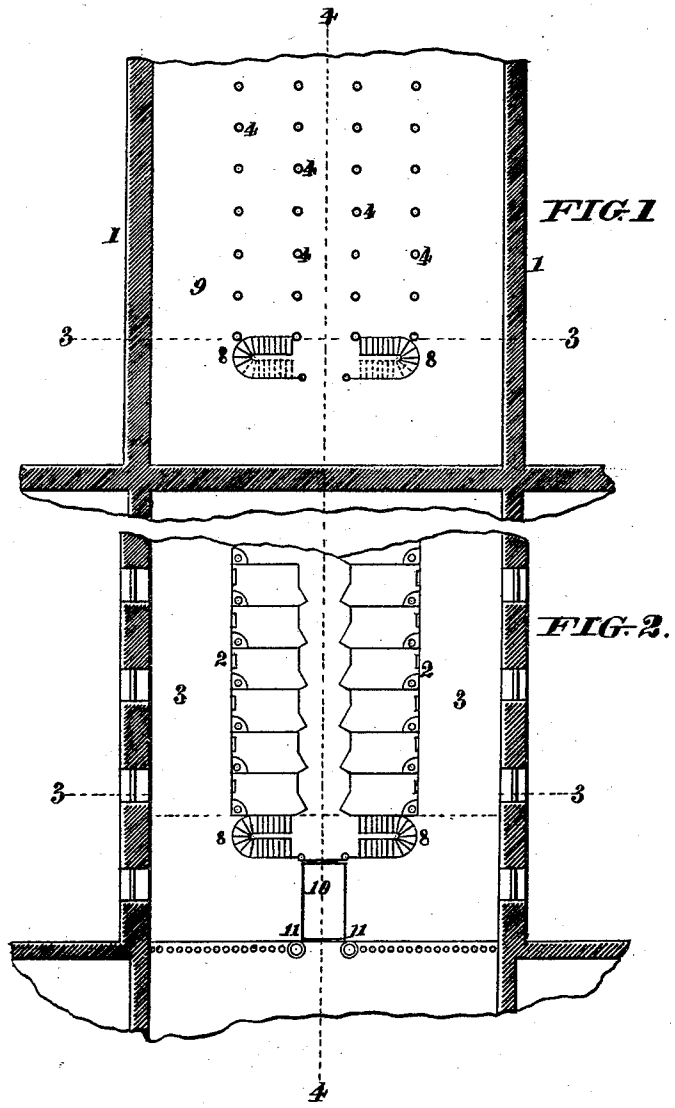
3 Sheets--Sheet 1.

J. B. COOK & J. W. HEATH.

Construction of Prisons.

No. 168,455. Patented Oct. 5, 1875.



WITNESSES

J. Scheithauer
LeBlond Burdett

INVENTORS

J B Cook
J W Heath
By Knight Bros
Attys

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

3 Sheets--Sheet 2.

J. B. COOK & J. W. HEATH.

Construction of Prisons.

No. 168,455. Patented Oct. 5, 1875.

FIG. 3.

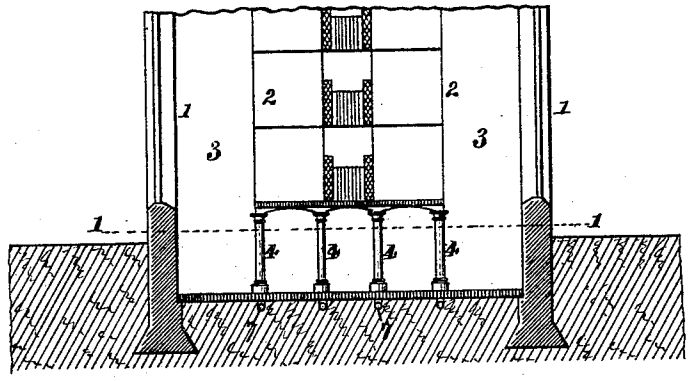
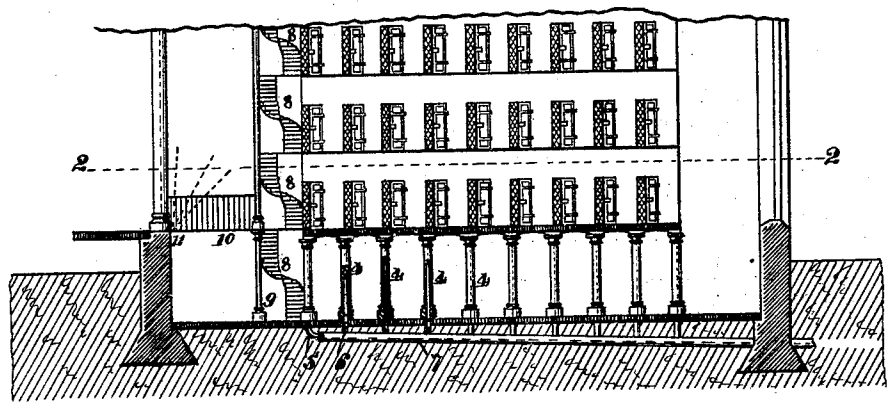


FIG. 4.



WITNESSES

J. Schettler

L. Blond Burdett

INVENTORS

J. B. Cook

J. W. Heath

By Knight Bros

Attys

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

3 Sheets--Sheet 3.

J. B. COOK & J. W. HEATH.

Construction of Prisons.

No. 168,455. Patented Oct. 5, 1875.

FIG. 5.

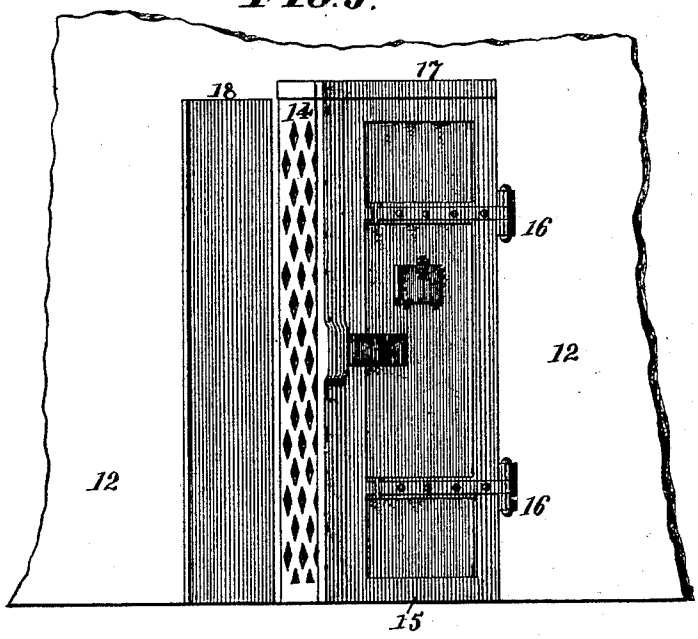
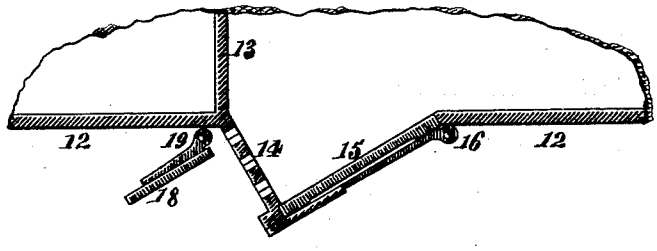


FIG. 6.



WITNESSES

J. Scheitlin

LeBlond & Burdett

INVENTORS

J B Cook

J W Heath

By Knight Bros

Attys

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES B. COOK AND JAMES W. HEATH, OF MEMPHIS, TENNESSEE.

IMPROVEMENT IN THE CONSTRUCTION OF PRISONS.

Specification forming part of Letters Patent No. **168,455**, dated October 5, 1875; application filed September 14, 1875.

CASE A.

To all whom it may concern:

Be it known that we, JAMES BARTHOLOMEW COOK and JAMES WILSON HEATH, of Memphis, in the county of Shelby and State of Tennessee, have invented certain new and useful Improvements in the Construction of Prisons, of which the following is a specification:

This invention relates in part to certain improvements in the construction of a prison, the general plan of which was devised and applied by one of these applicants in the construction of the Shelby county jail in the city of Memphis in the year 1860. The said jail was built on arches, with guard-spaces around the cells, extending from foundation to roof.

The present improvements consist, first, in supporting the inner structure containing the cells on hollow columns, through which are conducted the sewer-pipes and water-supply pipes, so that the said pipes may be concealed from the prisoners and protected from injury, and so that a clear open space may be afforded in the basement story for exercise.

The improvements consist, secondly, in providing a prison, which is built with an inner structure of cells, within and separate from the main or outer building, with a hinged or swinging gangway, affording communication between the main hall or outer building and the cells, and adapted to be turned up, so as to cut off such communication when required.

The improvements further consist in constructing a cell-door with a perforated jamb projecting from the face of the wall, the door proper being oblique to the face of the wall, and the perforated jamb permitting a view of the interior of the cell without opening the door, and without the necessity of gratings or other openings therein.

The improvements further consist in combining, with the aforesaid projecting perforated jamb, a secondary door for closing the said perforated jamb when required.

The last two improvements referred to are equally applicable to prisons of other construction.

In the accompanying drawings, Figure 1 is a horizontal section of structure, the plane of section being taken at the basement, as indicated by the line 1 1, Fig. 3. Fig. 2 is a horizontal section of structure, the plane of section being taken at the first story, or the story above the basement, as indicated by the line 2 2. Fig. 3 is a transverse section on the line 3 3, Figs. 1 and 2. Fig. 4 is a longitudinal section on the line 4 4, Figs. 1 and 2. Fig. 5 is an elevation view of a cell-door on a larger scale. Fig. 6 is a plan of same.

The entire prison consists of a jail within a jail, 1 1 representing the walls of the external building, and 2 2 the internal structure of cells. 3 is a corridor, open from basement to ceiling or roof surrounding the cells. The basement 9 of the cell structure is built on hollow columns, 4. The object of this is to give a clear space beneath the cells, to afford ample exercising-ground within the building for prisoners, where they are exposed to the view of the guard. The columns are constructed hollow for the purpose of utilizing them for the reception of water-pipes and sewer-pipes, 5 6. The water-pipes are carried up through the columns. The sewer-pipes are brought down through the same and connected to a common sewer, 7, as shown in Fig. 4, flowing out to the rear of the building. The external pipes may be employed alternately for sewerage and water. By this method the pipes are kept out of the reach of the prisoners, and are protected from multilation. 8 8 represent stairways, of any ordinary construction, affording access to the successive tiers of cells from the basement 9. The gangway plates or floors of passages between cells on the different floors are perforated for light and ventilation, permitting the free passage of air. 10 represents a gangway, hinged at 11, after the manner of a draw-bridge, so that it may be elevated, as illustrated by dotted lines in Fig. 4. This gangway affords communication between the main or external building 1 and the inner building or cell structure 2. During the day it can be lowered, whenever it is necessary to pass from the main hall of the jails to the cells, and again raised when not in use. At night, at lock-up time, it is to be raised entirely, so as to cut off all communi-

cation between the cells and the main building. The doors of the cells are constructed as more particularly illustrated in Figs. 5 and 6, in which 12 12 represent the external walls of the cells, and 13 a partition-wall thereof. 14 is a jamb projecting obliquely from the face of the wall 12, and perforated to afford a view of the interior of the cell without opening the door 15, which is hinged at 16, and when in position is closed against the projecting jamb 14, thus forming an angle with the face of the cell-wall. The top space above the door is closed solid by the cap-plate 17. 18 represents a supplemental door or shutter, hinged at 19 to the wall, for closing the perforated projecting jamb 14 at the will of the guard. The shutter 18 is furnished with suitable locks, so that it can be securely fastened. The use of the perforated projecting jamb 14 does away with the necessity of openings in the cell-doors, and affords a free circulation of air through the cells at all times while the shutters 18 are open, and being set and arranged as illustrated, they do not permit prisoners in opposite cells seeing or communicating with each other. This mode of constructing and arranging cell-doors is applicable to prisons built on any other plan or method of arrangement. The jambs and accessories to the doors can be made of any metal or material.

The following is claimed as new:

1. A structure of cells set on hollow columns, substantially as and for the purposes set forth.

2. The swinging or hinged gangway 10, employed in combination with an inner structure of cells and an outer main building, substantially as and for the purposes set forth.

3. The construction of cell-doors with perforated jambs projecting from the face of the wall, substantially as and for the purposes set forth.

4. The combination, with the cell-door 15 and projecting perforated jamb 14, of the supplemental door or shutter 18, for closing the openings in the said perforated jamb when required.

JAMES B. COOK.
JAMES W. HEATH.

Witnesses:
A. F. SCHULZE,
WM. BERRY.