82

W. McFarland,

Safe.

No. 94,761. Patented, Sep. 14. 1869.

Fig. 1.

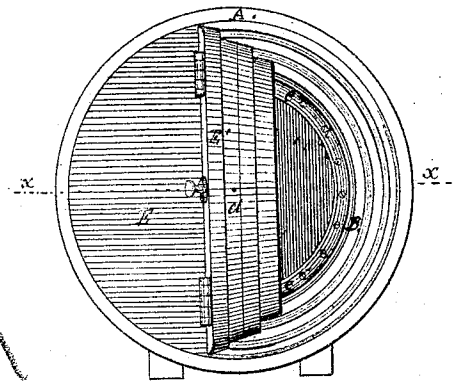


Fig. 2.

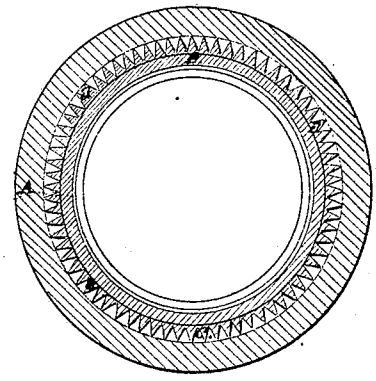


Fig. 3.

Section on line xx.

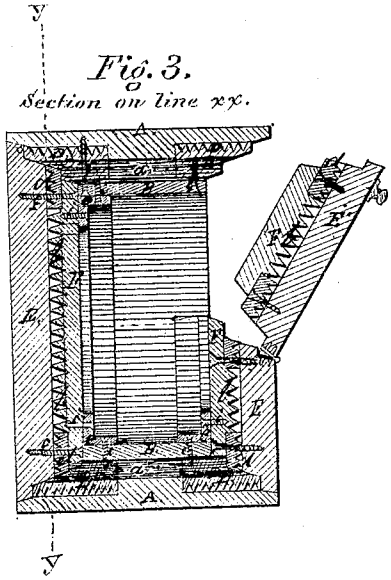
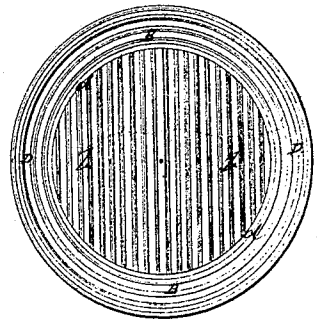


Fig. 4.

Section on line yy.



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109. SAFES, BANK PROTECTION AND RELATED DEVICES.
Search Room

United States Patent Office.

WILLIAM McFARLAND, OF BROOKLYN, E. D., NEW YORK.

Letters Patent No. 94,761, *dated September* 14, 1869.

IMPROVEMENT IN BURGLAR-PROOF SAFES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM McFARLAND, of Brooklyn, E. D., in the county of Kings, and State of New York, have invented certain new and useful Improvements in Burglar-Proof Safes; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a front view of a circular safe, with the door ajar, showing the edge view of the same, with the several ledges into which the door is fitted.

Figure 2 is a section through the centre of the circular body of the safe.

Figure 3 shows a top view section through, on the line *x x* of fig. 1.

Figure 4 is a vertical section through, on the line *y y* of fig. 3.

The object of my invention is to make safes which shall be burglar-proof, they being so constructed as to be impervious to diamond-pointed or other drills, or gunpowder, glycerine, or any explosive substance, while they are more perfectly fire-proof, and as convenient as safes constructed in any other manner.

My invention consists in a thick outside iron shell or case, next to which is a layer of hardened steel, composed of triangular sharp-edged ribs or bars, the sharp edges bearing against the outer shell or plate, their base being supported by an inner shell or plate of less thickness; or safes may be made with serrated hardened steel rings or plates, put in sections, the sharp angle edges in contact with the thick outside shell or plate, to answer the same purpose. The spaces between the triangular ribs or bars, or the serrated rings or plates, will be filled with a non-conductor of heat, or fire-proof cement, so that no space is left, or any considerable opening can be made, to introduce gunpowder or other explosive substance into the body of the safe.

My invention further consists in the mode of constructing safes, so that the hardened steel ribs, serrated rings, plates, and safe-guards overlap each other at all of the joints, so that there is no point in the whole structure where a diamond-pointed or any other drill can be used without coming in contact with the angular, hardened steel, in such position that it cannot take a hold upon it to penetrate.

The safes may be made of any desired form or shape, (the cylindrical being preferable,) the joints being all overlapped, the heads or ends being put in place, the plates all secured together by steel bolts, with hardened points, put in from the inside of the safe.

To enable others to construct my improved burglar-proof safe, I will describe it more in detail, referring to the drawings, and to the letters marked thereon.

I make the outside cylinder A of plates of hard cast or of wrought-iron, and, if desired, case-hardened.

To the inner surface of the shell or cylinder A, I fit a series of triangular ribs, or bars of steel, *a a a*, which are made as hard as fire and water can make them, the ribs *a a a* presenting their sharpest edges to the inside surface of the cylinder A, their base resting upon an inner cylinder, B, so as to cover its surface, and be held firmly together in the space *c* between the two cylinders.

In lieu of the angle ribs *a a a*, serrated plates of steel may be wrought and hardened, and put in sections, to answer the like purpose, the spaces *c* between the serrated ribs to be filled with a non-conductor of heat, or fire-proof cement, so that no considerable amount of an opening can be made to get in any explosive substance.

The drill-defying device, for the body of cylindrical safes, may be made of annular rings of steel, D D, wrought with the triangular serrations running round, (as seen in figs 3 and 4,) they being hardened the same as the plates or ribs.

The heads E, or ends of the safe, which are made with a flat surface, have the thick iron outside plate.

To the ribs a serrated plate, *b b*, is secured by an annulus or serrated ring, *d d*, inside of which is the inner plate of metal F, securely bolted from the inside with steel bolts *f f*, or screws, the points being hardened so that no drill will take hold of them, should they be accidentally reached from the outside, they not coming through the outside case, or their position known.

The door of the safe E′ is made by making one of the ends in two parts, the joints and serrations overlapping in the same manner as the joints where the heads are fitted in.

And, in order to provide for doubly securing my safe from the heads being removed by wedges or other burglar implements, I place inside the joint a rectangular flange, *e e*, of very tough metal, and secure it firmly, by the hardened steel screws *i i i i*, to both the head-plate F and inner cylinder B.

Safes may be made square, or of any desired form and dimensions, and be constructed so as to embrace all of my improvements, as above specified.

In the manufacture of my improved burglar-proof safes, all of the parts are fitted, drilled, tapped, the bolts and screws cut and nicely fitted, before they and the ribs or serrated plates and annular rings are hardened, and they can be put together and finished in a very short time.

The manner of putting together is to place the inner cylinder B in the heavy thick outer case A; then insert the ribs *a a a* in the space between them; fill

the interstices, by pouring in the fire-proof cement; then place the serrated rings or flanges D D, and fill them with the cement; secure them with bolts *f f*. The body is then ready to receive the ends E, and the insertion of the bolts *f f* laterally. The flange *e e* is then placed in the cover, over the joint, and secured by many screws *i i i i*, the door-end secured in the same manner, with the suitable locks and bolt attached, and the most perfect and secure safe, against being broken open, is produced that has ever yet come to my knowledge.

Having thus fully described my improved burglar-proof safe,

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

1. The hardened steel triangular bars or ribs *a a a*, in combination with the outer shell or case A and the inner shell B, as herein described.

2. The serrated rings or flanges D D, so arranged and secured within the outer and inner plates or cases to overlap other ribs and the joints of safes, as herein set forth.

In testimony whereof, I hereunto subscribe my name, in the presence of—

WM. McFARLAND.

Witnesses:

JAMES P. KENYON,

WM. H. CAMMEYER.