G. G. PERCIVAL.

Hydropneumatic Telegraphs for Hotel Annunciators.

No. 51,858. Patented Jan'y 2, 1866.

Fig 1

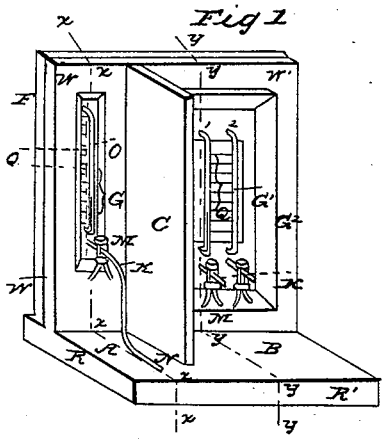


Fig. 2.

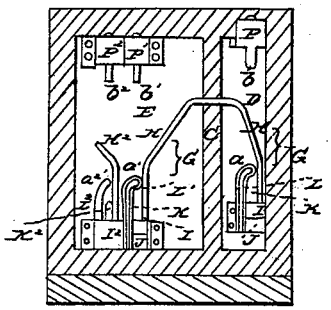


Fig. 3.

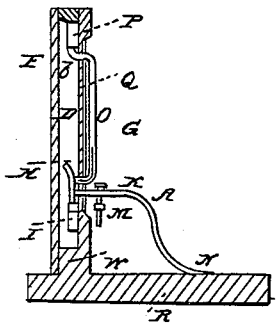
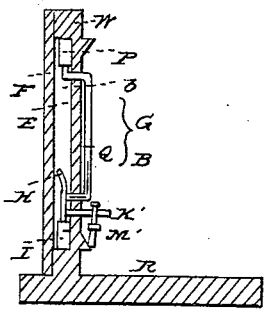


Fig. 4.



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN HYDROPNEUMATIC TELEGRAPHS FOR HOTEL-ANNUNCIATORS.

Specification forming part of Letters Patent No. **51,858**, dated January 2, 1866.

To all whom it may concern:

Be it known that I, GEORGE G. PERCIVAL, of Brooklyn, in the county of Kings, State of New York, have invented a new and Improved Hotel-Annunciator; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art of making to make and use the same, reference being had to the accompanying drawings, forming part of the specification, in which—

Figure 1 is a front perspective view of an apparatus constructed to illustrate this invention. Fig. 2 is a back elevation of the same after the covering F has been removed. Some of the minor details are in section. Fig. 3 is a vertical section through the lines *x x x x*, Fig. 1. Fig. 4 is a vertical section through the lines *y y y y*, Fig. 1.

Similar letters of reference indicate like parts.

The invention consists of a hydropneumatic telegraph connecting an office, for instance, with a number of rooms, each room being provided with an indexed gage, which is connected with a corresponding one in the office by means of an air-tube, which may, by the guest in the room, (or conversely,) be so inflated as to cause the fluids in the two gages to rise simultaneously and correspondingly, and thereby indicate, as per marginal reading, a number or an imprinted idea, forming a means of intelligence between distant points.

In the drawings, for the sake of compactness, the room A is represented as divided by a partition, C, from the office B. D and E are hollow spaces within the walls of the room and the office respectively, and are intended to be occupied by the various working portions and connections of the telegraphs, excepting the tubes O O′, which, projecting into the apartments with indices Q Q′ behind them, afford the means of reading the communicated information by the rise of the fluid in the tube, as will be presently explained. While each room or apartment is provided with one set of apparatus and connected by an independent tube with a similar apparatus in the office, the latter, of course, possesses a number equal to the aggregate of the rooms thus provided; but as a description of one will answer for each, I shall, in the main, confine myself to one set, and while Fig. 3 gives a view of the apparatus in the room, Fig. 4 shows it in the office, and Fig. 2 shows the connection between the two through the partition C by means of the air-tube H. The tube O in the room communicates at its lower end with an air-reservoir, I, containing a portion of colored fluid, J. The air-chamber I communicates by a pipe, H, with a similar air-chamber, I′, in the office apparatus, and occupies the same relation to the colored fluid J′ which supplies the tube O′ in the office. The pipe H has a branch, K, which enters the room for the use of the guest, who, by means of the mouth-piece N, is enabled to inject air into the tube, the pressure of which, acting in the chambers I I′ upon the fluids J J′, causes them to rise through tubes L L′ simultaneously into the tubes O O′. Behind the said tubes are placed graduated tables, consisting of corresponding lists of articles likely to be needed by a guest, or figures which, by a preconcerted tabular arrangement, are understood to indicate such and such articles or inquiries, and the upper surface of the liquid indicates the desire of the guest on the apparatus in room and office simultaneously.

Other means of inflation of the pipes may be adopted—as, for instance, a compressible hollow sphere connected with the pneumatic tube.

At the office end the tube H has also a branch pipe, K′, and the latter, as well as the pipe K in the room, has a clamp placed upon it. They are marked M′ and M respectively in Figs. 1, 3, 4. Their purpose is to retain the tube H at a certain degree of inflation, so that the pressure shall retain the colored liquid in the tube O O′ at the designed height until the pressure is relaxed at the end to which the intelligence is sent, which is equivalent, to the sender, that the information has been received.

Air-receptacles P P′ are provided above the indicator-tubes O O′, respectively, to prevent overflow of the liquid when excess of pressure is applied.

I^2 K^2 L^2 P^2, Fig. 2, indicate respective portions of another apparatus in the office with a supposititious connection by the tube H with another room.

The attention of the party in the office may

be called by any ordinary means not shown to the annunciator, and after reading the indication thereon he releases the clamp M′, which allows the extra air to escape and the fluid to settle to its normal height, or communicates back the desired information.

Having described my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

The combination of the chambers I I′, fluid-tubes O O′, indices, Q Q′, connecting air-pipe H, and means for injection, retention, and escape for the contained air, substantially as described.

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