

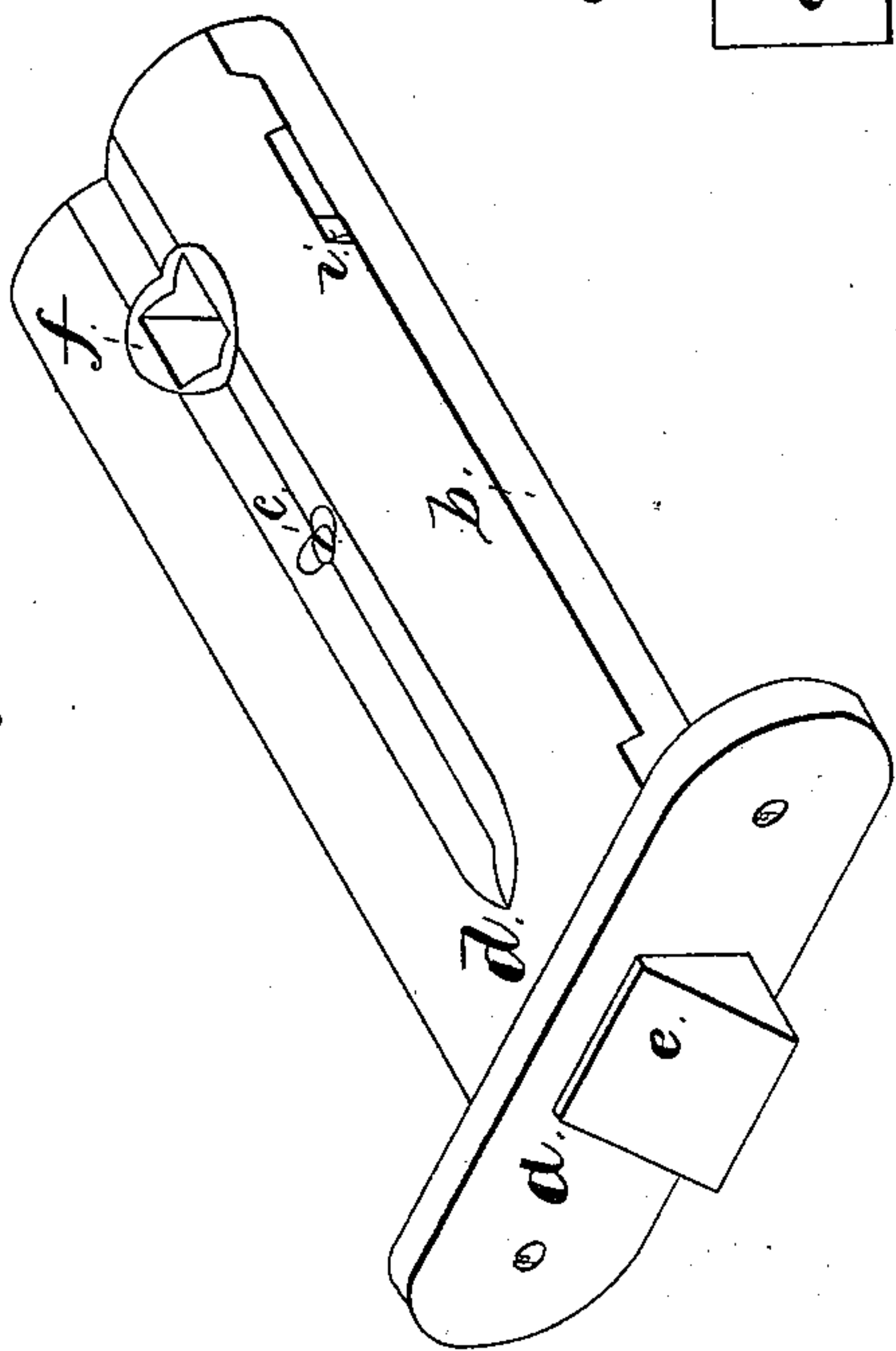
*R. Kinsley,*

*Latch.*

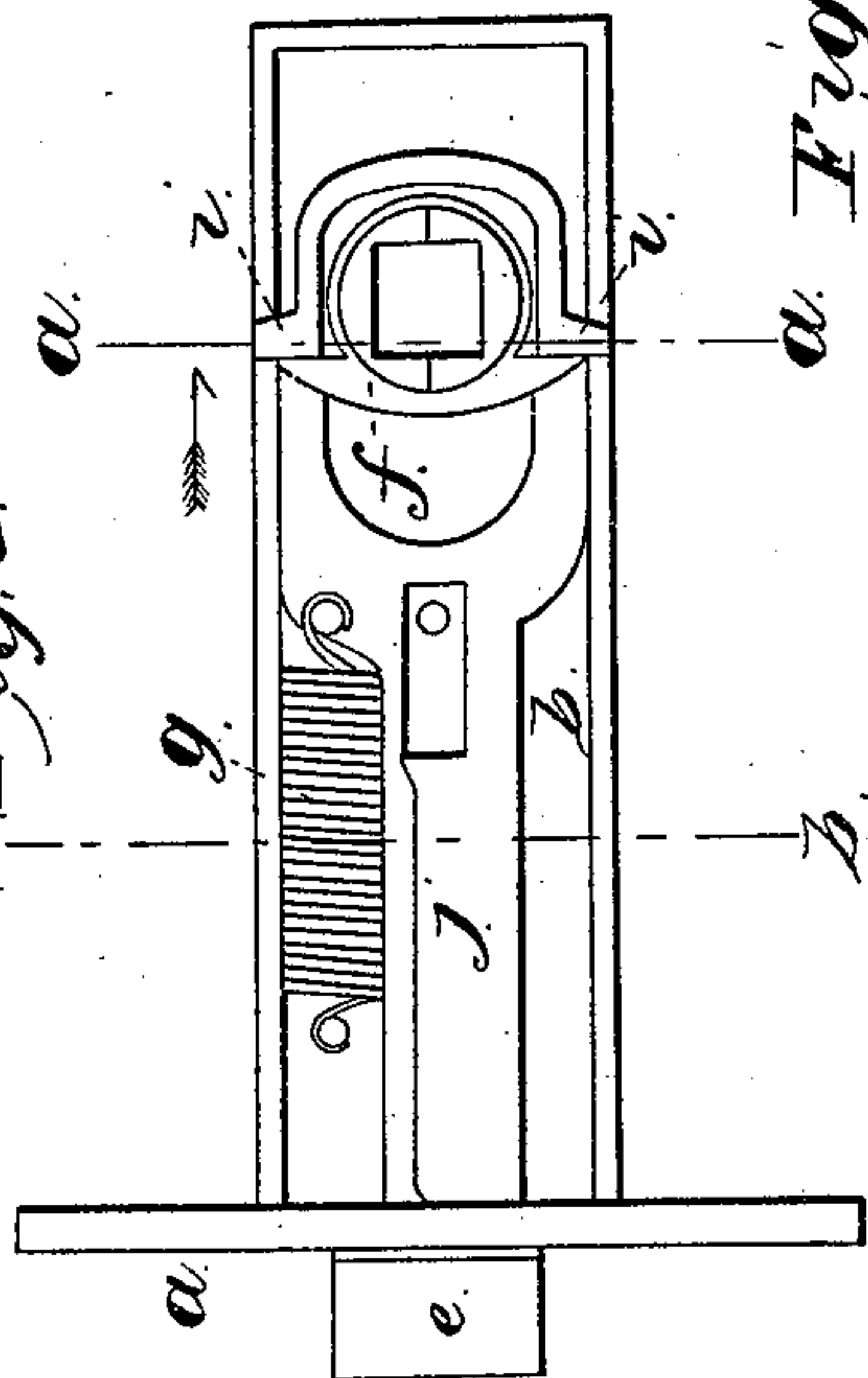
*N<sup>o</sup> 5,225.*

*Patented Aug. 7, 1847.*

*Fig. 1.*



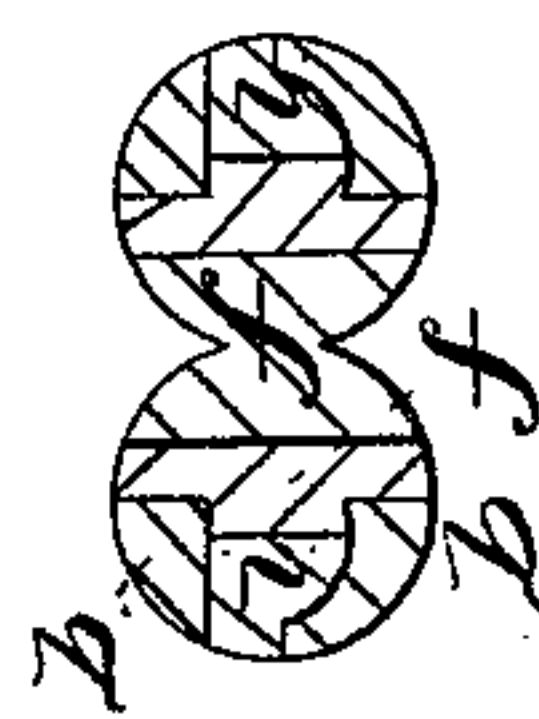
*Fig. 2.*



*Fig. 4.*



*Fig. 3.*





# UNITED STATES PATENT OFFICE.

RHODOLPHUS KINSLEY, OF SPRINGFIELD, MASSACHUSETTS.

## LATCH.

Specification of Letters Patent No. 5,225, dated August 7, 1847.

*To all whom it may concern:*

Be it known that I, RHODOLPHUS KINSLEY, of Springfield, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Mortise-Latches or Lock-Cases, and that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of a mortise latch, with my improved case; Fig. 2, a plan with the cap of the case removed; and Figs. 3 and 4 cross sections taken at the lines (*a*, *a*) and (*b*, *b*) of Fig. 2, looking in the direction of the arrows.

The same letters indicate like parts in all the figures.

The method of making the cases of mortise latches, &c., for which I now claim Letters Patent is an improvement on the mode secured to me by Letters Patent bearing date the seventh day of March in the year 1846, and consists in making it in the form of two parallel cylinders united together by a plane which takes from each cylinder about one eighth of its circumference, instead of forming it as under my former patent, by the union of three cylinders, so that a case of about one inch in width can be inserted without mortising by simply boring two parallel holes that run into each other—thus making a latch with a tumbler lever of nearly an inch in length with a case of only half an inch in thickness that can be let into a door by simply boring instead of mortising as was the practice prior to the date of my before recited patent, the bar of the bolt working mainly in one of the cylinders, and the helical spring, which projects the bolt in other cylinder, and the bridle or stirrup of the bolt on which the lever or tumbler of the spindle works and which requires considerable thickness of metal also working in the two hollow cylinders while the other parts of the bar of the bolt are made thinner to work in between the two plates where the two cylinders run into each other.

In the accompanying drawings (*a*) represents the front plate, and (*b*) the body of the case projecting therefrom at right an-

gles. It is composed of two plates one cast with the front plate and the other constituting the cap which is secured by a screw (*c*). The form of this case is that of two parallel cylinders united by a chord which cuts off about one eighth of the circumference of each cylinder, except for about half an inch at (*d*) toward the front plate, where the two cylinders are united by parallel tangent lines to leave sufficient room within this part of the case to receive the head of the latch bolt when drawn back. The form of the inside of the case is substantially similar to the outside and to this are fitted the bolt (*e*), tumbler (*f*) and helical spring (*g*). The head of the bolt is made in the usual form, and the bar (*j*) is larger on one side than the other, the larger side being fitted to slide freely within one of the cylindrical cavities of the case, the size of which admits of giving to the bar the requisite strength, and the other side is much smaller to lie and slide by the side of the helical spring (*g*) which is attached to it and to the case and which lies in the other cylindrical cavity of the case. The rear end of the bolt is formed into a bridle or stirrup to embrace and slide on the hub of the tumbler. The bar of the bolt along its whole length is reduced in thickness to fit that part of the case where the two cylinders are united and the sides of the bridle or stirrup are fitted to the cylindrical cavities and can therefore be made of sufficient thickness to have the required strength; and to have two shoulders (*i*, *i*) on which the arms of the tumbler act to retract the bolt. The hub of the tumbler has its journals fitted to, and turning in appropriate holes in the case, and as these holes are about equal in diameter to the circle that form the case, they will extend to the thickest part of the case on each side so that the requisite thickness of metal can be given to make good bearings. The ends of the hub are curved to correspond to the curve of the outside of the case.

From the foregoing it will be evident that this plan of forming the case and bolt is applicable to a mortise lock as well as to a latch by forming the bolt lock in the same manner and providing it with the requisite tumblers, &c.

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

Making the case of mortise latches or



locks in the form of two cylinders united  
and running into each other, the chord  
where the two cylindrical forms are united  
being less than their diameter, substantially  
5 as described, when this is combined with the  
bolt arranged with its greatest width in a  
plane passing through or parallel with the

axis of the two cylinders composing the  
form of the case, in the manner and for the  
purpose described.

RHODOLPHUS KINSLEY.

Witnesses:

C. W. M. KELLER,  
A. P. BROWNE.