

No. 758,539.

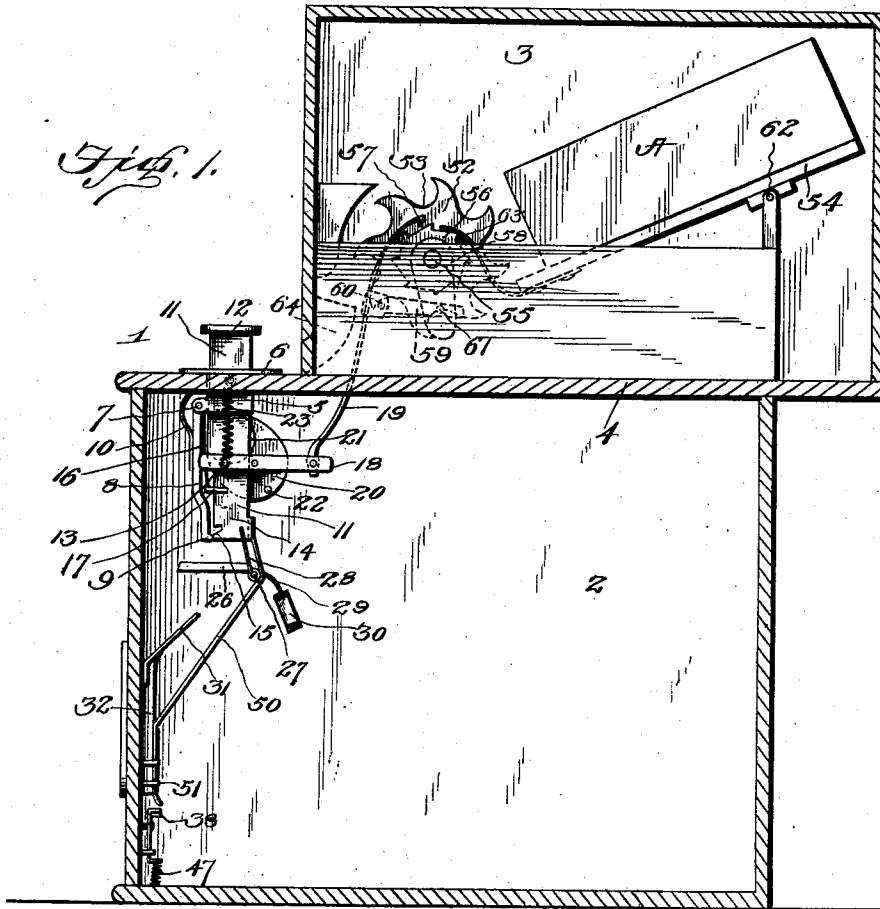
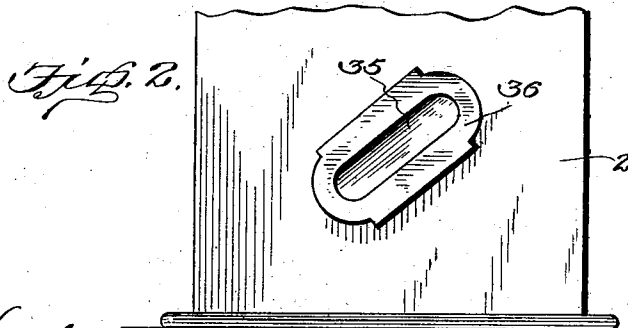
PATENTED APR. 26, 1904.

O. KRETER.
COIN CONTROLLED VENDING MACHINE.

APPLICATION FILED SEPT. 29, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses

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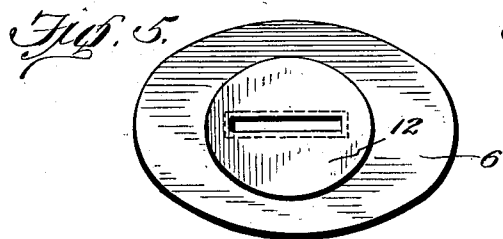
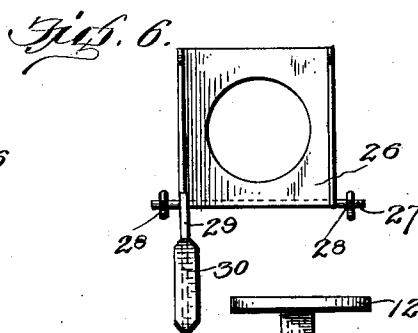
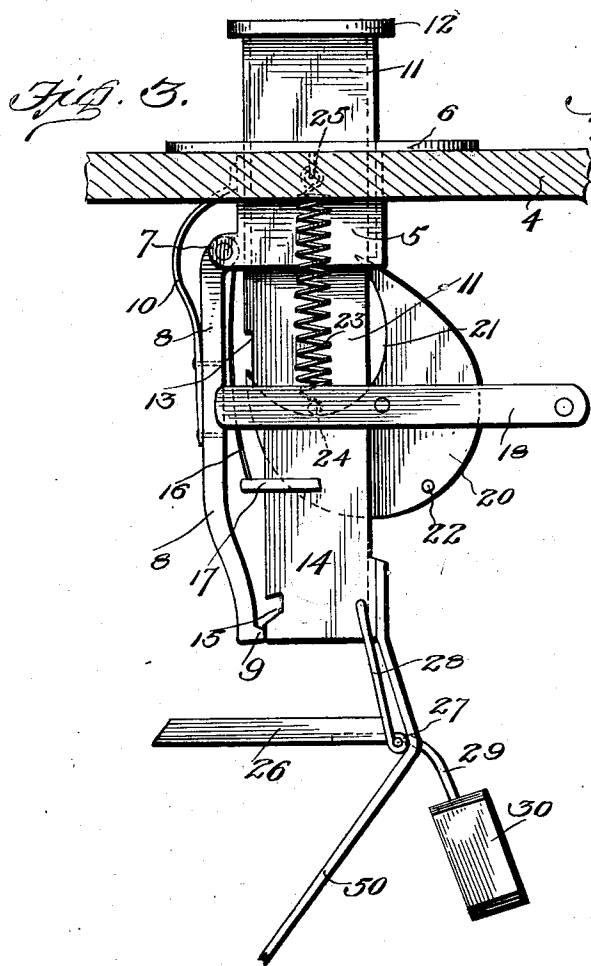
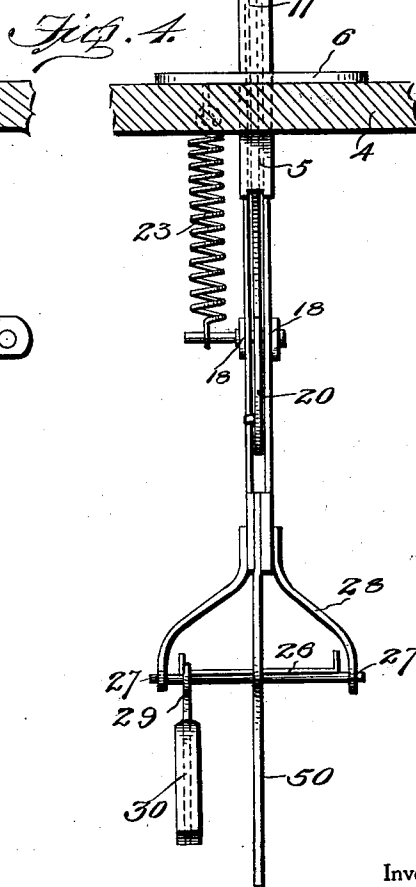
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NO MODEL.

3 SHEETS—SHEET 2.



Witnesses

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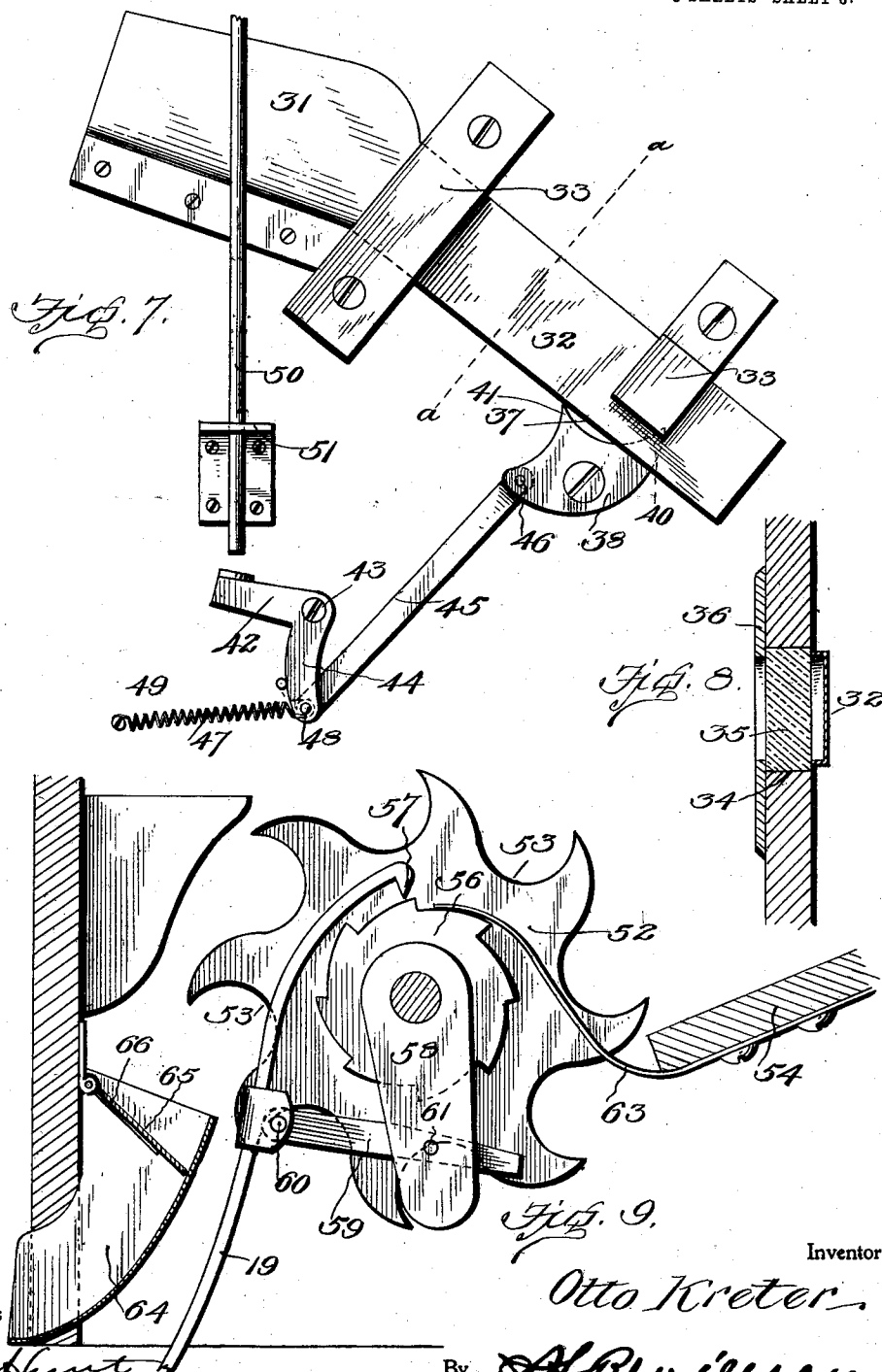
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O. KRETER.
COIN CONTROLLED VENDING MACHINE.

APPLICATION FILED SEPT. 29, 1903.

NO MODEL.

3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

OTTO KRETER, OF SAN ANTONIO, TEXAS.

COIN-CONTROLLED VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 758,539, dated April 26, 1904.

Application filed September 29, 1903. Serial No. 175,096. (No model.)

To all whom it may concern:

Be it known that I, OTTO KRETER, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented certain new and useful Improvements in Coin-Controlled Vending-Machines; and I do 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.

My invention relates to improvements in coin-controlled vending-machines adapted to vend or dispense articles it contains by the action of certain mechanisms supplied it for the purpose, said mechanism being inoperative or locked until released or unlocked by the introduction into the machine of a coin of given denomination and of a class having substantially uniform dimensions.

My invention consists in the construction, combination, and arrangement of devices hereinafter described and claimed.

The objects of my improvements are, first, to simplify the construction of machines of the class named; secondly, to provide improved and efficient means for protecting machines of this class from dishonest practices, tampering, and the like; thirdly, to provide a machine having broad adaptability in the vending of a great variety of articles, and, fourthly, to provide a machine having peculiar efficiency in vending such articles, as cigars, required by law to be sold from an original stamped package.

In the accompanying drawings, Figure 1 is a side elevation of my improved vending-machine, the containing case thereof being shown in section to disclose the operating mechanism. Fig. 2 is a detail front elevation showing the exterior of the coin-exposing device. Fig. 3 is a detail elevation, on a larger scale than that of Fig. 1, showing the coin-slot and plunger and its immediate connections. Fig. 4 is a similar view at right angles to Fig. 3. Fig. 5 is a detail top plan view of the coin-slot and plunger, showing also the upper end of the tubular guide therefor. Fig. 6 is a detail top plan view of the coin-pan. Fig. 7 is a detail elevation of the coin exposing and arresting mechanism. Fig. 8 is a detail sectional

view of the same, taken on the plane indicated by the line *a a* of Fig. 7. Fig. 9 is a detail elevation, partly in section, of the vending-cylinder and its connections.

The containing case 1 here shown comprises the lower compartment 2 and the upper compartment 3, separated by a partition 4, which covers the lower compartment and extends in front of the upper compartment, as shown in Fig. 1. Through an opening in the partition 4 in front of the compartment 3 extends a tubular guide 5, which is here shown as provided at its upper end with a flange 6, that bears on partition 4 and is secured thereto. The tubular guide 5 is provided on its front side at its lower end with a lug 7, to which is pivoted the upper end of a stop-arm 8, the latter having a stop-flange 9 on its inner side at its lower end. A spring 10, which is here shown as attached to the tubular guide 5 and to the stop-arm 8, normally presses the latter rearwardly.

A coin-slot tube 11 extends through the tubular guide 5, is vertically movable therein, and its upper end, which projects above the partition 4, is preferably provided with a head 12. This coin-slot tube is adapted to receive a coin of the required denomination representing the value of the article dispensed by the machine, and the lower portion of the said coin-slot tube is open on its front side, as at 13, and is contracted in width, as at 14, and is provided on its front side near its lower end with a notch 15, adapted to be engaged by the flange 9 of the stop-arm 8.

A spring 16, which is attached at its upper end to the front side of the guide-tube 5, has its lower portion extended in front of and to cover the opening in the front side of the coin-slot tube, and the play or movement of the free lower end of the said spring is limited by a keeper 17, which projects from the front side of the coin-slot tube. The latter is provided at a suitable distance from its lower end with a pair of horizontally-disposed cross-arms 18, which project to some extent in front of the coin-slot tube to guide and retain the pivoted arm 8 and the spring 16 in place, and the said cross-arms also project rearwardly from the coin-slot tube, as shown. A

vending-machine-operating link 19 has its lower end pivotally connected between the rear ends of said cross-arms. Eccentrically pivoted between the cross-arms is a coin-resting disk 20, which extends through an opening in the rear side of the coin-slot tube and projects into the coin-slot tube and extends therethrough, that portion of the said disk which enters the said coin-slot tube having a notch 21 in its upper side of suitable size to receive the coin dropped into the coin-slot tube, the said disk being normally maintained in the position shown in Fig. 3 by the weight of its lower portion below its pivotal axis and said disk being further provided with a check-pin 22, the function of which is to limit the pivotal movement of the said disk. When the coin-slot tube is in its elevated position (shown in Fig. 3) and the disk 20 carried thereby is also in its elevated position, the spring 16 coacts with the disk to hold the coin dropped into the coin-slot tube. When the coin-slot tube and the disk are depressed, the disk passes the lower end of the said spring, and the weight of the coin in the notch of the said disk counterbalancing the latter the disk is overturned, thereby causing the coin to drop therefrom and from the lower end of the coin-slot tube. A spring 23, which is here shown as a coiled or retractile spring, having its lower end connected to the coin-slot tube, as at 24, and its upper end connected to the flange 6 of the guide-tube 5, as at 25, normally supports the coin-slot tube and the coin-disk carried thereby in the elevated position (shown in Fig. 3) and returns the same to said position after the coin-slot tube has been depressed.

It will be understood that when a coin of the proper variety has been placed in the coin-slot 2 it falls into the notch 21 of the disk 20 and by its weight causes the said disk to rotate until stopped by the check-pin 22 coming in contact with the coin-slot tube 11, at which time the notch 21 of the disk opens downwardly and the coin falls therefrom until it is stopped by contact with the flange 9 of the stop-arm 8. Pressure being applied to the head of the coin-slot tube 12, said coin-slot tube moves downwardly through the guide-tube 5, carrying the coin with it until checked by the stop-arm 8. Said arm remaining stationary, the notch 15 passes below the stop-flange 9, and the coin, by reason of its diameter being greater than the width of the reduced lower portion of the coin-slot tube, projecting beyond the front side of the latter and by engagement with the stop-arm 8 moving the latter pivotally against the pressure of its spring 10 to disengage the stop-arm from the notch 15 and the said coin after passing the stop-arm dropping by its own weight from the lower end of the coin-slot tube. In the event that if it is attempted to depress the coin-slot tube without having placed a coin of

proper denomination therein the stop-arm 8, by the engagement of its flange 9 with the notch 15, will lock said coin-slot tube, so that the vending-machine actuated by the link 19, which is adapted to and moves with the coin-slot tube, cannot be operated.

A pan 26, pivotally connected, as at 27, to a hanger 28, which depends from the lower end of the coin-slot tube, receives each coin as it is dropped from the said tube. The coin-pan is normally held in the horizontal position (shown in Fig. 3) by means of an arm 29, having a weight 30. When a coin drops on the coin-pan, it counterbalances the weight 30, thereby causing the coin-pan to descend and to discharge the coin by gravity therefrom onto an inclined coin-chute 31, which is attached to the inner side of the front wall of the compartment 2. A coin-detaining inclined conduit 32 leads from the lower end of the said chute and, as herein shown, is attached to the front wall of the compartment 2 by means of clip-straps 33. The front wall of the compartment 2 has a coin-exposing opening 34 opposite the chute 32, so that coins in the said chute may be observed through the said opening. The latter is here shown as provided with a glass closure 35, held in place by a metallic trimming-piece 36. The coin-exposing conduit 32 is open at its lower end, and it also has an opening 37 in its under side at a suitable distance from its lower end.

A coin-stop plate 38 is pivoted, as at 39, below the under side of the coin-exposing conduit and is provided with a rear projection 40, which normally extends upwardly into the said coin-exposing conduit through the opening 37, and is also provided with a front projection 41, which is normally just below the said opening. An operating element 42, here shown as a bell-crank, is pivoted to the inner side of the front wall of the compartment 2, as at 43, and has its lower arm 44 pivotally connected to a link 45, which link is pivotally connected to the coin-stop plate, as at 46. A spring 47, here shown as a coiled retractile spring with one end connected to the bell-crank, as at 48, and the other end connected to the front wall of the compartment 2, as at 49, normally maintains said bell-crank, link, and coin-stop plate in the position shown in Fig. 7. An operating-rod 50 is attached to the lower end of the coin-slot tube, extends downwardly therefrom, passes through a guide-clip 51, and its lower end when said operating-rod is depressed by the downward movement of the coin-slot tube engages the horizontal arm of the bell-crank 42, turns the latter pivotally against the tension of the spring 47, and causes the link to turn the coin-stop plate 38 angularly a sufficient distance to cause the projection 40 of the latter to release the lowermost coin in the coin-exposing conduit or chute and to cause its projection 41 to engage the next coin above

to retain the latter in the said conduit or chute until by the reverse movement of the coin-stop plate under the tension of the spring 47 its projection 40 engages the lowermost coin in the said coin-exposing conduit or chute, as will be understood.

It will be understood that by the provision of my improved coin-exposing mechanism the coins fed to the machine when it is operated will be exposed to view, so that any attempt to use a false coin or a disk of the size of the coin is likely to be detected.

I will now describe the vending apparatus which is operated by my coin-controlled apparatus. In the compartment 3 is mounted a revoluble vending-cylinder 52, which is provided with longitudinal peripheral recesses 53 of the required size and shape to receive cigars successively from a cigar-box A on an inclined supporting-platform 54. The bearings of said vending-cylinder are shown at 55. At one end of the said cylinder is a ratchet-wheel 56, the teeth of which correspond in number and position with the recesses 53 of the vending-cylinder, and the movement of the link 19, by the movement hereinbefore described of the coin-slot tube, causes the said link to rotate the vending-cylinder by a step-by-step movement, the said link being provided with a ratchet-head 57, which engages the ratchet-teeth successively of the wheel 56, so that at each depression of the coin-slot tube the said link by its engagement with the ratchet-wheel turns the latter, and hence the vending-cylinder, to an extent equal to the width of one of the recesses of the vending-cylinder. A rock-arm 58 is pivotally connected to the axis of the revoluble vending-cylinder and depends therefrom and is connected to the link 19 by a link 59, said link 59 being pivotally connected to the link 19, as at 60, and similarly connected to the lock-arm, as at 61.

The support 54 for the cigar-box is pivotally mounted, as at 62, so that it is adapted to rock, and at its lower end is provided with a spring-strap 63, which bears on the upper side of the ratchet-wheel 56, so that each partial rotation of the ratchet-wheel causes the lower side of the said rocking support 54 to be first raised and then dropped somewhat, thereby shaking the cigars in the box and facilitating the feeding of the cigars singly from the box to the respective recesses of the vending-cylinder.

The vending-cylinder discharges its cigars singly into a delivery tube or chute 64, the lower end of which projects through an opening in the front wall of the compartment 3 and in the upper end of which is a gate 65, which is normally closed by a spring 66.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the inven-

tion will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. In coin-controlled mechanism, the combination of a movable coin-feed element, coin-released means to lock it against movement, and yielding means, actuated by the weight of a coin in the coin-feed element, to obstruct the passage of a coin therethrough until the coin-feed element is moved.

2. In coin-controlled mechanism, the combination of a movable coin-feed element, a spring to move it in one direction, a spring-pressed stop to lock it against movement in the reverse direction, and yielding means, actuated by the weight of a coin in the coin-feed element, to arrest a coin in the coin-feed element and position the coin to operate and release the spring-pressed stop, and thereby permit movement of the coin-feed element against the tension of its spring.

3. In coin-controlled mechanism, the combination of a movable coin-feed element, coin-released means to lock it against movement, yielding means, actuated by the weight of a coin in the coin-feed element, to obstruct the passage of a coin therethrough until the coin-feed element is moved, a revoluble vending element, and a step-by-step mechanism, operated by the movable coin-feed element, to rotate the vending element.

4. In coin-controlled mechanism, the combination of a longitudinally-slidable coin-feed element, coin-released means to lock it against movement, and gravitating means, overbalanced by the weight of a coin in the coin-feed element to obstruct the passage of a coin therethrough until the coin-feed element is moved.

5. In coin-controlled mechanism, the combination of a vertically-movable coin-feed element, a spring to raise it, a spring-pressed stop to lock it against downward movement, and a gravitating valve element in the coin-feed element, to arrest a coin dropped therein, and position the coin to operate and release the spring-pressed stop and thereby permit downward movement of the coin-feed element.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

OTTO KRETER.

Witnesses:

W. L. OPPENHEIMER,
THOS. J. MOONEY.