

(No Model.)

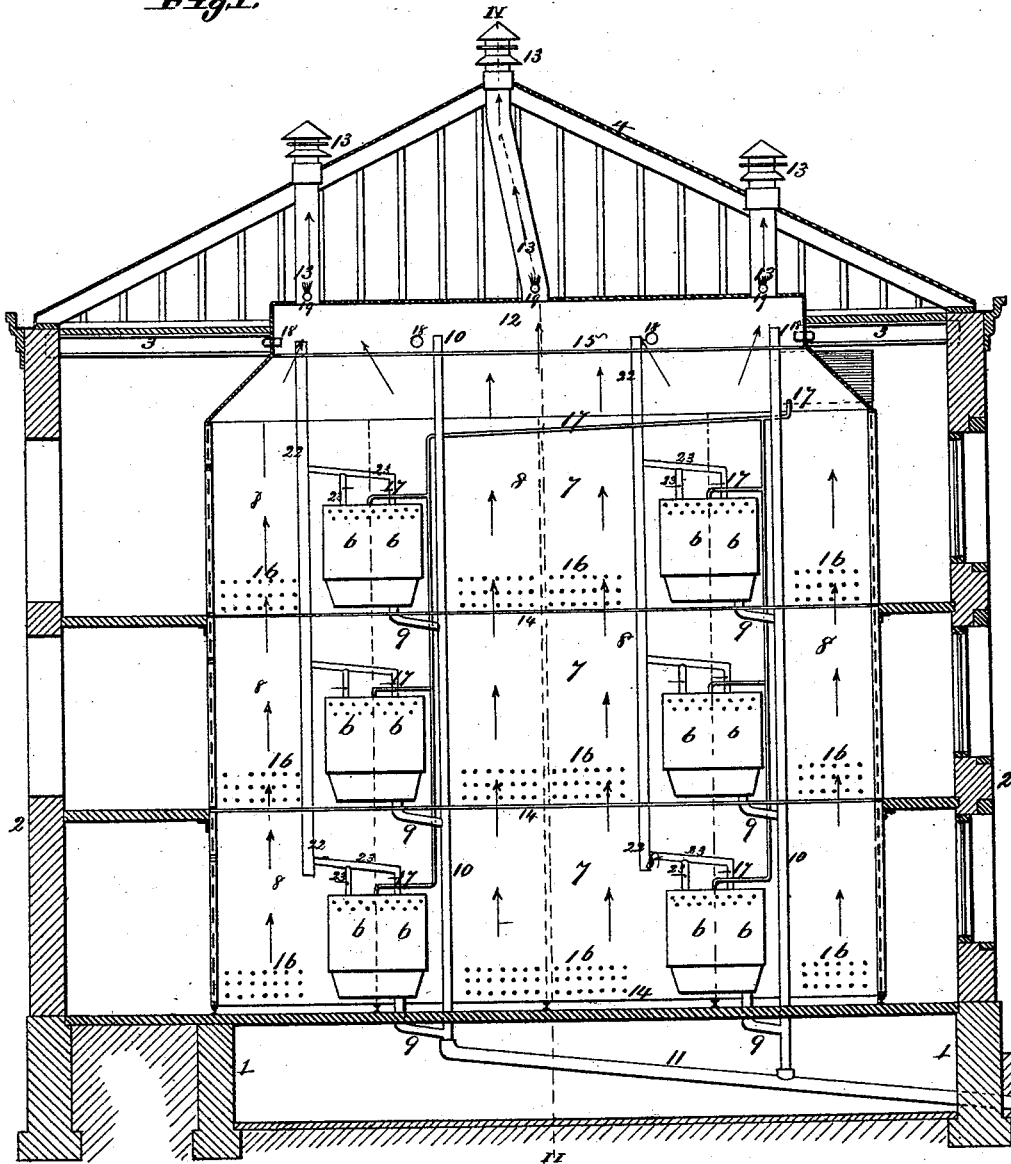
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C. H. SPARKS.
JAIL.

No. 455,128.

Patented June 30, 1891.

Fig. 1.



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Inventor,
Charles H. Sparks.
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(No Model.)

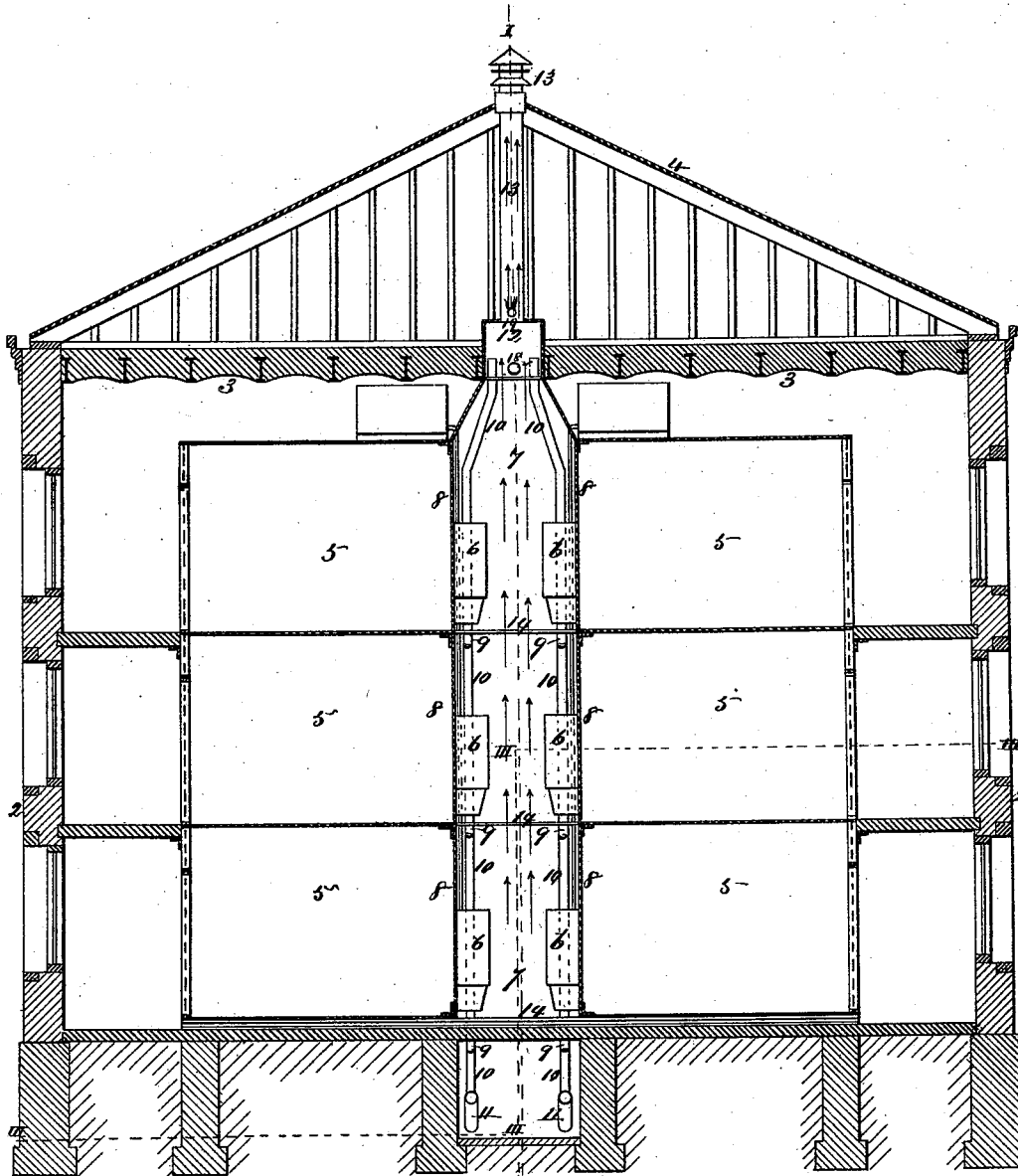
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Fig. II



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(No Model.)

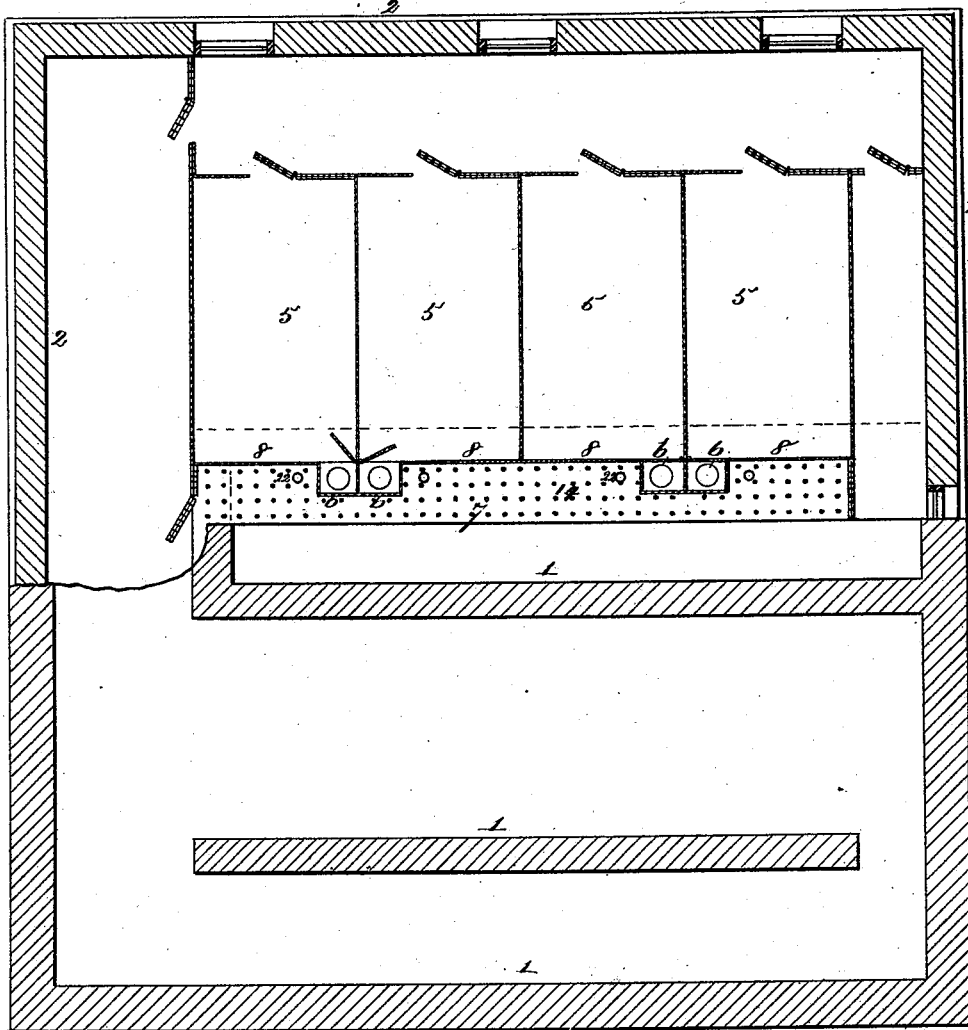
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Fig. III.



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UNITED STATES PATENT OFFICE.

CHARLES H. SPARKS, OF ST. LOUIS, MISSOURI.

JAIL.

SPECIFICATION forming part of Letters Patent No. 455,128, dated June 30, 1891.

Application filed November 14, 1890. Serial No. 371,448. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. SPARKS, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in the Art of Jail Structure, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

The improvement consists in making a corridor at the rear of the cells to contain the water-closets and all the water and soil pipes, and to form a means for the ventilation of the cells.

Figure I is a vertical longitudinal section of a jail, taken at II, Fig. II. Fig. II is a vertical transverse section of a jail, taken at II II, Fig. I. Fig. III shows horizontal sections taken at two levels, as indicated by lines III III, Fig. II.

The basement 1, walls 2, ceiling 3, and roof 4 may have any suitable construction. The cells 5 also may in the main features have any desired construction. The water-closets 6 are, however, removed from the interior of the cells and occupy space in the corridors 7, which I shall call the "convenience" corridors, and which is separated from the cells by metal wall 8. The water-closets are made of metal and are attached to the wall 8 and communicate by doors with the cells. I have shown the water-closets built in pairs, one communicating with each cell. 9 are the branch waste or soil pipes leading from each water-closet to the vertical waste-pipes 10, that lead into a common pipe 11, discharging into a sewer. (Not shown.) The pipes 10 discharge the foul air and gases at the upper ends into a box or chamber 12, having ventilating pipes or flues 13, discharging above the roof. A forced upward circulation is produced through the chamber 12 and flues 13 by a steam-jet or by a fire or other means of heating the air in the chamber. The bottom of the chamber is of perforate metal, so that the air from the corridors will escape into the chamber and be carried off through the pipes or flues 13. The floors 14 of the corridors 7 are perforated to allow the upward passage of air, which escapes through the perforated bottom 15 of the chamber 12 into said chamber, and has exit through the pipes 13. The air-escapes from cells 5

into the corridors through the holes 16, made through the walls 8, and mingles with the upward air-current in the corridors and passes off with it.

17 are the water-supply pipes.

It will be seen that the inmates of the cells will have no access to the combined sewer and ventilating pipes nor to the water-pipes, and that all portions of the pipes can be inspected, repaired, or renewed within the corridors 7. It will be seen that the construction furnishes a very perfect means of ventilation of the cells and the sewer-pipes. The contents of the chamber 12 is heated, so as to cause an upward current therethrough, by a steam jet or jets 18 or by a flame 19 therein or in the pipes 13. The doors 20 of the water-closets have air-holes made through them, and the rear walls of the water-closets have air-holes 21, so that the air will pass through the holes in the doors and in the back of the water-closets into the corridor 7, and be finally carried off through the pipes 13. (See Figs. I and III.)

22 are pipes within the corridor 7, communicating by branch pipes 23 with the upper portions of the water-closets and discharging at the upper ends into the chamber 12. The branch pipes 23 should have dampers by which the amount of air passing through them may be regulated. (See Figs. I and III.)

I claim as my invention--

1. The art of constructing jails, which consists in constructing a corridor with the prisoners' cells adjoining the same, but separated therefrom, and locating the waste and water pipes within said corridor, substantially as set forth.

2. The art of constructing jails, which consists in constructing the corridor 7 with the cells adjoining the same, but communicating therewith only by small air-holes 16, and locating the waste and water pipes within said corridor, substantially as set forth.

3. The art of constructing jails, consisting in constructing the corridor 7 and the cells adjoining the same, but separated therefrom by a wall having perforations 16 therein, forming above the corridor a chamber 12, having communication with the corridor and being provided with a discharge-pipe 13, substantially as and for the purpose set forth.

4. The art of constructing jails, consisting in constructing the cells 5, corridor 7, adjoining the cells and separated therefrom and having ventilation-holes 16 in the wall separating the cells and corridor, locating the waste and water pipes within the corridor and forming above the corridor a chamber 12, having communication with the corridor and with the upper ends of the waste-pipes and being provided with discharge-pipes 13, leading to the outer air, substantially as set forth.

5. The art of constructing jails, consisting in constructing the cells 5 with an adjoining corridor containing the water-closets and waste-pipe, and arranging above the corridor the chamber 12, having communication with the corridor and with the waste-pipe and being provided with discharge-pipe 13, substantially as set forth.

6. The art of constructing jails, which consists in arranging tiers of cells 5 in stories one above the other and corridors 7 on the same stories as the cells and having their floors 14 perforated, locating the waste-pipes 9 10 and water-closets 6 in the corridors, locating a chamber 12 over the corridors, so as to communicate with the corridors and with the waste-pipe 10, and providing such chamber with a discharge-pipe 13, all substantially as set forth.

7. The art of constructing jails, which consists in building the cells 5 and the corridors 7 with a perforate wall 8 between the cells and corridors and with perforate floor 14 between the corridors, forming the water-closets 6 in communication with the cells and within the corridors, but without communication with the corridors, locating the waste-pipe 10 and water-pipe 17 within the corridors, locating a chamber 12 above the corridors, so as to have

communication therewith and with the waste-pipe 10, and providing such chamber with a discharge-pipe 13, substantially as set forth.

8. The art of constructing jails, consisting in constructing the corridors 7 with perforate walls 8 adjoining the cells and with perforate floor 14, constructing water-closets 6 in communication with the cells and within the corridors, but out of communication with the corridors, locating the waste-pipe 10 and water-pipe 17 within the corridors, the chamber 12, having discharge-pipe 13 above the corridors, and so arranging a heating device as to heat the contents of the chamber 12, substantially as set forth.

9. The art of constructing jails, consisting in constructing the corridor 7 without means of access to the cell, constructing the water-closet 6 with air-holes 21 in its rear wall, locating the waste and water pipes within the said corridor, and locating above the corridor a chamber 12, having communication with the corridor and with the outer atmosphere, substantially as set forth.

10. The art of constructing jails, consisting in constructing a corridor or passage-way 7 without access to the cells and constructing the water-closets in the corridor with communication with the cells, substantially as set forth.

11. The art of constructing jails, consisting in providing the same with a ventilating-chamber 12 and extending a ventilating-pipe from the water-closets to said chamber so as to discharge thereinto, substantially as set forth.

CHARLES H. SPARKS.

In presence of—

SAML. KNIGHT,
BENJN. A. KNIGHT.