

(No Model.)

J. SKINNER.  
BEAN SCOURER AND CLEANER.

No. 541,185.

Patented June 18, 1895.

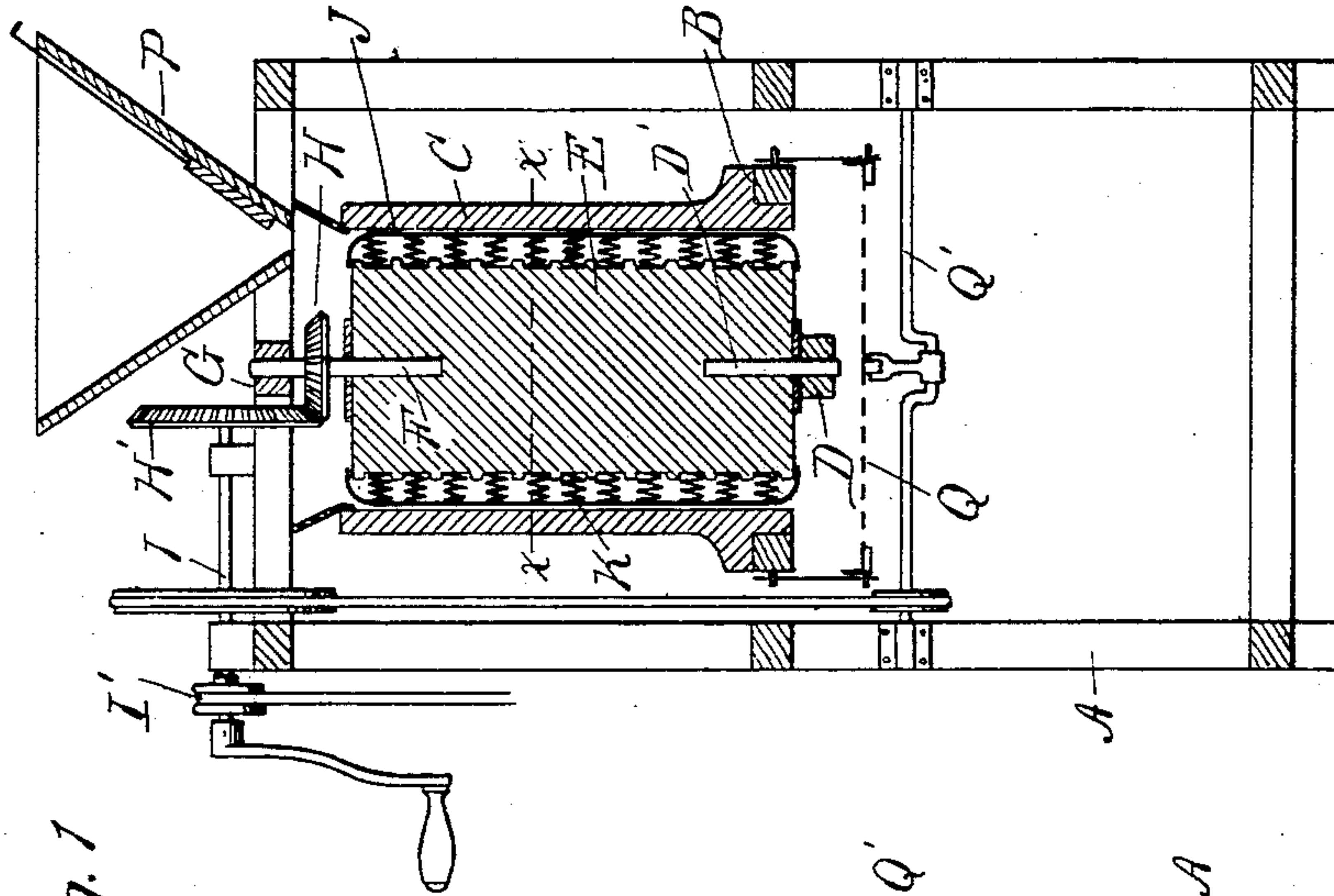


Fig. 1

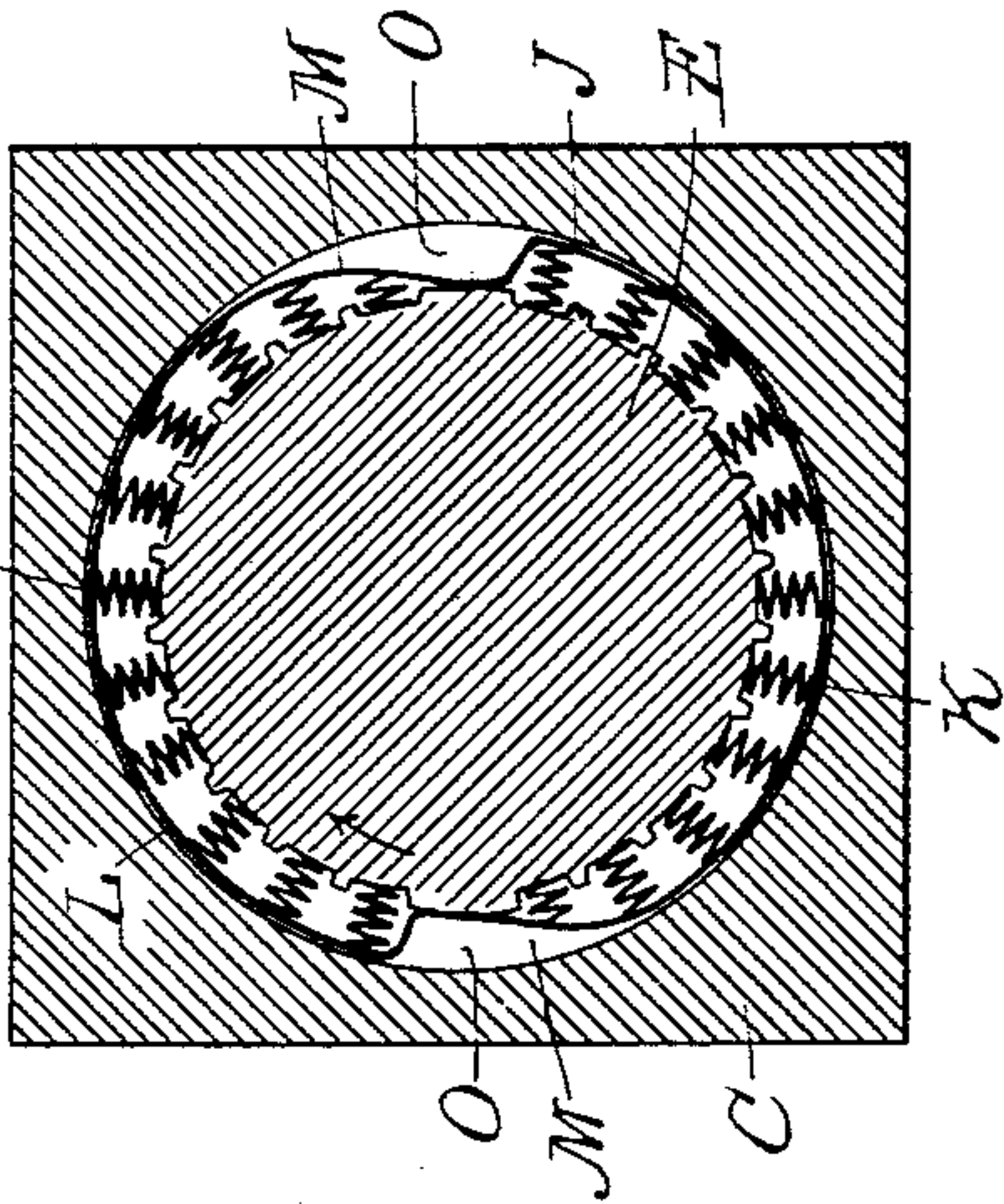


Fig. 2

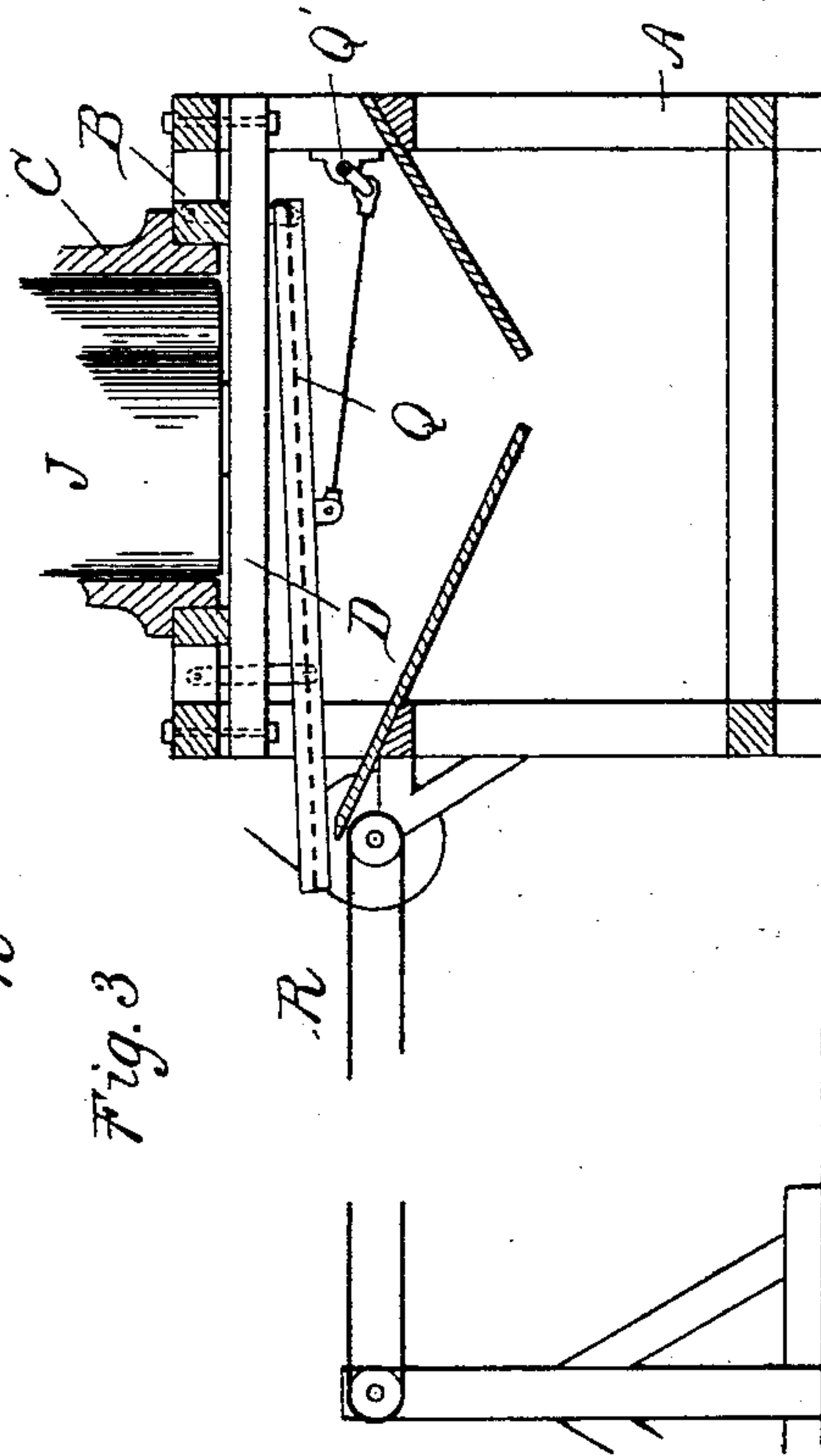


Fig. 3

Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN SKINNER, OF FLINT, ASSIGNOR OF ONE-HALF TO HENRY PUTMAN, OF GOODRICH, MICHIGAN.

## BEAN SCOURER AND CLEANER.

SPECIFICATION forming part of Letters Patent No. 541,185, dated June 18, 1895.

Application filed September 1, 1894. Serial No. 521,896. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN SKINNER, a citizen of the United States, residing at Flint, in the county of Genesee and State of Michigan, have invented certain new and useful Improvements in Bean Scourers and Cleaners, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The invention consists in the construction and arrangement of a scouring cylinder and its scouring drum and further in its combination with separating mechanism, and the actuating and feed devices, all as more fully  
15 hereinafter described.

In the drawings, Figure 1 is a vertical central section through my improved machine. Fig. 2 is a horizontal section on line *x x*, Fig. 1. Fig. 3 is a vertical section at right angles  
20 to Fig. 1, illustrating the construction of the cleaning and separating mechanism.

A is a suitable supporting frame. Centrally thereof is the square cylinder-supporting frame B in which is detachably supported  
25 the cylinder C. Below the cylinder is a cross bar D in which is journaled the stub shaft D' on the lower end of the drum E, preferably a solid cylindrical body. The upper end of this drum has the stub shaft F journaled in the cross bar G and provided with a  
30 bevel pinion H, with which meshes the bevel gear wheel H' on the crank shaft I, by means of which a rotary motion may be imparted to the drum. The drum is of less diameter  
35 than the cylinder, and is covered with the textile cover J backed by the coil springs K which at their inner ends enter sockets in the periphery of the drum, and at their outer ends bear against the cover J. This cover  
40 has the concentric portions L and the eccentric sections M extending down to the face of the drum, and forming vertical feed channels, O.

P is a hopper arranged with its discharge  
45 over the periphery of the drum, so that material fed therefrom will fall into the channels O, and as the drum revolves will scour the same between the spring-backed cover

and the cylinder gradually dropping by gravity to the lower end where it falls from the  
50 cylinder upon the screen Q. This screen is inclined and is reciprocated by the crank shaft Q' driven by belt connection from the crank shaft I. From the screen the material is delivered on the separator belt or apron  
55 R, driven by belt connection from the crank wheel I'.

The scouring cylinder drum will thoroughly scour the material, such as beans, without in any way injuring it, and regardless of the size  
60 of the material, that is it will as thoroughly scour the small as the large beans.

The screen separates the smaller broken particles from the good beans and the operator may separate the poor beans or dirt which  
65 may be with the beans, as they are fed along on the belt R.

What I claim as my invention is—

1. In a scouring machine, the combination with the vertically disposed scouring cylinder, of a drum concentrically arranged within the cylinder, a flexible cover surrounding the drum, yielding means for normally forcing the covering out of contact with the drum  
70 at opposite sides, depressions formed in the covering extending vertically the length thereof, means for rotating the drum and covering, and a feed hopper arranged in line with the space between the drum and cylinder, substantially as described. 80

2. In a scouring machine, the combination with the vertically disposed scouring cylinder, of a rotary drum concentrically arranged within the cylinder, formed with a series of depressions in its periphery, a series of springs  
85 seated in said depressions, a flexible covering surrounding the drum and springs and connected to the drum between the springs to form feed channels extending lengthwise of the drum, and means for feeding the grain  
90 into the cylinder at a point between the same and drum, substantially as described.

3. In a scouring machine, the combination of the imperforate vertical cylinder, a feed hopper discharging into the cylinder at the  
95 periphery, a rotary drum of less diameter

than the cylinder, a vertically arranged loose  
textile covering secured at points to the  
drum, spiral springs secured at their base  
to the drum and pressing with their outer  
5 ends against the textile covering, and means  
for rotating the drum substantially as de-  
scribed.

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

JOHN SKINNER.

Witnesses:

M. B. O'DOGHERTY,  
L. J. WHITEMORE.