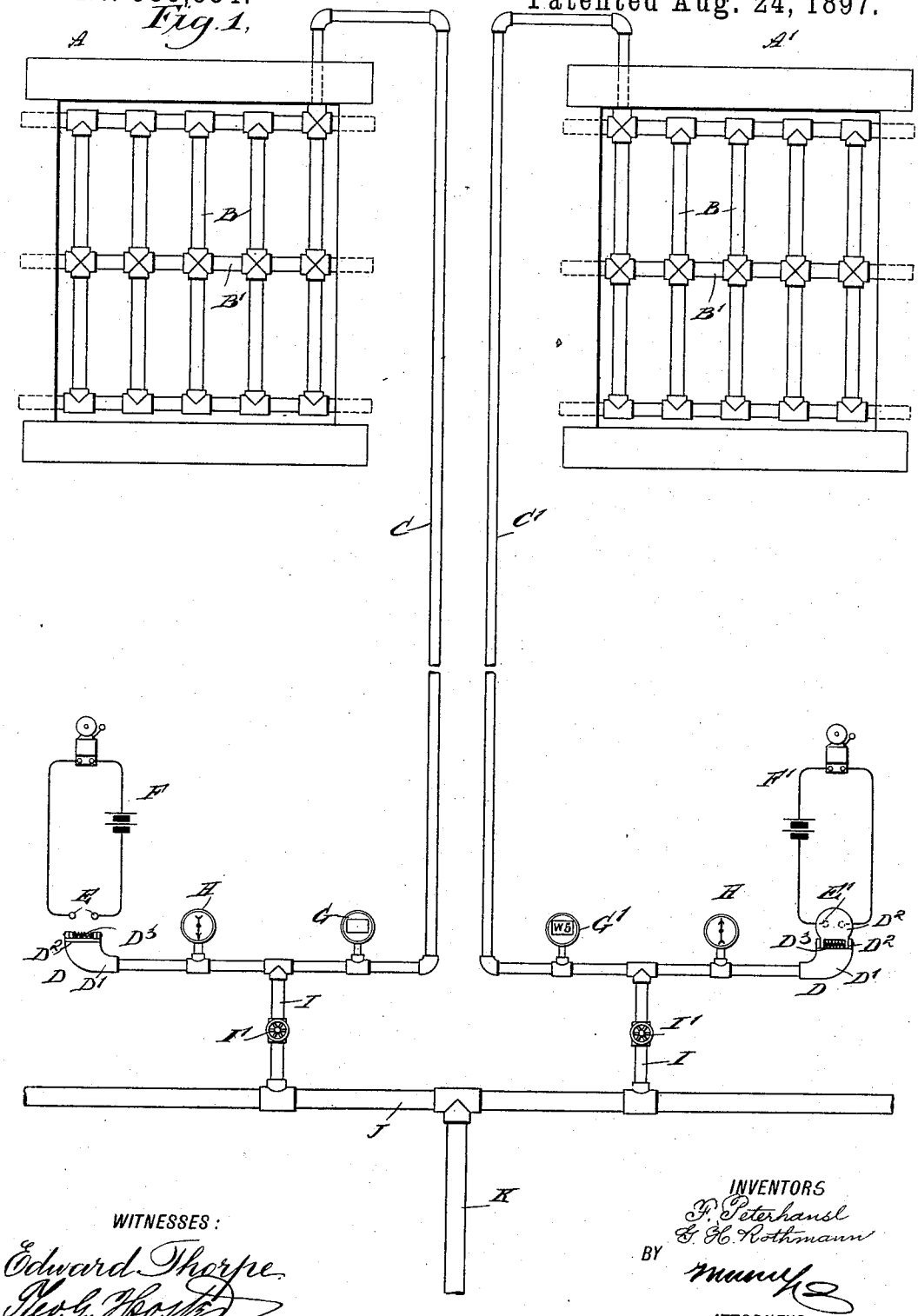
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PRISON CELL, VAULT, &c.

No. 588,834. Patented Aug. 24, 1897.

Fig. 1.



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Fig. 2.

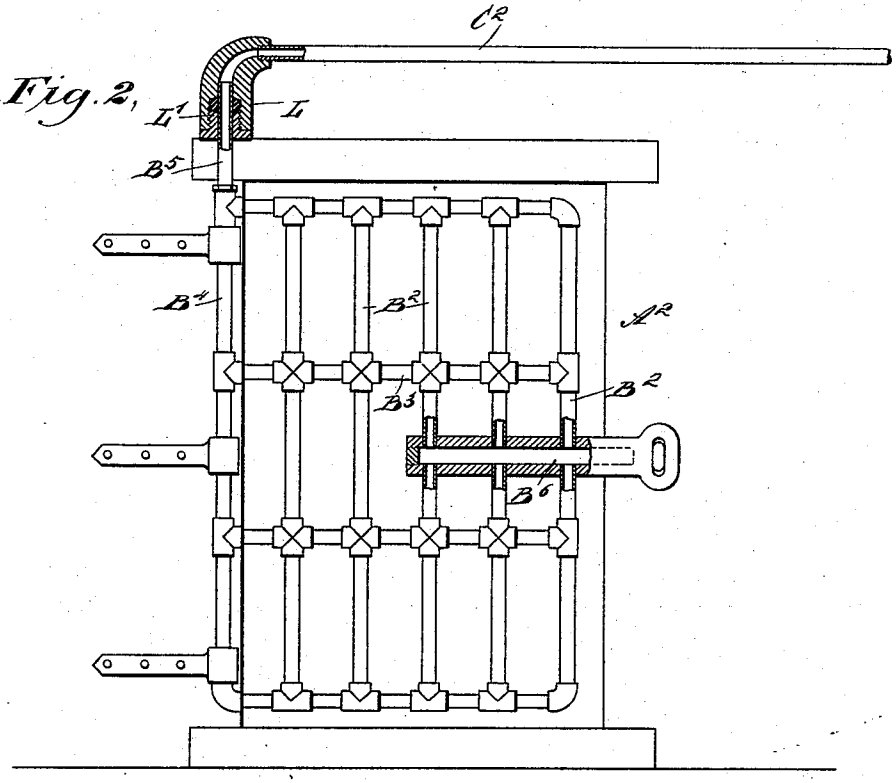


Fig. 3.

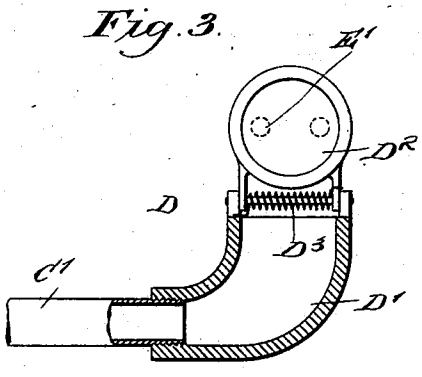
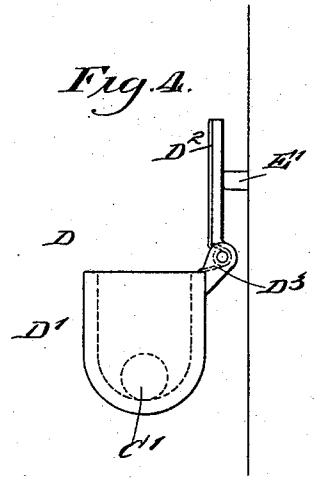


Fig. 4.



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UNITED STATES PATENT OFFICE.

FRANK PETERHANSL, OF BROOKLYN, NEW YORK, AND GEORGE H. ROTHMANN, OF RUTHERFORD, NEW JERSEY.

PRISON-CELL, VAULT, &c.

SPECIFICATION forming part of Letters Patent No. 588,834, dated August 24, 1897.

Application filed February 9, 1897. Serial No. 622,618. (No model.)

To all whom it may concern:

Be it known that we, FRANK PETERHANSL, of Brooklyn, in the county of Kings and State of New York, and GEORGE H. ROTHMANN, of Rutherford, in the county of Bergen and State of New Jersey, have invented new and useful Improvements in Prison-Cells, Vaults, Cages, &c., of which the following is a full, clear, and exact description.

The object of the invention is to provide certain new and useful improvements in prison-cells, cages, treasure-vaults, and like structures, whereby attempts to break the doors, walls, or windows of the same are at once signaled automatically to a central office to enable the authorities to frustrate the escape of the prisoners from the cells or attempts of burglars to break into the vaults.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement as arranged for window-gratings. Fig. 2 is a similar view of the improvement as arranged for doors, parts being in section. Fig. 3 is an enlarged sectional side elevation of one of the alarm-valves, and Fig. 4 is an end elevation of the same.

The improvement, as illustrated in Fig. 1, is applied to the windows A A', each of which has a grating formed of a series of vertically-disposed pipes B and horizontally-arranged pipes B', connected with each other in such a manner that the several pipes are in communication with each other, the pipes being set in the walls of the window to securely hold the grating in place. Each of the hollow gratings thus formed by the several pipes is connected by a pipe C or C' with a central office, and the end of each pipe C C' from a corresponding window is provided with a valve D D, respectively, formed with a valve-casing D', adapted to be closed by a hinged valve D^2, pressed on by a spring D^3, to hold the said valve normally in an open position. The valve D^2 when in this position makes contact with the contact-plates E or E' of an electric alarm F F', so that the alarm is sounded whenever the valve is in an open position. Each of the pipes C C' is provided with an indicating-disk G or G', indicating the number of the cell containing the corresponding window A or A', respectively. Each of the pipes C C' is also provided with a vacuum pressure-gage H, and each pipe is connected by a branch pipe I with a pipe J, connected by a pipe K with a vacuum-pump or other device for forming a vacuum in the pipe C C', and the window-grating formed of the hollow connected pipes B B'.

Each branch pipe I is provided with a valve I', so that each corresponding pipe C or C' may be connected or disconnected with or from the vacuum-producing device to reduce the pressure in the pipes to the desired degree, as indicated by the corresponding vacuum-gage H. When the pipes C C' are exhausted to form the vacuum, the valves D^2 are held close on the casings D', and when the vacuum has been established the said valves are held to their seats by atmospheric pressure against the tension of the springs D^3.

Now it is evident that when a prisoner in trying to escape breaks in one of the bars B B' air passes through the opening made in the pipe to fill the grating and the corresponding pipe C C', so that the vacuum is broken, and consequently the spring D^3 causes the valve D^2 to fly open into the position shown in Figs. 3 and 4 and at the right in Fig. 1 to close the circuit for the corresponding alarm F F' to sound the same, and thus notify the authorities that an attempt at breaking jail is made, and at the same time by the indicating-disk G or G', a corresponding alarm sounding, the number of the cell is given from which the attempt is made. The under side of each valve D^2 may be provided with the indicator, so that when the valve flies open the number of the cell is exposed to view.

For doors A^2 vertical and horizontal pipes B^2 and B^3 are connected with each other and with the pipe B^4, forming the pintle for the door to swing on, and this pintle is provided with a short pipe B^5, mounted to turn in a suitable stuffing-box L', held in an elbow L, connected by the pipe C^2 with the central of-

fice, similarly to the pipes C C', above described. The hasp B^6 for the door A^2 is made hollow and connected with several of the pipes B^2, so that in case one of the pipes B^2 B^3 or the hasp B^6 is cut by a prisoner or burglar air passes into the hollow pipes or hasp to break the vacuum and to cause the sounding of an alarm, as above described in reference to Fig. 1.

Now it will be seen that by the arrangement described great security is obtained for prison-cells, treasure-vaults, cages, and the like, and any attempt to break the doors, walls, windows, and the like is at once signaled to the central office to notify the authorities of the occurrence. The several pipes forming the gratings or bars are connected with each other by suitable T's, elbows, or other fittings, or the pipes may be soldered together or otherwise connected with each other, it being, however, understood that they are always in communication with each other to permit of forming a vacuum therein, as above described.

We are aware that gratings, doors, and the like have been made of pipes filled with water, air, or other fluid under pressure, but we do not claim such an arrangement.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. A prison-cell, vault, cage, &c., provided with a network of connected pipes forming the wall, grating, door, or the like, a pipe leading from the said pipes and adapted to be connected with an exhaust device, said pipe having an outlet adapted to be closed by a spring-actuated cover, and an alarm operated by said cover, substantially as described.

2. A prison-cell, vault, cage, &c., provided with a network of connected pipes forming the wall, grating, door, or the like, a pipe leading from the pipes and adapted to be connected with an exhaust device, said pipe having an outlet adapted to be closed by a spring-actuated cover, an alarm operated by said cover, and an indicator in the said pipe, substantially as described.

3. A window-grating made of a series of connected pipes, a pipe connected with the said grating and leading to a central office, means for exhausting the air from the said pipe and grating, and an alarm-valve held on the said pipe and closed by atmospheric pressure and adapted to be opened by a spring, and an alarm adapted to be sounded on the opening of the said valve, as set forth.

4. A window-grating made of a series of connected pipes, a pipe connected with the said grating and leading to a central office, means for exhausting the air from the said pipe and grating, an alarm-valve held on the said pipe and closed by atmospheric pressure, and adapted to be opened by a spring, an alarm adapted to be sounded on the opening of the said valve, and an indicator in the said pipe, substantially as shown and described.

5. A door formed of a series of connected pipes, a pintle connected with the said pipes and having an extension, and a pipe leading from the said extension to a central office, the said pipe being provided with an alarm-valve adapted to be opened by spring-pressure on breaking one of the pipes, substantially as shown and described.

6. A door formed of a series of connected pipes, one of which serves as a pintle, and provided with a hollow hasp connected with sundry of the pipes, and a pipe connected with the pipe forming the pintle and adapted to be connected with an air-exhaust device, said pipe having an outlet adapted to be closed by a cover normally held open by a spring, substantially as described.

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