

(No Model.)

2 Sheets—Sheet 1.

J. F. SCHLOSSSTEIN.
LOCK.

No. 488,091.

Patented Dec. 13, 1892.

Fig. 1.

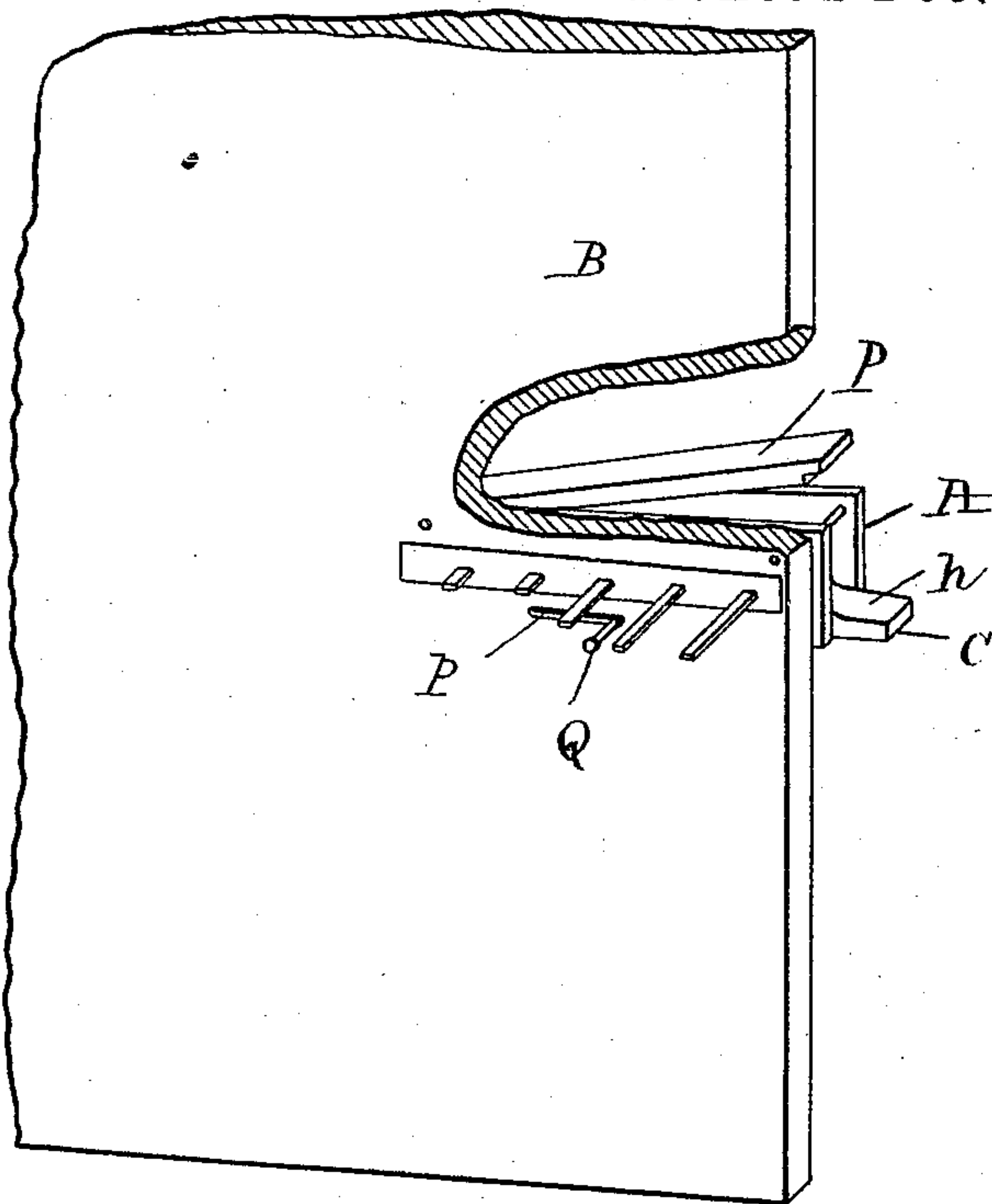


Fig. 2.

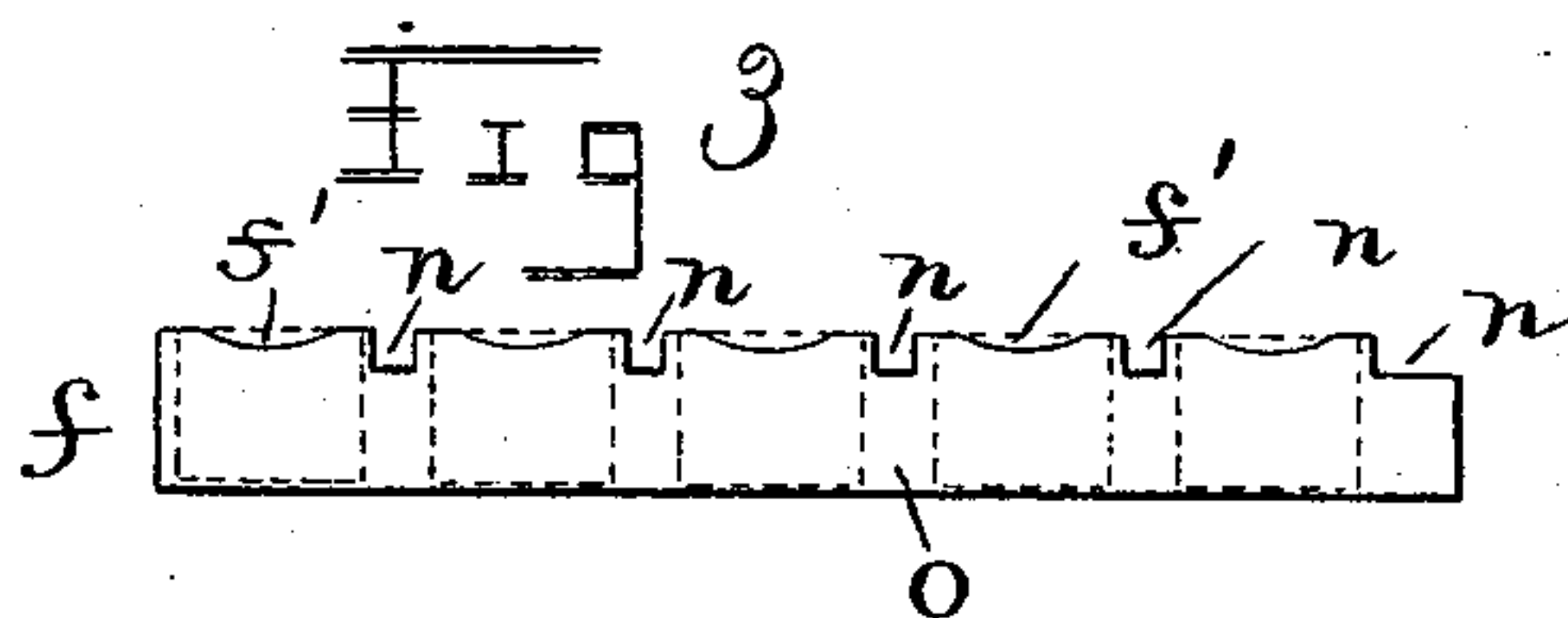
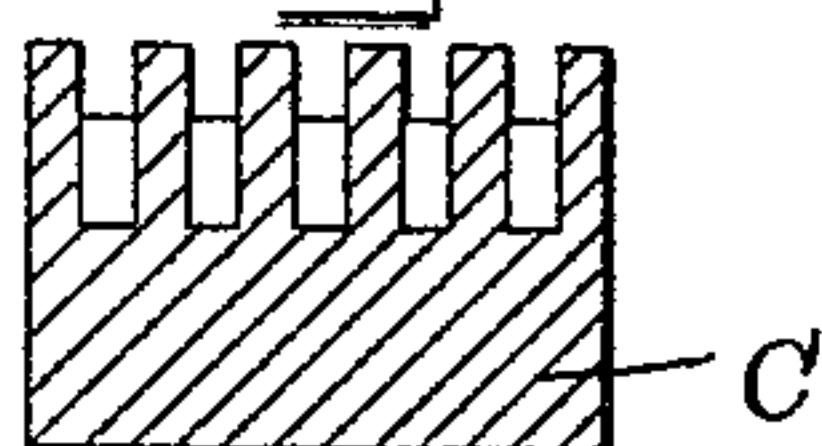


Fig. 4.

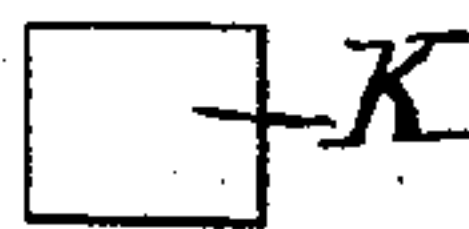


Fig. 5.

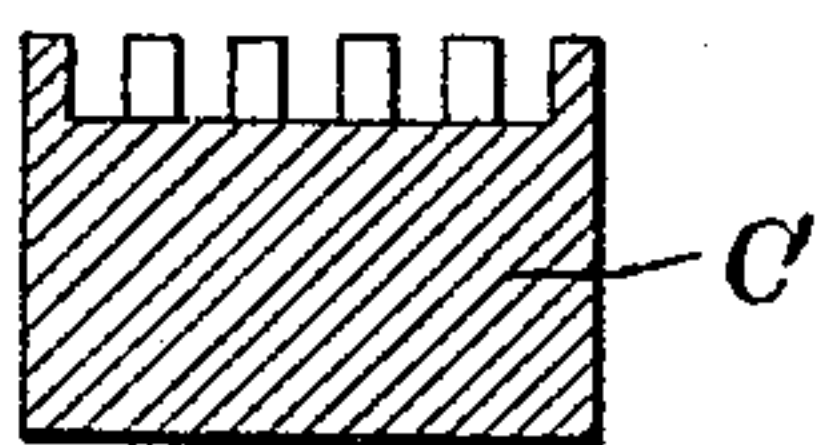


Fig. 6.

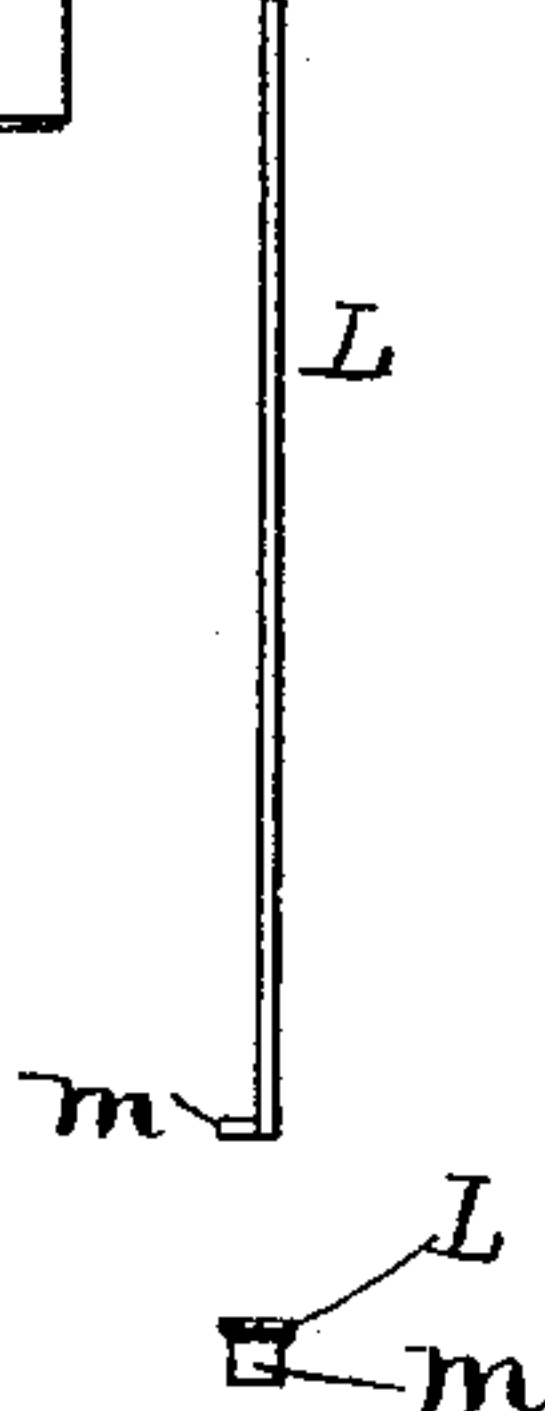
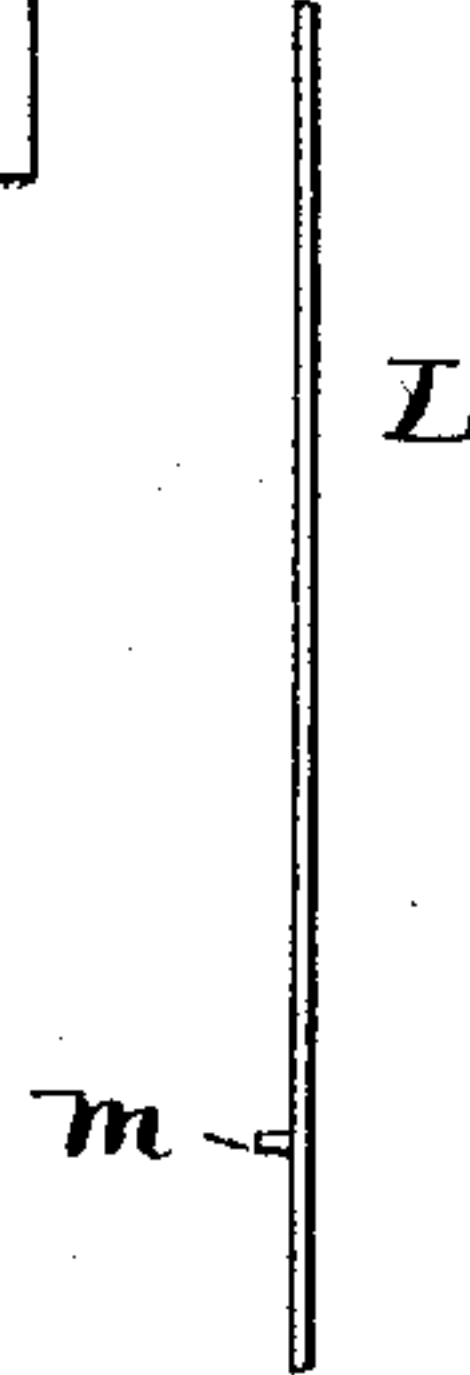


Fig. 7.



WITNESSES

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(No Model.)

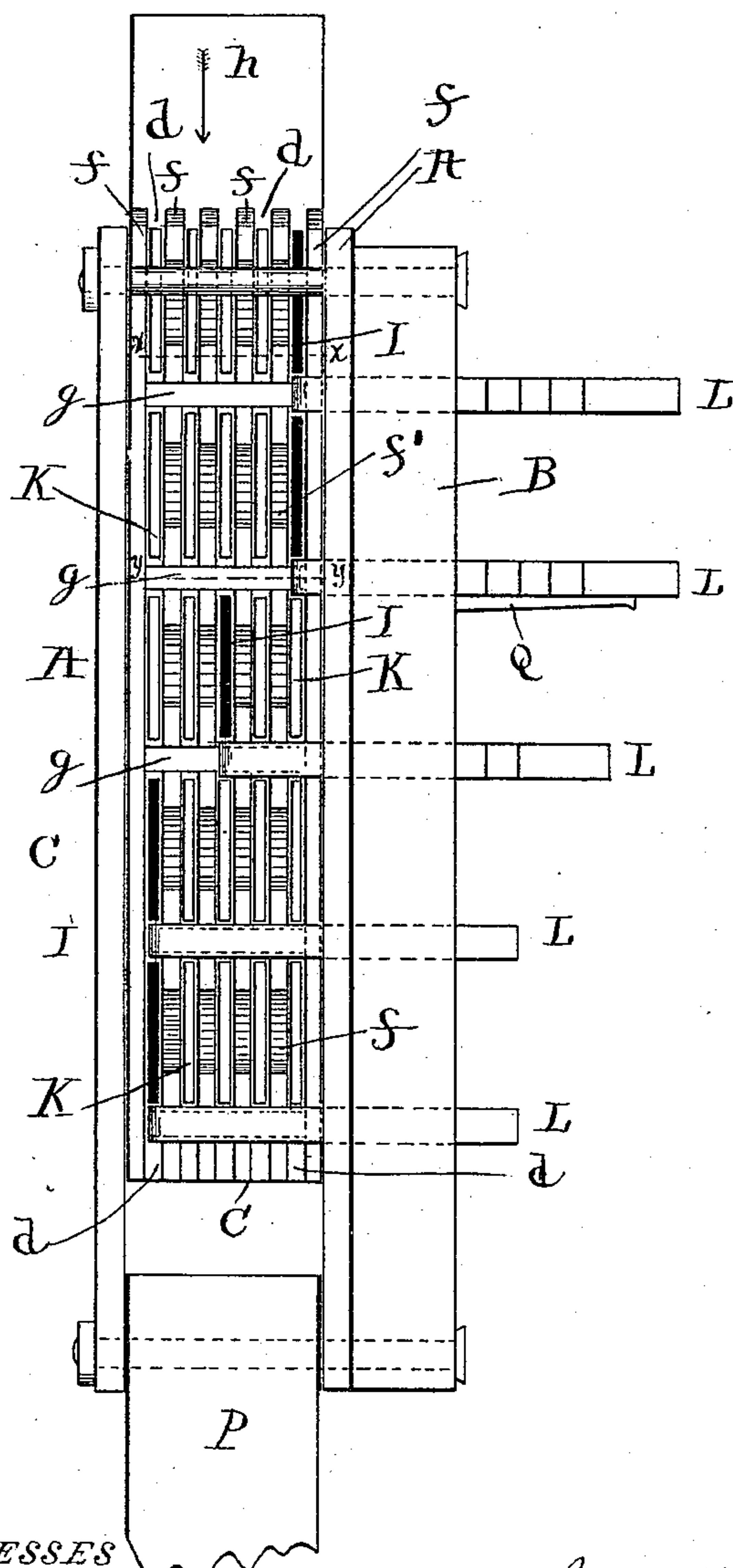
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Fig. 8.



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SPECIFICATION forming part of Letters Patent No. 488,091, dated December 13, 1892.

Application filed April 7, 1892. Serial No. 428,156. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. SCHLOSSSTEIN, of Buffalo, in the county of Buffalo and State of Wisconsin, have invented certain new and useful Improvements in Lock-Bars; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention consists of a special construction whereby a lock bar or bolt for a barn or other door may have a "combination" which will prevent the unlocking of the door by any one who does not know the special and only combination by which it was locked and by which only it can be unlocked. The construction will be made apparent from the following description.

In the drawings, Figure 1 is a perspective view of a lock-bar embodying my invention shown as applied to a door, say, of a barn, and with the lid or cover of its inner mechanism somewhat raised. Fig. 2 is a cross-section in the line *xx* of Fig. 8, the "blocks," hereinafter named, being removed. Fig. 3 is a plan of one of the notched ribs or partitions of the lock-bar; Fig. 4, a plan of one of the removable blocks; Fig. 5, a cross-section in the line *yy* of Fig. 8; Fig. 6, an edge view of one of the slide-keys; Fig. 7, a similar view of a slightly-different key having a prolongation beyond its short bent part; Fig. 8, a plan of the inside of the apparatus, the lid being removed or raised.

Within a case A, which is shown as secured to the inside or back of a door B, is a slide bar or bolt C, the main portion of which may be made with a series of two or more longitudinal deep parallel grooves *d*, being the spaces *n* between the longitudinal ribs or partitions *f*, intercepted by transverse partitions or fillings *g* at regular intervals, thus constituting a series of grooved quadrangular boxes bounded by the outer walls of the bolt or bar C, and by such fillings these boxes being separated into narrow compartments extending lengthwise of the bar by the longitudinal ribs *f*, the spaces between which form the grooves

d. The ribs *f* have cut-out portions *f'* to permit the lifting out and removal and change of position of the blocks or pins K, presently to be described. In other words, the sliding bolt or bar C is solid at that end portion *h* which when pushed outward, as shown in Fig. 8, serves to fasten the door, and the remainder of this bolt may be described as an uncovered box having a series of lengthwise partitions *f* and a series of vertical partitions or fillings *g*, thus forming numerous small chambers I. Loose removable blocks or pins K are provided adapted to be readily and interchangeably inserted in any one of these chambers I; but their numbers are as many less than the number of chambers as there are keys L, which I will now describe. These keys are simply flat strips of metal, each having a bent portion or hook *m*, adapted to freely enter the notches *n*, made in the partitions or ribs *f* of the box and capable of being pushed or pulled crosswise of the box, so that the part *m* may be brought to coincide with any one of the chambers I. These keys may terminate in the bent part *m*, as in Fig. 6, or may be extended beyond it, as shown in Fig. 7, so as to project entirely through the lock at its inside, as well as at its outside, but not so far.

P is a hinged door on the inside face of the lock.

Q is an outside handle projecting through a slot *p* in the door and serving to slide the bolt either for locking or unlocking; but it cannot be used for the purpose of unlocking unless the combination by which it was locked be known.

Suppose the bolt has five parallel rows of chambers I and five keys, as shown. All these chambers, excepting five, (arbitrarily selected,) are then filled with their respective blocks, and these blocks have a height such as prevent the sliding of the bolt whenever any one of the bent parts *m* comes in contact with the end of any one of such blocks. Hence no unlocking can take place until each and all of the keys shall first by a knowledge of the predetermined combination and arrangement be adjusted so that each and all of the bent parts *m* shall be in line with such of the chambers I of its adjacent box which shall have been left unfilled when the door was locked. By way of an illustration I have shown the

two left-hand upper chambers, the two right-hand lower ones, and a central one unfilled.

It will be evident that if the several projections *m* are in position to coincide with these unfilled chambers the bolt will be free to move in one or the other direction, dependent only upon whether these projections be at the right or left side of the chambers. If any one of these projections *m* be not in line with an unfilled chamber, the bolt cannot be shifted, because such projection then abuts against the block.

It will be seen that with five keys and five sets of chambers the possible permutation of changes in the combinations will be practically unlimited, inasmuch as each and every key may by the transposing of the blocks be excluded from engaging with any one or more of its adjacent chambers I.

It will be evident that the numbers of chambers, and consequently the numbers of the blocks and keys, may be less or more, as desired, the principle of the construction, however, being still the same.

No portable or pocket key is needed and no padlock or other similar contrivance to fasten or release the bolt. The device is complete within itself.

I do not claim, broadly, a set of parallel

grooves nor a set of keys working transversely of the same; but

I claim—

1. A lock bolt or bar having within it two or more longitudinal parallel grooves divided into separate chambers, combined with a set of removable and interchangeable blocks or pins adapted to be loosely lodged in such chambers and a set of adjustable hooked keys corresponding in number to the number of grooves, the combination being and operating substantially as set forth.

2. The described lock bar or bolt, having, in combination with parallel partitions notched at *n*, as described, and having between these partitions a series chambers of uniform shape and size, a set of interchangeable blocks or pins K, each adapted to be loosely lodged in such chambers and to be lifted by one's fingers and transferred at will from any one to any other of said chambers to effect a change in the combination, a set of hooked keys L, and the handle Q, projecting through a longitudinal slot in the door.

JOHN F. SCHLOSSSTEIN.

Witnesses:

THEO KELLER,
RUDOLF MUELLER.