

(No Model.)

R. R. COGGIN.

AUTOMATIC STORAGE PRESSURE RESERVOIR.

No. 256,291.

Patented Apr. 11, 1882.

Fig. 1.

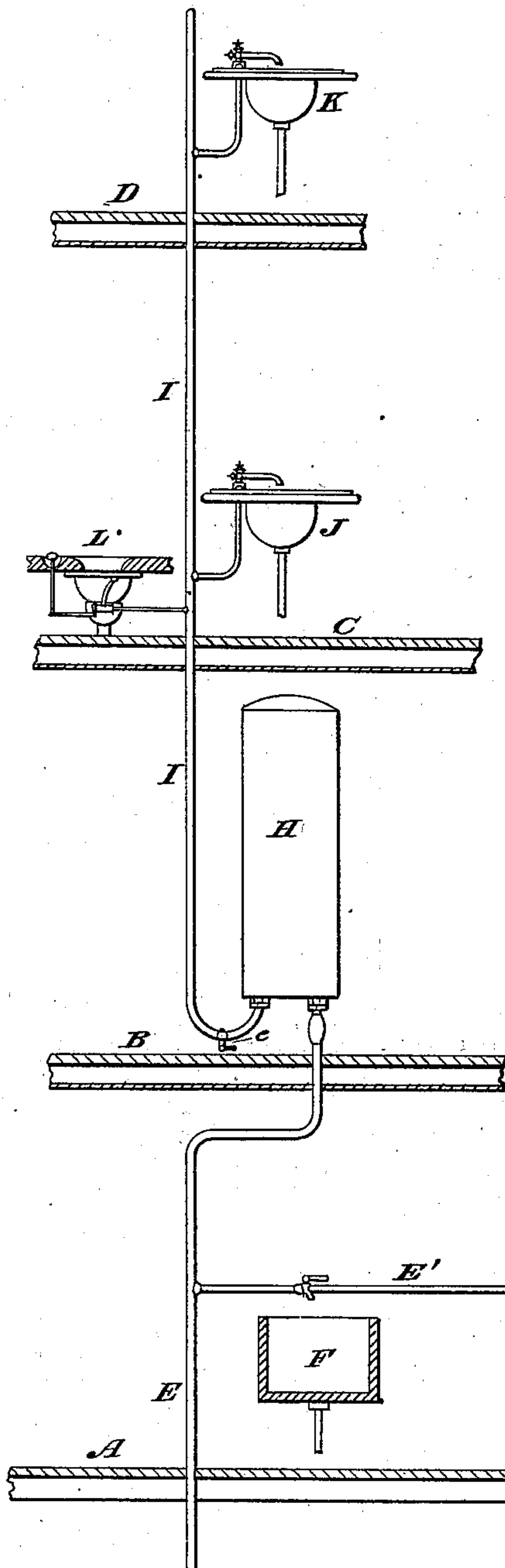
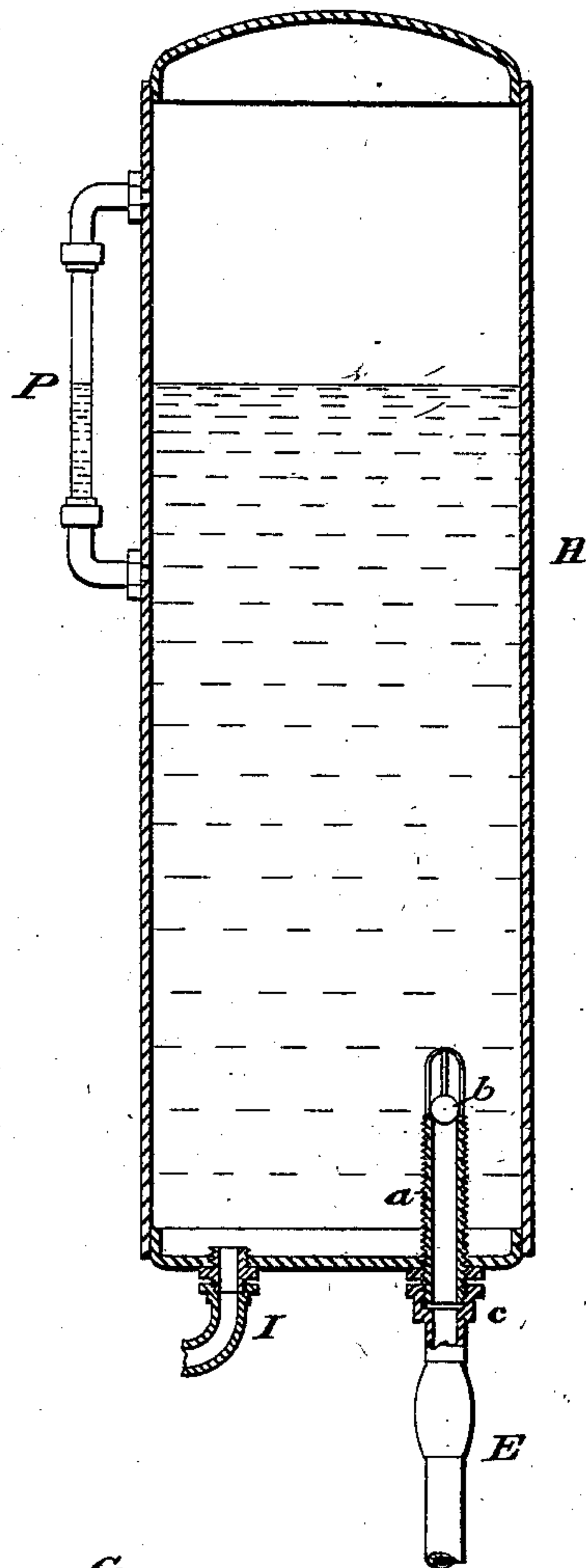


Fig. 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## AUTOMATIC STORAGE PRESSURE RESERVOIR.

SPECIFICATION forming part of Letters Patent No. 256,291, dated April 11, 1882.

Application filed December 24, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD R. COGGIN, a citizen of the United States, residing at Brooklyn, Kings county, New York, have invented certain Improvements in Automatic Storage Pressure Reservoirs, of which the following is a specification.

My invention relates in general to storage and pressure reservoirs arranged in the main water-service pipes of buildings to furnish an auxiliary supply to the basins, faucets, &c., that may be temporarily cut off by the opening of a faucet or faucets between them and the main.

The novel features of the invention will be definitely set forth in the claims.

In the drawings, Figure 1 is a general view, showing my invention on a small scale as applied in house-plumbing. Fig. 2 is an enlarged sectional view of the storage pressure reservoir detached.

Let A represent, for example, the kitchen-floor of a house; B, the parlor-floor, and C and D the upper floors.

E is the water-service pipe from the main, arranged to supply the house with water. This pipe supplies water to a sink, F, and closet G on the kitchen-floor by means of a branch pipe, E', the sink being interposed between the closet G and pipe E. The pipe E enters a storage pressure reservoir, H, shown as located on the parlor-floor at the bottom, as best shown in Fig. 2. Referring to this figure, *a* is a spud, which is screwed into the bottom of the reservoir H, extending upward inside about four inches by preference, and provided with a ball check-valve, *b*, arranged to seat itself on the end of the spud, and provided with a wire cage to prevent its escape. On the exterior end of this spud is screwed a tip, *c*, to which the service-pipe E is secured by a wipe-joint in a well-known way. The reservoir H may be of any size to suit the circumstances of the case; but for a house, as shown in Fig. 1, I prefer to employ a cylindrical galvanized iron vessel with a capacity of about sixty gallons.

I is the service-pipe for the floors above the storage-reservoir. This taps the bottom of the reservoir H much in the same way as the pipe E, but has no check-valve. It extends up to

the upper floors, C and D, and supplies, for example, basins J and K and a closet, L.

So far as described the operation is as follows: The water from the street-main enters the reservoir H, compressing the air therein until the reactionary pressure of the air equals the pressure in the main. Under ordinary circumstances this will fill the reservoir about two-thirds full. Now, when water is drawn at the sink F this is supplied directly from the service-pipe E, the check-valve in the reservoir preventing any water from returning thence after it has once passed into the reservoir. The basins J K and closet L are supplied wholly from the reservoir; and it will be found that the reduction of friction in the pipes, by bringing the reservoir close up to the basins, will enable the water to be drawn at both of these basins simultaneously, whereas if the service-pipe I extended directly to the main the friction would be sufficient to cause the flow at basin J to cut off the flow at basin K, provided the ordinary service-pipe permitted by law in cities be employed.

Should the plumbing require temporary repairs at the lower floor, as is often the case, and the water be cut off, the reservoir K will supply the upper floors during the interim. The pressure in the reservoir will (when the latter is cut off from the main) slowly decrease as the water is draw off; but with a large reservoir this will prove no drawback.

I have shown the closet G on the kitchen-floor arranged beyond the sink F. The sink in this case would of course cut off the water from said closet; and should the sink-faucet be open at the time the closet-knob was pulled the closet-valve would close before the water began to flow, and thus leave the pan dry. The seal being destroyed, the gas would rise from the waste-pipe and enter the house. To obviate this dangerous defect, which is likely to occur in any house plumbed in the usual way, I may provide the closet with a storage-reservoir for flushing, constructed substantially like the reservoir H, but smaller.

I may provide the reservoir H (see Fig. 2) with an ordinary gage, P, to show the level of the water therein. In case a small leak should exist at the top of the reservoir the air will es-



cape thereat and the water will rise in the reservoir; but should the reservoir be tight the air will tend rather to accumulate.

I prefer to place the storage-reservoir on the parlor-floor of a house, so as to bring it close to the basins it is to supply; but it might be placed on the kitchen-floor or in the cellar. In any case it will be placed below the cocks, basins, or closets it is intended to supply.

I may also place in the bend of the pipe I (see Fig. 1) a cock, *e*, whereby the water may be drawn off from the reservoir when desired. Any suitable kind of check-valve may be employed.

Having thus described my invention, I claim—

1. The combination, with the storage-reservoir H, of the main service-pipe E, arranged to admit water at its bottom, the check-valve

*b*, arranged to control the inlet, as shown, and the auxiliary service-pipe I, arranged to supply water from the reservoir to cocks beyond, all arranged substantially as herein set forth.

2. The combination, with the reservoir, of the spud *a*, secured in its bottom and arranged to project upward into the same, the caged check-valve *b*, arranged to close the inner end of the spud, the tip *c*, and the auxiliary service-pipe I, all constructed and arranged substantially as and for the purposes set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

RICHARD R. COGGIN.

Witnesses:

HENRY CONNETT,  
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