

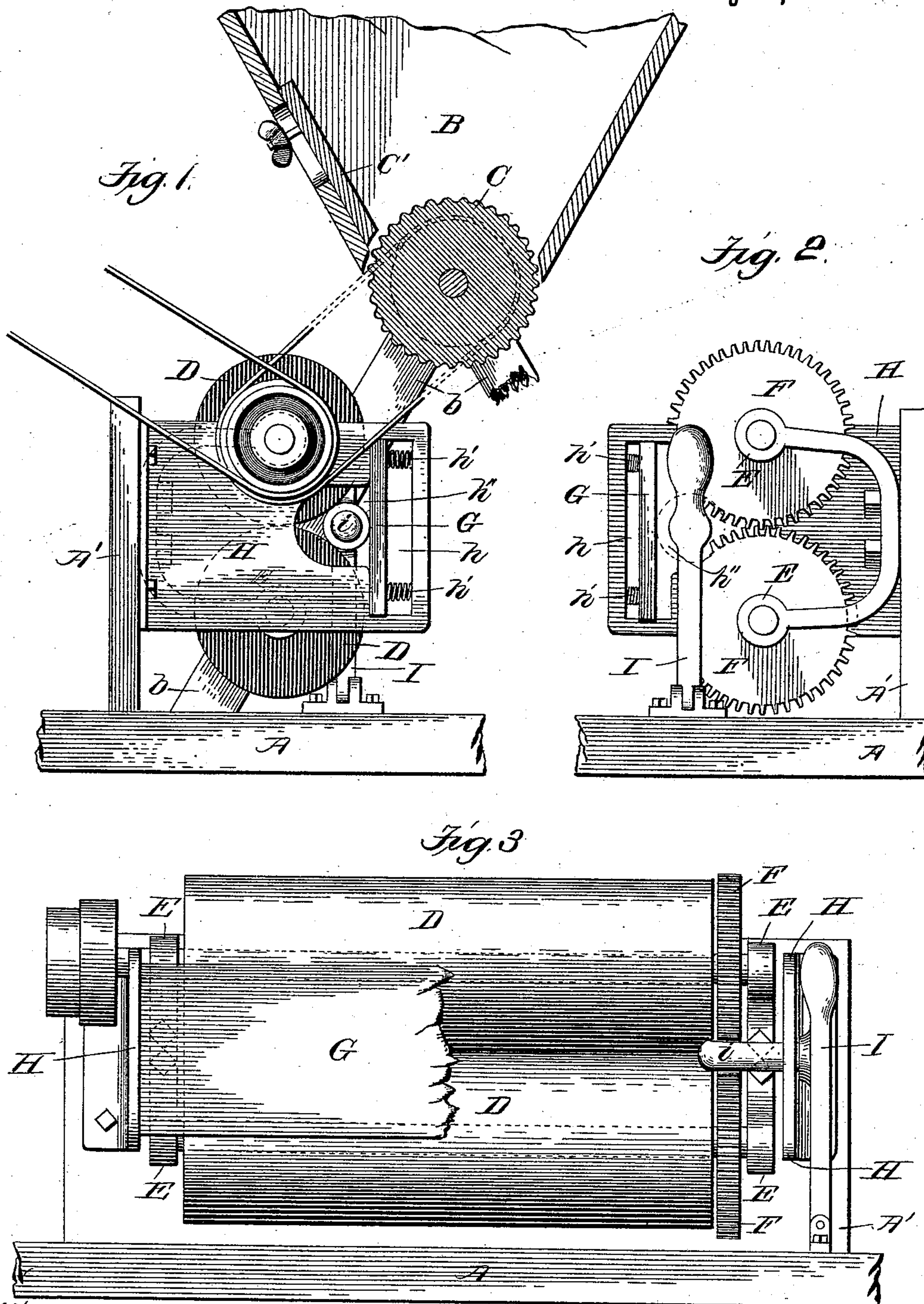
(No Model.)

H. LAMPARTER.

MACHINE FOR FILLING THE INTERSTICES OF CORN COB PIPES.

No. 496,883.

Patented May 9, 1893.



Witnesses:
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UNITED STATES PATENT OFFICE.

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MACHINE FOR FILLING THE INTERSTICES OF CORN-COB PIPES.

SPECIFICATION forming part of Letters Patent No. 496,883, dated May 9, 1893.

Application filed September 19, 1892. Serial No. 446,273. (No model.)

To all whom it may concern:

Be it known that I, HENRY LAMPARTER, a citizen of the United States, residing at St. Charles, in the county of St. Charles, State of Missouri, have invented certain new and useful Improvements in Machines for Filling the Interstices of Corn-Cob Pipes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, wherein like symbols of reference refer to like parts wherever they occur, and in which—

Figure 1 is an end elevation partly in section. Fig. 2 is a similar view of the opposite end, one of the guide plates, and the hopper being omitted. Fig. 3 is a front view, partly broken away, the hopper being omitted.

My invention relates to a new and useful improvement in machines for filling the interstices of corn cob pipes, and consists, generally stated, in providing means for subjecting the pipe to the action of rotating rolls while the filling material is fed thereon, said rolls forcing the filling into the interstices thereof, and by their rotation, presenting all sides of the pipe for treatment.

The object of this invention is to construct a machine to accomplish the above results, which will be cheap, simple, and effective in operation, and one whose capacity is very great. These objects I obtain by the construction illustrated in the accompanying drawings, wherein—

A indicates a suitable supporting base or table, provided with a vertically disposed shelf or supporting board A'.

B indicates a hopper, mounted upon the table A, or supported thereabove in any suitable manner, which in this instance, is shown at b which represent inclined supporting legs. Located in the apex or lower portion of the hopper is a feeding roller C, preferably formed with corrugations on its periphery, to more regularly feed the material contained in the hopper, to the receiving and distributing rolls beneath.

C' indicates a suitable adjustable slide mounted on the inside of the hopper upon one of its walls, its function being to regulate the

amount of material carried in the recesses of the corrugated feeding roller.

Mounted beneath the hopper, preferably in vertical alignment, are the receiving and distributing rolls D, the operating surfaces of which being made of rubber for obvious reasons, said rolls being mounted in yielding bearings E, supported by the shelf A'. The ends of the supporting shafts of these rolls, are provided with pinions F, the teeth of which are elongated to insure a positive mesh between the wheels, should the rolls be separated by the introduction of a large pipe, as will hereinafter be described. Extending along the length of the rolls, which I will term the front side, is a back-board G, the function of which is to press the pipe in between the rolls when it is introduced therebetween, as will presently appear. This board G is yieldingly supported by two guide plates H projecting from the shelf A' which guide plates are slotted as at h to permit the play of the board G.

h' indicate compression springs interposed between the board and the cross piece of the guide supports H, their functions being to yieldingly hold the four corners of the board in against or near to the rolls D. It is obvious that other springs might also be interposed, in order to act upon the center of the board, but these are unnecessary when the tension of the four corner springs is sufficient to enable them to perform their functions.

At h'' I have recessed the guide plates H, in order to permit the free passage of the pipes when being introduced into, or ejected from the rolls.

To insert the pipes in the rolls for treatment, I pivot a lever I on the table or base A near the feed end of the rolls (to the right, Fig. 3) and provide said lever with a projection i which registers with the opening formed by the two rolls and the back-board, and on said projection I place the pipe, taper end toward the rolls, and by thrusting the lever forward, the pipe is forced between the rolls and the back-board, where it is rotated, thereby subjecting all sides of the pipe to the action of the rolls, and filling its interstices with the material deposited thereon from the hop-

per. By the introduction of another pipe in like manner, the first pipe is forced forward, thereby enabling a continuous operation of feeding to be carried on.

5 Should a pipe of larger dimensions than the rolls and back-board can conveniently accommodate in their normal positions, be inserted, the back board being yieldingly mounted, will yield to its full extent, and should such
10 movement of the back-board not be sufficient, then the rolls, which are mounted in spring bearings, will separate and enable the pipe to be inserted, the meshing gears on the roller shaft still remaining in gear by reason of their
15 long teeth.

Power is derived through the medium of a driving belt passing around a pulley on the end of the shaft of one of the distributing rolls, and thence to the corrugated feed roller
20 in the hopper, in any suitable manner.

It will be understood that, by reason of the rolls being positively geared together, they will rotate in opposite directions.

I am aware that many minor changes in
25 the construction and arrangement of the several parts of my device may be made and substituted for those herein shown and described, such, for instance, as the substitution of a roll for the back-board, without in the least departing from the nature and principle of my
30 invention. It will also be obvious, that instead of gearing the receiving and distributing rolls directly together, which might in some instances obstruct the free insertion of
35 the pipe therebetween, I may advantageously employ the use of two pinions on the respective shafts, and place the communicating power a little to the rear, in which instance, these latter would act in the capacity of idlers.

40 Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a machine for filling the interstices of cob pipes, the combination of a suitable feed
45 hopper, of rubber rolls in vertical alignment therebeneath, a board in juxtaposition to said rolls, and means for feeding the pipes along the length of the roll, substantially as described.

2. In a machine for filling the interstices of
50 cob pipes, the combination with a suitable feed hopper, of rotating rolls therebeneath of a length greater than the length of two pipes

and means for feeding the pipes, one at a time, along the length of the rolls, whereby by the insertion of one pipe the preceding pipe is
55 forced forward at the same time being subjected to the action of the rotating rolls, substantially as described.

3. In a machine for filling the interstices of cob pipes the combination with a suitable
60 feed hopper, of rolls yieldingly mounted in spring bearings, and a yielding back-board between which and the rolls the pipe is inserted endwise, substantially as described.

4. In a machine for filling the interstices of
65 corn cob pipes, the combination of a suitable feed hopper of two rolls geared together and adapted to rotate in opposite directions, and a backboard, between which and the rolls the pipe is inserted endwise, substantially as de-
70 scribed.

5. In a machine for filling the interstices of corn cob pipes, the combination with a suitable feed hopper of two rubber faced rolls
75 mounted in yielding bearings, a yielding back-board, arranged in juxtaposition to and parallel with rolls, and a supporting guide for the board.

6. In a machine for filling the interstices of corn cob pipes, the combination with a suitable
80 feed hopper, of a corrugated feeding roll mounted therein, a regulating slide arranged in proximity to the feeding roll, receiving and distributing rolls beneath said hopper for receiving and distributing the material as it is
85 fed therefrom, to and upon the pipes, and suitable means for feeding the pipes to the roll and holding them in contact therewith, substantially as described.

7. In a machine for filling the interstices of
90 corn cob pipes, the combination with a suitable feed hopper, of rolls therebeneath, a lever provided with a projection upon which the pipe is placed and fed to the action of the rolls, and means for yieldingly holding the pipe in
95 contact with the roll, substantially as described.

In testimony whereof I hereunto affix my signature, in presence of two witnesses, this 16th day of September, 1892.

HENRY LAMPARTER.

Witnesses:

JACOB ZEIDLER,
A. SCHNEIDER.