(No Model.)

P. HALE.

SAFETY DOOR FOR JAIL CORRIDORS.

No. 475,556. Patented May 24, 1892.

Fig. 1

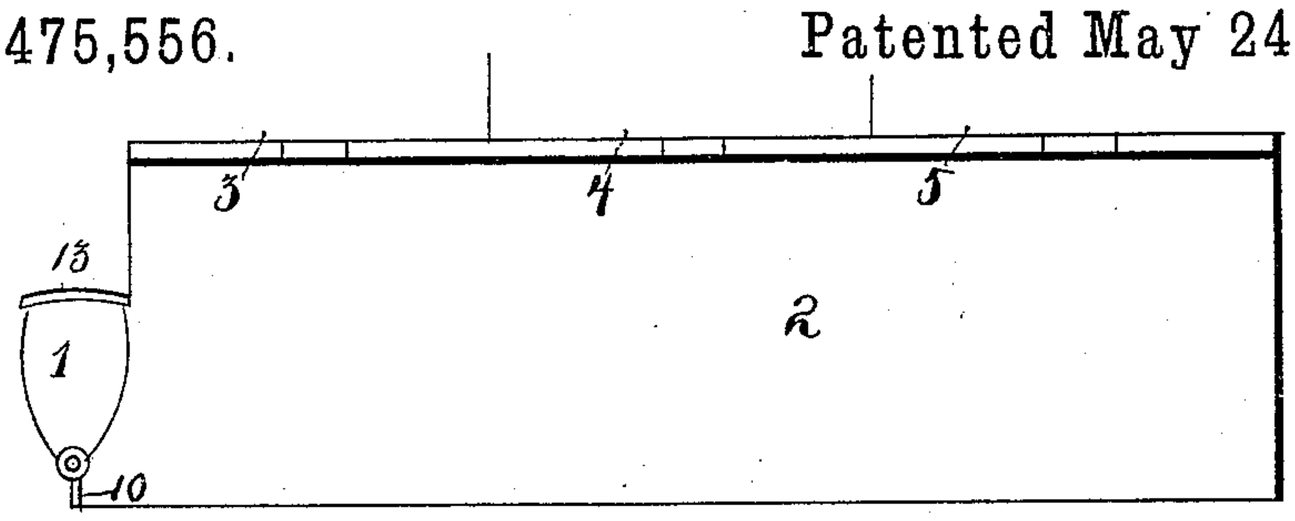


Fig. 2.

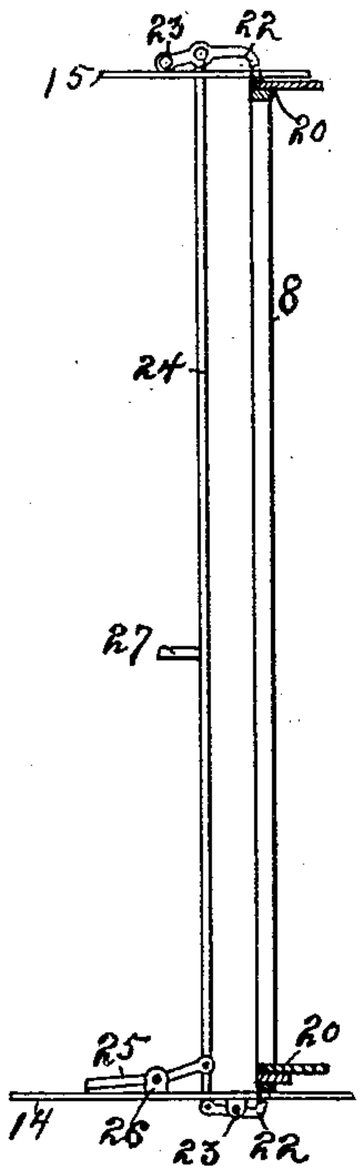


Fig. 3

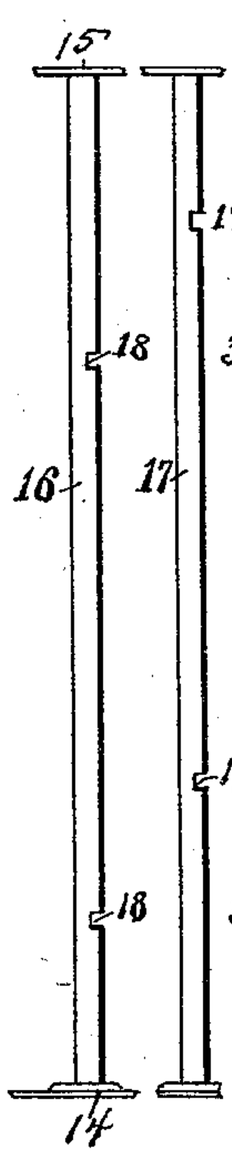


Fig. 4

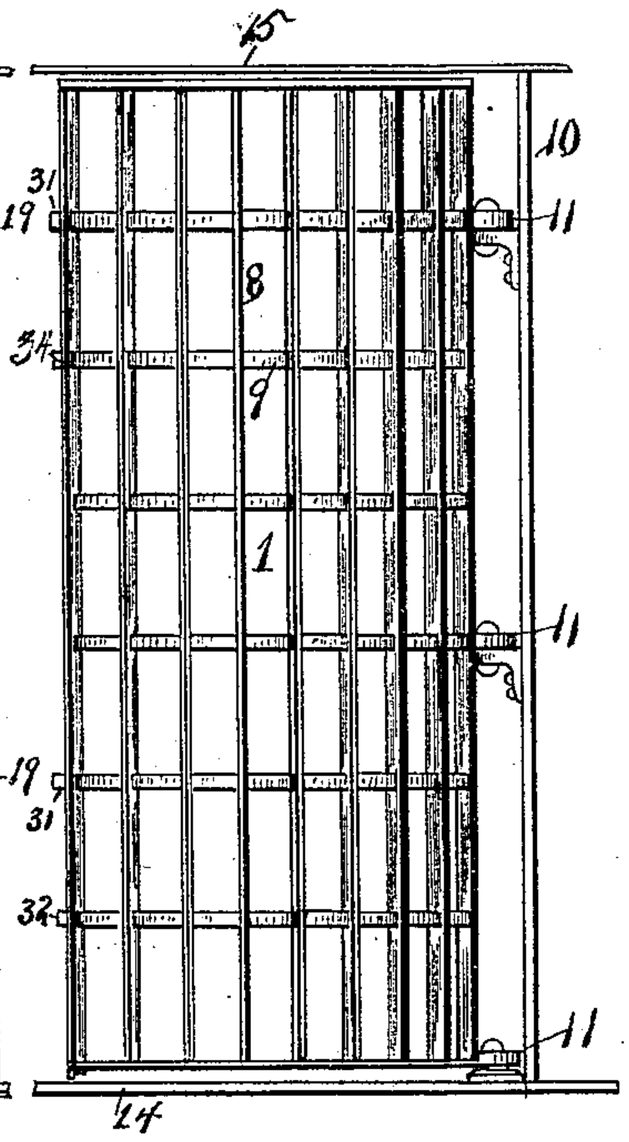


Fig. 5.

Fig. 6

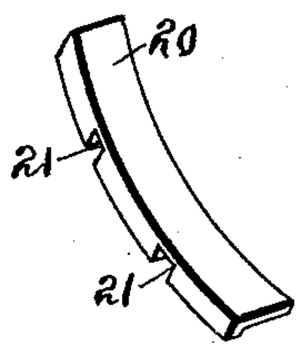
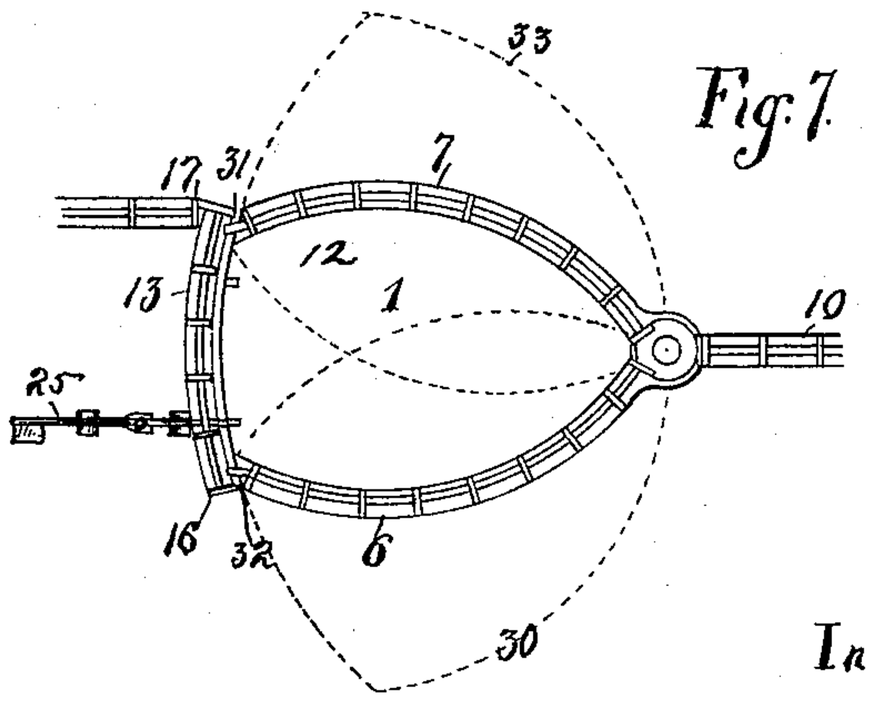


Fig. 7.



Witnesses.

A. A. Sticks

E. F. Langan

Inventor

Perley Hale.

By Higdon & Higdon Attorneys.

UNITED STATES PATENT OFFICE.

PERLEY HALE, OF CHICAGO, ILLINOIS, ASSIGNOR TO CHARLES H. SPARKS, OF ST. LOUIS, MISSOURI.

SAFETY-DOOR FOR JAIL-CORRIDORS.

SPECIFICATION forming part of Letters Patent No. 475,556, dated May 24, 1892.

Application filed September 7, 1891. Serial No. 405,018. (No model.)

To all whom it may concern:

Be it known that I, PERLEY HALE, of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Safety-Doors for Jail-Corridors, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an improved safety-door for jail-corridors, &c.; and it consists in the novel arrangement and combination of parts, as will be more fully hereinafter described, and designated in the claims.

In the drawings, Figure 1 is a diagrammatic plan view exhibiting the relative positions of the safety-door, a jail-corridor, and three cells communicating therewith. Fig. 2 is a sectional elevation showing an automatic locking device and a portion of the safety-gate. Fig. 3 is a side elevation of the outer and inner stop-bars, respectively, made use of to limit the outward and inward movement of the safety-gate. Fig. 4 is a side elevation of the safety-gate hung upon hinges. Fig. 5 exhibits a number of diagrams, on a small scale, indicating a series of different forms in which the safety-gate may be constructed. Fig. 6 is a detail view, in perspective, of a locking-plate secured across the outer portion of the safety-gate at the bottom thereof. Fig. 7 is a broken plan view of the gate and portions of the grating with which it is connected, the top bars of both gate and grating being removed.

The safety-gate 1 is located at any suitable point in a jail, preferably at one end of a corridor 2, whereby prisoners may be removed one at a time (or any number at a time) from the cells 3 4 5, &c., and the corridor or enter the corridor in a like order.

The safety-gate is made V-shaped or of other similar shape in cross-section, which may be either of those indicated by the several diagrammatic figures shown in Fig. 5. It is provided with double walls or wings—such as an outer wing 6 and inner wing 7—which are preferably constructed of vertical and horizontal bars 8 and 9, respectively, or, in other words, of lattice-work, although it is obvious they may be constructed of solid metallic plates. The wings 6 and 7 are united at one edge throughout their length in a secure manner and are hung thereat to the vertical wall 10 of the jail-corridor or other portion of building, so as to swing either out or in, as indicated by the dotted lines in Fig. 7.

11 indicates the hinges by means of which the safety-gate is supported in position.

The above construction provides a safety-gate wherein one edge of the wings 6 and 7 is united to a corresponding edge of the wing 7 and each wing is bowed or curved outwardly, so that the edge of the wing 6 that is opposite the hinged edge thereof will be separated a considerable distance from the corresponding edge of the wing 7, thereby forming between said wings a space 12, preferably of such size as will comfortably receive the body of one person only, such space being thus closed on the side adjacent to the hinge and having an entrance-passage at the side opposite said hinged edges of the wings.

The gate 1 is arranged with its entrance-passage normally closed by a concentric partition or wall 13, having a curve or radius corresponding to that of the arc of the circle described by the free ends of the wings of the gate, said concentric wall being fastened at its upper and lower ends to the floor and ceiling, 14 indicating the floor and 15 the ceiling, the arrangement being such, of course, that said wings shall freely swing without contact with said wall, except as hereinafter described. The wall 13 is preferably also made of vertical and horizontal bars, in a manner similar to that of the wings 6 and 7, having an outer stop-bar 16 and an inner stop-bar 17, located, respectively, at the outer and inner edges thereof. The outer bar 16 is provided with recesses or notches 18 in its edge that stands adjacent the swinging gate, and the inner bar 17 is provided with recesses 19 on its edge that is next adjacent the said gate, but in different planes or altitudes from the planes in which the notches or recesses 18 in the outer bar are located, for a purpose hereinafter mentioned. In Fig. 7 the upper bars of both gate and wall are removed, the better to exhibit the construction below them.

20 (see Fig. 6) indicates short locking-bars,

one of which is placed across the entrance-passage of the gate both at top and bottom, the one at the bottom being located sufficiently low to be out of the way of the feet of persons entering or passing out of the gate—that is, as low down as possible—while the one at the top is as near the ceiling as possible. The locking-bars 20 are provided with one or more notches or recesses 21, which are adapted to be engaged by the free ends of locking-dogs 22 or other devices which will lock and hold the gate in its normal closed position, which is that in which it is shown in solid lines in Fig. 7. The dogs 22 are pivoted at 23, one above and one below, to the ceiling and to the floor, respectively, and a vertical operating-rod is arranged so as to connect them and cause the one above to engage or disengage the locking-bar at top of gate at same time that the one below engages or disengages the locking-bar on the bottom of the gate. (See Fig. 2.) A foot-treadle 25 is pivoted to the floor at 26, and has one end pivotally connected to the rod 24, so as to operate the dogs 22, as will be described farther on. A handle or projection 27 is also applied to the rod 24, at some distance above the floor, within easy reach of the operator's hand, for the purpose just mentioned. The weight of rod 24 is sufficient to hold dogs 22 in engagement with the recesses 21.

The operation is as follows: When it is desired to enter the corridor 2, (the safety-gate being in the position indicated by solid lines in Fig. 7,) the operator either presses his foot on the treadle 25 or grasps the handle 27 (or both) and elevates the rod 24, thereby causing the free ends of the dogs 22 to be disengaged from the recesses 21 in the locking-bars 20, carried by the gate, as shown in Fig. 2. Then he pulls the gate outwardly toward him to the position indicated by the dotted lines 30, Fig. 7, until and at which time the lugs or projections projecting from the free edge of wing 7 come in contact with the outer stop-bar 16 and limit the outward movement of the gate. Meanwhile the projecting lugs 32, projecting from the free edge of the outer wing 6, have not been retarded in their outward movement, because the recesses 18 have permitted them to pass the outer stop-bar 16, said lugs 32 and recesses 18 being relatively arranged to permit such action. (See Figs. 3 and 4.) The gate now being in the position just stated, a person—such as a prisoner—may enter the space 12 and the gate be swung inwardly with him therein to the position indicated by dotted lines 33, when the prisoner may be caused to pass out of the gate into the corridor or otherwise disposed of. In the meanwhile the projecting lugs 31 have passed by the inner stop-bar 17 by reason of the recesses 19 therein; but the projecting lugs 32 on the outer wing 6 have come in contact with said bar 17 and the inward movement of the gate has been limited thereby. Of course this operation may be repeated as many times as is necessary to permit the desired number of persons to enter the corridor or other inclosure or to make their exit therefrom.

Of course it will be observed that the safety-gate and the devices for operating the same are located in such position as not to be tampered with by unauthorized persons.

What I claim is—

1. The double-walled safety-door for jails, consisting of hinged wings 6 and 7, separated at one edge to form a space and having projecting lugs 31 32 on the free edges of said wings, in combination with a wall 13, arranged concentrically with respect to the hinges of said wings, and the stop-bars 16 and 17, having recesses 18 19, substantially as set forth.

2. The combination of the safety-gate 1, provided with bars 20, having recesses 21 and hinged to swing back and forth, locking-dogs 22, arranged to engage the notches in said bars 20, the vertical rod 24, connecting a dog at the top of the door with a dog at the bottom thereof, and means for operating said rod 24, substantially as set forth.

3. In combination with a gate for jails, constructed with wings, said wings being united at one edge, the opposite edges thereof being separated to form a space between the wings adapted to receive a person, said space being open only on the side of the gate opposite the united edges of the wings, a vertical wall to which the gate is hinged at its united edges, an opposite wall concentric with the hinge-joint of the gate, said gate being thereby arranged to oscillate adjacent to the concentric wall, which closes the entrance-passage to said space when the gate is in its normal position, and means for limiting the inward and outward movement of the gate, substantially as set forth.

4. In combination with a gate for jails, constructed with two wings, said wings being united at one edge and separated at the opposite edges to provide a space between them, and projections at the outer separated edges of the gate, means for hinging the united edges of the gate, a wall concentric with the hinge-joint and adapted to close the entrance-passage of the space between the wings, and devices engaged by said projections for limiting the inward and outward movement of the gate, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

PERLEY HALE.

Witnesses:
ED. E. LONGAN,
JNO. C. HIGDON.