

Safe Bolt Work.

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IMPROVEMENT IN BOLT-WORK FOR SAFE DOORS, &c.

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, MARTIN BRIGGS, of the city of Rochester, in the county of Monroe, and State of New York, have invented a certain new and useful Improvement in the Bolt-Work of Safes, Vaults, and Doors; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings.

Nature of the Invention.

My invention consists in tying or locking the opposite jambs of a safe together by arms extending from jamb to jamb, having hook joints to prevent spread or expansion by gunpowder or wedges.

It also consists in the arrangement of certain parts, as will be hereinafter described.

General Description.

In the drawings—

Figure 1 is an elevation of the door, with the bolt-work attached.

Figure 2, a section through the door and jamb.

The door A and jamb B are made up of the ordinary plating, and arranged in the usual manner.

Instead of the usual round bolts, attached to the door and shooting into sockets in the jamb, I employ the following arrangement:

Flat plates or bars, C C C C', are secured on the inside of the door, respectively upon the sides and ends, as shown. These bars are made to slide out and in bodily by means of slots *a a* cut in the same, which fit over corresponding headed pins, *b b*, of the door; or, instead of this, any equivalent connection may be made.

When the door is closed and the bars thrown out, as in black lines, they shoot over the joint between the door and jamb upon the inside, and preferably into a socket, and therefore effectively close it, thus serving the double purpose of a lock (as usual) and a shield to the joint all around, to prevent the entrance of gunpowder or fire. This arrangement I believe to be new.

Common bolts simply fasten into the jamb at different and widely separated points. In my invention the bearing is all around. Common bolts give no protection to the joint, while my bars, by covering the joint, effectually prevent any passage through, either of tools, of gunpowder, or of fire when exposed in a conflagration. They also give greater strength with corresponding lightness of construction, and being upon the face of the door, they are easily reached for repairs.

If desired, a portion only of the four plates may be used; for instance, those on the sides; but I contemplate as the most effective plan the use of all, as shown.

When the bars or plates are drawn back or retracted, as shown in dotted lines, they uncloze the joint and allow the door to swing.

The above-described arrangement may be operated by any desired mechanical means. That shown in the drawings is a convenient and effective one. Two sets of forked arms, D D D, (three in a set,) connect with common bearings, *f f*, one of which is operated by the knob or handle outside. The horizontal arms of these sets are connected by rods or bars E E on the sides which rest between the friction-rollers *g g* of the side bars C C, to lessen friction when thrown. When the spindle is turned, of course the toggle action will throw the side bars or bolts out to connect with the jamb, as before described.

The end bars C' C' have vertical stems, *h h*, provided with gear-teeth, *l*, with which engage similar teeth, *m*, of hubs or bearings *f f*, so that the same action of the spindle which throws the side bars also throws the end ones.

The ends of the arms D, striking over the joint of the jamb, serve as an additional safeguard, with bars C C', in preventing the forcible opening of the safe.

The ends of the arms are also provided with hooks *k k*, which engage with corresponding catches in the jamb, the object of which is to tie the opposite jambs together and prevent any lateral expansion or spread of the same, either under the action of wedges or gunpowder.

Claims.

Tying or locking the opposite jambs of a safe together by arms extending from jamb to jamb, having hook joints or equivalent, to prevent spread or expansion by gunpowder or wedges, as herein described.

Also, the arrangement as a whole, consisting of the bars or plates C C', arms D D, connecting rods E E, friction-rollers *g g*, and gears *l m*, the whole operating in the manner and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

MARTIN BRIGGS.

Witnesses:

GEO. W. MIATT,
R. F. OSGOOD.