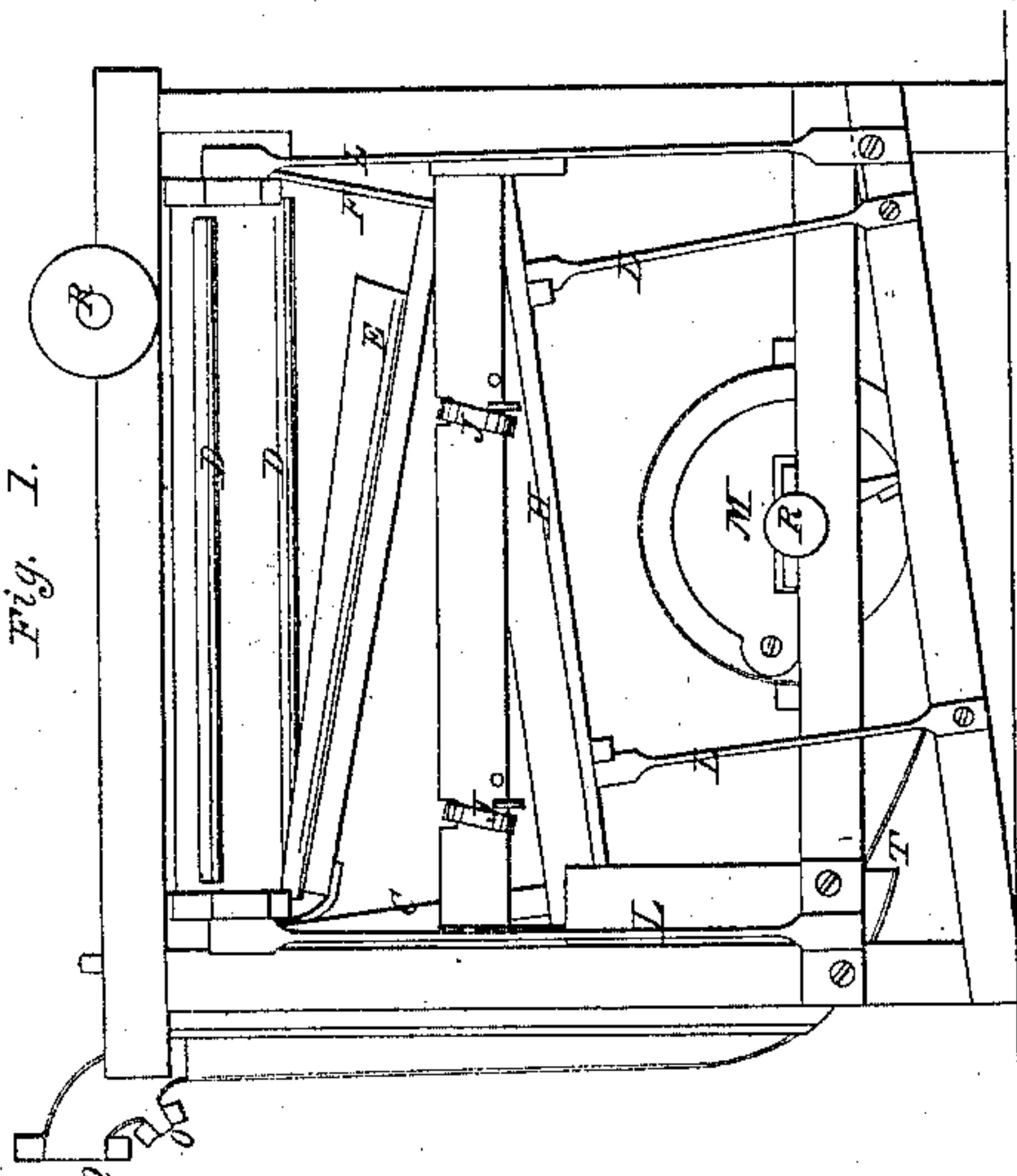
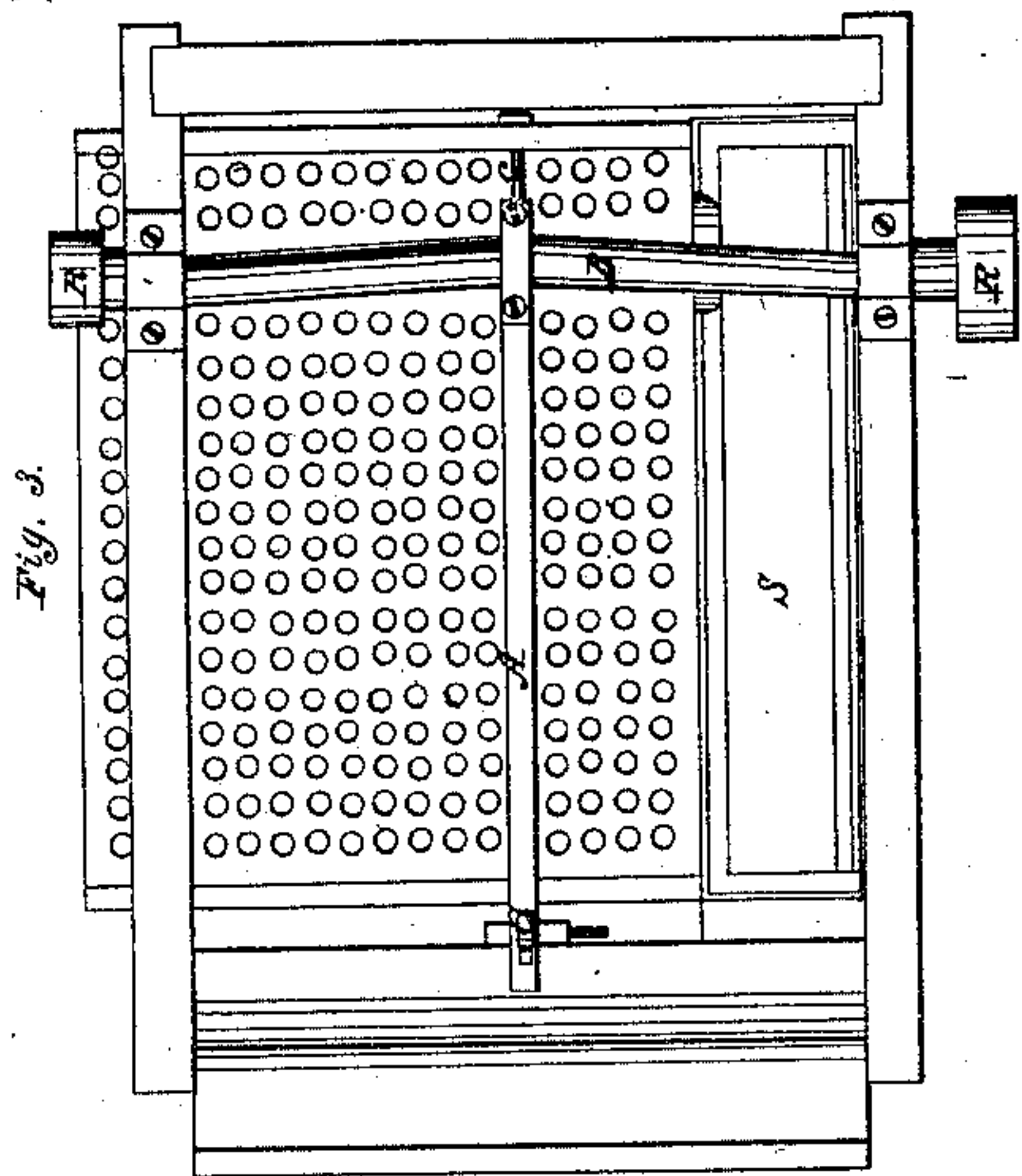


I. Wait,

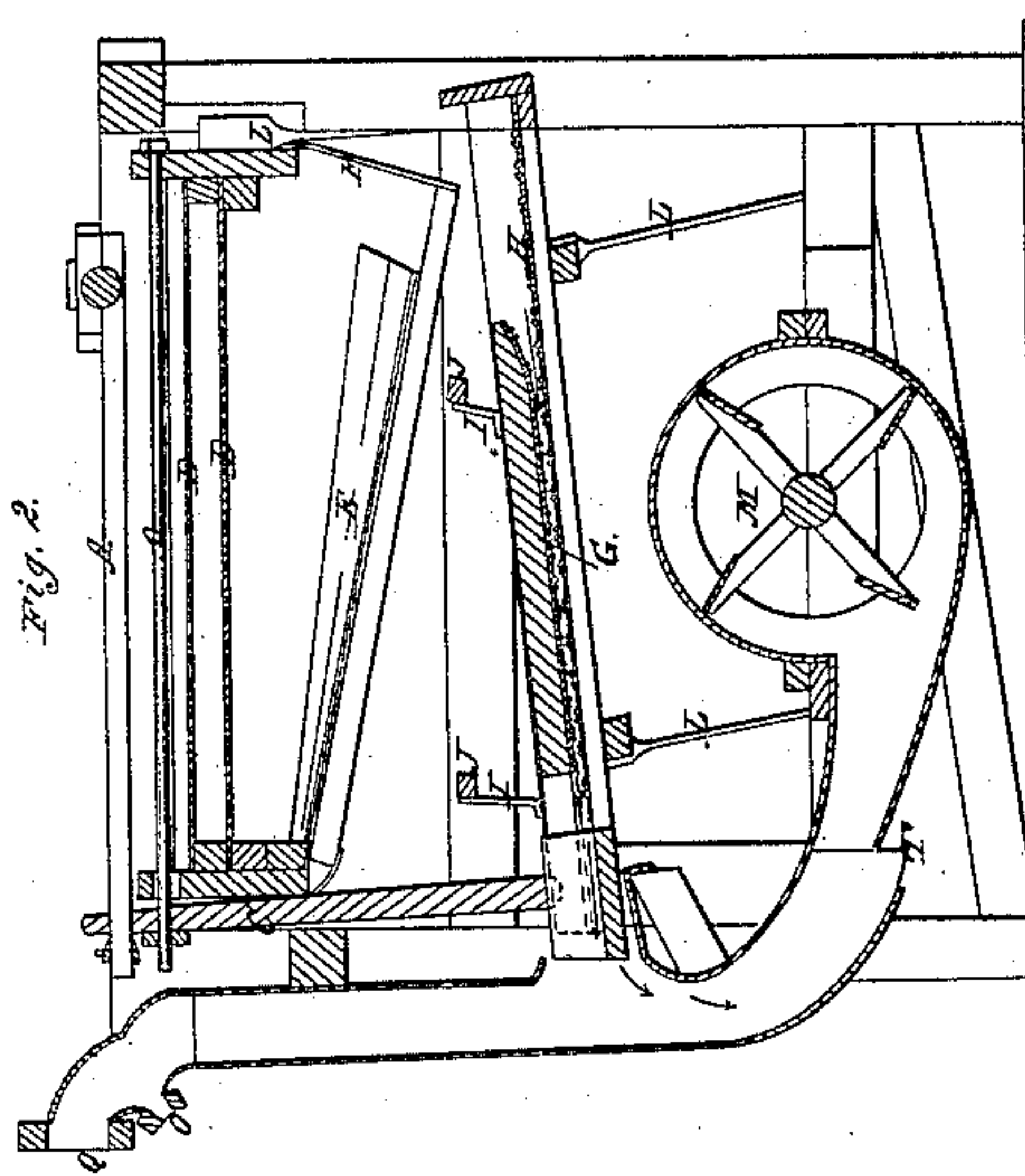
Rice Cleaner.

No. 25,777.

Patented Oct. 11. 1859.



Witnesses
Ephraim Brown
C. C. Colwell



Inventor,
Isaac Wait

UNITED STATES PATENT OFFICE.

ISAAC WAIT, OF WATERTOWN, NEW YORK.

GRAIN-CLEANER.

Specification of Letters Patent No. 25,777, dated October 11, 1859.

To all whom it may concern:

Be it known that I, ISAAC WAIT, of Watertown, in the county of Jefferson and State of New York, have invented a new and useful Improvement in Wheat Cleaning and Scouring Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1, is a vertical side view of the machine; Fig. 2, a vertical and longitudinal view, and Fig. 3, a plan view of the top.

Similar letters of reference, in each of the several figures indicate corresponding parts.

The nature of my invention consists in effecting the combination of the separating sieves, scouring surfaces and driving gear, by means of a single vibrating lever which gives a contrary motion to the sieves and scouring surfaces, at each revolution of the crank or driving shaft, substantially as hereinafter described.

To enable others, skilled in the art, to make and use my invention, I will proceed to describe its construction and operation.

A, is a pitman attached to one end of a horizontal crank shaft B, and at the other end to the top of the vibrating lever C. The lower end of this lever is rounded and fitted into a socket corresponding with it, in a block attached to the lower plate of the scourer; this lever works upon an axis K at its center.

D, D, are sieves attached at one end to the lever C, by an iron rod *c*, above the sieves and extending to the opposite side of the sieve box. These sieves have an oscillating motion, as will be presently described.

E, is an inclined apron attached at one end of the sieve box and at the other suspended by two leather straps F. This apron has the same oscillating motion as the sieves.

G, and H, are two scouring plates, made of sheet-iron thickly perforated with small holes, having the rough or bur, sides opposed to each other. The upper plate is movable only vertically by means of the leather straps I, attached to the adjusting rollers J; this plate being supported and held in its proper place by said straps; at one end it has an open slot in which the lever C, works free of it. The lower plate has an oscillating longitudinal motion caused by the action of the lever C, working upon its center K. L, L are upright wooden springs which like-

wise aid the auxiliary motion of the sieves and scourer and support them; M, a fan or blower; N, a passage for the air put in motion by the fan. O, an opening for any light grain that may be carried up; Q, an opening for the dust to pass out.

R, R, are pulleys for bands to drive the machine; S, a hopper attached to the box of the sieves, and T, an opening for grain to pass out.

In the operation of this machine, it will be seen that after the grain to be cleaned is put in the hopper and the machine put in operation, the oscillating motion of the hopper and sieves produced by the crank shaft, will cause the grain to fall upon the sieves and from them upon the lower plate of the scourer. The oscillating motion of this plate, caused by the action of the lever, will pass it gradually through between the roughened surfaced plates and thoroughly scour and free it from all foreign substances, as it passes out into the air passage, the grain by its specific gravity will fall down and pass out at the opening near the bottom, while the lighter matter will pass out at the opening at the top.

By employing flat bur surfaced scouring plates, I am enabled to arrange the separating sieves and said plates in such relation to each other and a fan that the grain falls in a scattered condition over a very large scouring surface and is passed in a thin sheet through a broad blast of wind and perfectly deprived of all foreign matter. It will also be seen that my arrangement of flat plates and sieves enables me to dispense with much gearing; it only being necessary to employ a single crank shaft, one connecting rod and a vibrating lever, therefore a machine combining the qualities of a separator and scourer, which will be compact and not liable to get out of order, can be furnished at a small cost.

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

The combination of the separating sieve and the bur surfaced plates, by means of the vibrating lever which gives a contrary motion to each at every revolution of the wheel or crank, substantially in the manner and for the purpose herein described.

ISAAC WAIT.

Witnesses:

LYSANDER H. BROWN,
C. COLWELL.