

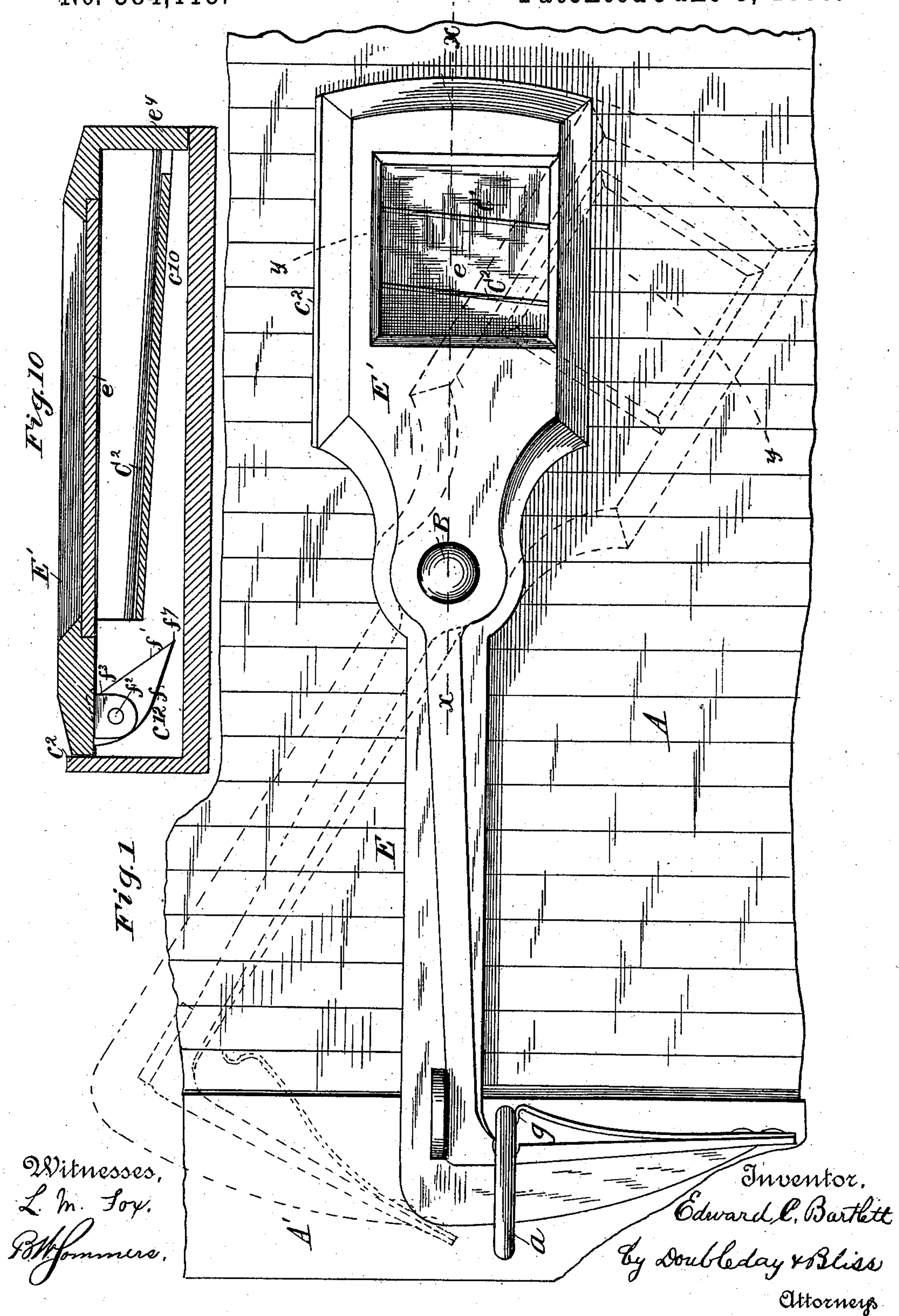
(Model.)

3 Sheets—Sheet 1.

E. C. BARTLETT.
SEAL LOCK.

No. 384,115.

Patented June 5, 1888.



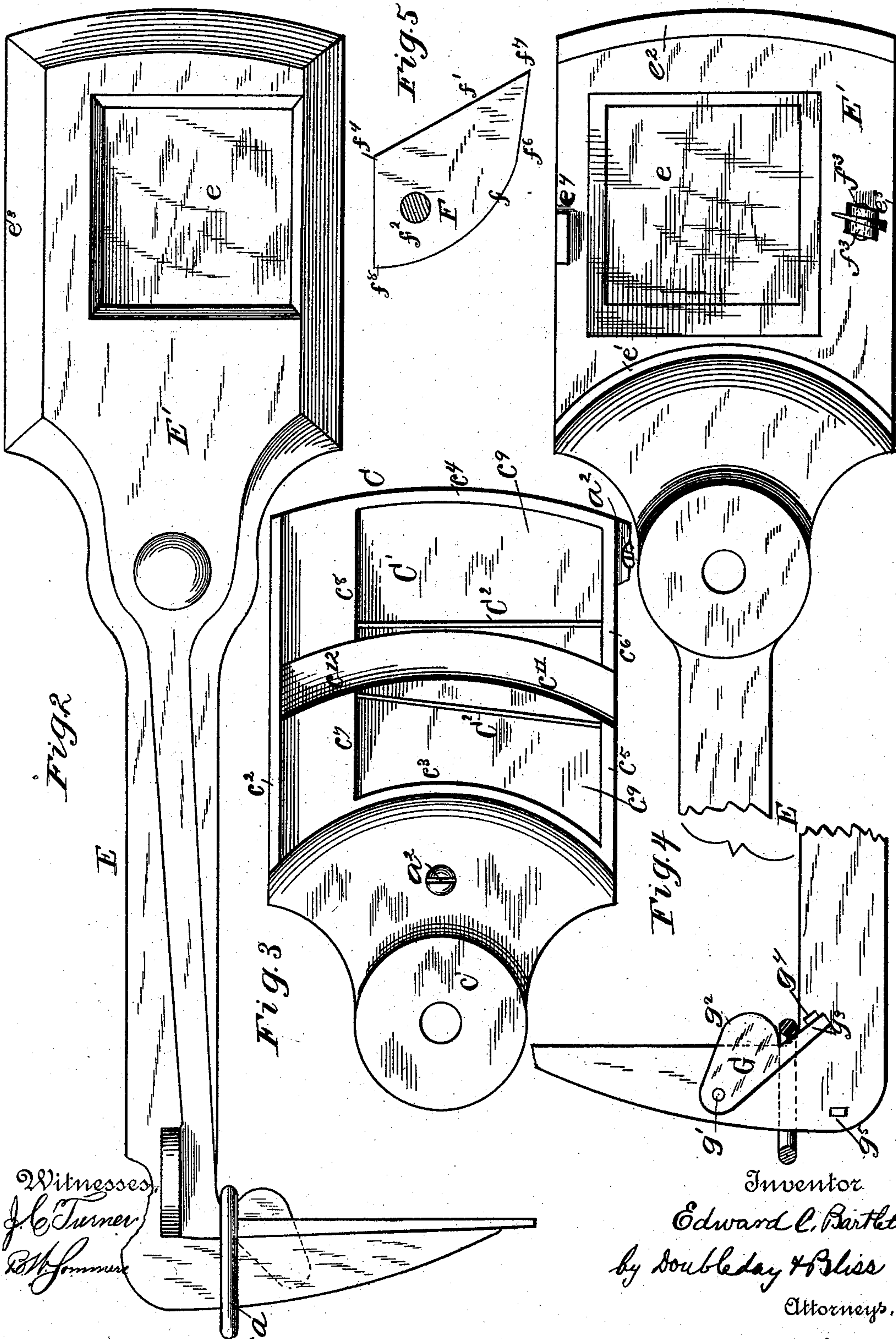
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3 Sheets—Sheet 2.

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Witnesses
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R. W. Sommers

Inventor
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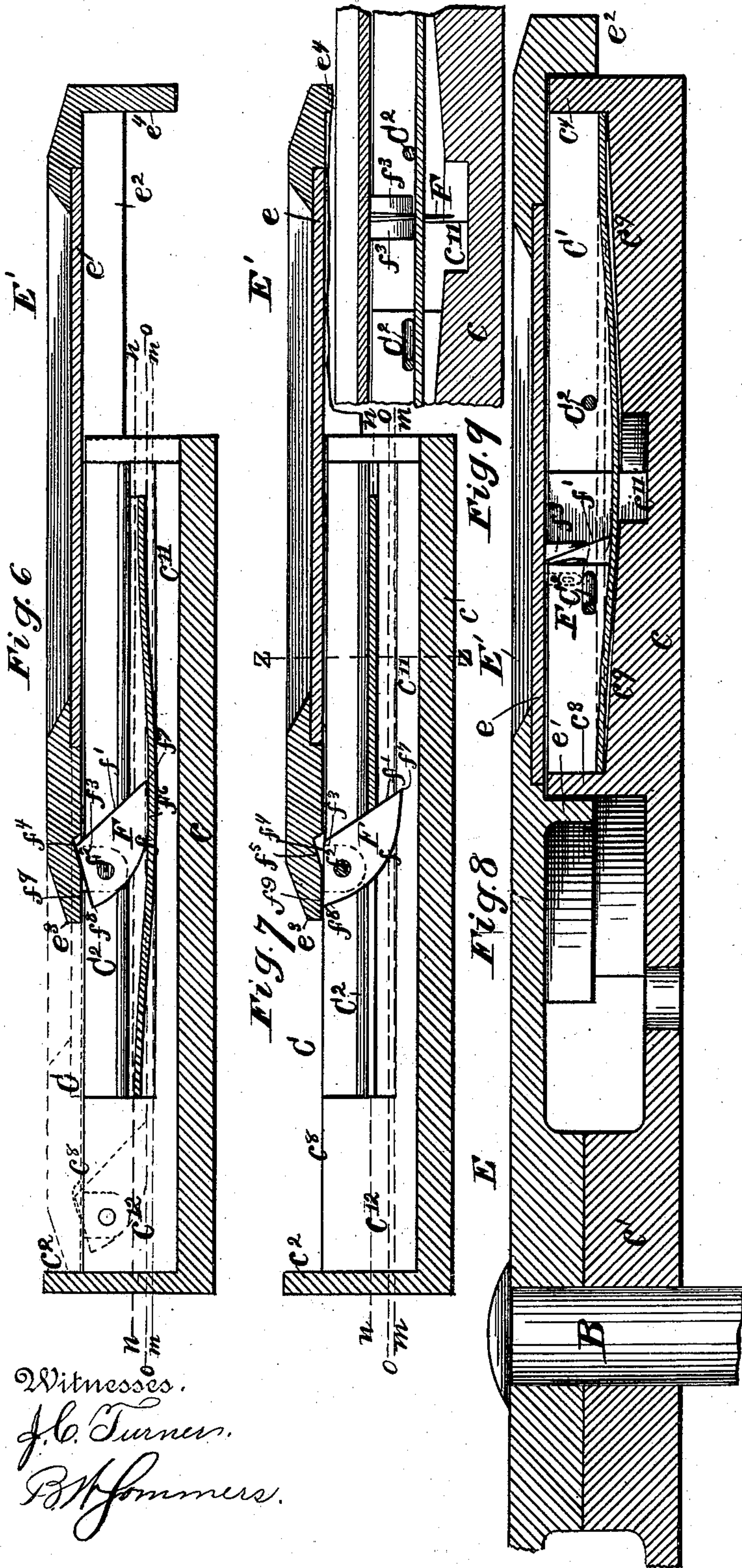
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UNITED STATES PATENT OFFICE.

EDWARD C. BARTLETT, OF OMAHA, NEBRASKA, ASSIGNOR TO JOHN L. McCAGUE, OF SAME PLACE.

SEAL-LOCK.

SPECIFICATION forming part of Letters Patent No. 384,115, dated June 5, 1888.

Application filed January 7, 1888. Serial No. 260,087. (Model.)

To all whom it may concern:

Be it known that I, EDWARD C. BARTLETT, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Seal-Locks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in seal-locks, it pertaining more especially to improvements in locks of the kind combined with freight-car doors.

I have been led to the improvements hereinbelow described by an extensive experience with locks of the character shown and described in the patent to Emanuel Oehrle, No. 366,241, July 12, 1887.

Among the numerous requisites for a successful lock of this character are the following: First, it must be simple in respect to the number, the construction, and the arrangement of its parts; second, it must be of a light weight, because of the cost of the large number of them which must be employed and of the expense involved if each is heavy; third, they must be sufficiently strong to resist the severe usage to which they are subjected; fourth, the parts which contain and cover the seal must be so constructed and related to each other that the seal shall be perfectly protected from rain and snow, as otherwise they are apt to be defaced and destroyed, and the cutting mechanism is liable to become rusty and inoperative; fifth, a powerful leverage must be provided for actuating the seal-cutting knife, inasmuch as the seals, when of practicable character, are made of comparatively thick pasteboard; sixth, to hold the card firmly during the cutting action there must be holding devices engaging with both of the faces of the seal and adapted to bear against said faces on lines in proximity to the line of cut to prevent the seal from bulging or being crowded in either direction at the central portion thereof, for when such bulging or crowding occurs the paper or pasteboard causes such a clogging of the knife-passage as to either prevent completely the movement of the knife-carrier or to break the knife itself, or to break the glass which is employed to cover the seal-receptacle.

I am aware of the fact that a number of de-

vices have been heretofore proposed and patented, and a wide practical experience with many of them has led me to devise the forms herein.

Figure 1 shows a portion of a car-door and the wall and a seal-lock of one of the forms embodying my improvements. Fig. 2 is a face view of the latch-arm detached. Fig. 3 is the face view of the seal-holder or card-receptacle detached. Fig. 4 is an inside face view of the latch piece or hasp detached, part being broken away. Fig. 5 is a side view of a knife, on an enlarged scale. Fig. 6 is a cross-section on the line, *y y*, Fig. 1, the parts being shown on twice the scale of those in Fig. 1 in order to clearly exhibit the relations of the knife and card at the time when the knife is moving backward. Fig. 7 is a similar section showing the parts in the relative positions occupied when the knife is cutting. Fig. 8 is a partial longitudinal section on the line *x x*, Fig. 1, showing the parts in the position occupied at the instant the knife is leaving the card. Fig. 9 is a section on the line *z z*, Fig. 7. Fig. 10 is a section showing the bottom of the card-holder inclined relatively to the path of the knife.

In the drawings the car-door is represented by A and the adjacent wall by A'. Although I herein make particular mention of cars of the character alluded to, it will be understood that the essential features of the present invention may be applied to receptacles other than such cars.

a represents the staple or fixed fastener, which is secured to the car-wall, and is adapted to receive the hook of the latch-bar.

In order to attain some of the ends which I have above specified, it will be seen on comparing the construction herein with that shown in the aforesaid Oehrle patent that I dispense with much of the metal required in making the last said devices. At the same time I have so arranged the parts that I preserve the required strength and provide a greatly-increased leverage for effecting the cutting action.

The seal holder or receptacle is in the drawings indicated as a whole by C. As shown in the figures now being described—namely, Figs. 1 to 9—it is formed, preferably, with a base-

plate, c , which extends outward at one end to form a bearing-piece, c' , for the pivot-bolt. It has also a projecting flange, c^2 , at the upper edge, and curvilinear guide-flanges $c^3 c^4$, struck from the axis of the pivot-bolt at B. It has also upon the lower side projecting flanges or walls $c^5 c^6$, and at the upper side corresponding walls or flanges, $c^7 c^8$. It will be seen that the walls or flanges $c^3 c^4 c^5 c^6 c^7 c^8$ substantially inclose a more or less shallow chamber, which is indicated in the drawings as a whole by C' , and which is adapted to receive and firmly retain the card or seal.

As concerns some of the features of the invention, I do not limit myself to the exact conformation shown for these walls or flanges or for the bottom of the card or seal receptacle.

I aim to hold the seal at two or more of its edges, and yet permit it to yield at the central part in the direction opposite to that of the knife-holder when the knife is opening, and at the same time prevent the seal from yielding beyond a certain limited distance, as such limiting is necessary when the knife is cutting. I provide one or more stops near the central portion of the seal, these being preferably in a plane somewhat lower than that of the supports which hold the edges of the seal so that the seal can yield toward them, and at the same time they extend out far enough to limit the yielding of the seal. In the preferred construction there is one such stop upon each side of the knifeway, the latter being of the form of a groove which lies between them.

I prefer a construction substantially as shown, the various shapes and the relative dimensions being substantially illustrated in Figs. 3, 6, 7, and 8. The bottom walls of the seal-holder slope from the sides toward the center, as shown at c^9 , Fig. 8, said bottom walls constituting stops for the under side of the seal, and it as a whole may be inclined inward from the top toward the bottom, as shown at c^{10} , Fig. 10. The central portion of the bottom has a groove or way formed therein, as shown at c^{11} . It extends through the bottom wall, $c^5 c^6$, and also through the wall $c^7 c^8$ of the top, its upper end being completely closed by the top flange, c^2 .

In the form of device selected for illustration the supports for the edges of the seal are provided by the bottom walls at their highest parts. The stop or stops for the seal at the central portion thereof are provided by those parts of the bottom wall which are the lowest and immediately adjacent to the groove or way c^{11} . These parts at the center which act as stops to prevent the seal from yielding beyond a fixed distance and the parts which support the seal at its edges are preferably cast integral with the bottom walls on account of the ease of manufacture, the bottom walls being gradually depressed from the edge supports of the seal to the central stop parts; but other ways of providing these two elements of construction—to wit, the edge supports for the seal and the central stop or stops—will read-

ily suggest themselves to those skilled in such devices.

The card or seal is inserted by sliding it edgewise into the receptacle. It will be seen that the card is supported from below by means of the parts c^9 of the bottom, the inner edges of these being adapted to engage with it on lines in proximity to the lines of cut. Then in order to provide a similar support for the opposite face of the card or seal, I employ holders, such as shown at C^2 . Preferably these are wires extending continuously across the card-chamber and having their ends rigidly fastened in the walls $c^5 c^6 c^7 c^8$. They are arranged to come in contact, if necessary, with the outer face of the seal on lines near the line of cut.

When the seal-holding chamber has the features of construction above described, the seal is held firmly in place and the central portion thereof is prevented from bulging or being crowded in either direction while being cut. It is well known that in practice there is a tendency for the central parts of the card-seals, especially when large, to be crowded in one direction or the other, and that as a result the paper or pasteboard is so accumulated in the path of the cutting devices as to cause a clogging and stopping of them or a breakage of the knife or the glass which covers the seal-chamber. In this respect there can be considerable modification of the devices shown. Instead of the wires $C^2 C^2$, bars may be employed or plates or other devices which will not interfere with the inspection of the seal, but which can bear against the exposed face of the card if necessary.

When the parts $c^9 c^9$ slope toward the center in the way shown and described, the card can yield sufficiently, if it is necessary, in order to permit the knife to move over the card without cutting or marring it. By having the bottom slope inward from the upper to the lower edge thereof the card will be held in such an inclined position as to readily permit the knife to pass over the lower edge when making its backward or upward movement. If the card is not held in a proper plane relatively to the knife, there is danger that the edge of the former may engage with the knife and be forced outward instead of inward to permit the free passage of the latter.

The latch-arm is represented as a whole by E. It is pivoted by the bolt B passing through the latch-arm, and also through the aforesaid projection c' of the seal-carrier and into or through the car-door. In the aforesaid Oehrle patent the latch-arm was pivoted at a point beyond the knife relatively to the free end of the latch, said end being comparatively near to the knife. As a result, little leverage could be applied by means of the latch-bar to the knife in cutting. In the present construction I place the pivot relatively near the knife and distant from the free end of the latch-arm, so that the leverage is greatly increased and the device can be used successfully in cutting quickly a large and thick card-board seal, such

as it is well known it is desirable to use in contradistinction to the thin paper or small and thin card-board seals, which have been heretofore in use, and which have been necessary by reason of the manner of construction and arrangement of the parts which effect the cutting.

The latch-arm at its rear end is extended to form a heel or frame-like cover, (indicated by E'), it being rabbeted in the center to receive the glass e . It also has, preferably, curvilinear flanges $e' e^2$, conforming to and adapted to lie outside of the aforesaid flanges $e^3 e^4$ on the seal-plate. When the latch-arm is fastened in position over the seal-plate, its upper edge, e^3 , lies under and is covered by the aforesaid flange e^2 on the seal-plate, whereby a tight joint is provided at the top of these parts to prevent the access of water, dust, snow, &c., to the seal-chamber. The flanges $e' e^2$, in conjunction with those at $e^3 e^4$, provide correspondingly tight joints at the inner and outer ends of the seal-chamber, so that none of the said foreign materials can enter.

At e^4 there is a lug or closing-plate, cast with or secured to the part E' of the latch-arm, and adapted to fit into and to close the lower end of the way or groove c^{11} in the seal-holder. This lug or closing-plate e^4 not only insures that no moisture or dirt shall be admitted from below into the seal-chamber, but also effectually guards against any tampering with the seal or knife, which would be possible by means of wires or tools if an opening were left at this point when the latch-bar is closed into the locked position. An opening at this point is desirable, in order to let the knife escape from the seal-holder without obstruction.

In the aforesaid Oehrle patent there is shown a knife of peculiar character, it having a laterally-turned lip or flange adapted to engage with the under side of a spring-plate, which latter is secured to the bottom of the seal-chamber and has its operative edge at some distance from said bottom.

One of the objects of the present invention is to avoid the necessity of using a knife of that character. The knife here all lies virtually in one plane. It may be either rigidly attached to the latch-arm or pivotally. As shown in these figures now being described, the part E' constitutes the knife-carrier, it being cast with downwardly-extending ears f^3 , between which is pivoted the knife F . The knife has a curved blunt bottom and back edge, as at f , with a sharpened backwardly-inclined cutting-edge, f' . The pivot f^2 secures the knife to the lugs f^3 . The knife at the upper end is so shaped as to permit it to rock upward and outward forwardly, and is prevented from moving inward and backward beyond a limited distance. The knife is normally arranged to travel on the central line of the aforesaid way or groove c^{11} . When the latch-arm is in the locked position, the knife lies in the part c^{12} in this way or groove above the card or seal. As the latch-arm is thrown

up at the free end, the knife is forced downward along said way or groove, severing the card in its passage, the latter being held firmly against crowding centrally in either direction by the devices above described. The inclination of the operative edge of the knife further insures that the card shall during the cutting action be drawn up or out from the bottom of the seal-holder and be gripped firmly between the knife and the wires or opposite holders C^2 .

The action of the parts will be readily understood during the reverse action of the latch-arm—that is, when moving from the dotted lines in Fig. 1 to that in full lines.

When the parts are operated, the seal is inserted by passing it in under the wires C^2 , and then the latch-arm is thrown down to bring its hook into the staple a . During this movement the knife passes upward. The instant its rear edge strikes the lower edge of the seal or card the knife is by the latter pressed outwardly sufficiently to ride freely over its surface; or if there should be any crowding the card will yield by reason of the conformation of the bottom c^9 , said center of the card being at that time on the line $m m$, Fig. 6. The instant the knife passes over the upper edge of the card the latter by its elasticity can assume the normal position—to wit, the plane indicated by the line $n n$, Figs. 6 and 7. The point f^7 of the knife is not allowed at any time to rise above the normal plane of the card—that is, above the line $n n$. The knife has a shoulder or stop at f^4 adapted to strike against the surface at f^5 of the part to which the ears f^3 are attached, these parts being so related as to prevent the point f^7 from rising above the normal line of the card. The back and bottom edge of the knife at f^6 is of such conformation that when the knife is moving, as shown in Fig. 6, the said back part will ride upon the card and depress it, the point being at that time on the line $o o$, Figs. 6 and 7.

Preferably the ears $f^3 f^3$ are so arranged relatively to the heel end of the knife that the latter shall be more or less cramped or held by friction by the said ears—that is to say, the joint is not a loose one for the knife. As a result of this, after the knife escapes from the card, as shown by dotted lines, Fig. 6, and after the card has again assumed a normal position, the knife remains in the position shown in Fig. 6 until the latch-arm is moved sufficiently to bring the knife into contact with the edge of the card. As soon as such contact commences, the cutting action begins, and at the same time the knife moves so that the angle of its edge to the card varies in such a way as to greatly increase the cutting efficiency of the knife, as will be readily understood.

At f^8 there is a shoulder or stop on the knife which is adapted to strike against the surface at f^9 of the knife-carrier, and it acts as a stop to limit the upward play of the knife, the latter being held rigidly after assuming the position shown in Fig. 7. At this time the point

f^1 of the knife is at a distance from the bottom of the knifeway substantially proportional to that shown in Fig. 7.

I do not limit myself to having the knife cramped by friction between the lugs or otherwise, as some of the elements of the invention can be attained if they be loosely pivoted. A spring may be combined with it, if desired, in ways that will be readily understood by those skilled in such devices; but I prefer the construction shown and the described method of relating the parts, as I thereby provide an exceedingly simple cutter, and one which is small and durable, and by having the parts held in this way an increase in cutting efficiency can be obtained at the commencement of the knife's action. In either case—that is, whether the knife be retarded by the friction of the parts to which it is pivoted or by a supplemental device, such as a spring—the friction-surface or the spring act as a yielding stop—that is, a stop which normally acts to prevent the knife from swinging about its hinge, but which can yield if a sufficient pressure be brought to bear against it.

By examining Figs. 6 and 7 it will be seen that the lower ends of the ears f^3 lie but a short distance above the normal line of the card, and as a result of such relative placing these ears act to assist the knife, in that they hold the cut edges of the card down and prevent them from being thrown into such positions relatively to the line of cut as to clog or crowd the knife. If desired, these ears may be projected down to the plane of the top surface of the card so as to insure their holding the cut edges properly.

It will be seen that the cutting-edge of the knife is inclined to the plane of the card—that is to say, is so arranged that the normal line of the cutting-edge intersects the plane of the card in such way as to lie at an acute angle to said plane on one side thereof and in the direction of the path of cut and an obtuse angle on the other side of the card having reference to said path; and it will be further seen that the tendency of the card is to move away from the knife in the direction of that side on which the said obtuse angle lies. Furthermore, the holder or support C^2 is situated on that side of the card where lies the said obtuse angle.

The inclination of the knife-edge to the plane of the card is a matter of great advantage, as it facilitates the cutting action, and as a consequence of thus inclining it there results the aforesaid pushing of the card in one direction or the other, accordingly as the aforesaid angles are produced between the normal line of the cutting-edge of the knife and the plane of the card, with a tendency to drive the card away from the point of the knife. This is overcome by such holders or retainers as those at C^2 . Although I have shown this holder or retainer C^2 on that side of the card which is opposite to the knife-point, yet it will be seen that the knife can be arranged to have its

point or its heel on either side of the card relatively to the holder C^2 , so long as the proper inclination of its cutting-edge is given to the plane of the card; but in this respect the construction shown can be varied so far as concerns the presence of the support C^2 alone, or both the holder or support C^2 on one side of said seal and the aforesaid central stops, c^3 , on the other side—that is to say, it will be understood that the presence of both of them or of only one depends upon the location of the knife and of the inclination of the knife-edge. In the present construction I have the cutting-edge of the knife inclined to the edge of the seal in such way that the holder or retainer C^2 for the face is on that side opposite to the point of the knife, the inclination of said edge being forward relatively to the path of cut.

Although the knife-passage c^{11} is above shown and described as being of the form of a groove with continuous side walls, it can be modified in this respect.

The shank part E of the hasp or latch can, as concerns the knife, be considered merely as a lever or handle for operating the latter.

The width of the knife way or groove c^{11} is such that not only do I insure that the knife shall be efficient, even though it may be from one cause or another moved laterally relatively to the center line of this knife groove or way, but also insure that there shall be an amply large free space below the central part of the card to permit it to yield sufficiently when the knife is passing backward over the center of the card.

I do not of course claim any of the inventions shown or described in the aforesaid Oehrle patent; but the differences of construction and operation will be immediately apparent upon comparison of the two devices. It will be seen that below the card in the present construction there is a rigid or inflexible support adapted to bear against the under surface of the card or seal if the latter should be forced down sufficiently to reach it, and yet that the said rigid support is normally at such distance from the card as to allow the latter to bend down at the center to permit the passage of the knife, this being in contradistinction to the Oehrle construction, where there is upon one side of and immediately adjacent to the knife a support which has to be crowded downward in order to force down the card, said support being flexible and level and of such nature as to require an expensive and difficult method of manufacture to be followed. In my case the bottom or under support of the seal-chamber can be produced initially when casting it.

In another respect the present construction is superior to one like that in the Oehrle patent, because of the location of the pivot B between the seal-holder and the fixed fastener. When the seal-receptacle is between the pivot and the staple, the cover and the knife move downward into the locked position and move

upward when passing away from that position. Because of their movement upward, the upper part of the seal-chamber must be left more or less open and provided with orifices 5 or ways for the inward passage of the knife, &c., and hence it is difficult to provide as complete protection for the interior of the seal-chamber as is desirable.

By placing the seal-chamber on the side of 10 the pivot opposite to the staple the movements of the cover and knife to and from the locked position are reversed, and it becomes possible to provide all of the protection along the upper edge of the device that is necessary against 15 the access of water, the knife-passage being at the lower side.

Instead of a supplemental lock like that shown at G to secure the latch-bar relatively to the staple or the fixed fastener, use may be 20 made of any suitable device. In Fig. 1 I have shown a spring of peculiar conformation, it being riveted to the nose of the hook and having a loop, *g*, adapted to spring into engagement with one of the staple-legs. In Fig. 4 I 25 have shown another form of automatic lock, this one consisting of a locking-plate, G, pivoted to the latch-arm E. The plate is expanded at *g*², the edge of this part being more or less circular about the axis of the pivot *g*'. 30 The pivot is so arranged relatively to the center of gravity of the plate that the latter normally tends inward. It is limited in its play by means of a stud, *g*³, engaging with lugs *g*⁴ *g*⁵. The locking-plate does not at all interfere 35 with the inserting of the hook into the staple, and the instant the former has reached a certain position the plate falls sufficiently to engage with the under side of one of the staple-legs, and the parts are so related in position 40 that any upward movement of the hook tends to produce a firmer engagement of the staple.

The supplemental lock, whether it be a gravity-lock, like that at G in Fig. 4, or a spring-lock, like that at Fig. 1, is of considerable importance, not only in that it avoids ac- 45 cidental movements of the latch or hasp and the possible marring of the seal, but, moreover, provides a visible gage, by which the party closing the door can accurately tell whether 50 the knife has reached the end of its throw—that is, the position where it is adapted to cut the seal. If by inadvertence or from any cause the latch-hook should not be moved down far enough to carry the knife entirely 55 across the card, and it (the knife) should be allowed to remain against the face of the card, there is possibility of opening the latch without cutting the card, the normal cutting action of the knife not coming into play until it 60 has been carried sufficiently far beyond the card to engage with its edge during its reverse motion. I so construct the knife that even should it be moved only part way backward over the face of the card, and then brought for- 65 ward again, it will so mar the card as to indicate that such motions have been made; but

there is liability of the knife being able to ride freely in both directions without sufficiently cutting the seal for detection. However, when a visible gage of the character of 70 that at G is employed, the one locking the car can easily ascertain whether the knife has been moved sufficiently far to escape from the card and lie opposite its edges.

I do not herein claim any of the subject- 75 matter set forth in the claims in my application No. 263,574, filed February 10, 1888.

What I claim is—

1. The combination, with the seal-receptacle having supports for the seal at its edges, of a 80 stop for the central part of the seal on a plane lower than that of the said supports for the edges, a knifeway extending below the last said stop, and a seal-support across the central part of the seal on the side opposite the said stop, 85 substantially as described.

2. The combination, with the seal-receptacle having a support for the edges of the seal and stops below the edge-supports for the center of the seal, and a knifeway between said cen- 90 tral stops and extending below them, of a knife all of whose cutting-edges lies in a plane transverse to the seal and which extends below the said central stops, as set forth.

3. The combination, with the seal-receptacle 95 having a support for the edges of the seal and a stop for the central part thereof lower than the edge-supports, of the knife, the seal-cover, and a support or retainer for the outer surface of the seal supplemental to the said cover, 100 substantially as described.

4. The seal-receptacle formed with supports for the edges of the seal, supports for the central part of the seal, and continuous bottom walls formed integral with both of the said 105 supports and gradually depressed from those at the edge to those at the center, and a knifeway between said bottom walls, in combination with a seal-cover provided with a knife in said knifeway, substantially as set forth. 110

5. In a car-sealing device, the combination of a seal-holder having a knife groove or way, a rigid or unyielding support at the side of said knife groove or way and inclined upward and outward from said way, and a support for 115 the card adapted to bear against the central portion of its outer face, a knife-carrier, and a knife adapted to move in the said knife groove or way to sever the card or seal, substantially as set forth. 120

6. In a sealing device, the combination of a seal-holder having an unobstructed passage for a seal-cutting knife, and having a rigid inflexible support for the under side of the seal, which is inclined inward or downward rela- 125 tively to the path of the knife and knife-carrier, and a knife adapted to move along the aforesaid passage and cut the seal, substantially as set forth.

7. In a sealing device, the combination of 130 the seal-holder having an inwardly-sloping bottom wall, *c*², inclined relatively to the path

of the knife, a knife way or passage, c^{11} , depressed below the bottom wall, c^9 , the seal-support C^2 across the central part of the outer surface of the seal, a knife-carrier lying above the seal-receptacle when the seal is sealed, and a knife secured to the said carrier and adapted to move in the said knifeway and cut the seal, substantially as described.

8. In a sealing device, the combination of the seal-holder and the knife-carrier, of which parts one is fastened by and rocks about a pivot and a staple to which the said pivoted part is fastened, and which is situated on that side of the pivot opposite to the knife and seal, substantially as described.

9. In a sealing device, the combination of a seal-holder and a knife-carrier, which is secured by and rocks about a pivot, a knife thereon which moves in a curvilinear path around said pivot, and a bar or arm, E , on that side of the pivot which is opposite to the knife, adapted to operate as a handle for moving the knife, substantially as set forth.

10. In a sealing device, the combination, with the seal-holder, of the latch-arm secured by a pivot, B , and adapted to engage with a fixed fastener and formed integrally with a cover for the said seal-chamber, which is situated on that side of the pivot opposite to the said fixed fastener, substantially as set forth.

11. The combination, with the seal-receptacle, of the latch-arm fastened by a pivot and adapted to engage with a fixed fastener on one side of the pivot and cast with an apertured heel-extension on the other side of said pivot, adapted to receive a glass to lie over the seal, substantially as described.

12. The combination, with the seal-receptacle having a knifeway extending beyond the seal, of the knife-carrier, the knife hinged thereto and adapted to initially engage with the edge of the seal, and a yielding stop for retarding the movement of the knife around the hinge when it begins to cut the edge of the seal, as set forth.

13. In a sealing device, the combination, with the seal-receptacle and the knife-carrier, (of which two parts one moves relatively to the other,) of a knife having its cutting-edge situated at an inclination to the plane of the seal, substantially as set forth—that is to say, at an obtuse angle on one side of said seal—and a seal-retainer independent of the knife-carrier, adapted to bear against the last said side of the seal to prevent displacement of the card relatively to the knife, substantially as set forth.

14. In a sealing device, the combination, with the seal-receptacle and a knife-carrier, (of which two parts one moves relatively to the other,) of a knife having the cutting-edge inclined to the plane of the seal and a stationary support or retainer for the seal across that face of the seal which is opposite to the point of the knife, substantially as described.

15. In a sealing device, the combination, with a seal-holder adapted to hold the card in a normal position, and also to permit the card to yield inward, of a knife-carrier, a knife hinged to said carrier and adapted to move over the face of the card and to depress it when moving in one direction, and stops, substantially as described, which prevent the point of the knife from passing beyond the normal plane of the card, substantially as set forth.

16. In a sealing device, the combination, with the seal-holder adapted to hold a card in a normal position, and also to permit it to yield therefrom, of the knife-carrier and the knife hinged thereto and adapted to move over the face of the card in one direction and in contact therewith to depress it, stops to prevent the point of the knife from moving beyond the normal plane of the card, and stops to limit the movement of the knife in the opposite direction around its hinge, substantially as set forth.

17. In a sealing device, the combination, with the seal-holder, of the knife-carrier and the swinging knife hinged thereto having a curvilinear blunt back and bottom edge and the opposite sharpened cutting-edge, and the knifeway extending beyond the card, whereby the knife and the edge of the card can be brought into the described relation to each other when the cutting begins, substantially as set forth.

18. In a sealing device, the combination, with the seal-holder, of the knife-carrier arranged to form a cover for the seal-holder and having the inward-projecting ears f^3 , and the knife F , secured to said ears, substantially as described.

19. The combination, with the knife-carrier having the stops $f^5 f^9$, of the knife F , hinged thereto and having the opposing stops $f^4 f^8$, and the seal-holder adapted to hold the card in a plane intersecting the knife prior to the commencement of the cutting action, whereby the aforesaid stops cause the knife to commence the cut at the edge of the card and permit it to swing about the hinge, substantially as set forth.

20. The combination, with the seal-holder, the knife, and the knife-carrier, of the latch-arm formed with or secured to the knife-carrier, the fixed fastener a , the gravity-lock G , adapted to fall into locking position at the instant the knife reaches the cutting position, and stops which limit the play of the gravity-lock, substantially as set forth.

21. In a sealing device, the combination, with the seal-holder, the knife, and the knife-carrier, of the latch-arm, the locking-plate G , pivoted to the hasp, and the stops $g^4 g^3$, substantially as set forth.

22. The combination, with the seal-receptacle having the wall $c^5 c^6$, the side wall, c^3 , and the top flange, c^2 , projecting to points beyond the wall c^5 , of the seal-cover having the glass and

the metal frame surrounding the said glass, and having its upper edge adapted to fit under the said flange c^2 , substantially as set forth.

23. The combined latching and sealing device having the latch-arm E, pivoted at B, and the heel-extension E' on the side of the pivot opposite to the part E, and the seal-holder secured to the door opposite to the pivot B, whereby the said extension E is caused to

move downward when passing out from the locked position, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD C. BARTLETT.

Witnesses:

H. H. BLISS,
M. P. CALLAN.