No. 857,843. PATENTED JUNE 25, 1907.

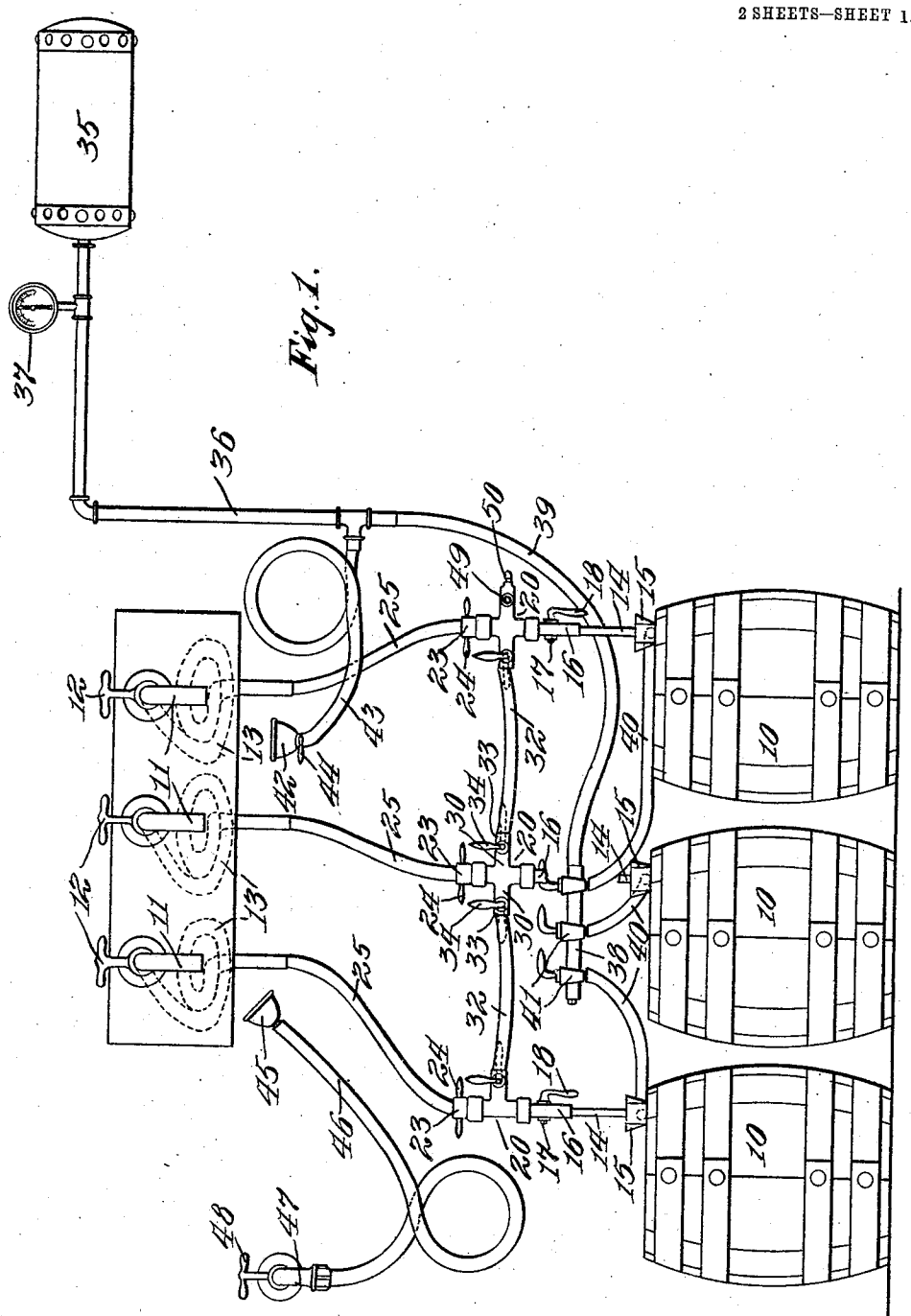
W. F. STARK.

BEER SERVICE APPARATUS.

APPLICATION FILED JAN. 22, 1906.

2 SHEETS—SHEET 1.

Fig. 1.



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Robert Ade.

Inventor:
William F. Stark.
By his Attorney:
F. H. Richards.

THE NORRIS PETERS CO., WASHINGTON, D. C.

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2 SHEETS—SHEET 2.

Fig. 2.

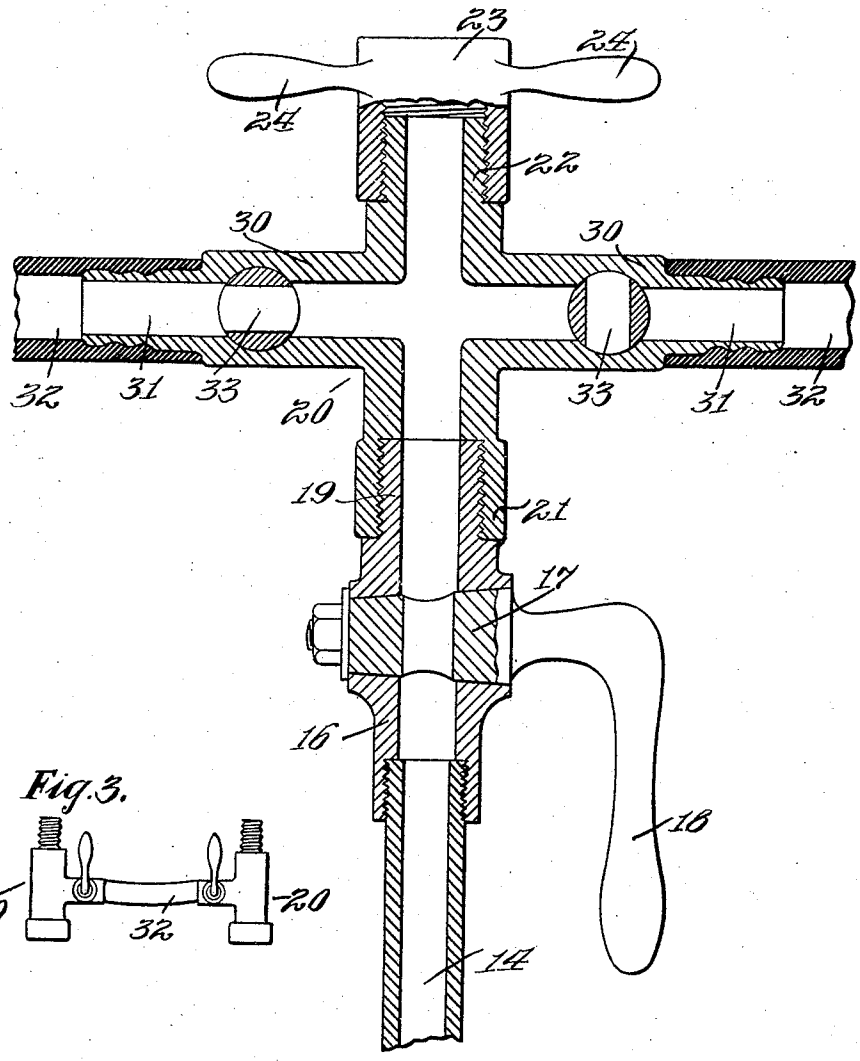


Fig. 3.

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UNITED STATES PATENT OFFICE.

WILLIAM F. STARK, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO JAMES ENGLISH, OF NEW HAVEN, CONNECTICUT.

BEER-SERVICE APPARATUS.

No. 857,843. Specification of Letters Patent. Patented June 25, 1907.

Application filed January 22, 1906. Serial No. 297,186.

To all whom it may concern:

Be it known that I, WILLIAM F. STARK, a citizen of the United States, residing in the borough of Manhattan, in the county of New York, city and State of New York, have invented certain new and useful Improvements in Beer-Service Apparatus, of which the following is a specification.

This invention relates to and has for an object to provide an improved beer service apparatus.

In the dispensing of liquids, more particularly malt beverages, the casks containing the same are usually stored in the cellar, and in the tap room, situated at some place on a higher plane than the casks, there are suitable faucets connected to the casks by a series of piping, the casks also being connected with a suitable pressure device, as for instance, a source of compressed air supply whereby the beverage is forced to the faucets and is there drawn as occasion may demand, the presence of the compressed air preventing the volatilization of the beverage and the escape of the entrained gas. During those portions of the day when the beverage is not being drawn from the faucets it will remain in the pipes between the casks and the faucets, and should the pipes have cooling coils connected with them, the beverage will become unduly chilled.

It is one of the objects of my present invention to provide means whereby the beverage may be returned from the pipes into the casks and there retained until it is again desired to force it to the faucets.

My present improvement makes use of the method of returning liquid under pressure to its receptacle by counter pressure and gravity, by employing means for connecting the draw faucet at its point of delivery to the counter pressure.

The passage of malt beverages through pipes has a tendency to gum and coat the inside of the pipes, rendering the same foul, and requiring frequent purging to keep them in a proper hygienic condition. The present improvement embodies means whereby the pipes may be filled with water for preventing them from becoming dry after the time the beverage has been returned to the cask and during the time the pipes remain idle, and also for the purpose of flushing and washing the pipes. This can be done by the employment of the present improvement without uncoupling the pipes from their connection with the casks or with the draw tubes which are ordinarily employed for establishing communication with the cask, and this while using a draw faucet of ordinary form.

In the drawings accompanying and forming a part of this specification, Figure 1 illustrates in a diagrammatic way a practicable embodiment of the present improvement in a beer service apparatus. Fig. 2 is a central section of a coupler employed in my present system; and Fig. 3 is a side elevation of a pair of couplers for use in a two pipe system.

Referring to Fig. 1 wherein the apparatus is represented as being connected up ready for use, there is provided a series of casks 10 connected to a series of faucets 11, each having a handle 12 for controlling a valve, by means of piping, in the present instance embodying a cooling coil 13 and a draw tube 14 passing through some suitable form of bung 15 into the cask, it being provided with some suitable form of head 16, which may be provided with a plug valve 17 controlled by a suitable handle 18 and having upon its upper end an outside screw threaded portion 19, (see more particularly Fig. 2), and upon which screw threaded portion an intermediary head or coupler member, designated in a general way by 20, is applied, it having an interiorly screw threaded hub 21 surrounding the screw threaded portion 19, the upper portion of which coupling has an exteriorly screw threaded portion 22 upon which a coupling, in the present instance the usual form employed with draw tubes and designated by 23, is applied, it having suitable handles 24 for its manipulation. This coupling is for the purpose of connecting the flexible tube 25 with the end of the draw tube 14. It will be readily seen that there is a direct and uninterrupted passageway from the cask through the draw tube to the faucet. When it is desired to apply my apparatus to an existing installation it is merely necessary to insert the coupling member 20 between the coupling 23 and the draw tube 14. The coupling 20 may be provided with one or more side arms 30, each of which is provided with a nipple 31 to receive the end of a flexible hose 32. The flexible hose 32 and 25 are sufficiently long that any one of the draw tubes may be withdrawn from the cask and replaced in a fresh cask without disturbing the other draw tubes of the series. Each of

the side tubes or passages 30 is provided with a valve 33 controlled by means of some suitable handle 34.

It will be seen that the dispensing tube at its lower end embodies a flexible hose 25, which hose will generally be lined with rubber in the present practice and the rest of the tube being made of block tin. The flexible tubing 25 and 32 is employed so that the connections between the dispensing tube and the draw tube will not have to be broken when it is desired either to substitute a fresh cask or for the purpose of cleaning. It is a well known fact that block tin is employed in connection with beer service systems on account of its greater cleanliness but that rubber has a certain amount of affinity for the heavier particles of the beer and that these tubes become foul, in fact the rubber hose is more subject to fouling than any other part of the system. It will be seen that the beer will be shut off from the cask below the rubber hose and that when the flushing takes place the rubber hose will also be included in the flushing circuit. Other devices which have been employed shut off the beer from above the flexible hose and do not include such hose in the flushing circuit thereby permitting the foulest portion of the system to remain in its foul condition but nevertheless carefully washing out those portions of the system which are made out of block tin which is essentially and naturally cleanly. Also it is above stated that the connections are permanent, of course it will be apparent that these may be unfastened as of course anything may be taken apart which man has put together but so far as the system, while in use except for the purposes of repairs, is concerned, these connections are permanent. They are neither uncoupled for the purposes of changing cask, as is done in some systems, nor for the purpose of connecting the pipes up in a different manner for the purpose of flushing and cleansing as is done in some other systems. After the couplings have been made sufficiently to hold the beer under pressure which passes through them, it is unnecessary to break these couplings. Such breaking and recoupling wears the parts and the washers are liable to become worn or lost and it will be impossible for the bar tender who would generally perform this work and who is not supposed to be a mechanic to get at all times the same satisfactorily tight joints which the skilled mechanic would get who first installed the system. All the bar tender has to do with the system, below the bar is turn on and off the faucets and he is not required to enter the realm of the mechanic.

The beer or other beverage will be forced from the casks to the faucets through the piping connections generally by means of compressed air, which may come from some suitable source of supply, as for instance, a storage tank 35, it being provided in the present instance with a line pipe 36 and pressure indicator 37. The line pipe may be connected to some suitable coupling member 38 by means of a flexible hose 39. The coupling member 38 is shown as having means for attaching a number of branch hose 40, each of which is controlled by a suitable valve 41; such hose 40 are connected to the respective bungs in some suitable manner, so that the compressed air from the source of supply 35 will enter the casks and force the beer or other beverage out through the draw tubes in the well known manner. When it is desired to return the beer which occupies the system of piping from the casks to the faucet back to the cask a suitable slip joint connection 42; which in the present instance is such as are made of rubber and are flexible to permit ready slipping on and off a faucet; connected to the line pipe 36 by means of a flexible hose 43 and controlled by a valve 44, will be slipped over the faucet and by its handle 12 the valve will be turned, whereupon the pressures being equalized at the top of the column of liquid within the connections from the cask to the hose and the pressure upon the surface of the liquid within the cask such column of liquid will by gravity flow down into the cask in a gentle and easy manner without agitating the contents of the cask. After the liquid has returned to the cask the valve 17 may be turned and thereby prevent the subsequent rising of the liquid upon the withdrawal of the slip joint connection from the faucet. If it is desired to return the liquid from all the lines of pipe for the purpose of closing the system, as for instance, as for the night, the slip joint connection 44 will be applied to each of the faucets successively, whereupon the system of pipes instead of containing the beer or other beverage will now be filled with compressed air. The system of pipes above the series of valves 17 may then be placed in intercommunication by opening all the valves 33, and when the valves 17 are closed the pipes may be flushed out by means of a slip joint connection 45, it being connected by means of a flexible hose 46 to some suitable source of water supply, as for instance a faucet 47 having a valve 48 for controlling it. This may be applied to one faucet and the other faucets opened in succession until sufficient water has passed through them, when all the faucets may be closed, the slip joint removed, and the system of piping above the valve 17 being filled with water will remain filled until it is desired to again dispense the beverage, when the faucets may be opened and the slip joint connection 42 from the compressed air applied to one of these, which will blow all the water out of the system of pipes. The slip joint connection 42 will then be re-

moved, the valves 33 closed and the valves 17 opened, and also the valves 41, which it will generally be found desirable to close when the system is not in operation, and upon the turning of the valve 12 in one of the faucets the beer will rise and pass out of the device, the beer traversing an uninterrupted path through the coupling device 20. At certain periods of the day the attendant may observe that the beverages from certain casks are not called for; he may at those periods return the beverage to the cask and without shutting off the casks keep it there by means of the compressed air in the pipes until such time as that particular beverage will again come in demand. By this means the beverage is never permitted to get chilled in the pipes or to become flat or fouled therein.

In Fig. 1 the coupling or intermediary head at the right hand side is shown as having a plug 49 replacing the valve in the unconnected side passage and a cap 50 may be put over the nipple.

Having described my invention I claim:

1. The beer service apparatus comprising a series of casks, a series of dispensing faucets, direct connection from the casks to the respective faucets and embodying valve controlled draw tubes and flexible hose, permanently attached flexible valve controlled connections coupling together the several cask-and-faucet connections each at a point between the hose and draw tube, a source of compressed air supply having connections with the respective casks, a slip joint connection for the faucet from the source of air supply, a source of water supply, and slip joint connection for the faucet from the source of water supply.

2. The beer service apparatus comprising a series of casks, a series of dispensing faucets, valve controlled draw tubes for entrance into the casks, piping directly connecting the faucets with the draw tubes and embodying flexible hose adjacent to the draw tubes, permanently attached valve controlled connections connecting the flexible hose adjacent to the draw tubes, a source of compressed air supply, means for connecting the source of air supply with the respective casks, means for connecting the source of air supply with a selected faucet, a source of water supply, and means for connecting this with a selected faucet.

Signed at Nos. 9–15 Murray street, New York, N. Y., this 19th day of January, 1906.

WILLIAM F. STARK.

Witnesses:

CHAS. LYON RUSSELL,

FRED. J. DOLE.