

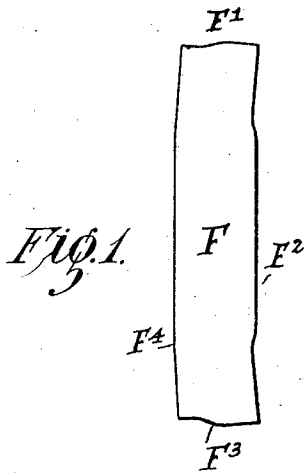
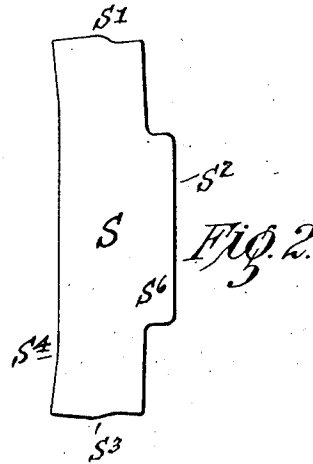
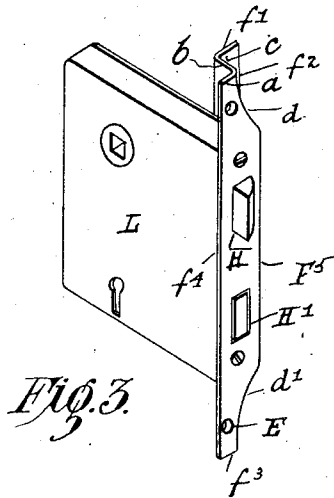
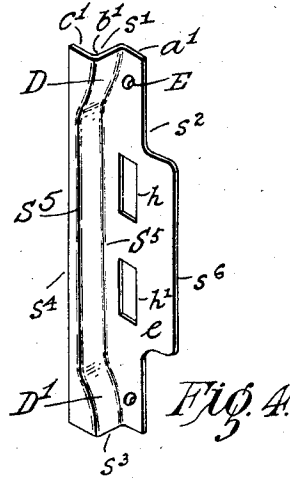
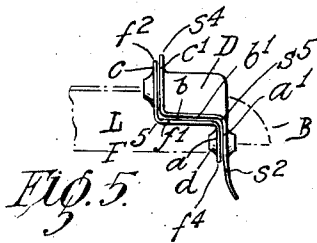
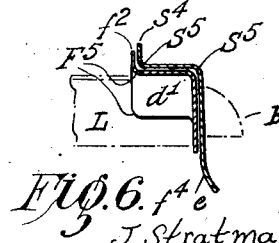
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J. STRATMANN

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MORTISE LOCK

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UNITED STATES PATENT OFFICE.

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MORTISE LOCK.

Application filed August 27, 1926, Serial No 132,020, and in Australia October 14, 1925.

An object of this invention is to provide improvements in mortise locks and their striking plates those now largely used on double doors being relatively expensive.

5 They are cast, then hand and machine finished; or parts of the plates are pressed into shape, and are riveted to other, usually cast, parts. The resulting article is, in each case, defective and my objects include the making
10 of light, strong, accurate plates by simple means, resulting in greater cheapness. Finishing, assembling, and fitting of my plates is easy to effect. They will be easy to position to suit lock bolts and like movable mem-
15 bers, and will be when desired, reversible to suit either "right hand" or "left hand" locks.

The first step in carrying this invention into effect is to prepare two sheet metal blanks each of special form; the second step
20 is to further shape them as herein explained—and the final step is to fit them so that they become the face plate and striking plate required.

In the accompanying drawings I illustrate my construction, but minor variations as to form may be made while retaining features hereinafter claimed.

Figure 1 is a face view of my blank for a lock face plate.

30 Figure 2 is a face view of my blank for the striking plate.

Figure 3 is a perspective view of a mortise lock having the face plate fitted.

35 Figure 4 is a perspective view of the striking plate.

Figure 5 is a plan of the face and striking plates in their relative positions, when the doors are closed. The lock bolt and part of the lock body are shown by broken lines.

40 Figure 6 is a sectional plan of the parts in Figure 5.

F is my face plate blank; S is my striking plate blank; each is flat and is stamped out of a sheet of metal such as brass.

45 Each blank has edges which are of irregular contour, not being straight, but these edges when further shaped produce edges some of which are straight, and some of which are curved as herein explained. They
50 produce surfaces some of which are plane and some of which are curved. To produce the said shapes each blank is subjected to pressure between dies in a suitable machine.

55 The flat face plate blank in Figure 1 has an upper and a lower edge F^1 , F^3 respectively, and two longitudinal edges F^2 , F^4 respec-

tively. The flat striking plate blank in Figure 2, has an upper and a lower edge S^1 , S^3 respectively and two longitudinal edges S^2 , S^4 respectively.

60 The face plate, Figure 3 has flat surfaces in 3 different planes a , b , c , and has an upper and a lower curved surface d , d' respectively.

65 The striking plate, Figure 4 has flat surfaces in 3 different planes a^1 , b^1 , c^1 , and has an upper and a lower curved surface D , D^1 , and a curved lip e .

The curved surfaces of the face plate are recessed, and the corresponding curved surfaces of the striking plate are bossed, all
70 are so spaced apart that the intermediate parts of the respective plates meet as in Figures 5 and 6. These curved surfaces can be polished by a machine without being hand
75 finished. To avoid the production of sharp edges which might injure a workman or a user of the lock, the plates have slightly rounded edges F^5 , S^5 respectively, these having a good appearance.

80 The edges of the face plate blank are contoured as follows. Each end F^1 , F^3 has at one side a shallow recess; the edge F^4 has a slight and gradual rise between its ends; and the edge F^2 has a shallow recess near each
85 end. These edges become, in the order stated in the completed plate, the edges marked f^1 , f^3 , f^4 , f^2 , respectively.

90 The edges of the striking plate blank are contoured as follows. Each end S^1 , S^3 has at one side a shallow recess; the edge S^4 has a shallow elongated depression between its ends, and the edge S^2 has a central projecting lip S^6 . These edges become in the order
95 stated in the completed plate, the edges marked s^1 , s^3 , s^4 and s^2 respectively, with the lug S^6 , the latter being when in use met by the spring bolt B of the lock L when the door is being closed.

100 During the pressing of the face plate blank to produce the completed plate, I also produce in the plate one or more bolt openings H, H^1 ; and during the pressing of the striking plate blank to produce the completed striking plate, I also produce in
105 that plate one or more bolt holes h , h^1 , in a corresponding position. To allow of fastening each plate in its operative position I provide holes for screws, that is suitable countersinkings E which is effective
110 at any convenient time prior to lock fitting. When countersinking the metal of

the blank is displaced so as to produce on the other side of any selected countersinkings projecting circular flanges *d* which will facilitate the fixing of the plate in correct operative position; such flanges will fit into recesses in lock parts, or in building structures, as the case may be, although cases will arise in which flanges would not be required. Attention is directed to the fact that the surfaces *b*, *a* and *c* of each of the plates constitute in effect intermediate portions and parallel end portions which extend in opposite directions from the respective sides of the intermediate portions. This particular shape is effected when the blanks are pressed and by this construction it is to be noted that the face plate is fastened with one end portion on the enclosed bolt receiving edge of the lock casing the adjacent intermediate portion being arranged against a portion of the side wall of the lock casing. The plates are complementary so that when fitted respectively to the lock casing and door and to the door jamb a neat appearance is effected.

I claim:—

1. A lock having a face plate wholly made of sheet metal pressed into completed form from a flat blank having four edges each of

non-rectilineal contour, the said face plate having surfaces in three planes and two curved surfaces spaced apart forming an upper and a lower recess, also one or more bolt apertures and holes for fastening means, and rectilineal edges except at the curved surfaces.

2. A sheet metal face plate for a mortise lock, formed from a flat blank contoured with one edge slightly raised between its ends, an opposite edge slightly recessed near each end, and two ends each slightly recessed near one side, the blank being pressed and apertured to complete the face plate.

3. A lock as set forth in claim 1, and in which the face plate blank is contoured with one edge slightly raised between its ends, an opposite edge slightly recessed near each end, and two ends each slightly recessed near one side.

4. A lock as set forth in claim 1, and in which the face plate at the holes for the fastening means has its metal pressed to form circular flanges on the lock side of the plate for positioning purposes.

In witness whereof I have hereunto set my hand.

JOSEPH STRATMANN.