

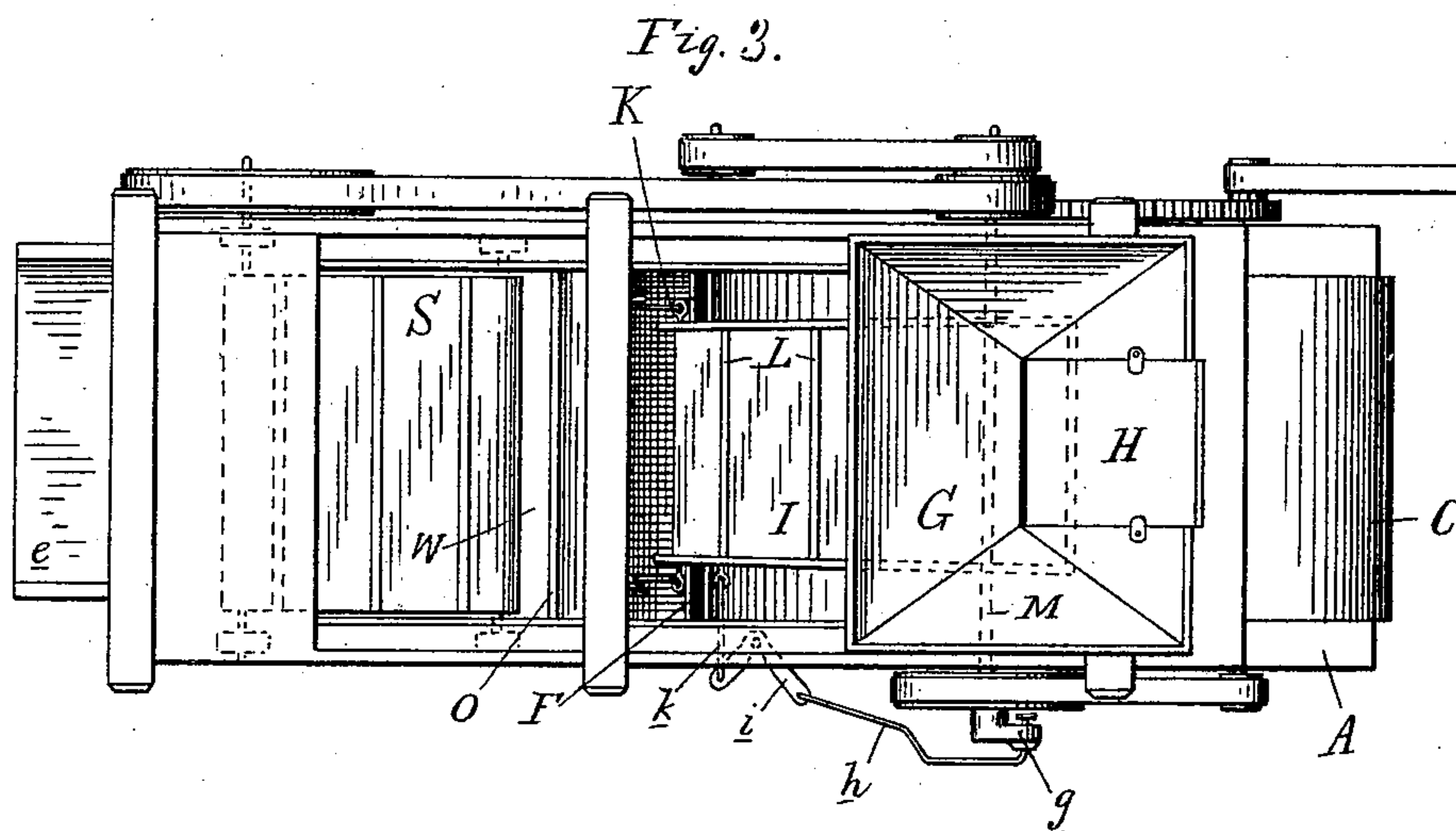
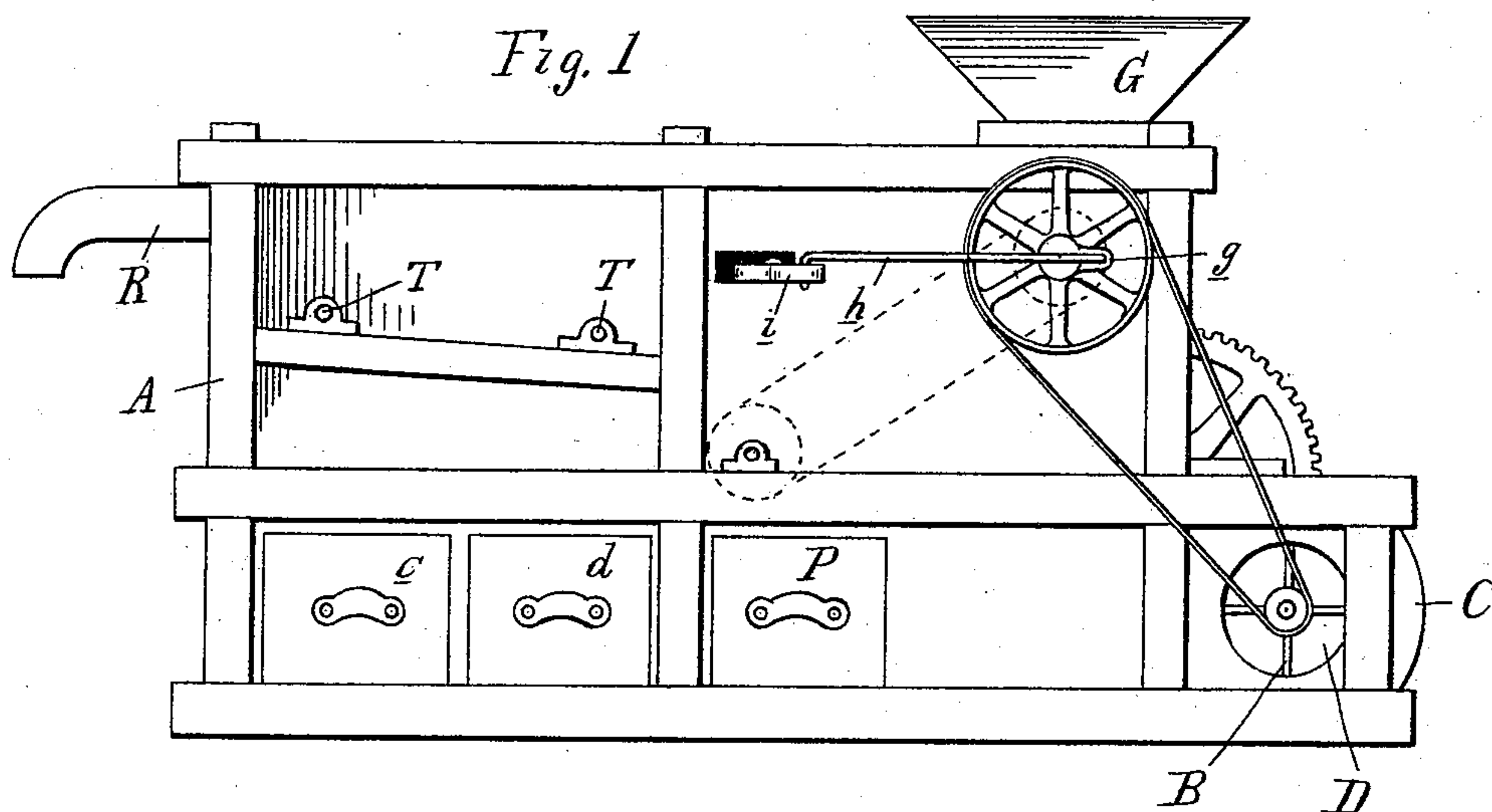
(No Model.)

2 Sheets—Sheet 1.

C. J. PICKETT.
COFFEE CLEANING MACHINE.

No. 404,430.

Patented June 4, 1889.



Witnesses:
R. M. Hulbert,
John Schuman.

Inventor:
Chancy J. Pickett
By Mos S. Sprague & Son
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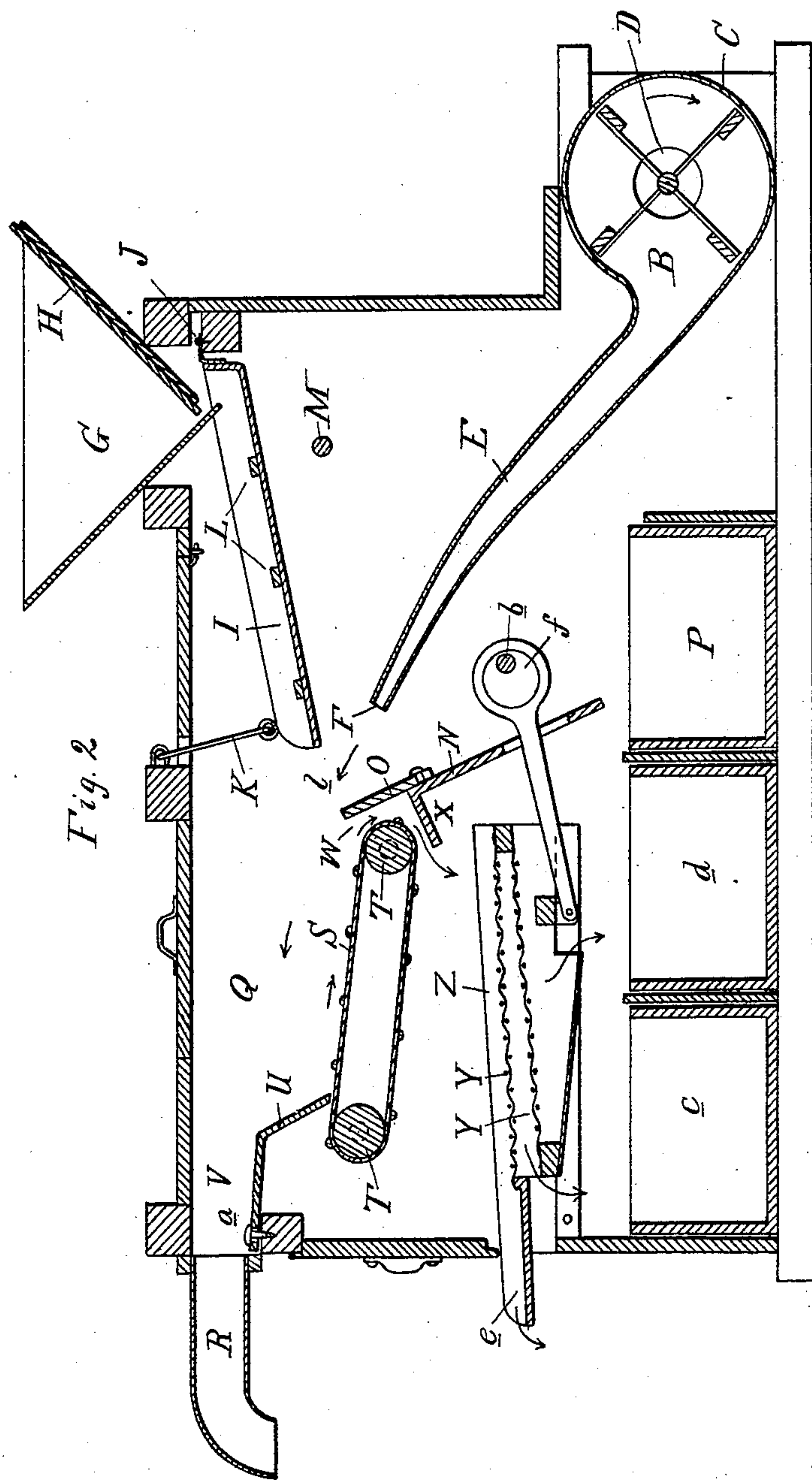
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Chancy J. Pickett
By Thos. S. H. Maguire & Son
Atty.

UNITED STATES PATENT OFFICE.

CHANCY J. PICKETT, OF BAY CITY, MICHIGAN, ASSIGNOR OF TWO-THIRDS
TO WILLARD I. BROTHERTON AND HENRY N. WATROUS, OF SAME PLACE.

COFFEE-CLEANING MACHINE.

SPECIFICATION forming part of Letters Patent No. 404,430, dated June 4, 1889.

Application filed September 19, 1888. Serial No. 285,788. (No model.)

To all whom it may concern:

Be it known that I, CHANCY J. PICKETT, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Coffee-Cleaning Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to a new and useful improvement in a coffee cleaner and separator; and the object of the invention is to free the coffee from foreign ingredients, especially stones, pieces of wire, and iron, which
15 are liable to injure the grinding-mill; further, to free it from dust and other like debris and refuse, and, further, to grade the coffee into the ordinary merchantable sizes and separate it from the broken kernels.

20 To this end my invention consists in the construction, arrangement, and combination of the different parts in a single operative machine, all as more fully hereinafter described and shown in the accompanying drawings, and pointed out in the claim.

In the drawings, Figure 1 is a side elevation; Fig. 2, a vertical central longitudinal section, and Fig. 3 a plan thereof.

30 A is the frame of the machine, suitably constructed to support the operating parts thereof.

B is a rotary fan or blower of known construction, secured within a casing or frame C built upon one end of the machine and provided with the usual air-inlets D. An upwardly-inclined blast-duct E connects with this casing and carries the blast created by the fan into the upper portion of the machine, where it is discharged in a concentrated form through
40 the discharge-opening F of the blast-duct.

G is a feed-hopper supported on top of the frame, near one end thereof, and provided with the adjustable feed-slide H.

45 I is an inclined spreader-pan movably secured below the discharge-spout of the hopper by means of a pivotal connection J at one end and the hangers K at the other end. This spreader-pan is provided with the cross-slats L, and is agitated by a suitable connection with the transverse shaft M in a well-known manner. This spreader-pan has its

discharge end some distance above the terminal of the blast-duct, and in such proximity thereto as to cause the material to fall into the path of the blast, which passes in a diagonally-upward direction through it.

N is a direction-board, preferably provided at its upper end with an adjustable portion O. This board is slightly inclined, as shown, and is intended to direct the heavy material
60 escaping the blast into a drawer or receptacle P below, and to direct with its upper end the blast and such materials as are carried by the blast into the wind-chamber Q, formed on top of the frame. This chamber is provided at its bottom with the endless carrier
65 S, which preferably consists of an apron provided with cross-slats and mounted upon suitable rollers T T. At its farther end the wind-chamber is contracted into a throat V by
70 means of an inclined direction-board U, the free end of which loosely rides upon the carrier, being attached for this purpose by a loose connection a at its rear end to the frame of the machine, and the throat V communicates with the discharge-spout R extending
75 outside the frame. The top of the wind-chamber, top of the throat, and top of the discharge-spout are in one horizontal plane, while the bottom of this wind-chamber, by
80 the construction described and shown, forms a gradual contraction toward the end.

At the inner end of the carrier is formed the discharge-throat W, and below this is placed an inclined direction-board X, and below this is located the inner end of the separator-screens Y Y, which are secured in a frame Z, which is reciprocatingly mounted in the frame of the machine and receives an endwise-shaking motion by a suitable connection with the revolving shaft b. Below
90 these screens are placed suitable drawers c and d, the former one receiving the material passing through the upper screen and the latter the material discharging through the lower screen. The material which does not pass through the upper screen is carried off by a discharge-spout e, which extends through the rear end of the machine.

Motion is communicated to the various
100 movable parts of the device, preferably in the following manner: The power is communi-

cated to the shaft of the fan in the first instance, and from there it is transmitted to the shaft M. This shaft carries upon one end two pulleys, from one of which motion is communicated to the shaft *b*, and from the other of which motion is communicated to the shaft of one of the carrier-rolls. The screens are reciprocated, preferably, by an eccentric *f* on the shaft *b*, and the spreader-pan *I* is laterally agitated by its connection with the shaft M, which consists, preferably, of the crank *g*, pitman *h*, bell-crank *i*, and connecting-link *k*.

The frame of the machine is suitably provided with removable doors to permit access to the interior, and all the parts where needed are provided with such adjustments as are found necessary in the ordinary construction of such devices.

In practice, the parts being arranged and constructed substantially as described, they are intended to operate as follows: The raw material being fed into the hopper is discharged therefrom with a proper adjustment of the feed-slide unto the spreader-pan *I*, from which it is spread by the cross-slats *L*, and forwarded to the inner end by the combined action of the inclination of the board and the lateral shaking motion applied to the inner end of the pan. As the material is discharged from the spreader-pan, it falls directly into the blast from the fan which is concentrated upon it, and acting in an upward direction, besides, carries all the material through the opening *l* into the wind-chamber *Q*, except such weightier materials as stones, pieces of iron, &c., which are directed into the drawer *P* below. The wind-chamber *Q* allows the blast to expand, and thereby permits the heavier material to drop to the bottom thereof, while the lighter material—such as dust, chaff, and Quakers—is carried by the wind into the discharge-throat *V*, from which it is blown out finally through the discharge-spout

R. The material which is not blown out, and which comprises all the valuable portion of the raw material, is collected upon the carrier *S*, the motion of which feeds it in a continual and even stream toward the inner end thereof, from which it falls through the throat *W* onto the board *X*, and from there onto the upper screen. This upper screen has its meshes selected of such size as to pass only the smaller and broken kernels through it, while the larger and perfect kernels are directed through the discharge-spout *e* to the outside and collected there. The material passing through the upper screen passes into the lower screen, which is a finer mesh, to retain the smaller kernels upon the screen and gradually forward them into the drawer *c*, while the broken kernels fall through the screen and are collected in the drawer *d*.

It will be understood that by means of the adjustability of the board *O* the effect of the blast can be increased or decreased to effect the proper separation.

By hinging or otherwise securing the board *U* loosely, as described, it will always ride with its free end upon the carrier, and thereby prevent any escape of the blast. At the same time it gives direction for the wind to the discharge-spout *R*.

What I claim as my invention is—

The combination, with the wind-chamber and the endless carrier, of the inclined direction-board *U*, loosely attached at one end to the frame of the machine and its other end riding loosely upon said carrier, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 23d day of August, 1888.

CHANCY J. PICKETT.

Witnesses:

S. M. HALBERT,
JOHN SCHUMAN.