

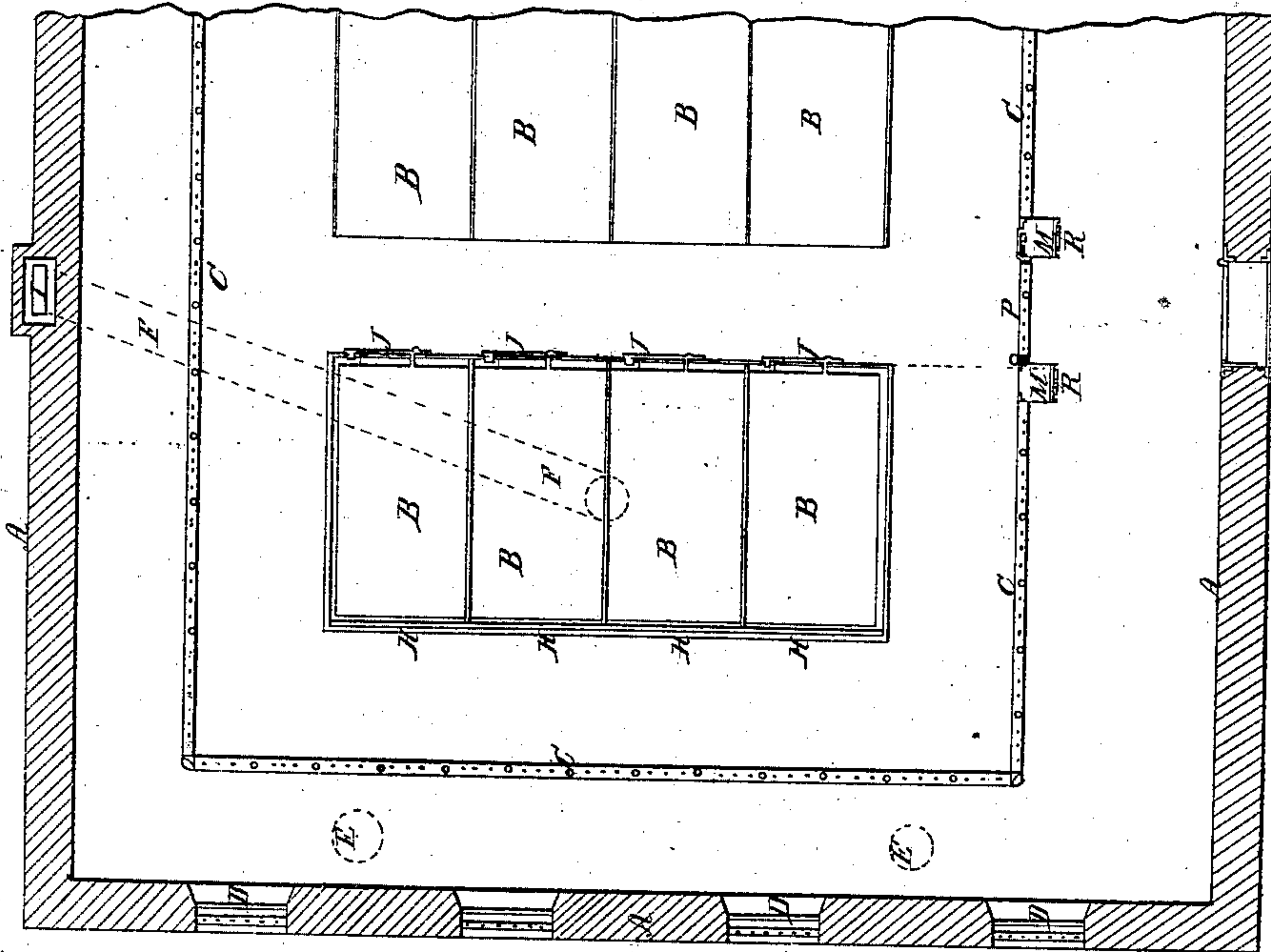
*I. Hodgson.*

*Iron Structure.*

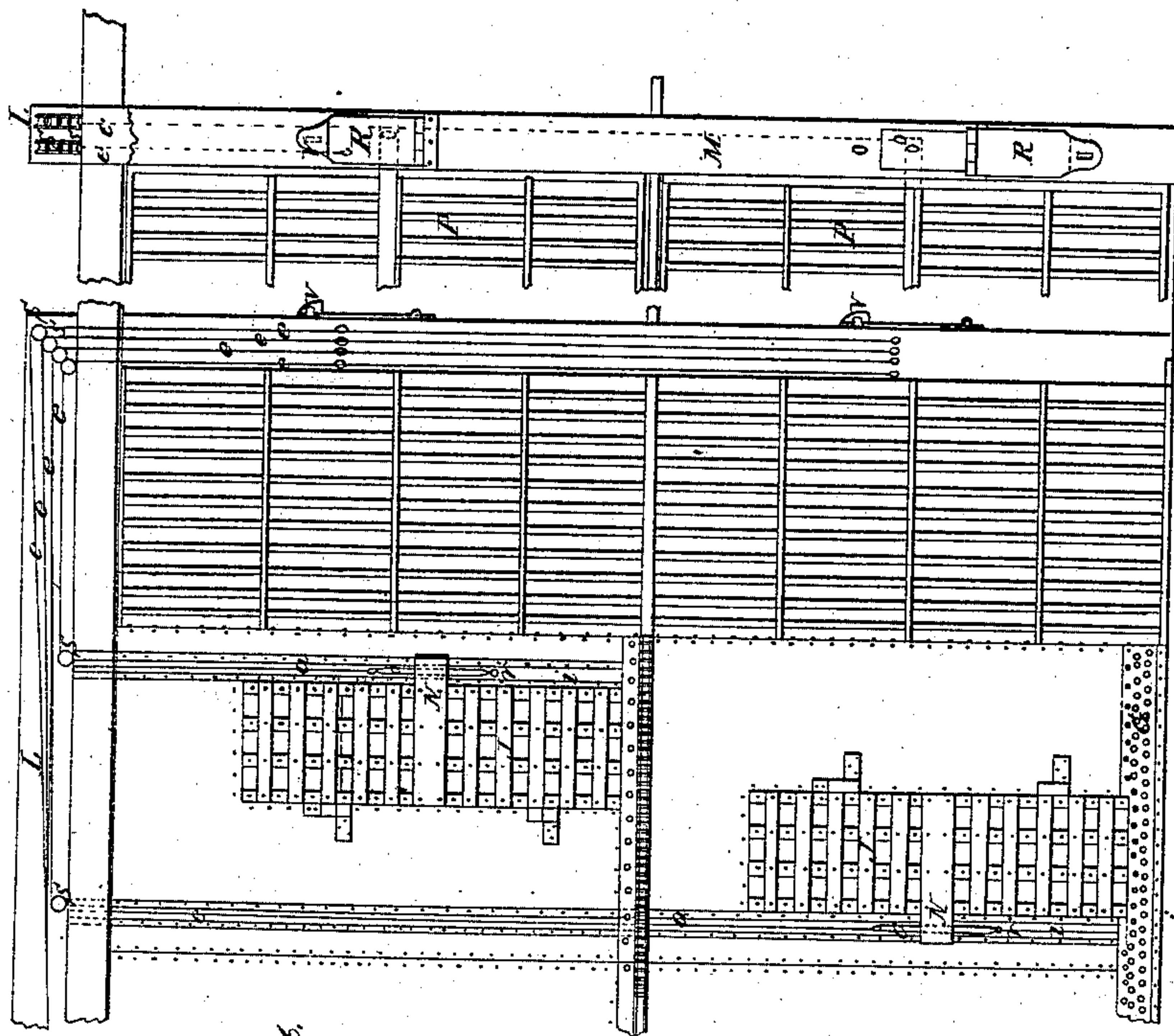
*N<sup>o</sup> 78,966.*

*Patented Jan. 16, 1868.*

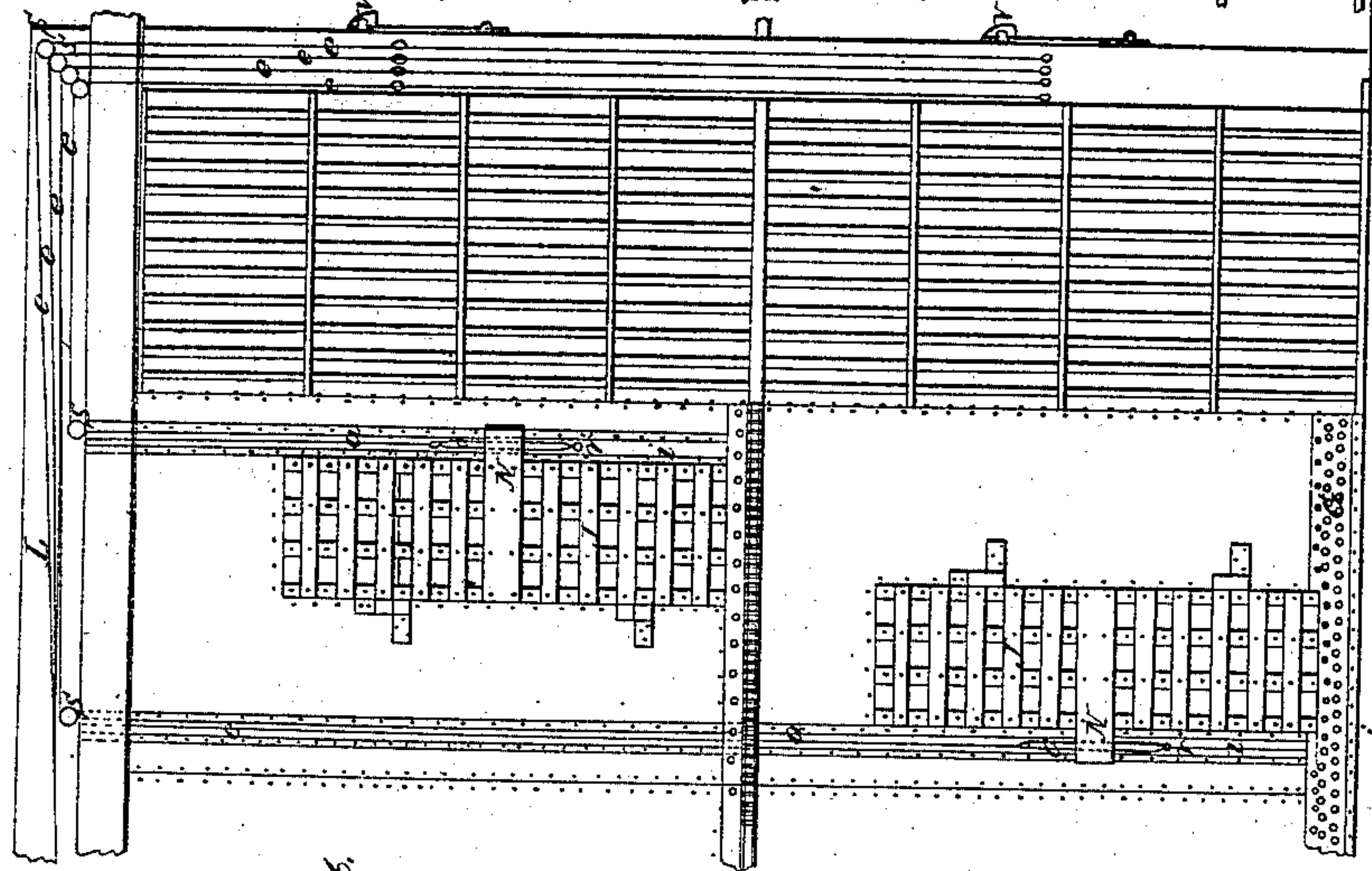
*Fig. 1.*



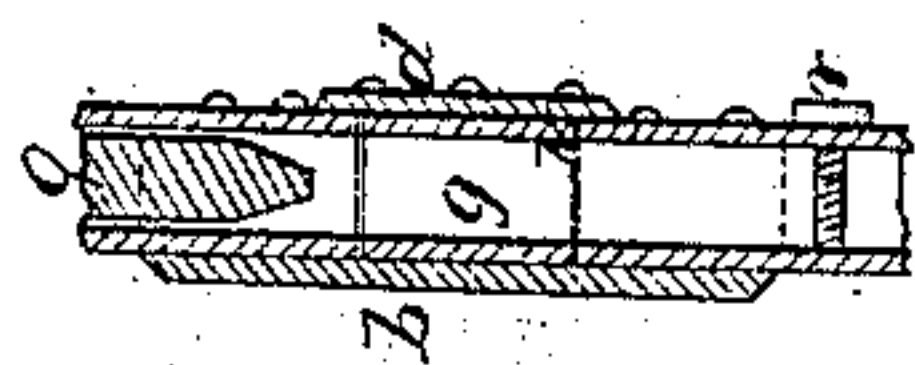
*Fig. 3.*



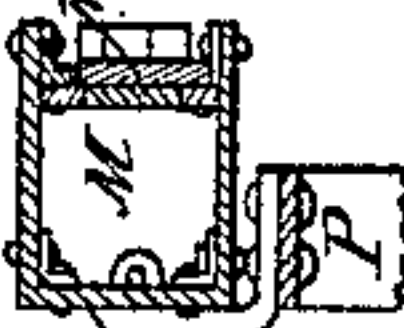
*Fig. 2.*



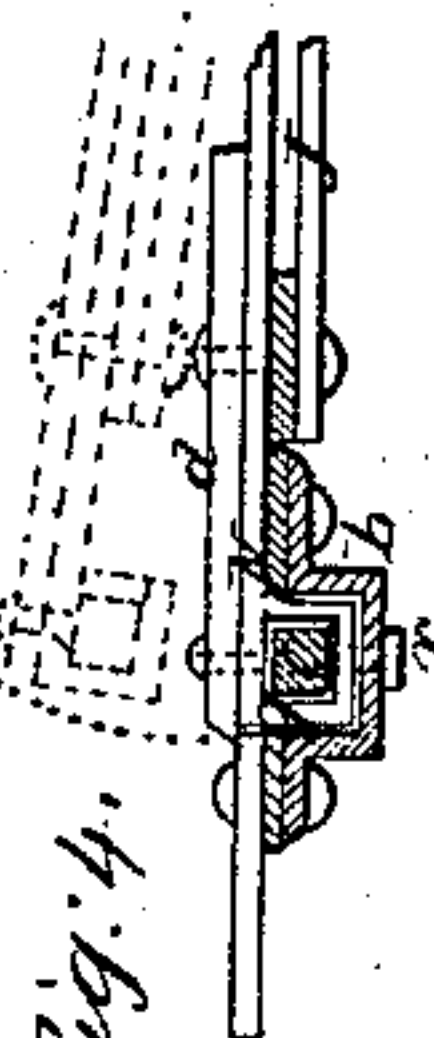
*Fig. 6.*



*Fig. 5.*



*Fig. 4.*



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# United States Patent Office.

ISAAC HODGSON, OF INDIANAPOLIS, INDIANA.

*Letters Patent No. 78,966, dated June 16, 1868.*

## IMPROVEMENT IN CONSTRUCTION OF PRISONS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, ISAAC HODGSON, of Indianapolis, in the county of Marion, and State of Indiana, have invented new and useful Improvements in Prisons; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making part of this specification.

This invention relates to arrangement of the cells and interior of prisons, and to the mode of securing the cell and other interior doors, combining superior arrangements for warming, lighting, and ventilating with an improved mode of securing and manipulating the fastenings of the cell-doors.

Figure 1 is a ground plan of the prison, the cells and other interior portions of which are constructed and arranged with reference to the application of my improvements, the drawing representing a portion of the plan cut away.

Figure 2 is a section taken through the central corridor, close to the cells, and cutting one of the hollow door-posts in the grating-enclosure surrounding the cells.

Figure 3 is a front view of one of the hollow or box-posts, showing part of the doors leading to the cell-enclosure.

Figure 4 is a detail section of the cell-doors, showing the hinge and mode of fastening.

Figure 5 is a horizontal section of the hollow door-post and portion of the door, showing the hasp situated at the entrance of the cell-enclosure.

Figure 6 is a vertical section of a portion of the box or way for the bolt-fastening, showing section of the eye and of the hasp of the cell-doors, and a portion of the bolt for securing the doors.

Similar letters of reference indicate like parts in the several figures.

The following description will enable skilled artisans to make and use my invention.

A A are the exterior walls of the prison, of brick, stone, or other suitable material, and which, on account of the construction and arrangement of the interior, need not be of the strength or cost of prison-walls as usually built.

In the central portion of the space enclosed by the walls A are the iron cells B, and surrounding the cells is a substantial iron grating, C, the whole being so arranged that sufficient space for corridors is left between the grating C and the outer walls, for the use of the jailor or guards and visitors, and between the grating and the cells for the use of the prisoners. The exterior walls are furnished with windows, D, for lighting the interior, and the ends of the cells toward the exterior wall are made of grating for the admission of light to the cells.

The building is warmed by furnaces placed in the basement, in the usual manner, the warmed air being admitted to the prison-room through registers placed in the outside corridor, as shown at E. The doors of the cells are made so as to permit the warmed air to circulate freely through them, so that it may permeate every portion of the cells.

The floors of the cells are raised about six inches above the principal floor of the prison, in order to provide both for the ventilation of the prison and to utilize the warmth of the escaping air to warm the cell-floors.

The prison is ventilated by means of ducts, indicated by dotted lines, F, under the floor. These ducts open into the space under the cells, and connect with a metal pipe, I, enclosed in the smoke-flue, so that it may be heated to establish a draught, or the foul-air ducts may open into any other flue, whether heated or not, as may be desired. The foul air of the prison is drawn downward through the perforated base G, fig. 2, under the cells, and is conveyed by the duct F to the flue I, and thence to the external air.

It will be seen that this arrangement of the cells within the grated enclosure in the central portion of the prison, provides great security against escape of the prisoners. The cells being isolated from the exterior wall, and complete in themselves, aid to the prisoners from the outside is rendered more difficult than when the cells adjoin the outer wall. Additional security is provided by the grating C that surrounds the cells, and intervenes



between them and the outer wall. This construction and arrangement of the cells also affords superior advantages for warming, lighting, and ventilating them, and the arrangements for warming, lighting, and ventilating, present no facilities for escape of the prisoners, as they are not permitted the use of the outer corridor in which the warm-air registers are placed, and the ventilators are not accessible. Besides, the cells are exposed fully to view of the jailor or guard, and the outer ends, H, of the cells being open grating, for the admission of light and warmed air, also expose the prisoners to convenient surveillance.

The device for securing the cell-doors, J, consists of the eye *g* of the hasp N of the door and the drop-bolt O. The drop-bolt O is securely housed in a double-angle or U-iron, *a*, set vertically, and securely riveted, near the edge of the doorway, to the inside of the plate, constituting the inner or door-end of the cells, and forms a vertical tube or guide-way for the bolt O, and safe housing for the cord *e* by which the bolt is suspended and operated.

The double-angle or U-iron *a*, shown in red lines in fig. 2, in horizontal section in fig. 4, and in vertical section in fig. 6, extends from the floors of the cells up to and connects with the cord-way L above the ceiling of the prison.

The cord-way L is a horizontal iron box, placed above the ceiling of the prison, to house and protect the cords *e* by which the bolts O O are suspended and operated. The cords *e* run over sheaves S in the cord-way L; those immediately over the hollow door-posts M being arranged as shown, and set nearly touching each other, to prevent the cords getting out of place.

The cord-way is made with a shutter to cover the top, so as to afford convenient access to the cords when required for repairs, and which at other times is to be securely fastened, to prevent the cords being tampered with. The eye *g* of hasp N of the cell-doors is of the same transverse dimensions as the angle-iron *a*, and a piece is cut out of the latter of sufficient length to let the eye *g* shut neatly into the space, and should fit so as to form a connected tube with *a* without obstructions. This opening and the adjacent ends of the angle-iron *a* are encased in a larger iron, *b*, that is securely riveted to the cell-wall, and the wall is cut through to allow the eye *g* to shut into the space cut out of the angle-iron *a*, and fair with the cell-wall, over which, on the outside, a plate, *d*, fig. 6, is riveted, to entirely cover the opening and protect the bolt O.

The cell-doors are fastened by iron bolts, O, suspended in the angle-iron way *a*, and operated by means of the cords *e*. The door-posts M of the grating-enclosure are made hollow, about eight inches square, or other convenient size, and extend from the prison-floor, and connect with the cord-ways L above the ceiling, and, with the cord-ways and tubes *a*, form a continuous and secure housing for the cords *e*.

A screw-bolt, *r*, is inserted through the cell-wall from the outside, the end projecting into the tube *a* to form a stop to the descent of the bolt O, and hold it in proper position in the eye *g*. This stop is made removable, so that in case the cords *e* break, the stop can be taken out to let the bolt O down to the permanent stop *i*, which is placed so that the upper end of the bolt will be opposite the opening into which the eye *g* shuts, when the cord may be readily readjusted. This arrangement, in connection with the cord-way L over the ceiling, affords convenient facility for repairing the cords, when broken, at trifling cost.

The doors, P, to the grating-enclosure are furnished with a hasp, *k*, the eyes of which enter a slot in the back of the posts M, and are secured by a padlock in the eye within the posts. The openings in the posts that afford access to these padlocks and to the cords *e*, are closed by shutters, R, that are hinged at the bottom to the posts, and are secured by padlock through staples fixed in the posts that enter a slot in the top of the shutter, and the tops of the shutters are furnished with a hood, V, to cover the padlocks and protect them from blows struck by persons attempting to effect unlawful entrance.

The device for securing the cell-doors is operated from the opening in the posts M by means of the cords *e*, and enables the jailor to unfasten one or more of them at pleasure, and combined with the grated enclosure C, enables him to have full command of the prisoners without coming in contact with them.

I make no claim to any particular mode of warming, lighting, or ventilating the prison, as these may be varied as circumstances may require.

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

1. The hollow door-posts M, furnished with the hooded shutters R, the cord-ways L, and vertical tube or U-iron, *a*, substantially as set forth.
2. The hasp N and eye *g*, bolt O, and cords *e*, and stops *r* and *i*, constructed and arranged substantially as and for the purpose set forth.

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Witnesses:

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