

*Yale & Wilson,
Perm. Lock.*

No. 3312

Patented Oct 20. 1843.

Fig. 1.

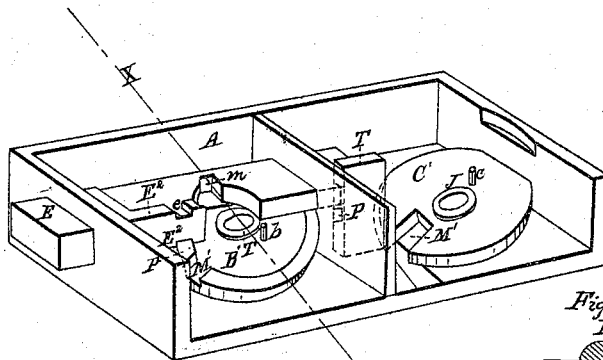


Fig. 3.

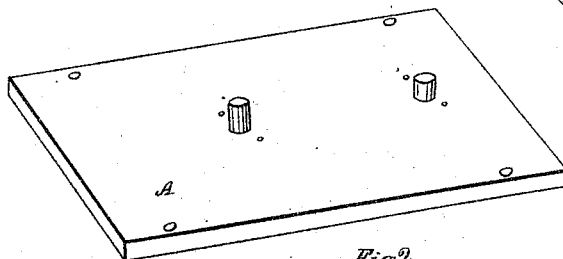


Fig. 7.

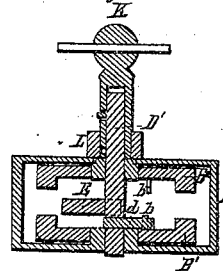


Fig. 2.

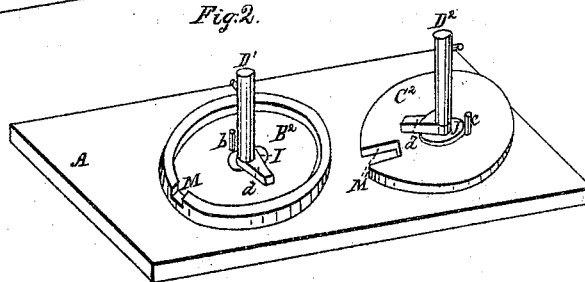


Fig. 6.

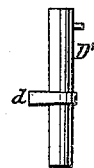


Fig. 5.

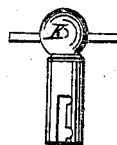


Fig. 4.



UNITED STATES PATENT OFFICE.

LINUS YALE AND CHS. WILSON, OF SPRINGFIELD, MASSACHUSETTS.

COMBINATION SAFETY-LOCK FOR DOORS, &c.

Specification of Letters Patent No. 3,312, dated October 20, 1843.

To all whom it may concern:

Be it known that we, LINUS YALE and CHARLES WILSON, of Springfield, in the county of Hampden and State of Massachusetts, have invented a new and useful Safety-Lock for Doors, Trunks, and other Articles, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a perspective view of the interior of the stock or case, the front and one side plate being removed. Fig. 2 is a perspective view of the inner side of the front plate showing two of the disks and the ends of the spindles which pass loosely through their centers, and the ends of the hollow studs of the plate on which the disks revolve. Fig. 3 is a view of the outer side of the same plate and the ends of the aforesaid spindles passing through the same which effectually close the apertures therein. Fig. 4 is the thimble or tube which is put on the spindle and which contains the guide or index for locking and unlocking. Fig. 5 is the key; Fig. 6, one of the revolving and sliding spindles and arms detached; Fig. 7, vertical transverse section at the dotted line *x x* of Fig. 1.

A is the box, stock, or case, containing the disks and bolt. This for a common sized lock, is generally made about twelve inches long, six inches wide, and one inch deep, variable, however, in size to suit the views of the manufacturer, divided into two apartments by a partition P, said partition serving as a guide for the bolt B' B² and C' C² are four disks placed inside the aforesaid case in pairs and turning on two hollow studs or collars I I and J J fastened to the inner sides of the plates of the case and making part of the same. The spindles D' D² are made to turn with the wheels or disks when interlocked therewith by arms and pins as hereafter described and pass through round apertures in the front and back plates of the case to receive the key by which they are turned having a radiating arm *d* extending from the periphery of each spindle about an inch, more or less, as required to reach studs *b b*, *c c* inserted into the sides of the disks against which said arms *d* strike to cause the disks to turn with the spindles as they are turned by the key.

The two disks B' B² or the pair of wheels connected with the spindle D' are reamed out on the sides next the bolt (hereafter

described) placed between them, forming circular rims or flanches around their peripheries which turn in corresponding mortises *e* in the bolt E when the latter is locked for holding the bolt in that position. The other pair of disks need no circular rims nor corresponding mortises in the bolt as the bolt is held in a locked position by its inner or rear end coming against the peripheries of the wheels or disks C' C².

The bolt E is made with flanches E² on its sides and a T head on the rear end and a mortise *m* on one side to admit the arm *d* of the spindle D' for throwing it in and out.

In order to unlock the bolt or cause it to recede into the case the aforesaid circular rims on the disks B' B² and the peripheries of the disks C' C² are cut away so as to form mortises M M' of the width of the portions of the bolt that are to retreat therein when the bolt is to be thrown back or be unlocked and of a depth equal to the throw of the bolt, said mortises or notches in the disks being first made to coincide with the line of the bolt by turning them around by a key K applied to the outer end of the spindle. The mortise M in the bolt aforesaid for the arm is made in the edge of the bolt next the spindle D' by which it is thrown in or out of the case as above stated. The bolt is reduced in thickness where it plays back and forth between the two pair of disks, except where it is flanged and where the T head is formed for the flanges of the disks B' B² and for the T head at the rear end which comes against the peripheries of the disks C' C². The end of the bolt E thrown out of the case is made of the usual thickness.

In order to unlock the bolt the aforesaid mortises in the circular rims or flanges of the disks B' B² and those in the peripheries of the disks C' C² must all be in a straight line and coincident with the flanges and T head or parts of the bolt that are to retreat into said mortises when the bolt is thrown back, as above stated and this position of the disks can only be brought about by the person having a knowledge of the figure or letter or sign by which the bolt was locked. Having a knowledge of this the unlocking of the bolt becomes very simple and easy—for then it is only necessary to place the thimble L Figs. 4 and 7 on which the signs are printed or engraved or marked over the

spindle D' with the dowel pin or pins *p* of the thimble in a corresponding aperture or apertures in the case or stock and place the key K within it and on the spindle and push the spindle in until the arm strikes against the face of the disks and turn the key opposite or against No. 1 (if figures be used) on the thimble which operation will also turn the disk lettered C' around by the arm of the spindle being in contact with the stud or pin *c*. Then draw the spindle toward you until the arm strikes against the face of the disk C²—then turn the spindle to the right until the arm of the spindle comes in contact with the stud in disk C² and continue to turn the spindle and disk until the slot in the key is opposite No. 2 on the thimble. Then remove the key and thimble and place them on spindle D' as represented in Fig. 7 and turn disk B' in the same manner as before described until the slot in the key is opposite No. 3 on the thimble, then draw the key forward and turn disk B² till the slot in the key is against figure 4 of the thimble. This operation will bring the mortises or notches in the disk all in a direct line. Then push the spindle back until the arm *d* of the spindle D' enters the slot *m* in the bolt and comes in contact with the bolt then turn the key to the right when the bolt will slide back freely—the aforesaid mortises in the disks being in a line coincident with the line of the flanges of the bolt and T head entering therein. To lock the bolt again turn the key in the opposite direction which will throw the bolt out of the case; then turn one or all the wheels slightly and the bolt will be locked.

This lock may be made with one or more

disks, and in different forms and sizes and proportions, but we consider the above the best mode of constructing the "safety lock" and as well adapted for banks, safes and stores and other places.

Having thus fully described our invention we wish it understood that we do not mean to claim a case, or revolving disks grooved in their peripheries; or spindles turned by a separate key or any such well known devices used in the construction of locks, but

What we do claim as our invention and desire to secure by Letters Patent is—

1. Combining a revolving and sliding spindle and arm with one or more rotating disks notched in their peripheries or flanges in the manner and for the purpose set forth by which the spindle is made to perform the triple purpose of turning the disks,—throwing the bolt, and closing the aperture in the case, the bolt being prevented from being pressed back simultaneously with the turning of the disks; and the introduction of false keys or other implements to the interior of the lock is also prevented.

2. And we also claim the combination of the rotating and sliding spindle in combination with two rotating disks having the same center of rotation so that by the sliding and turning of the spindle it can be made to act on the two disks alternately as described.

LINUS YALE.
CHARLES WILSON.

Witnesses:

JOSIAH HOOKER,
WM. H. TUPPER.