(No Model.) 2 Sheets—Sheet 1.

P. W. HERZOG.

CONSTRUCTION OF PRISON CELLS.

No. 348,210. Patented Aug. 31, 1886.

Fig. 1

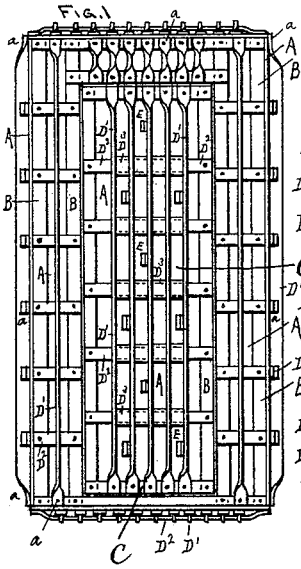


Fig. 2

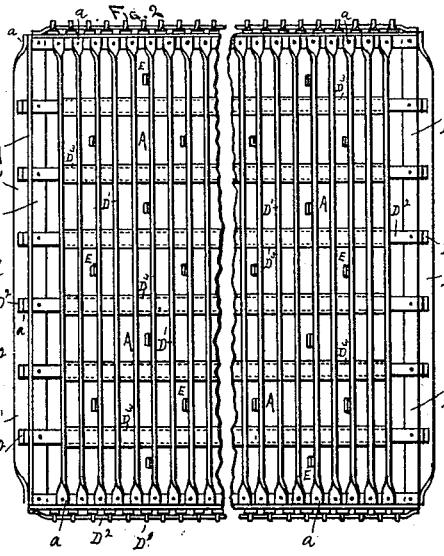


Fig. 3

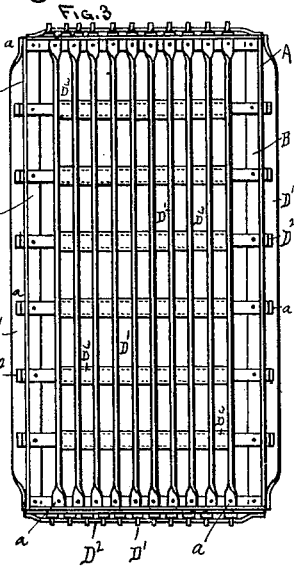


Fig. 4

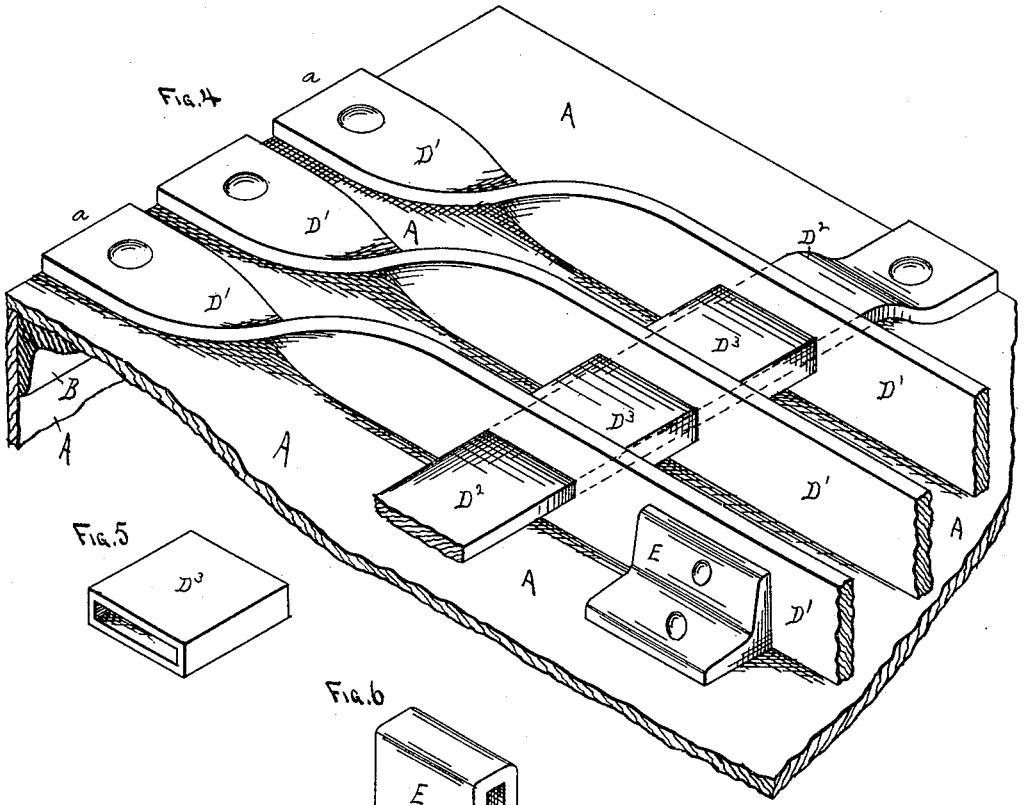
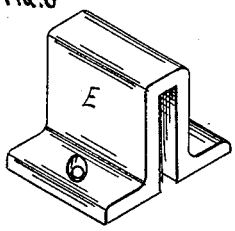


Fig. 5

Fig. 6



WITNESSES.
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C. A. Wilson.

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(No Model.) 2 Sheets—Sheet 2.

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CONSTRUCTION OF PRISON CELLS.

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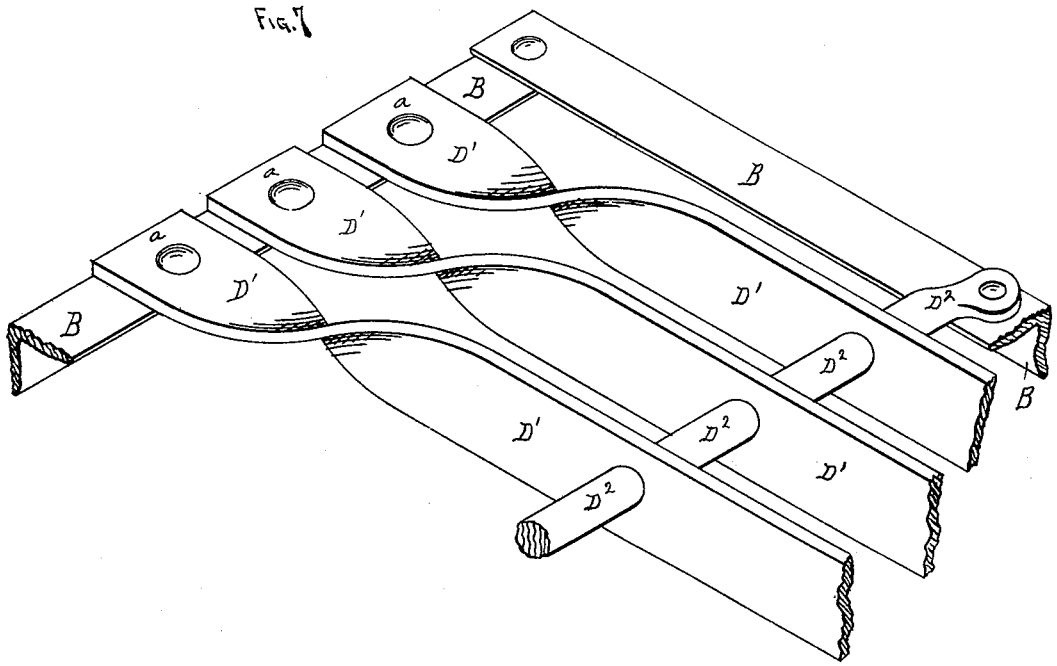
FIG. 1



WITNESSES.
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Philip Willis Herzog.
INVENTOR. By
Charles N. Woodward.
Atty.

UNITED STATES PATENT OFFICE.

PHILIP WILLIS HERZOG, OF MINNEAPOLIS, MINNESOTA.

CONSTRUCTION OF PRISON-CELLS.

SPECIFICATION forming part of Letters Patent No. 348,210, dated August 31, 1886.

Application filed April 13, 1886. Serial No. 198,772. (No model.)

To all whom it may concern:

Be it known that I, PHILIP WILLIS HERZOG, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in the Construction of Prison-Cells, of which the following is a specification.

This invention relates to the cells and corridors for the confinement of prisoners in prisons or jails; and it consists in the manner of constructing and arranging the lattice-work, sheathing, or "cladding," as hereinafter shown and described.

In the drawings, Figure 1 is an outside end elevation of the door end. Fig. 2 is a side elevation, from the outside, of a cell with my improved cladding attached thereto. Fig. 3 is an end elevation of an open back end of a prison-cell with my improved lattice-work covering it. Fig. 4 is a perspective view, enlarged, of a portion of one corner of a cell, illustrating more fully the manner of arranging the sheathing or cladding. Fig. 5 is a perspective view, on the same scale as Fig. 4, of one of the bar-separating ferrules detached. Fig. 6 is a perspective view, on the same scale as Figs. 4 and 5, of one of the bar-clamps detached, illustrating a modification in its form. Fig. 7 is a perspective view, similar to Fig. 4, illustrating a modification in the construction when used as a lattice-work wall for a corridor, and for similar places.

In Figs. 1, 2, and 3 of the drawings I have shown an approved form of a cell, in which the sides, top, bottom, and one end are covered with sheet metal, A, secured at the corners by being riveted to angle-irons B, while the other end is covered with my improved cladding or sheathing only, the door C being shown placed in the closed end, Fig. 1. In this form of cell one entire end (that next to the corridor) is open, except the lattice-like covering, which is the most approved form of cell; but it is evident that the cladding or open lattice may be applied to any form of cell, or used for the walls of corridors or for doors, or other similar purposes. The cladding or open lattice consists of a series of flat metal bars, D′, edgewise to the body or sides of the cell in close proximity, and bars D^2 at right angles to the bars D′, and passing through the latter, as shown, the two sets of bars thus forming a "lattice" or "grate" like sheathing over the cells, or around the corridors, &c. The ends of both sets of bars D′ D^2 are riveted to the angle-iron corners B, the ends of the bars D′ being twisted one half around to bring their flat sides in contact with the angle-irons, as shown at *a*.

On the bars D^2, between each pair of the bars D′, ferrules D^3 may be placed, to serve to keep the bars D′ in place, and prevent the possibility of their displacement by the prisoners in endeavoring to escape by crowding the bars D′ sidewise. When this cladding is used to cover the sheet metal, A, of the cells, the latter will be connected to either or both sets of bars D′ or D^2, at suitable intervals by clamps E, as shown, the cladding thus forming a support to the sheet metal, and greatly strengthening and stiffening the cells. In Fig. 6 I have shown one of the clamps E of a slightly different form, and adapted to enclasp the bars D′ on both sides instead of one side only, as in Figs. 1, 2, 3, and 4; but the results obtained will be the same, no matter which form is used. The bars D′ are shown placed in an upright position and close together, and the bars D^2 in a horizontal position at longer intervals, these interstices being usually about three inches from center to center of the bars D′, and twelve inches from center to center of the bars D^2.

When flat metal is used for the bars D^2, it will usually be the same size as the bars D′, three-eighths ($\frac{3}{8}$) of an inch thick by two and one-half ($2\frac{1}{2}$) inches wide; but these proportions and dimensions may be varied as required, and the relative positions of the two sets of bars may be reversed, if preferred, although generally the arrangement shown and the dimensions enumerated above will be found preferable.

In Fig. 7 I have shown the bars D^2 of round metal; but their functions are the same as when the flat bars are used for both sets.

The bars D^2 may be of any required form—square, round, oblong, oval, diamond, or other shape.

Any suitable metal may be used for the bars D′ D^2; but generally "laminated metal" (con-

sisting of alternate layers of steel and iron) will be used. The ferrules D^3 will generally be of "case-hardened" iron, or of steel, or they may be of the laminated metal.

I claim several important advantages by this manner of constructing the cladding and open lattice—among others the following: By placing the bars D′ close together and edgewise to the walls of the cells the least possible amount of light is obstructed when used for doors, corridors, or open parts of cells, while at the same time retaining or increasing the strength of the walls formed by the bars, as all the pressure to which they will be subjected will be exerted against them through their longest diameters. The cross-bars D^2 will be used only at the proper intervals to support the bars D′, and prevent them being forced apart. In this connection the ferrules D^3 perform an important function, as they prevent any displacement of the bars D′.

When used as a cladding to the walls A of the cells, the functions of the bars D′ are to prevent the prisoners from escaping by cutting through the sheet-metal walls of the cells, the steel in the laminated bars being tempered to a saw-and-file-proof hardness, while the iron in the bars serve as a protector to the steel to prevent them being broken by bending. When thus used upon the walls A, the cross-bars D^2 may, if so preferred, be dispensed with, and in this case the bars D′ only will be used and placed edgewise to the walls A, the necessary stiffness being imparted by the clamps E, the advantage to the cells in this instance being that the resistance to the outward pressure is greatly increased without increasing the weight of metal or cost of the work, and also exposing a greater surface of the sheet metal to the inspection of the jailer, and thus decrease the opportunities for the prisoners to operate upon the sheet metal without discovery.

Having thus described my invention, what I claim as new is—

1. A cladding or sheathing for prison-cells, corridors, and similar places, consisting of parallel flat bars D′, secured at their ends to the supporting-framing, and twisted half-way around, so as to be edgewise to said cell or corridor, in combination with cross-bars D^2 at right angles to and passing through said bars D′, substantially as set forth.

2. In a cladding or sheathing for prison-cells and the like, a covering, A, and flat bars D′, placed edgewise to said covering, in combination with clamps E, connecting said covering and bars, substantially as set forth.

3. A cladding or sheathing for prison-cells and the like, consisting of a covering, A, flat bars D′, placed edgewise to said covering, and cross-bars D^2, passing through said bars D′ at right angles thereto, in combination with clamps E, connecting said bars to said covering, substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

PHILIP WILLIS HERZOG.

Witnesses:
C. N. WOODWARD,
H. S. WEBSTER.