J. G. WALLICK.

GARBAGE PULVERIZER FOR SEWERS.

APPLICATION FILED AUG. 12, 1909.

996,958.

Patented July 4, 1911.

2 SHEETS—SHEET 1.

Fig-1-

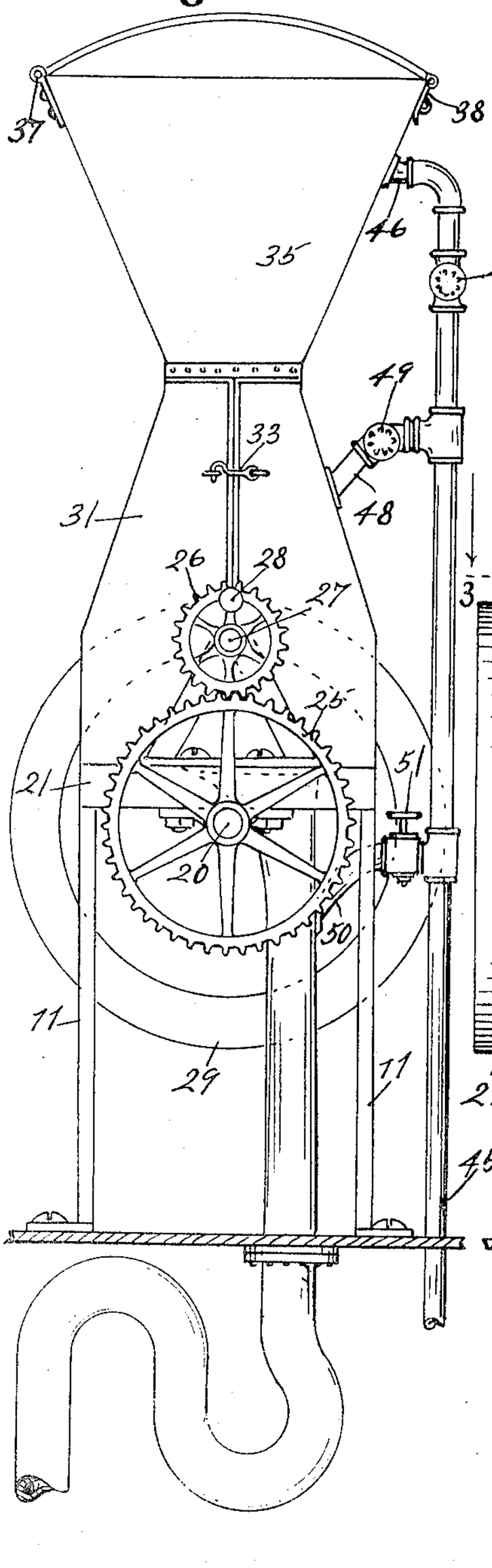
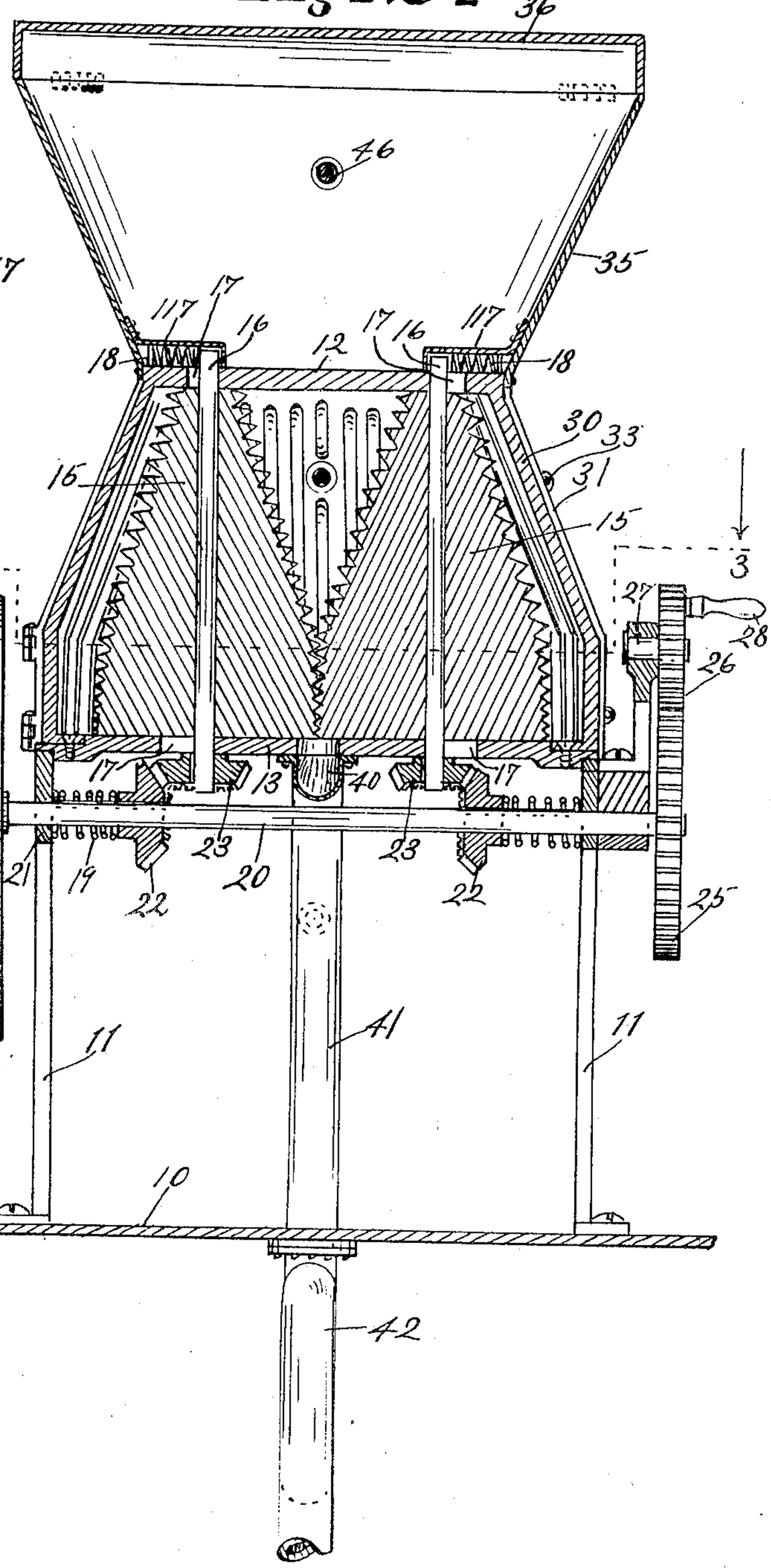


Fig-2-



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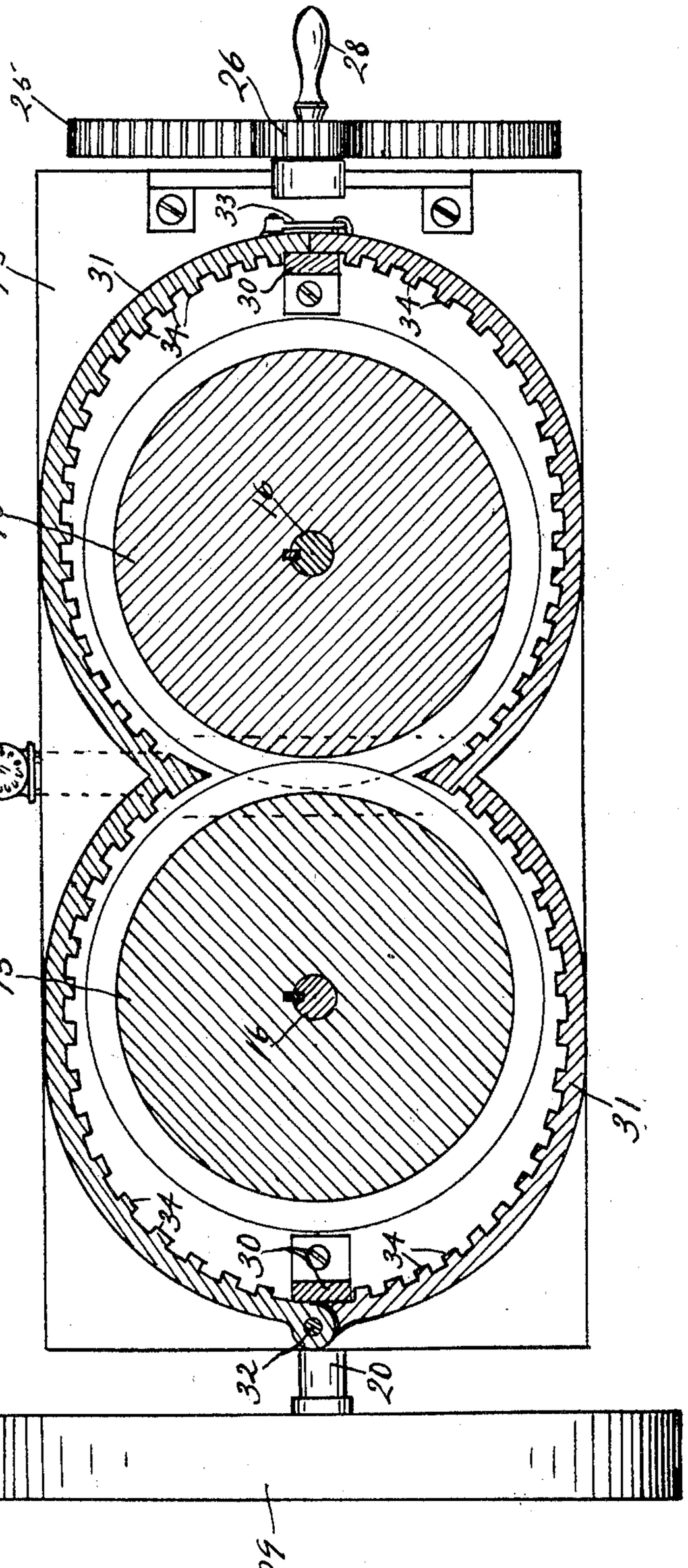
2 SHEETS—SHEET 2.

Fig 3 -



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GARBAGE-PULVERIZER FOR SEWERS.

996,958. Specification of Letters Patent. **Patented July 4, 1911.**

Application filed August 12, 1909. Serial No. 512,546.

To all whom it may concern:

Be it known that I, JOHN G. WALLICK, of Indianapolis, county of Marion, and State of Indiana, have invented a certain new and useful Garbage-Pulverizer for Sewers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like letters refer to like parts.

The object of this invention is to provide means for treating and depositing garbage into a pipe discharging into a sewer. This enables the garbage to be disposed of in the kitchen of a residence or hotel, and avoids the annoyance and trouble of carrying the garbage out and depositing it in garbage boxes along the alleys and the removal thereof by municipal authorities, or the burning or other like disposition of garbage.

The chief feature of the invention consists in combining a sewer pipe and a machine for pulverizing the garbage, into which the garbage can be deposited by the cook as she cleans the plates and dishes, and then the garbage is ground up or otherwise reduced to a condition which enables it to be carried off through the sewer without obstructing the sewer pipe or causing any other inconvenience.

Along with the foregoing idea is the further one of combining with the sewer pipe and pulverizing machine means for supplying water thereto under pressure for flushing the garbage through the goose-neck of the sewer pipe and through the pulverizing machine, and for soaking the garbage in the pulverizing machine preparatory to grinding the same and for cleaning the pulverizing machine.

The details of the invention will be understood from the accompanying drawings and the following description and claims.

In the drawings Figure 1 is a side elevation of the device. Fig. 2 is a section on a central vertical line through the same as appears in Fig. 1. Fig. 3 is a horizontal section on the line 3—3 of Fig. 2.

The drawings herein show a floor 10 of a kitchen, upon which a frame 11 is secured. This frame has a top cross bar 12 and a bottom plate 13, between which pulverizing rolls 15 are mounted in vertical positions, the spindle 16 of each roll extending through slots 17 in the bar 12 and plate 13, said slots being so arranged that they will permit the rolls to meet at the lower ends and will permit them to move away from each other as required by the material introduced between. The rolls are held together or forced toward each other by springs 18 and 19. The springs 18 press inwardly against the upper end of the spindles 16, and as here shown, are located on the bar 12. The springs 19 are spiral and surround the driving shaft 20 lying between the bearing 21 thereof and the beveled pinion 22 that is splined on the shaft 20 so that it will be rotated by the shaft and yet is slidable along the shaft. It bears against a bevel gear 23 secured on the lower end of the spindle 16.

A shaft 20 is driven by a spur gear 25 that meshes with a smaller gear 26 mounted in the frame piece 27 that is turned by a handle 28. There is a fly wheel 29 also on the shaft 20.

The rolls 15 taper upwardly at least for the major portion of the length thereof, and are provided with spirally disposed knives or ribs 30. These are larger and spaced farther apart toward the upper ends of the rolls and become smaller and closer toward the lower ends of the rolls, and the lower portion of the rolls intermesh and are practically vertical and not tapering.

A casing 31 surrounds the rolls, as indicated in Fig. 3, and is formed preferably of two halves hinged together at 32 and fastened at the other end by the fastener 33, so that the sides of said casing may be readily opened and thrown backwardly away from the rolls for cleaning the rolls. The inner surface of this casing is provided with vertical ribs 34 adapted to coöperate with the rolls in crushing the garbage. The casing fits reasonably close around the lower parts of the rolls, excepting on the two lateral sides where enough space is left for the rolls to be pressed apart by any piece of garbage that is difficult to pulverize.

A hopper 35 is secured to the upper end of the frame and provided with a lid 36 hinged at one side at 37 and provided with a fastener 38 at the other side.

A transverse centrally located outlet opening 40 is provided in the bottom plate 13 under the meeting point of the two rolls and through which the garbage after being pulverized escapes into the pipe 41. This should be a relatively large pipe, say about three inches in diameter and projects through the floor, where it is connected with

the goose-neck 42 located under the floor and in communication with the sewer 50.

A water pipe 45 supplies water to the device under pressure. It may be connected with the usual city water supply system, or with the tank elevated so that gravity will introduce the water under pressure, or with a pump. From the pipe 45 a nozzle 46 enters the hopper 35, and it is controlled by a valve 47. This is for the purpose of soaking the garbage and causing a portion thereof to flow away through the pulverizing machine into the sewer pipe 41. A nozzle 48 enters the casing surrounding the rolls and is for the purpose of flushing or forcing the material out through said rolls and for cleaning the rolls. It is controlled by a valve 49. Another nozzle 50 enters the sewer pipe 41 just below the pulverizing machine and is for the purpose of flushing the material through the goose neck 42. It is controlled by a valve 51. Both nozzles 48 and 50 are preferably downwardly inclined so as to give the water coming in under pressure the flush power.

In operation the cook throws back the lid 36 and cleans her plates and dishes into the hopper 35. When she is through cleaning her dishes thus, the valve 47 is opened so as to let a supply of water into the hopper. This soaks the garbage and also carries a considerable portion thereof down and out into the sewer. This step in the process may continue while the dishes are being washed, so as to reduce the amount of garbage to be ground. After the dishes are washed the pulverizing machine is operated and the garbage ground. It goes down gradually to the lower part of the rolls, being ground gradually as it approaches the lower part of the roll. The upper parts of the rolls do the coarse part of the grinding, crushing the bones, etc., into smaller parts, and as the material moves on through the grinding rolls it is ground into fine, granular yet pulp-like material and passes out through the opening 40 into the pipe 41, the water through the nozzle 46 at the top still flowing. After the grinding is thus finished, the valve 47 may be closed and the valve 49 opened so as to flush the material out of the grinding machine, and to a certain degree clean the parts of the grinding machine. Then the valve 49 is closed and the valve 51 opened, whereby everything is forced out through pipe 41 and the goose-neck 42 into the sewer. This completes the process, except that at times the casing must be thrown open and the rolls and ribs of the grinding machine thoroughly cleaned by a brush or rag with soap and water, but ordinarily some soap powder combined with the flushing water will reasonably clean the device.

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

1. The combination of a machine provided with a hopper for receiving garbage, means for pulverizing the garbage, a pipe leading from the discharge of said machine to the sewer and provided with a goose-neck bend therein, means for introducing water under pressure into the sewer pipe below the pulverizing machine, and means for introducing water under pressure into the pulverizing machine.

2. The combination of means for pulverizing garbage, a casing surrounding said pulverizing means, a hopper extending above said casing, a sewer pipe extending down from said casing for receiving the garbage from the machine after it is pulverized, means for introducing water into the hopper, means for introducing water under pressure in a downward direction into the casing surrounding the pulverizing means, means for introducing water under pressure in a downward direction into the sewer pipe below the pulverizing means, and a valve for controlling each of said water supplying means.

In witness whereof, I have hereunto affixed my signature in the presence of the witnesses herein named.

JOHN G. WALLICK.

Witnesses:
G. H. BOINK,
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