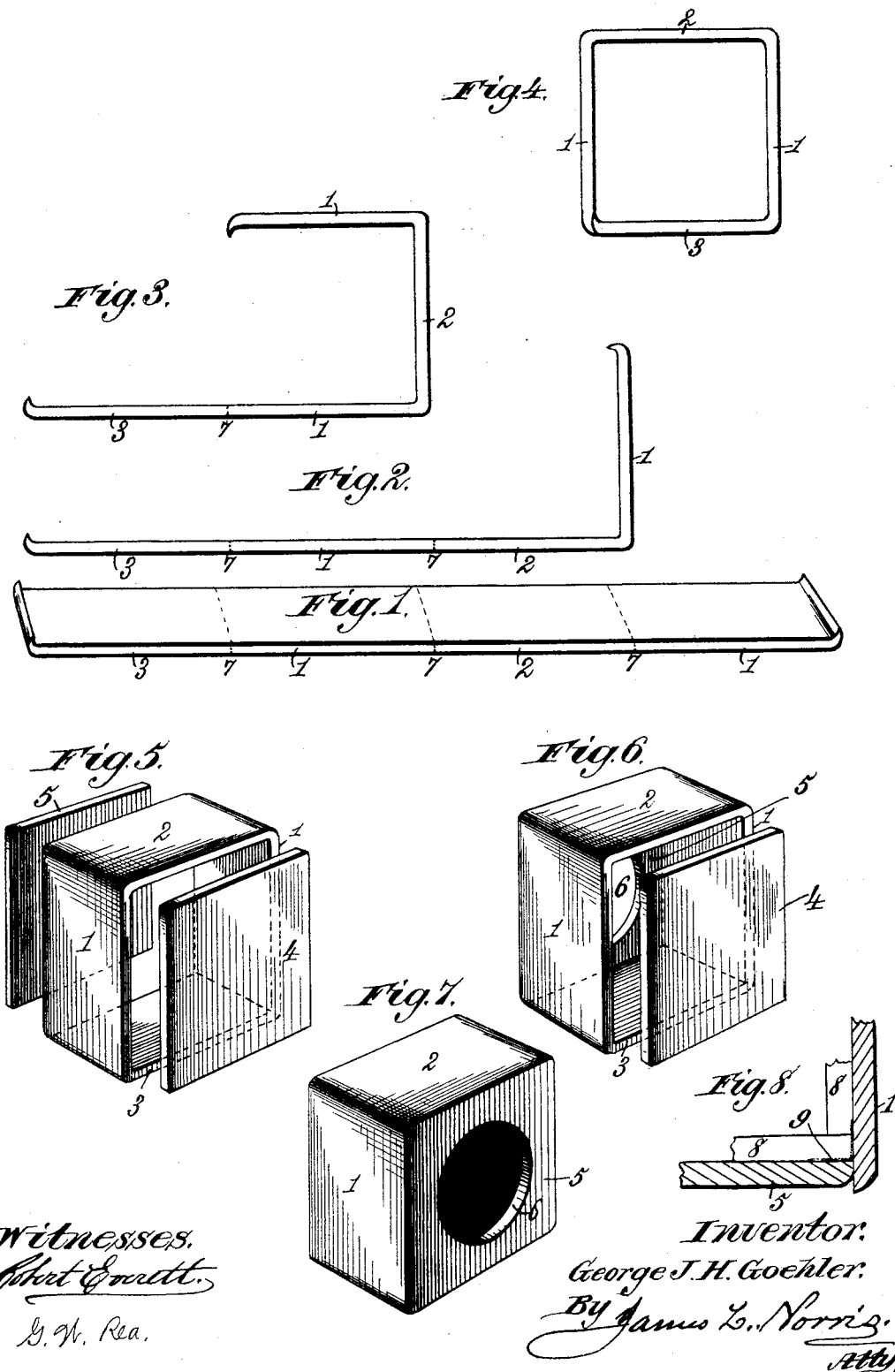


(No Model.)

G. J. H. GOEHLER.
SAFE.

No. 524,941.

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UNITED STATES PATENT OFFICE.

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SPECIFICATION forming part of Letters Patent No. 524,941, dated August 21, 1894.

Application filed February 27, 1894. Serial No. 501,657. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. H. GOEHLER, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Burglar-Proof Safes, of which the following is a specification.

This invention relates to burglar-proof safes and has for its object to produce a strong safe-body or shell that shall be free from seams, joints or other weak points of attack which permit the insertion of wedges or other burglar tools or the introduction of gunpowder or other explosives.

My invention consists, first, in a burglar-proof safe-body the walls of which are welded together at adjacent edges into a solid shell with no joints or seams and having a door opening in one of its walls; and, second, in the method of making a seamless burglar-proof safe-body which consists in forming from suitable metal an open box shaped shell, welding together the walls of said shell at adjacent edges, cutting a door opening in one of the walls of the shell and welding a plate to the open side of the box shaped shell to complete the safe-body.

In the annexed drawings illustrating the invention—Figure 1 is a perspective of an oblong plate of metal, or usual safe material, having its ends slightly turned up. Figs. 2, 3 and 4 represent the successive steps of forming from said oblong plate an endless and substantially rectangular metal band that is to constitute the main portion of the safe body, or its top, bottom and two sides. Fig. 5 is a perspective of the parts of the shell or safe-body before the front and back-plates are welded in place. Fig. 6 is a perspective of the parts of the shell or safe-body after the front plate has been welded in position and a door opening cut therein and before the back plate is welded into the open side of the box shaped shell. Fig. 7 is a perspective of a burglar-proof safe-body constructed according to my invention, but before the door is attached and before any inside plates or work is placed in the safe. Fig. 8 is a detail sectional plan of one corner of a welded safe-body showing inside metal plates placed in the shell or endless band to hold the front and back plates in position while being welded and asbestos or similar non-conducting material placed be-

tween the said inside plates and the shell and its front and back to prevent the shell and front or back from being welded to the inside plates.

Referring to the drawings, the numeral 1 represents the sides of my seamless rectangular safe-body; 2 the top; 3 the bottom; 4 the back plate and 5 the front plate in which the door opening 6 is formed. All the walls of the safe-body are solid or without joints.

In constructing the seamless rectangular safe-body, the top, bottom and sides, which constitute the main portion of the body, are first formed by bending a sheet or plate of metal, or usual safe material, of the proper length and width and desired thickness into the form of a four sided band. For this purpose I take an oblong sheet or plate of safe material, shown in Fig. 1, and preferably turn up each end a little, as shown. I then bend this plate transversely and successively at about the points marked 7 beginning first at a point, say, about one-fourth the distance from one end of the blank. This first bending of the metal blank brings it into the form shown in Fig. 2, the bend being at substantially a right angle to the main portion of the metal. The blank is then bent again and in a similar manner at another predetermined point as shown in Fig. 3 and finally, by another bend, it is brought into the form shown in Fig. 4 which permits the two ends of the blank to come together. At this point the two ends of the oblong blank are securely and closely united by welding, thus producing an endless rectangular band or body free from joints, seams or shoulders. This endless band is to form the top, two sides and the bottom of the safe-body. The slightly turned up ends of the oblong blank, as shown in Fig. 1, are not essential but assist in effecting a firm union of the ends of the bent blank by welding. It is obvious that the bends or corners of the endless band may be somewhat rounded and yet give substantially the same results as an exact rectangular body or shell.

Into one end of the endless band, produced as above described, is then securely welded a solid metal plate that is to constitute the front of the safe-body. This welding into place of the front plate 5 is readily accomplished for the reason that the other side of the substantially rectangular band is open and affords ready

access for introducing the necessary tools and appliances. After the front plate 5 has been welded all around the edge of the endless band, thus producing an open box shaped shell, an opening 6 will be cut in or through one of the walls of said shell. The opening 6 is, preferably, formed in the solidly welded front plate 5 and can be easily cut the required shape by placing the open box shaped shell in a lathe and employing a proper cutting tool. The opening 6 may be circular or of any other desired form. It serves, first for giving access to the interior of the shell in welding the back plate 4 into place and thereafter it constitutes the door opening of the safe. As I prefer to employ a circular screw-door for closing the safe the opening 6 will have a corresponding circular form.

After the front plate 5 has been welded into place and the opening 6 properly formed, either in a lathe or otherwise, the solid back plate 4 will be welded into place, in the rear edge of the endless band, in the same manner as the front plate. During this operation the opening 6 permits the introduction of necessary tools and appliances into the safe-body.

Before putting the front and back plates in position for welding it is preferable to place in the open ended shell or band inside plates or corner pieces 8 that will be adapted to serve as supports or bearings for the front and back plates to hold them in shape during the welding operation. A strip of asbestos or other suitable non-conducting material 9, Fig. 8, is placed between the shell itself and these inside plates 8 and also between said inside plates and the front and back of the shell so that in the welding of the front or back to the shell band these parts will not be welded to the inside plates or corner pieces. The front and back plates having been securely welded to the band shaped main portion of the safe-body, the usual filling or layers of lining plates are built up in the safe-body by introducing the same through the door opening. After this the door is applied to the said opening. Though a circular door opening is shown in the drawings it will be understood that the safe may be provided with a square door opening, if desired.

By cutting the door opening into the front plate after welding the latter to the endless band forming the main portion of the body the said opening is not distorted or rendered untrue, which would be likely to occur if the opening were cut into the front plate before welding it to the band, because in the operation of welding the metal is liable to be more or less stretched or drawn out of shape. This would require the door opening to be trued in the lathe after welding the front plate in place and would correspondingly increase the cost of making the safe-body.

It is obvious that instead of cutting the door opening in the front plate it could be

cut in one of the sides of the endless band before described, but it is preferably formed in the front plate because in that case the opening is cut after the welding operation so that the form of the opening is preserved, while if it were cut in one of the sides of the band it would have to be cut before welding the final or back plate to the band, so that the opening would be liable to be drawn out of shape in welding such plate to the band.

By welding the entire safe-body into a solid shell, in the manner described, it presents a smooth, unbroken surface having no joints, seams or shoulders into or against which a prying or wedging tool of any kind can be placed or into which explosives can be introduced, thus rendering the safe-body exceedingly strong and extremely difficult of successful attack by burglars.

What I claim as my invention is—

1. A burglar-proof safe-body having its walls welded together into a solid seamless shell and provided with a solid front wall welded in place and having a door opening, substantially as shown and described.

2. The herein described method of making a seamless burglar-proof safe-body, which consists in welding together the walls of an open box shaped shell, forming a door opening in one of the walls of said shell, and then welding a plate to the open side of the box shaped shell to complete the seamless safe-body, substantially as described.

3. The herein described method of making a seamless burglar-proof safe-body, which consists in bending a sheet or plate of metal of the proper length, width and thickness into a four sided band, then uniting the ends of said band by welding, then welding a solid front plate to one edge of the said four sided endless band, then cutting a door opening in said solid front plate, and then welding a solid back plate to the opposite edge of the four sided band to complete the seamless safe-body, substantially as specified.

4. The herein described method of making a seamless burglar-proof safe-body, which consists in forming a sheet or plate of safe material into an endless band, uniting the ends of said band by welding, placing inside plates or corner pieces in said band to serve as bearings for solid front and back plates and hold them in shape while welding, interposing a non-conducting material between said inside plates and the shell, then welding the solid front plate into the endless band, then cutting a door opening in said front plate, and then welding the solid back plate into the endless band, substantially as specified.

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

GEORGE J. H. GOEHLER. [L. s.]

Witnesses:

S. L. CARY,

A. W. SMITH.