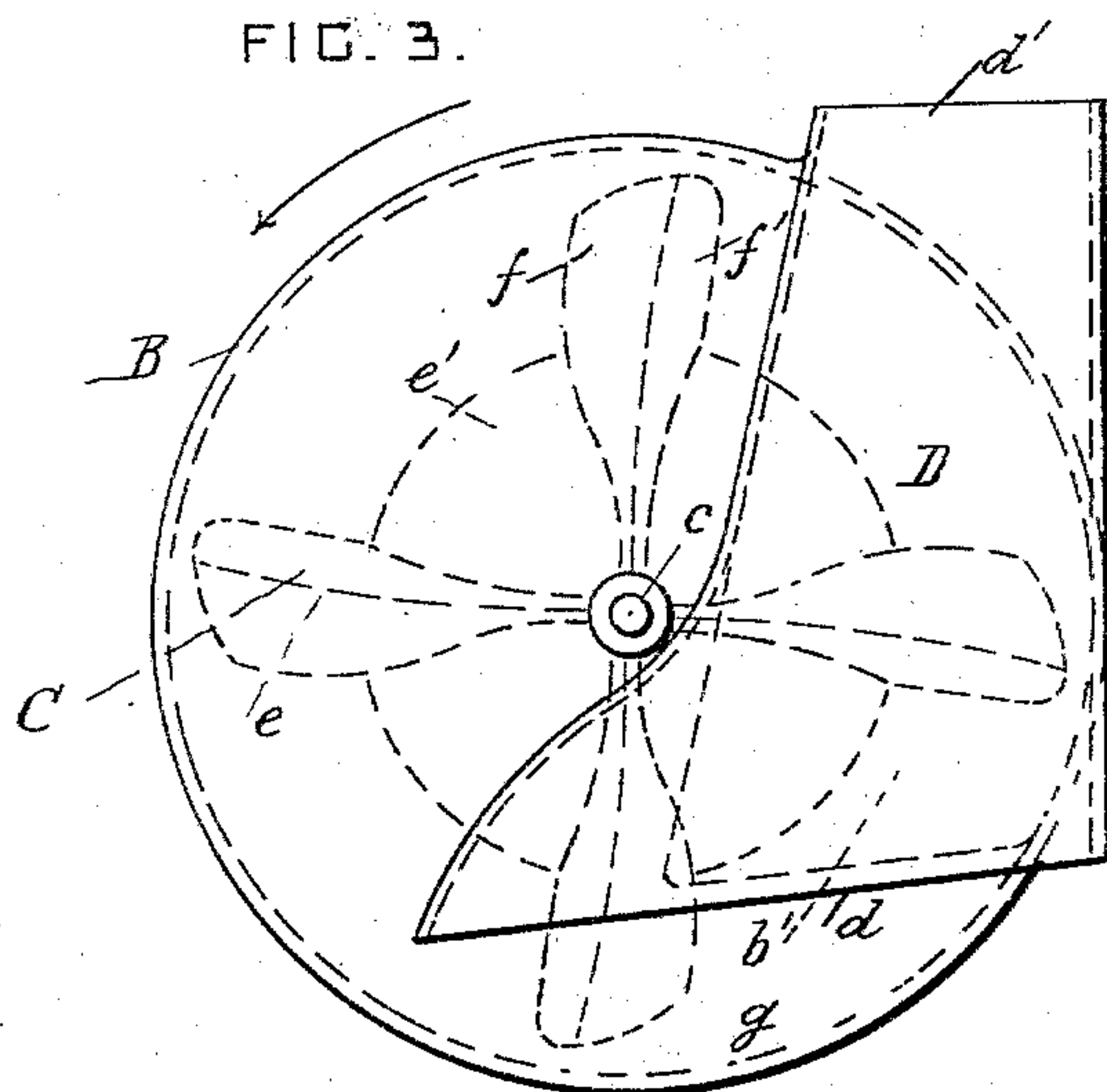


FIG. 4.

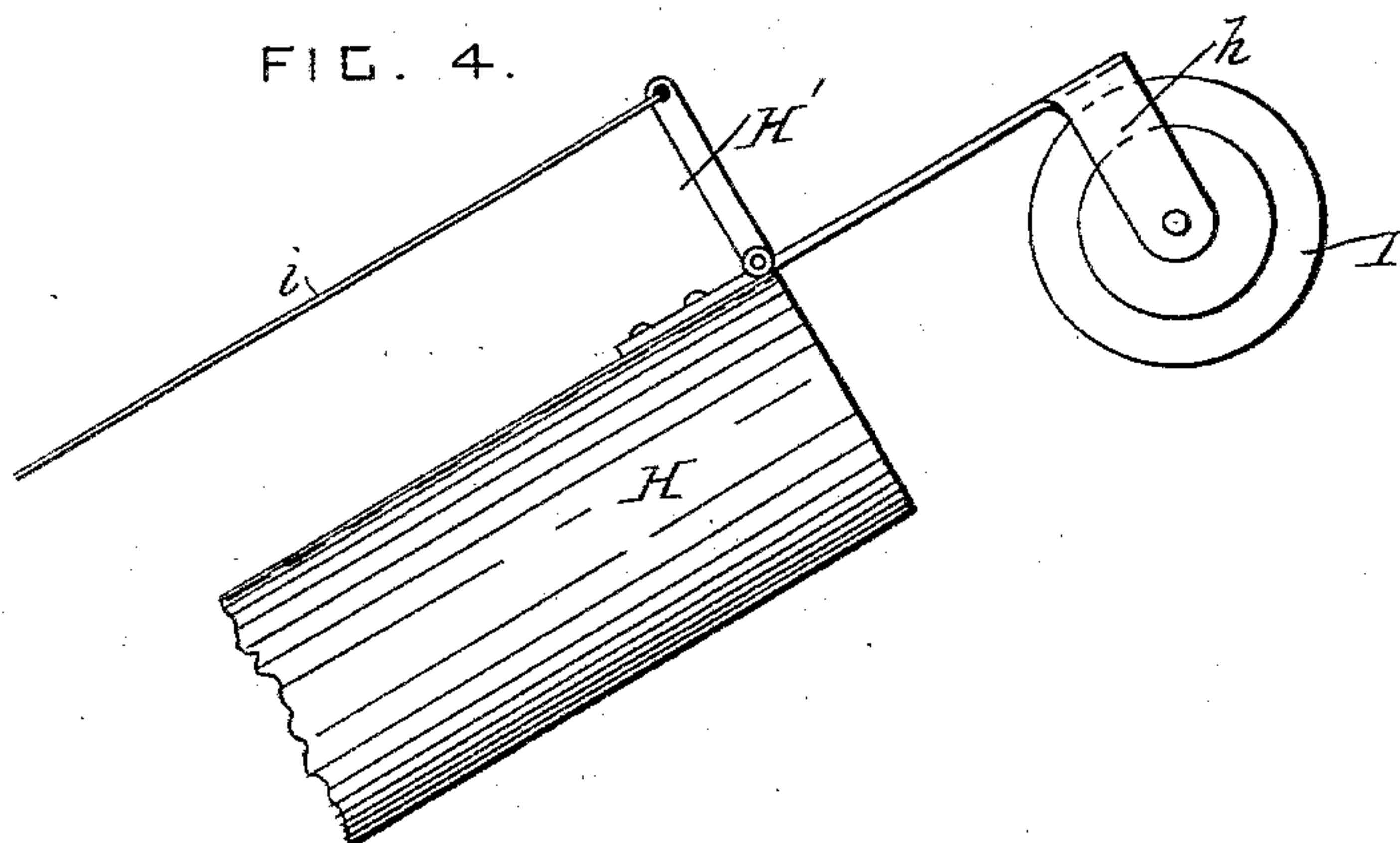
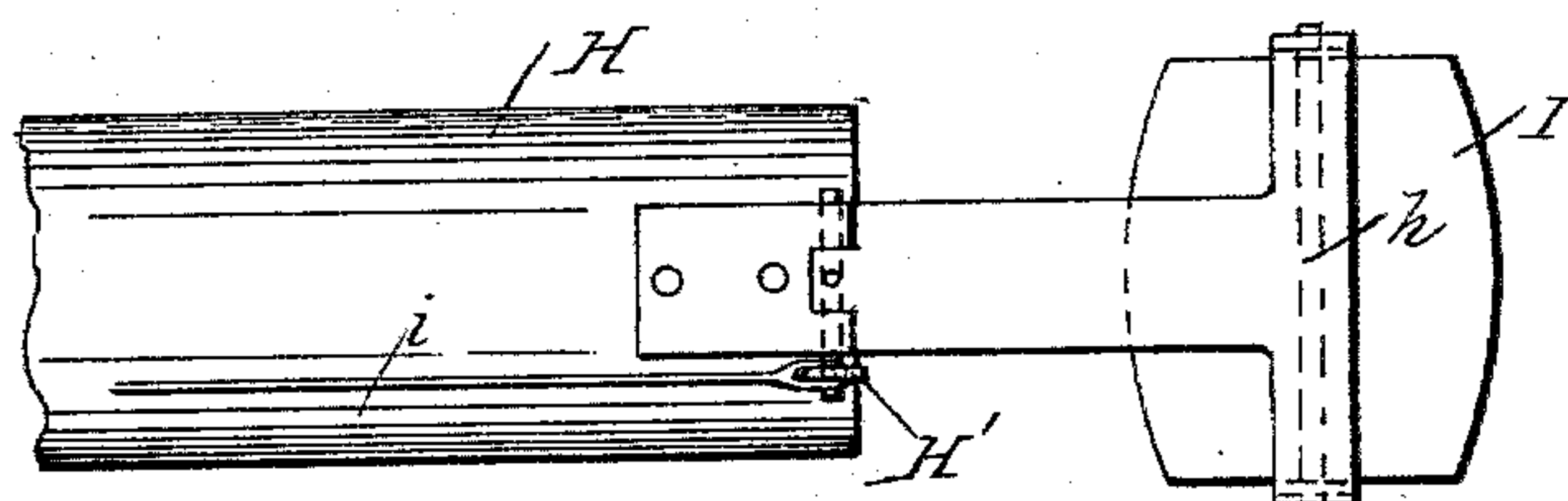


FIG. 5.



WITNESSES

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# UNITED STATES PATENT OFFICE.

LEMUEL D. PARMLEY, OF WAYNESBOROUGH, PENNSYLVANIA, ASSIGNOR OF TWO-THIRDS TO CHARLES J. DANIELSON AND MINNIE D. ELLINGSON, OF HAMLET, INDIANA.

## PNEUMATIC STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 589,853, dated September 14, 1897.

Application filed February 26, 1897. Serial No. 625,212. (No model.)

*To all whom it may concern:*

Be it known that I, LEMUEL D. PARMLEY, a citizen of the United States, residing at Waynesborough, in the county of Franklin and State of Pennsylvania, have invented certain new and useful Improvements in Pneumatic Straw-Stackers; 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.

This invention relates to pneumatic straw-stackers used in connection with threshing-machines; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a sectional plan view of the rear part of a threshing-machine provided with a pneumatic straw-stacker. Fig. 2 is a cross-section taken on the line  $xx$  in Fig. 1. Fig. 3 is a side view of the discharger-casing. Fig. 4 is a side view of the deflector, and Fig. 5 is a plan view of the same.

A is a portion of the casing of a threshing-machine of any approved construction, and A' is the straw-chamber at its rear end.

B is the discharger-casing, secured to one side of the casing A.

C is the discharger or fan, mounted on a shaft  $c$ , inside the casing B. A pulley  $b$  is provided on the shaft  $c$  for revolving the discharger.

The casing B is provided with a hood D, which projects within the casing A. The lower part of the hood D is flared, and  $d$  is an inlet for the air and straw at its lower part. An outlet  $d'$  for the air and straw is provided at the top of the hood above the inlet  $d$ . A delivery-pipe of any approved construction is attached to the outlet  $d'$  and passes upward through the casing A.

The discharger is provided with blades  $e$  and has a disk  $e'$  on its rear side. The blades  $e$  are curved rearwardly with a spiral twist and are something like a letter S at their tops, as shown in Fig. 1, each blade being provided with a forwardly-curved lip  $f$  at its front and a rearwardly-curved lip  $f'$  at its rear.

The discharger-casing B is provided with an opening  $b'$  in its front side, leading into the hood D. When the discharger or fan is revolved rapidly in the direction of the arrow

in Fig. 3, air is drawn in the inlet  $d$  and is forced up the outlet  $d'$ . The straw is drawn in with the air and passes direct from the inlet to the outlet without entering the discharger-casing. The position of the opening  $b'$  and the peculiar form of the fan-blades cause the air and straw to whirl around spirally in the outlet-passage and delivery-pipe, as indicated by the arrows in Fig. 1, and this spiral motion causes the loose straw to be formed into a loose cylindrical mass, which is propelled through the delivery and discharge pipes with great facility.

The air is forced into the hood from the discharger-casing through the opening  $b'$  at the periphery of the discharger-casing, where it has its greatest velocity. This determines the direction of the rotary or spiral current in the hood. The form of the blades also assists in producing the spiral current in this direction, because the air slips over the lips  $f'$  rearwardly and in the direction of the curve of the lip and passes between the blades to some extent and across the periphery of the casing, as indicated by the straight arrow toward the opening  $b'$ .

The lower part of the discharger-casing is provided with a lip  $g$  at the bottom of the opening  $b'$ , and this lip prevents the straw from getting into the casing B.

G is a conveyer of any approved construction arranged crosswise in the casing A and operating to conduct the straw to the under part of the hood. The conveyer may project under the hood or not, as may be found convenient. The conveyer is driven by a belt-pulley  $g'$  or any other approved driving mechanism.

H is the upper end portion of the discharge-pipe. The deflector consists of a barrel-shaped cylinder I, which is larger in diameter at its middle portion than at its ends. This deflector is journaled in a frame  $h$ , which is hinged to the upper side of the discharge-pipe.

H' is an arm connected to the frame  $h$ , and  $i$  is a cord or rod attached to the arm H' and affording a means for operating the deflector. The straw is deflected by contact with the cylinder I, and the barrel-shaped form of the cylinder causes the straw to be spread laterally before it falls upon the top of the stack.



In operation the deflector is raised somewhat above the position shown in Fig. 4, and it is revolved continuously by the straw, which impinges against its lower side. The  
5 straw is deposited in different places on the stack by raising and lowering the deflector-frame.

This elevator and stacker can be used to raise hay and many other light substances, as  
10 well as for raising straw.

What I claim is—

1. In a pneumatic stacker, the combination with a discharge-pipe, of a frame carried by the said pipe, and a revoluble cylinder journaled in the said frame and operating to deflect the straw, substantially as set forth.  
15

2. In a pneumatic stacker, the combination, with a discharge-pipe, of a frame carried by the said pipe, and a barrel-shaped cylinder journaled in the said frame, said cylinder being larger at its middle portion than at its ends and operating to deflect and spread the straw, substantially as set forth.  
20

3. In a pneumatic stacker, the combination, with a discharge-pipe, of a frame hinged to the said pipe and provided with means for raising and lowering it, and a revoluble cylinder journaled in the said frame and operating to deflect the straw, substantially as set forth.  
25 30

4. In a pneumatic stacker, the combination, with a discharger-casing provided with an opening on one side, of a hood covering the said opening and provided with an inlet at its lower part and an outlet above the said inlet, and a discharger journaled in the said casing, substantially as set forth.  
35

5. In a pneumatic stacker, the combination, with a discharger-casing provided with  
40

an opening on one side and a lip at the bottom of the said opening, of a hood covering the said opening and provided with an inlet below the said lip and an outlet above the said inlet, and a discharger journaled in the said casing, substantially as set forth. 45

6. In a pneumatic stacker, the combination, with a discharger-casing provided with an outlet arranged to one side of the casing, of a discharger journaled in the said casing and provided with blades having forwardly-projecting lips on their front edges and rearwardly-projecting lips on their rear edges, whereby the air is forced spirally through the said outlet, substantially as set forth. 50 55

7. In a pneumatic stacker, the combination, with a straw-chamber, of a discharger-casing having its inlet and outlet arranged upon the same side of it and within the said chamber, and a discharger journaled inside the said casing, substantially as set forth. 60

8. In a pneumatic stacker, a discharger or fan provided with blades having forwardly-projecting curved lips on their front edges and rearwardly-projecting curved lips on their rear edges, and a disk arranged on the same side as the rear edges of the blades, substantially as set forth. 65

9. In a pneumatic stacker, the combination, with a discharger-casing having a discharge-opening formed through one side wall thereof and extending to the periphery of the said casing, of a discharger journaled inside the said casing, substantially as set forth. 70

In testimony whereof I affix my signature in presence of two witnesses. 75

LEMUEL D. PARMLEY.

Witnesses:

CHARLES J. DANIELSON,  
HJALMAR A. ELLINGSON.