

L. Yale, Jr.
Burglar-Proof Safe.
No. 9,350. Patented Oct. 19, 1852.

Fig. 1.

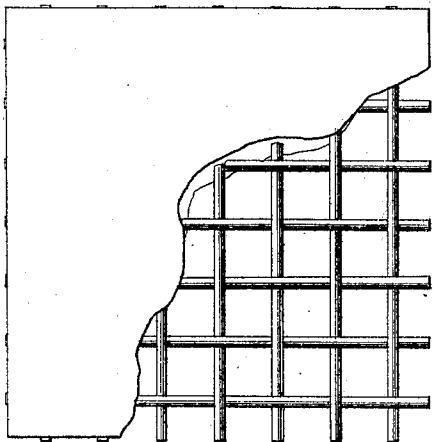


Fig. 2.



Fig. 3.

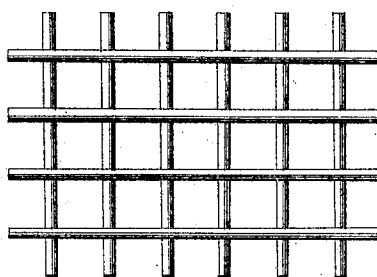


Fig. 5.



Fig. 4.



Fig. 6.

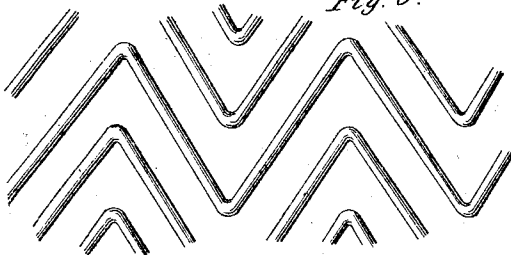
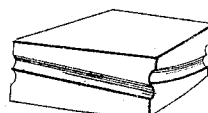


Fig. 7.



UNITED STATES PATENT OFFICE.

LINUS YALE, JR., OF NEWPORT, NEW YORK.

IMPROVED BURGLAR-PROOF PLATES FOR DOORS, SAFE-WALLS, VAULTS, &c.

Specification forming part of Letters Patent No. 9,350, dated October 19, 1852.

To all whom it may concern :

Be it known that I, LINUS YALE, JR., of Newport, in the county of Herkimer and State of New York, have invented a new and Improved Method of Making Burglar-Proof Plates, Doors, and Chests of Cast and Malleable Iron; and I do hereby declare the following to be a full and exact description of the same.

The method I have invented obviates the difficulties heretofore experienced in the use of cast-iron or any of the old combinations of cast and malleable iron for the above-named purposes—viz., first, the brittleness of cast-iron; secondly, the usually-exposed position of the malleable iron to the drill and chisel of the burglar, these objections, one or both, existing against all previously-invented defenses of this kind made of these materials.

To enable others skilled in the art to use my invention, I will proceed to describe its construction, reference being had to the annexed drawings, forming part of this specification.

Upon the edges of the pattern for the intended plate or door I put core prints, which when the mold is made, form a resting-place for the malleable iron. This pattern is molded in the usual manner, and before the flask is closed I place transversely rods of malleable iron in the core prints before mentioned, which are thus supported about midway of the mold, and around which the melted iron runs and incloses them when poured in the usual manner. These rods I usually interweave, as seen in Fig. 1, and also in section, Fig. 2; or they may be simply crossed, as in Fig. 3, or section, Fig. 4; or they may be looped together, as in Fig. 5, or bent without crossing, as in Fig. 6, in either of which ways they answer the purpose intended—viz., to protect the plate or door from being separated when fractured.

I do not use straight rods without crossing, because the plate or door, &c., might be fractured through its whole extent without the line of fracture crossing a rod, and this it would be liable to, inasmuch as the line of fracture commonly follows the line of the rods. Thus the door or plate, &c., being completely broken into two separate parts that are not tied by bent or crossed rods or their equivalents, is rendered worthless.

These particular methods of combining malleable and cast iron, necessitating as they do the use of crossed or bent rods or their equivalents, are essential in the new and improved process of manufacturing burglar-proof plates, doors, &c., that I have invented.

The process thus far detailed produces a plate or door which is a sufficient protection against blows or pressure.

Combined with the above process, as a security against the drill and chisel of the burglar, I arrange in the mold a chill plate or plates in such manner as to harden one or both sides of the required plate or door. This effectually prevents drilling a series of holes or cutting a circular or other groove, thereby enabling the operator to remove a portion of said plate or door, &c.

The proportion between the thickness of the plate and the spaces between the malleable rods should be such that the plate would not by ordinary means be broken into pieces of less diameter than the meshes or spaces between the rods. It will be seen that should the plate be broken thus small and the fracture follow the line of the rods, the pieces could not be withdrawn, owing to the fact that the half of the diameter of the rods would be embedded in the edges of each piece, the shape of said pieces being such as seen in Fig. 7; neither could the rods be sheared off at the line of fracture, as there would be no stability of one part for another to shear against.

I do not claim in said plates, doors, and chests the casting in of straight rods or bars of malleable iron, or their equivalents, embedded parallel with each other in only one general direction.

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

A method of making burglar proof plates, doors, and chests of iron, which, in the process of being cast into the form required for such plates, doors, and chests, surrounds or embeds malleable-iron rods or bars, or their equivalents, arranged substantially as described and shown by the specification and drawings herewith accompanied, or in an equivalent manner.

LINUS YALE, JR.

Witnesses:

STUART PERRY,
WM. H. WILLARD.