

No. 682,560.

Patented Sept. 10, 1901.

K. MASLONKA.  
SEAL LOCK.

(Application filed Aug. 28, 1899.)

(No Model.)

4 Sheets—Sheet 1.

Fig. 1

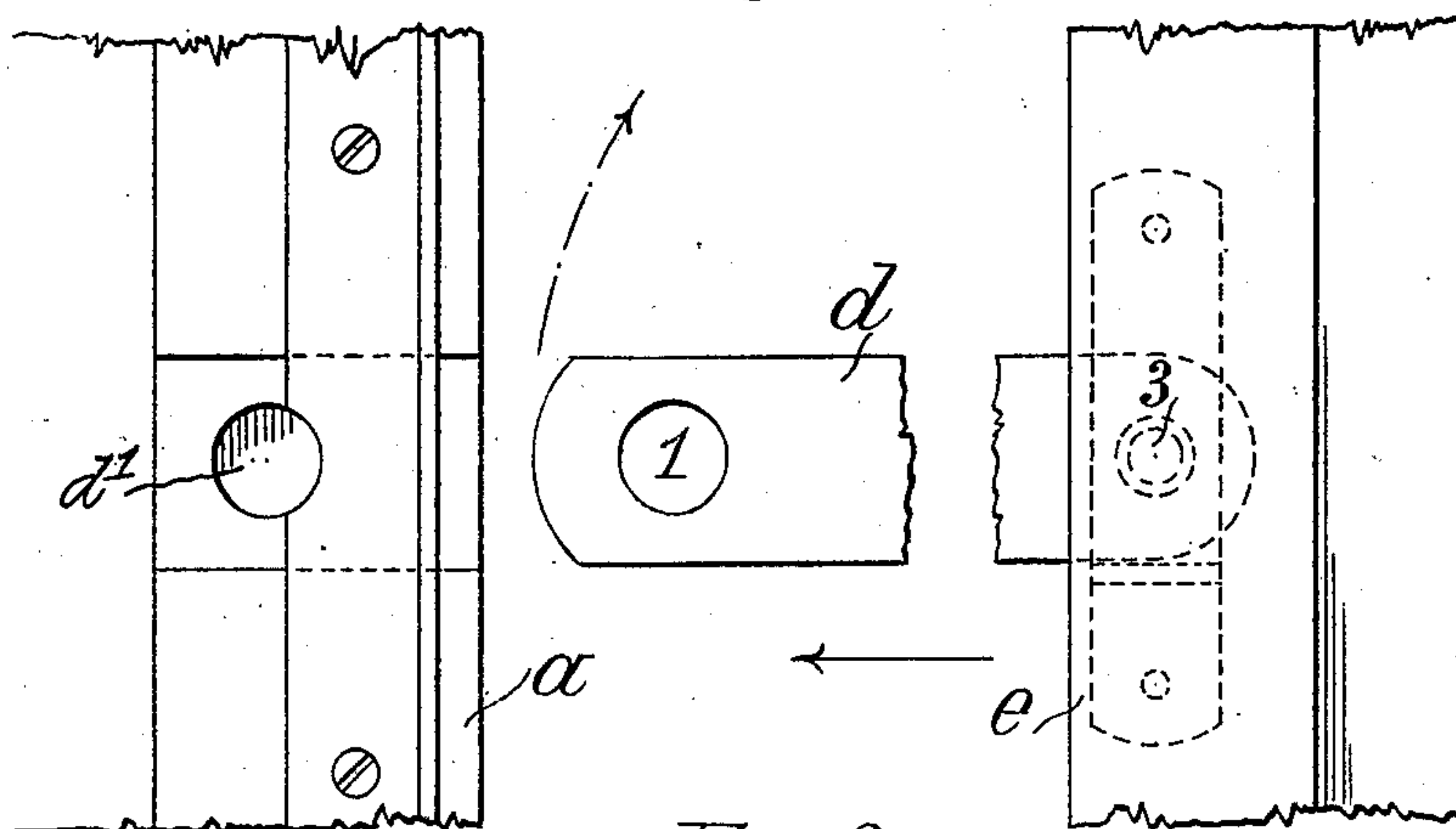


Fig. 2

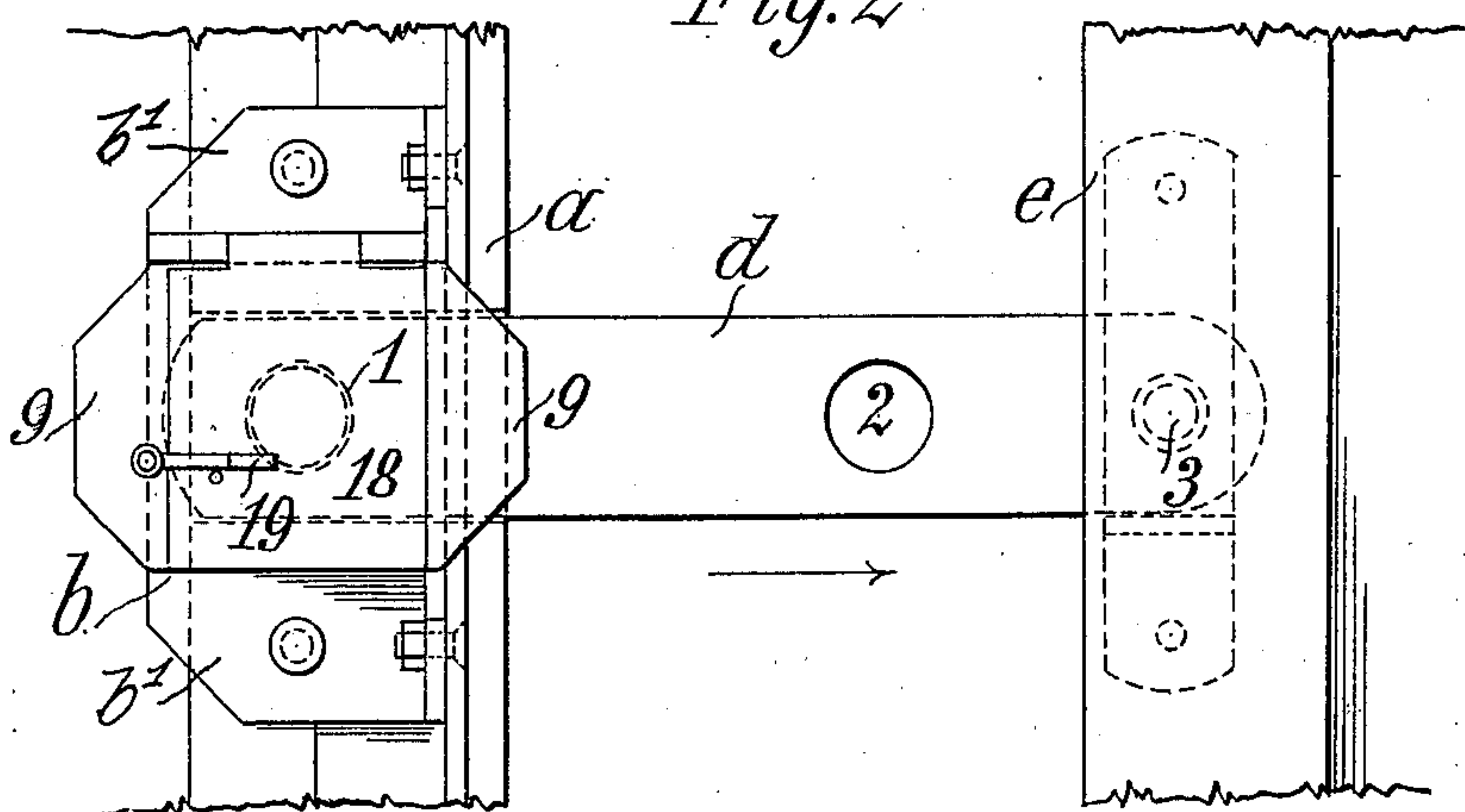
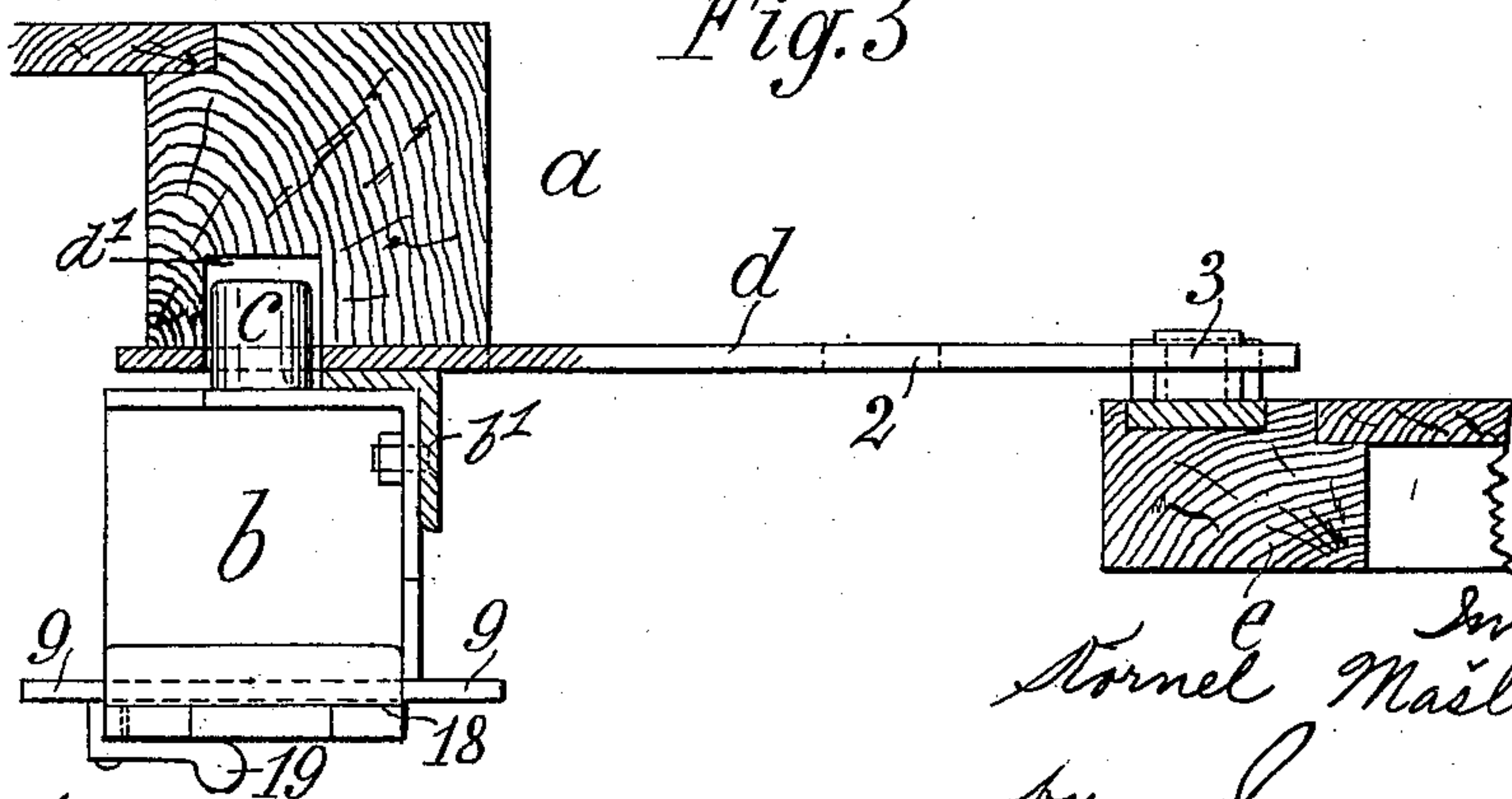


Fig. 3



Witnesses:  
B. H. H.  
B. H. Sommers

Inventor:  
Kornel Maslonka  
by *[Signature]*  
Att'y

No. 682,560.

Patented Sept. 10, 1901.

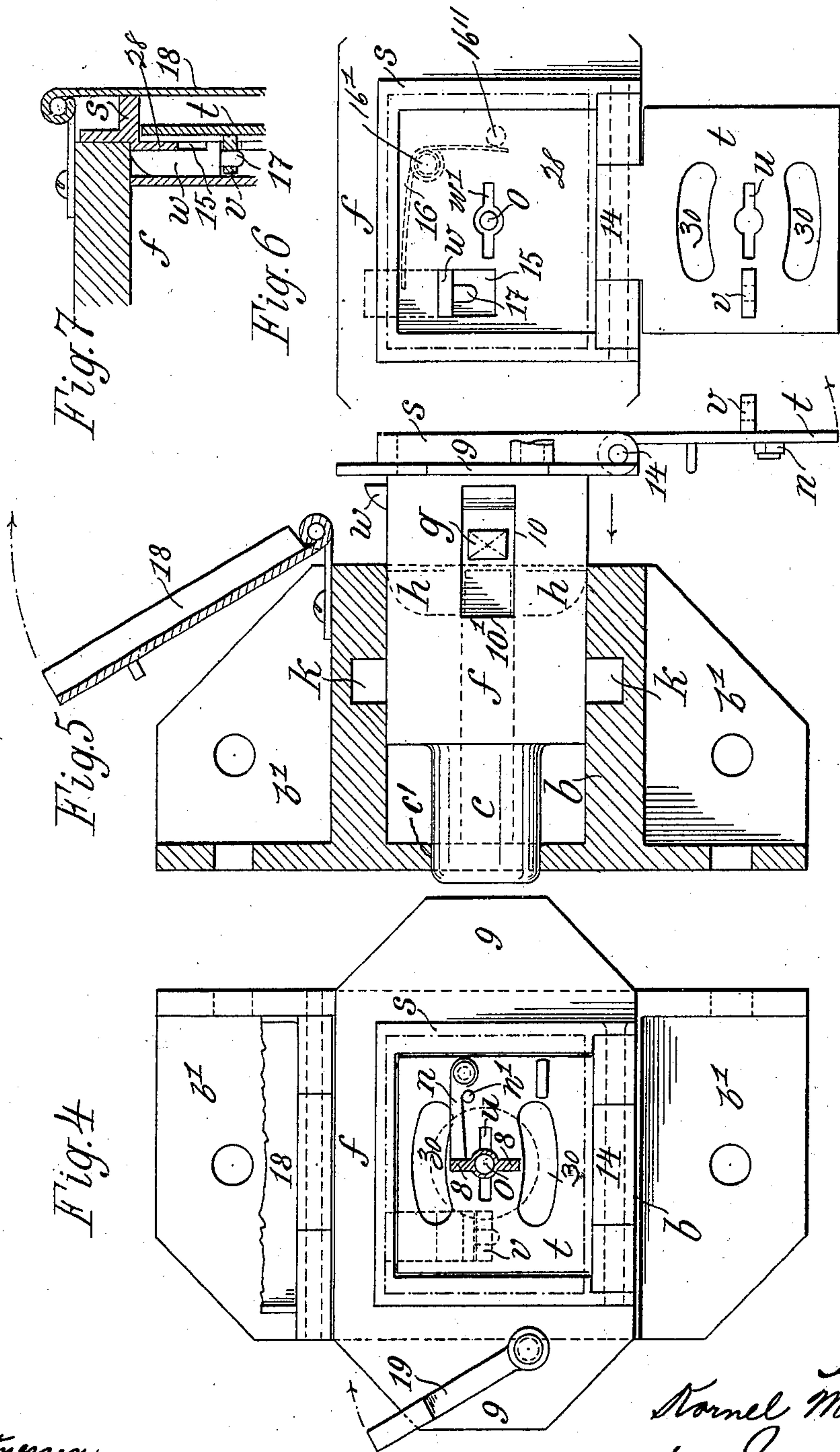
K. MASLONKA.

SEAL LOCK.

(Application filed Aug. 28, 1899.)

(No Model.)

4 Sheets—Sheet 2.



Witness:  
B. A. Allen  
B. L. Summers

Inventor  
Kornel Maslonka  
by *[Signature]*  
Att'y.



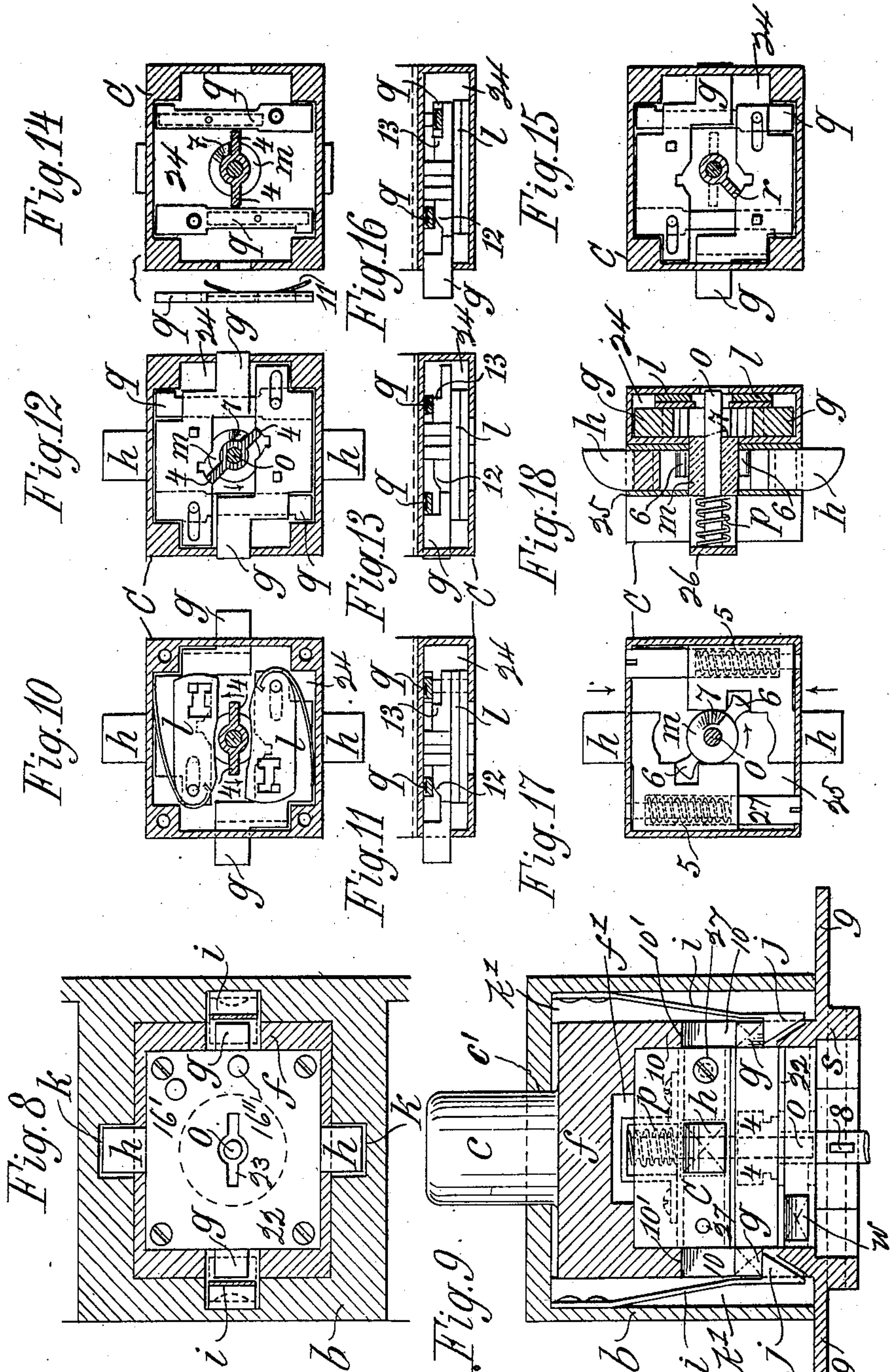
K. MASLONKA.

SEAL LOCK.

(Application filed Aug. 28, 1899.)

(No Model.)

4 Sheets—Sheet 3.



Witnesses:

*A. J. Jones*

*B. K. Sommer*

Inventor  
Kornel Maslonka  
by *Henry M. H.*  
Atty.





# UNITED STATES PATENT OFFICE.

KORNEL MASLONKA, OF NEU-SANDEC, AUSTRIA-HUNGARY, ASSIGNOR OF  
THREE-FOURTHS TO STEFAN WALORSKI, OF RUDAWA, NEAR CRACOW,  
AND JOSEF PILAWSKI AND WLADIMIR VON LEWICKI, OF CRACOW, AUS-  
TRIA-HUNGARY.

## SEAL-LOCK.

SPECIFICATION forming part of Letters Patent No. 682,560, dated September 10, 1901.

Application filed August 28, 1899. Serial No. 728,755. (No model.)

*To all whom it may concern:*

Be it known that I, KORNEL MASLONKA, a  
subject of the Emperor of Austria-Hungary,  
residing at Neu-Sandec, in the Province of  
Galicia, in the Empire of Austria-Hungary,  
have invented certain new and useful Im-  
provements in Seal or Controlling Locks; and  
I do hereby declare the following to be a full,  
clear, and exact description of the invention,  
such as 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 and figures of refer-  
ence marked thereon, which form a part of  
this specification.

This invention has relation to locks, more  
especially locks adapted for use on freight-  
cars, and more particularly to "seal-locks;"  
and it has for its object a lock the mechan-  
ism of which cannot be readily tampered with,  
while if used as a seal-lock the seal cannot be  
removed or destroyed by an attempt at re-  
moval.

The invention consists in structural fea-  
tures and combinations of coöperating ele-  
ments, substantially as hereinafter described,  
and specifically pointed out in the claims.

In the accompanying drawings, Figures 1  
and 2 are fragmentary elevations of a door-  
post and door of a railway-car, showing the  
locking-bar pivoted to the door and the keeper  
in the door-post for the lock-bolt in Fig. 1  
and the lock applied in Fig. 2; and Fig. 3 is  
a sectional plan view of Fig. 2. Fig. 4 is an  
outer face view of the lock with the key in-  
serted and shown in section. Fig. 5 is a lon-  
gitudinal vertical sectional view of the lock,  
the lock-bolt being shown partly drawn out of  
its casing and the gates that close the open end  
of said casing thrown open. Fig. 6 is an ele-  
vation or outer face view of the lock with the  
main gate open. Fig. 7 is a detail sectional  
view of the device for locking the seal to the  
lock-casing. Fig. 8 is a cross-sectional view,  
and Fig. 9 a longitudinal vertical sectional  
view, of the lock, showing the lock-bolt locked  
to its casing. Figs. 10 and 12 are cross-sec-  
tions of the internal casing, showing the lock-  
ing-bolts *g* in their projected and retracted  
positions, respectively, the tumblers for said

bolts being removed in Fig. 12, Figs. 11 and  
13 being fragmentary horizontal sections of  
Figs. 10 and 12, taken on a line above the  
tumblers. Fig. 14 is a cross-section of the  
internal casing, showing the safety locking-  
dogs *q*; and Fig. 16 is a fragmentary hori-  
zontal section of Fig. 14, showing one of said  
dogs in engagement with one of the bolts *g*.  
Fig. 15 is a view similar to Fig. 12, showing  
the impossibility of retracting both bolts *g*  
with a key having but one bit. Fig. 17 is a  
vertical section of the internal casing, illus-  
trating the means for retracting the bolts *h*.  
Fig. 18 is a longitudinal vertical section of  
Fig. 10. Figs. 19 and 22 are detail horizon-  
tal sectional views. Fig. 20 is a sectional  
front elevation, and Fig. 21 a longitudinal  
vertical sectional view, of the lock adapted  
for use with lead seal-plugs; and Figs. 23 and  
24 show the key in front and side elevations,  
respectively.

As shown in Figs. 1 to 3, the lock-bar *d* is  
pivoted at 3 to the car-door *e*, while the lock-  
casing *b*, provided with suitable bolt-flanges  
*b'*, is bolted to the door-post, in which is formed  
a suitable recess *d'*, acting as a keeper for the  
lock-bolt *c*. The lock-casing *b* is polygonal  
in cross-section and provided in four of its  
inner faces with oppositely-arranged recesses,  
the recesses *k* in the two opposite walls serv-  
ing as keepers for two reciprocally-movable  
spring-actuated sliding locking-bolts, and in  
the recesses *k'*, which extend from end to end  
of the casing *b* in the other opposite walls,  
are arranged resilient keepers *j* on the outer  
free end of springs *i*, secured at the inner  
end in said recesses, said keepers having  
their proximate faces beveled and being lo-  
cated near the outer end of said casing, which  
outer end is open and has in its inner end  
wall an opening *c'*, as shown in Figs. 5 and  
9, through which the lock-bolt *c* is projected  
when pushed into the casing to pass through  
one of the holes 1 or 2 in the lock-bar *d* when  
the latter is properly positioned and engage  
the keeper *d'* in the door-post, as shown in  
Fig. 3.

To the lower horizontal edge of the casing,  
at its open end, is hinged a gate *t*, having a  
central transverse keyhole *u*, and to the outer



face of said gate is pivoted a locking-dog *n*, whose drop when the gate is closed is limited by a stop-pin *n'*, said dog adapted to engage a radial lug 8 on the key, Fig. 4. From the inner face of said gate *t* projects a perforated lug *v* (see Figs. 4 to 7) for purposes hereinafter described.

The lock-bolt *c* has an enlarged chambered head *f* of the same form in cross-section as that of the casing *b*, the rectangular chamber therein being open at its outer end, from opposite side walls of which project flanges or ears 9, whereby the bolt can be seized and pushed into and drawn out of its casing. In the chamber of the bolt-head *f* is contained the lock mechanism, and in the inner end wall of said chamber is formed a central recess *f'*, while two of its opposite side walls are slotted longitudinally, as shown at 10, Fig. 9.

Referring now more particularly to Figs. 8 to 18, it will be seen that the locking appliances are confined in a casing *C*, fitting the rectangular chamber in the bolt-head *f*, said casing being open at its outer end, which is closed by a plate 22, in which is formed a central keyhole 23, so as to register with the keyhole *u* in gate *t* when the latter is closed. The casing *C* has two chambers 24 and 25, in the outer one of which are confined the reciprocally and horizontally movable sliding bolts *g*, and in the adjacent chamber 25 are confined the reciprocally and vertically movable spring-actuated sliding bolts *h*, having their inner faces at the outer ends beveled or curved outwardly. (See Fig. 18.) As shown in said Fig. 18, the casing *C* has in rear of its chambers only side walls abutting against the inner end wall of the chamber in the bolt-head *f* to hold said casing from being pushed too far into said chamber, and centrally of the rear wall of chamber 25 is a yoke 26, projecting beyond the rear edge of the side walls of casing *C*, Fig. 18, into the recess *f'* in the chamber in the bolt-head *f*, Fig. 9, to which yoke is secured the key-pin *o*, whose outer end projects into the keyhole 23 in front plate 22 of casing *C*, Figs. 8 and 18.

The form of the reciprocally-movable locking-bolts *h* is clearly shown in Figs. 17 and 18. They are mounted on screw-pins 27, having an attenuated portion passing through a hole in the heel of the bolts and carrying a spring 5, that keeps said bolts normally projected from their chamber. The form of the bolts *g*, which are not spring-actuated, is clearly shown in Figs. 12 and 15, and in cooperation with these bolts I use a tumbler or tumblers *l*, Fig. 10, which may have any suitable number and arrangement of wards.

As an additional means of safety—namely, to prevent the bolts *g* from being retracted into the casing one after another by means of a key having a single bit only, Fig. 15—I provide two locking dogs or latches *q*, Figs. 11 to 16 and 19, held against the bolt by springs 11, Fig. 14, said bolts having an in-

clined face 12 on one side of an approximately central enlargement or bearing and a lock-shoulder 13 on the opposite side thereof, Fig. 19, so that when both bolts *g* are simultaneously retracted by means of a key having two bits 4, Figs. 23 and 24, the inclined or beveled faces 12 will ride over the latches *q* and force the same against the walls of casing *C*, thus allowing both bolts to slide inwardly over said latches. If, on the contrary, an attempt is made to retract one bolt after another by means of a key having but one bit, the retraction of the upper bolt, for instance, Fig. 15, would force the upper end of the right-hand latch against the casing-wall and tilt the lower end of said latch inwardly into engagement with the lock-shoulder 13 on the lower bolt *g*, thus preventing its retraction by the further turning of the key, as will be readily understood, a similar operation taking place if the lower bolt *g* were first retracted. Then the left-hand latch *q* would come into operation and lock the upper bolt. The spring-bolts *h*, which project into the longitudinal slots 10 in two of the opposite sides of the head *f* of lock-bolt *c*, are not directly retracted by the key, Figs. 23 and 24, but by means of a sleeve *m*, mounted on the key-pin and held in normal position by means of a spring *p*, coiled upon said pin and bearing on the sleeve and on the yoke 26, Fig. 18, said sleeve having two radial bits 6, adapted to engage suitable notches in the said bolts *h*, Fig. 17, and is provided on its front face with an incline forming a shoulder 7. The key, Figs. 23 and 24, has, besides the two bits 4, two radial lugs 8, hereinbefore referred to, and when a lead plug-seal is used I provide an outer gate 18, Figs. 3, 4, 5, and 7, hinged to the upper rear edge of the casing, said gate being held in a closed position when the lock-bolt *c* *f* is fully pushed into its casing—i. e., in its locked position—by means of a latch 19, Figs. 3 and 4, pivoted to one of the lateral flanges 9 of the bolt-head and held in position by a pin projecting from the outer face of said gate. (See Figs. 3 and 4.)

When the lock is used as a seal-lock with paper or cardboard seals, the outer end of the head *f* of the bolt *c* is provided with a seal-chamber *s*, open at its outer end, and in its opposite end wall 28 is formed an opening 15 and a keyhole *w'*, through which the key-pin *o* projects, and between said wall 28 and the outer end plate 22 of casing *C*, containing the locking-bolts, is arranged a sliding locking-bolt *w*, consisting of a block having a locking-pin 17, which when the bolt-head *f* is fully pushed in traverses the aforesaid opening 15. The locking-bolt *w* is normally held projected from the lock-bolt head *f* by a spring 16, Fig. 6, one end of which engages the said block of said bolt, said spring being coiled on a pin 16', and its other end has bearing on a pin 16'', both pins being preferably secured to plate 22 of casing *C*, Fig. 8.

It will be observed, and as more clearly



shown in Fig. 5, that the lock-bolt *c f* cannot be entirely withdrawn from its casing *b*, as it is obvious that said bolt can move out of its casing only a distance equal to the length of the slots 10 in its opposite sides, the inner end 10' of said slots acting, together with the keepers *j*, as stops. If the lock-bolt *c f* is drawn out of its casing to the full extent, the spring-actuated locking-bolts *h* will be projected from the bolt-head *f* by the action of their springs 5, and so will the locking-bolt *w*. When the lock-bolt *c f* is in the position last referred to, a cardboard seal is placed in chamber *s* at the outer end of the bolt-head *f* and the gate *t* closed, and the lug *v* on the inner face thereof will be forced through the seal or through an opening previously made therein into the opening 15 in the chamber-wall. If now the bolt is pushed into its casing, the locking-bolts *h* will be forced inwardly into the bolt-head *f*, their inner or rear faces being curved to admit of this, as hereinbefore stated, and as the bolt-head *f* is about to be fully pushed in the locking-bolt *w* is likewise pushed inwardly, its locking-pin 17 passing through the perforation of the lug *v* on gate *t*, thus locking both gate and seal to the bolt-head *f*. At the same time the locking-bolts *h* are brought in line with their keepers *k* and are projected into the same by their springs 5, while the sliding bolts *g*, previously projected into the slots 10 by means of the key, snap over their resilient keepers *j*, as shown in Fig. 9, thus locking the bolt-head *f* to four sides of its casing. Of course it will be readily understood that when the bolt-head is moved out of its casing *b* sufficiently for the locking-bolt *w* to clear the end of said casing, Fig. 5, the spring 16 of said bolt *w* will throw the same out and automatically release the seal and gate *t*.

When paper or cardboard seals are used, I preferably dispense with the gate 18 and provide the gate *t* with segmental sight-openings 30, Figs. 4 and 6. When a lead seal *Z* is used, the perforated lug *v* on gate *t* is dispensed with, as well as the keyhole and sight-openings therein, but has simply a slot *x* in line with the aforementioned aperture 15 in the back of seal-chamber *s* for the insertion of the perforated shank *y* of the seal *Z* into the path of the locking-bolt *w*, so that the seal *Z* acts as a means for locking gate *t* to bolt-head *f*, and said gate can therefore not be opened without first cutting away the enlarged head of said seal *Z*. This arrangement is clearly shown in Figs. 20 to 22, and in this construction the locking-dog *n*, hereinbefore referred to, is pivoted in the seal-chamber *s*.

In throwing out the locking-bolts *g* by means of the key the latter is turned in the direction of the hands of a watch, and in order that this may be effected the sleeve *m* is mounted on key-pin *o*, so as to have endwise motion thereon, as hereinbefore described. As one of the bits 4 of the key slides on the

inclined or cam face that forms the shoulder 7 on the outer face of sleeve *m* the latter is forced inwardly against the stress of its spring *p* until said bit has cleared the said shoulder 7, when the latter is thrown forward again to a normal position by its said spring *p*.

To open the lock, the key is inserted and turned in the direction of arrow, Figs. 10 and 12, whereby the bits 4 on said key lift the tumblers, release the bolts *g*, and retract the latter into the bolt-head *f*, the tumblers under the stress of their springs reengaging the bolts in a well-known manner. As soon as bolts *g* are retracted one of the bits 4 engages shoulder 7 on the outer end of sleeve *m*, Fig. 12, and on the key being further turned sleeve *n* is also turned, its bits 6 engaging suitable notches in the bolts *h*, Fig. 17, and retracting the same against the stress of their springs. The key can then be locked against rotation in a reverse direction under the action of the springs 5 of the bolts *h* by means of the latch *n*, as hereinbefore described.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. A lock comprising a springless bolt having an enlarged head, an inclosing casing provided with an internal keeper or keepers and with an aperture through which the bolt can be projected for engagement with a locking-keeper, said bolt having to-and-fro motion in its casing, means for imparting such motion to said bolt, and a spring-projected and key-retracted locking bolt or bolts within the head of the bolt and adapted to engage the keeper or keepers in the casing when the bolt is projected therefrom and lock said bolt against motion, for the purpose set forth.

2. A lock, comprising a lock-bolt having an enlarged head, a casing in which said bolt can be moved to and fro by hand, said casing open at one end and provided in its opposite end with an aperture in line with the bolt and with internal keepers, means for locking the bolt-head to its casing when pushed into the same with the bolt projecting through the aforesaid aperture, and means limiting the movement of the bolt out of its casing, for the purpose set forth.

3. A lock comprising a springless lock-bolt provided with an enlarged chambered head, an inclosing casing provided with an aperture through which the bolt can be projected into engagement with a suitable keeper, said bolt having to-and-fro motion in its casing, and means for imparting such motion to the bolt; in combination with oppositely-arranged keepers within the casing and reciprocally-movable spring-projected and key-retracted locking-bolts in the aforesaid chamber in the bolt-head adapted to engage the keepers within the casing and lock the lock-bolt against motion when projected from said casing, for the purpose set forth.

4. A lock comprising a bolt having an enlarged head polygonal in cross-section, and a



corresponding casing in which said bolt has to-and-fro motion, said casing provided in one end with an aperture in line with the bolt and with internal keepers on four of its sides; in combination with locking-bolts contained in the bolt-head and adapted to be projected from its four sides into engagement with the aforesaid keepers in the casing to lock the bolt thereto, for the purposes set forth.

5. A lock comprising a lock-bolt having an enlarged head, a casing in which said bolt has to-and-fro motion, said casing provided in one end with an aperture in line with the bolt, and with oppositely-arranged internal keepers, and two locking-bolts contained within the lock-bolt head and constructed to be reciprocally and simultaneously moved into or out of engagement with the aforesaid keepers to lock the lock-bolt thereto or unlock it therefrom; in combination with means for preventing the unlocking of the bolt-head from its casing should an attempt be made to move one locking-bolt after another out of engagement with their keepers, for the purpose set forth.

6. A lock, comprising a lock-bolt having an enlarged head, a casing in which said bolt has to-and-fro motion, said casing provided in one end with an aperture in line with the bolt, and with internal oppositely-arranged keepers; in combination with reciprocally-movable locking-bolts contained in the bolt-head and adapted to be moved into and out of engagement with the aforesaid keepers in the casing to lock the bolt-head thereto or unlock it therefrom, and tumblers connected with said bolts, for the purpose set forth.

7. A lock comprising a lock-bolt having an enlarged head, a casing in which said bolt has to-and-fro motion, said casing provided in one end with an aperture for the bolt, the resilient keepers *i j* in said casing, the reciprocally-moving locking-bolts *g* contained in the bolt-head and coöperating with said keepers to lock said head to its casing, and the tumblers *l* of said bolts; in combination with the spring-actuated locking-tongues *q* arranged relatively to the locking-bolts as described and adapted to engage a shoulder 13 on said bolts, substantially as and for the purposes set forth.

8. A lock comprising a lock-bolt having an enlarged head a bolt-casing, handholds on the bolt-head for moving the bolt to and fro in its casing, the latter provided with a bolt-aperture in one end and with oppositely-arranged internal keepers; in combination with two reciprocally-sliding key-operated locking-bolts contained within the bolt-head and adapted to engage the aforesaid keepers and lock the bolt to the casing, springs acting on said bolts to hold them in engagement with their keepers, and a revoluble key-operated device constructed to engage with and retract said locking-bolts, for the purpose set forth.

9. A lock, comprising a lock-bolt having an enlarged head, a casing open at one end and

into and out of which the bolt has free motion, said casing provided with a bolt-aperture in its opposite end and with oppositely-arranged internal keepers; in combination with reciprocally-movable locking-bolts contained within the bolt-head and adapted to engage the aforesaid keepers, said bolts having the inner faces of their outer ends curved, springs acting on said bolts to keep them in engagement with their keepers, a key-operated device for retracting the bolts from their keepers, and means for limiting the motion of the bolt out of its casing, substantially as and for the purpose set forth.

10. A lock, comprising a bolt having an enlarged head rectangular in cross-section and provided with longitudinal slots in opposite sides, a casing of like form in cross-section in which said bolt-head has free to-and-fro motion, said casing provided with a bolt-aperture, and spring-supported keepers oppositely arranged in said casing and located near the outer end thereof; in combination with reciprocally-movable locking-bolts, springs holding said bolts normally projected through the aforesaid slots in the bolt-head in engagement with their keepers, a key-pin arranged axially within the bolt-head, and a key-operated device revoluble on said pin and adapted to engage the locking-bolts and retract the same into the bolt-head, for the purpose set forth.

11. A lock comprising a bolt having an enlarged head rectangular in cross-section and provided with longitudinal slots in opposite sides, a casing of like form in cross-section in which said bolt-head has free to-and-fro motion, said casing provided with a bolt-aperture, and spring-supported keepers oppositely arranged in said casing and located near the outer end thereof; in combination with reciprocally-movable locking-bolts, springs holding said bolts normally projected through the aforesaid slots in the bolt-head in engagement with their said keepers, a key-pin arranged axially within the bolt-head, a key-operated device revoluble on said pin and adapted to engage the locking-bolts and retract the same into the bolt-head, and a latch at the outer end of said head adapted to engage a projection on a key and lock the same against rotation, and the locking-bolts against the stress of the bolt-springs, substantially as and for the purpose set forth.

12. A lock comprising a bolt having an enlarged head polygonal in cross-section, a casing of similar form in cross-section in which said bolt-head has free to-and-fro motion, said casing provided with a bolt-aperture in one end and with oppositely-arranged internal keepers, reciprocally-movable locking-bolts contained in the bolt-head, springs holding said bolts normally in engagement with their keepers, and a key-pin arranged axially in the bolt-head between said bolts; in combination with a sleeve *m* revoluble on the key-pin and having a shoulder 7 on its outer face



and radial arms 6 adapted to engage both locking-bolts, and a spring *p* on the key-pin acting on said sleeve, substantially as and for the purpose specified.

5 13. A lock comprising a bolt having an enlarged head, a casing open at one end, in which said bolt can be moved to and fro by hand, said casing provided in its closed end with an aperture in line with the bolt, a seal-chamber at the outer end of the bolt-head, a gate for closing said chamber, and locking appliances contained within the bolt-head and adapted to lock the same to its casing; in combination with means for locking the seal and  
10 seal-chamber gate to the bolt-head when moved to project the lock-bolt from its casing, for the purpose set forth.

14. A lock comprising a bolt having an enlarged head, a casing open at one end, in which  
20 said bolt can be moved to and fro by hand, said casing provided in its closed end with an aperture in line with the bolt, a seal-chamber at the outer end of the bolt-head, a gate for closing said chamber, and locking appliances contained within the bolt-head and adapted to lock the same to its casing; in combination with means for locking the seal and seal-chamber gate to the bolt-head when  
25 moved to project the lock-bolt from its casing

and to automatically release said seal and gate chamber when the bolt-head is moved to withdraw the bolt into its casing, for the purpose set forth.

15. The combination with the head *f* of the lock-bolt provided with an aperture 15 in its front face, the locking-bolt *w*, and a spring acting thereon to hold the outer end of said bolt projected from one of the lateral faces of said lock-bolt head *f*, a gate hinged to the outer end of the bolt-head and provided with an aperture *x*, and the casing *b* in which said bolt-head has free to-and-fro motion; of a seal having a perforated shank adapted to be inserted through the gate-aperture *x* and the bolt-head aperture 15 with its perforation in line with the locking-bolt *w*, whereby when the said head is pushed into its casing the locking-bolt *w* is moved into the perforation in the shank of the seal, locking the same, and therethrough the gate, to the bolt-head, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

KORNEL MASLONKA.

Witnesses:

JOSEF RICBARD,  
ALVESTO S. HOGUE.