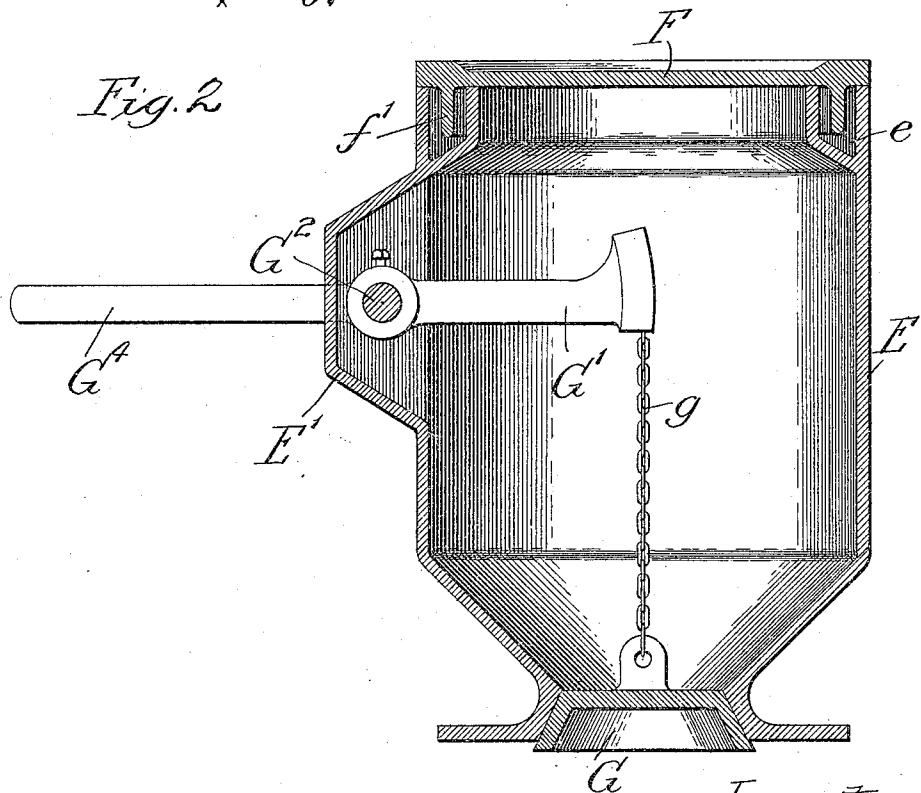
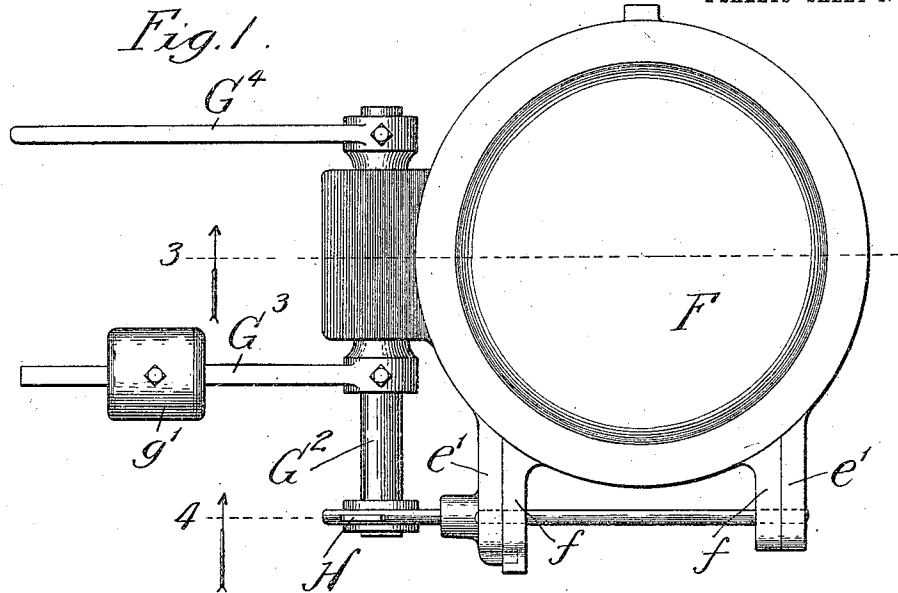


C. A. HARVEY.
FEEDING DEVICE FOR PRODUCERS.
APPLICATION FILED JAN. 6, 1908.

962,216.

Patented June 21, 1910.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3.

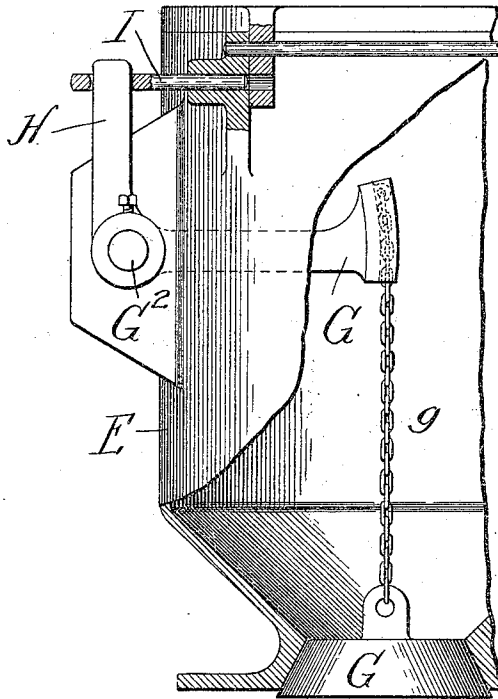


Fig. 4.

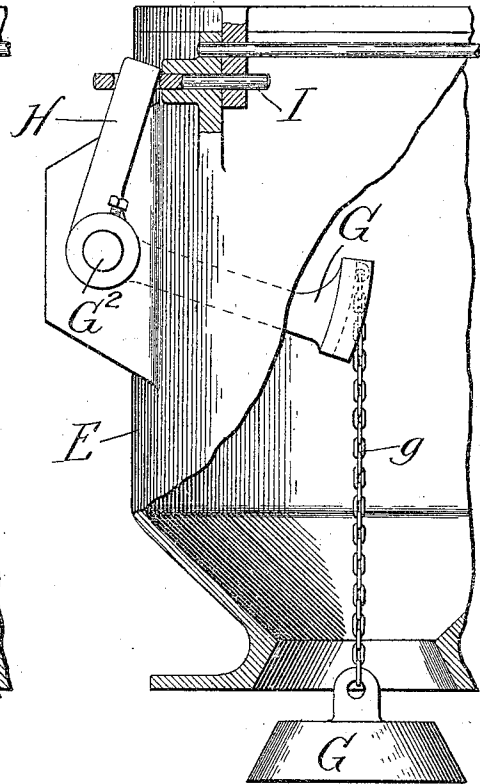
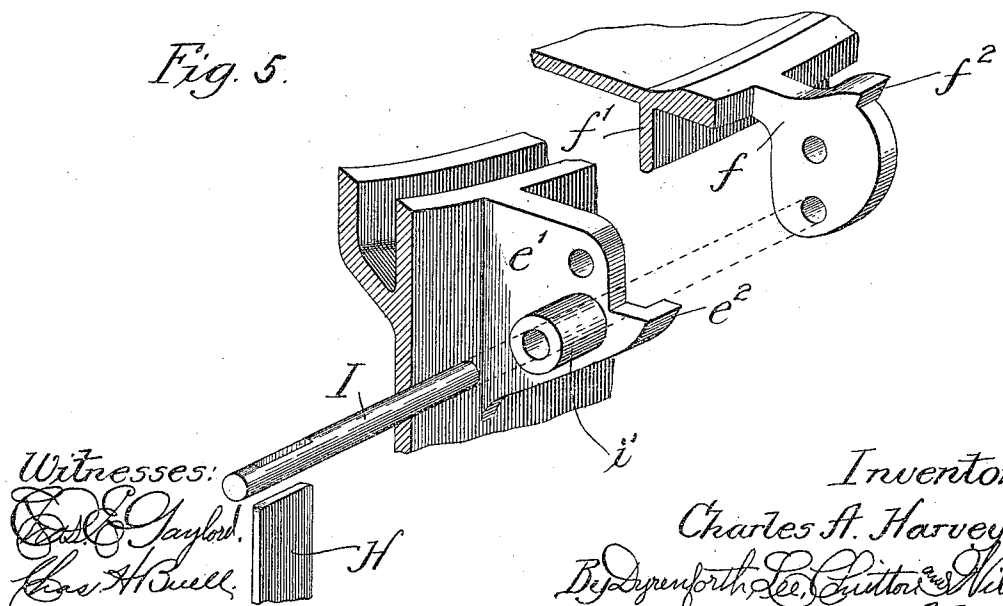


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES A. HARVEY, OF CHICAGO, ILLINOIS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO PRODUCER GAS UTILITIES CO., OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

FEEDING DEVICE FOR PRODUCERS.

962,216.

Specification of Letters Patent. Patented June 21, 1910.

Application filed January 6, 1908. Serial No. 409,450.

To all whom it may concern:

Be it known that I, CHARLES A. HARVEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Feeding Devices for Producers, of which the following is a specification.

My invention relates to certain new and useful improvements in feeding devices for producers, and is fully described in the specification and shown in the accompanying drawing, in which—

Figure 1 is a top plan of the feeding device; Fig. 2 is a section in the line 3 of Fig. 2; Fig. 3 is a broken section through the feeding device the upper portion of the section being taken in the line 4 of Fig. 2 and the lower portion in the plane of Fig. 3; Fig. 4 is a similar view showing the parts in different position; and Fig. 5 is a perspective view showing the locking device for the feeder cover.

Referring now to the drawings the construction of the magazine or fuel-feeder will be explained. The magazine has an outer casing E generally hopper-shaped in form and provided at its upper edge with a sealing trough *e*. The outer casing is provided with projecting lugs or ears *e*¹ to which are pivoted in turn ears *f* upon a pivoted cover F which is provided with a downwardly projecting bead *f*¹ adapted to enter the sealing trough *e* of the outer casing of the magazine. By this construction the cover can be swung up to expose the interior of the magazine or it can be swung down so as to make a tight seal, some fluid or a mass of sand being placed in the trough *e* for sealing purposes. The ears *e*¹ and *f* on the outer casing and cover respectively are provided with mutually engaging lugs *e*², *f*² which serve to limit the upward movement of the cover.

The lower portion of the magazine can be closed by means of a frusto-conical plug G suspended by a chain *g* from an arm G¹ mounted upon a rock-shaft G² which extends through a projection E¹ of the outer casing the construction being clearly illustrated in Fig. 3. The rock-shaft G² is provided with a backwardly extending radial arm G³ carrying a counter-weight *g*¹ to offset the weight of the plug G with a backwardly extending hand lever G⁴ by which

the said shaft can be rocked and with an upwardly extending radial arm H (Figs. 4 and 5). The upwardly projecting arm H engages with a slot *i* in a longitudinally movable pin I which is mounted in a sleeve *i*¹ integral with one of the lugs or ears *e*¹ of the outer casing of the magazine.

The operation of the magazine is as follows: When the rock-shaft G² is in the position shown in Fig. 4 the plug G is raised so as to hold the opening from the magazine into the producer proper closed thereby rendering the passage of gas outward through the magazine impossible. When the parts are in this position the cover can be raised and a fresh charge of fuel inserted if desired. When such a charge is inserted it can be dumped into the producer proper by rotating the rock-shaft to the position shown in Fig. 5 which will lower the plug and permit the fuel to enter. However, this rotation of the rock-shaft will swing the radial arm H to the right as shown in Fig. 5 and will move the pin I longitudinally so that it will pass through a hole provided to receive it in the adjacent ear *f* upon the cover F so as to make the raising of the cover impossible. It will readily be seen that if an attempt is made to lower the plug G when the cover is raised, that the ear *f* will engage with the pin I to prevent such operation. It is thus made impossible for the operator to open both the cover and the plug at the same time for the cover can only be opened when the plug is closed and the plug can only be opened when the cover is closed. The escape of gas from the producer to the atmosphere through the opening through which the fuel is introduced is therefore made impossible. This feature is of the greatest importance because it places a check upon the workman which makes careless manipulation out of the question.

I realize that considerable variation is possible in the details of construction of my improved device, without departing from the spirit of my invention, and I do not intend therefore, to limit myself to the specified form herein shown and described.

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

1. In a device of the class described a feeding chamber having a pivoted cover for its top and a vertically movable plug for its lower end, a rock-shaft having means of con-

nection with the plug to operate the same and means on the cover for preventing the operation of the rock-shaft except when the cover is closed and for preventing the operation of the cover when the rock-shaft is
5 turned to lower the plug.

2. In a device of the class described a feeding device having a plug for its lower end and a pivoted cover, a rock-shaft having a
10 radial arm connected with said plug, a radial arm projecting from the shaft, and a pin movable with said arm and adapted to engage a portion on the cover, the pin and cover being so arranged that said rock-shaft
15 can be rotated only when the cover is lowered and the cover can be raised only when the rock-shaft is rotated to raise the plug and withdraw the pin.

3. In a device of the class described the

combination with a feeding device a plug 20 for the lower end thereof, a cover for the upper end thereof and a rock-shaft having means of connection with the plug for raising the same, of a radially projecting arm on the rock-shaft, a longitudinally movable 25 pin guided on the feeding device and engaging said arm and an ear on the cover having an opening through which said pin can be passed to permit the rotation of the rock-shaft when the cover is closed and having a 30 plain surface preventing the rotation of the rock-shaft to lower the plug when the cover is open.

CHARLES A. HARVEY.

In presence of—

A. U. THORIEN,
R. A. SCHAEFER.