Sept. 12, 1950 C. D. RYAN ET AL 2,522,237

METER LOCKING MECHANISM FOR MAIL TREATING MACHINES

Original Filed April 29, 1940 4 Sheets-Sheet 1

Fig. 1.

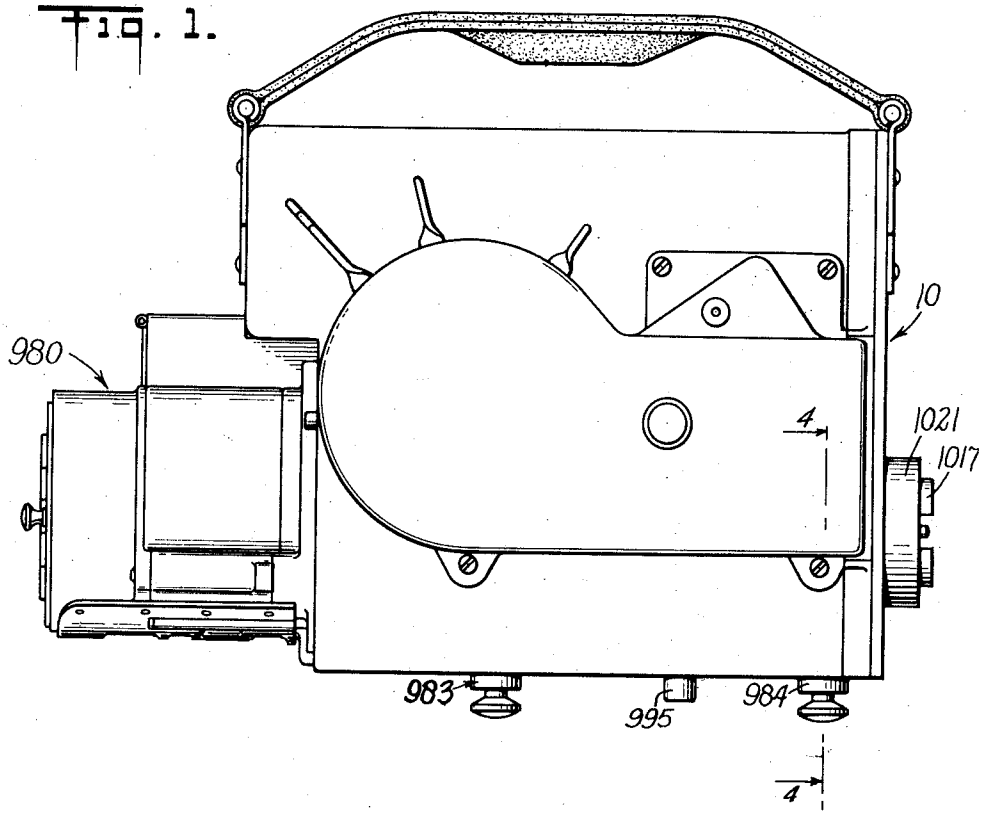

Fig. 5.

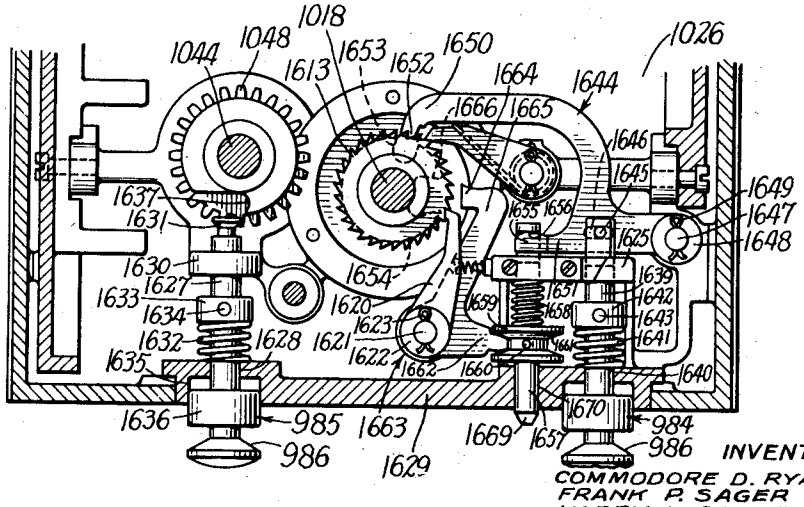

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Fig. 2.

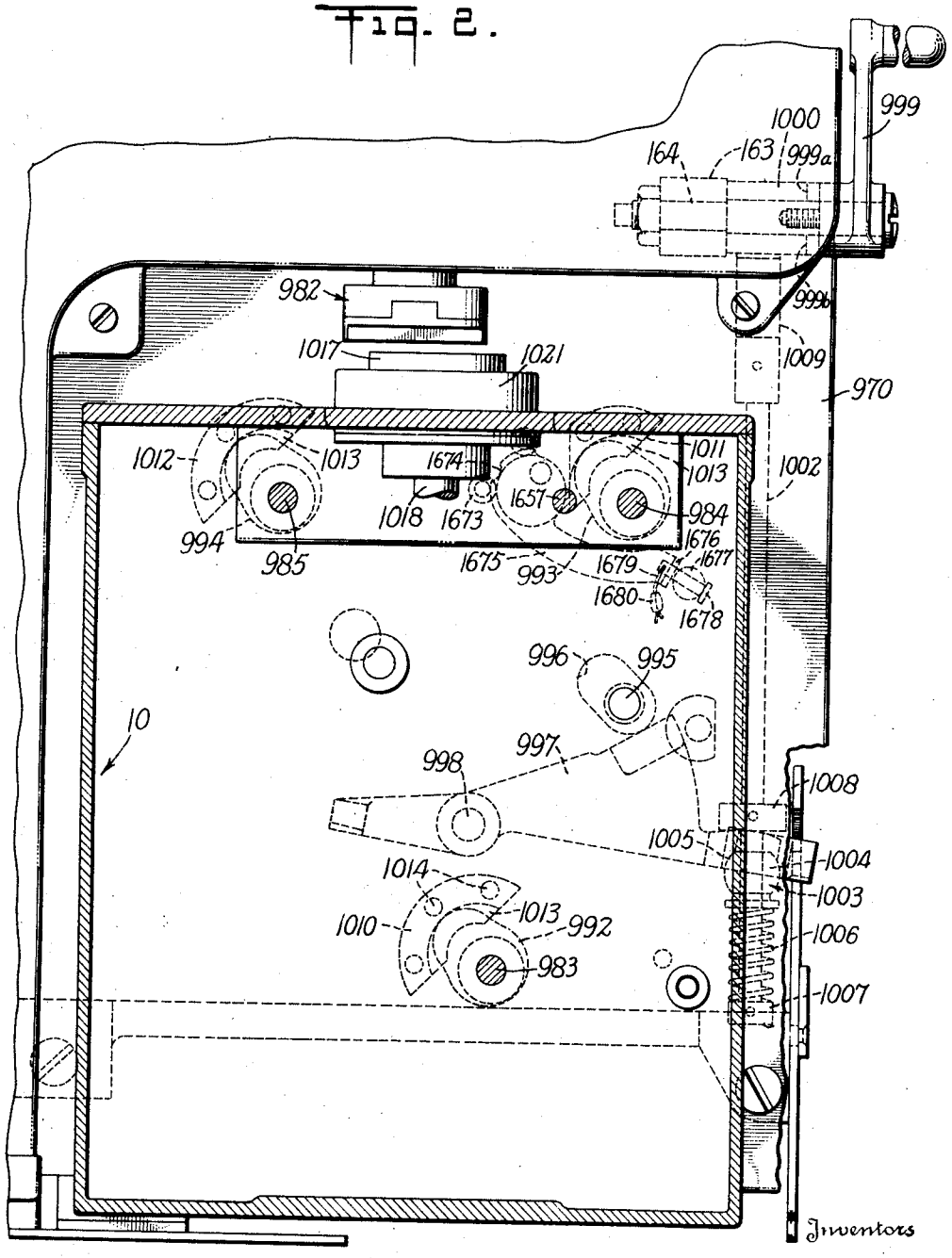

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Fig. 3.

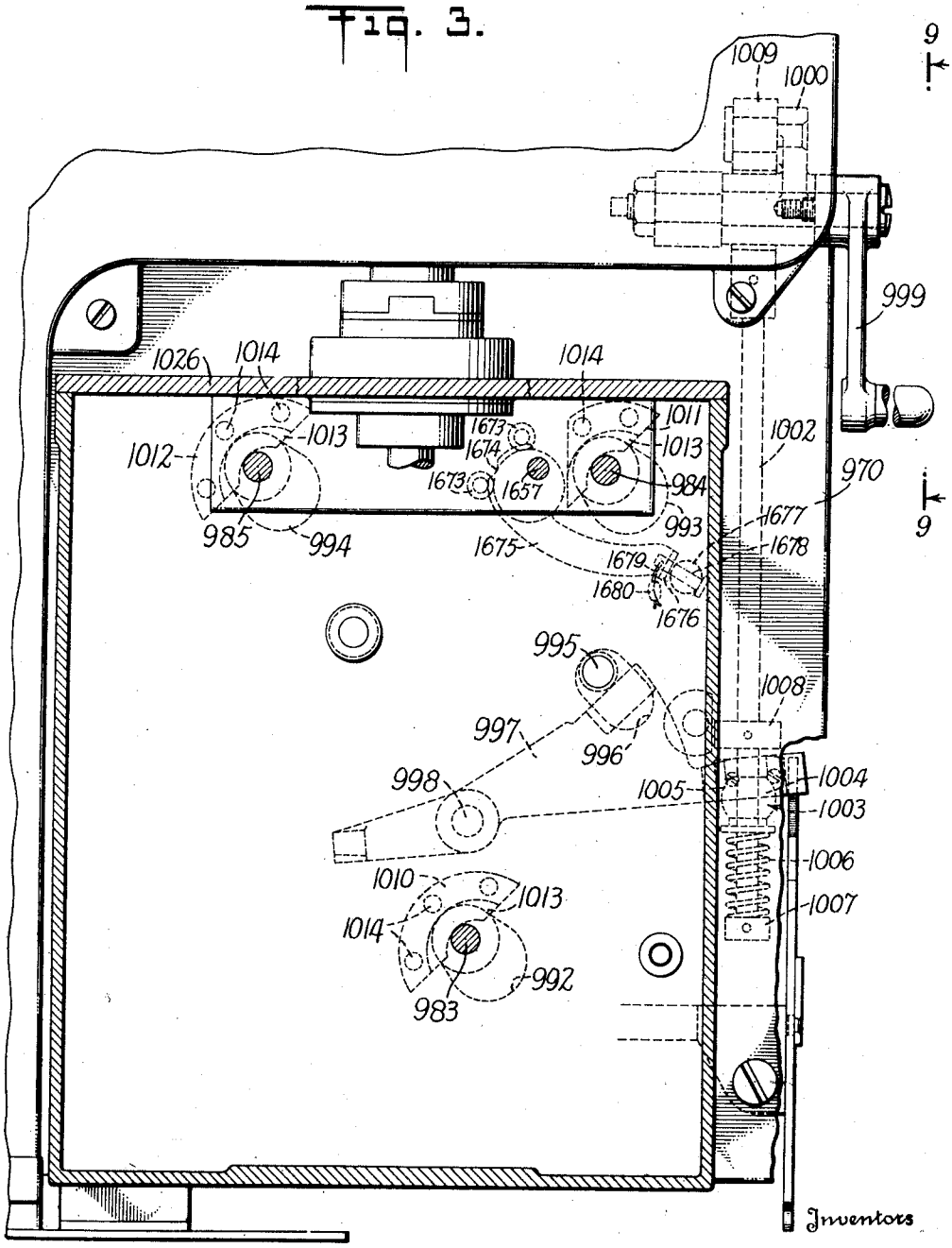

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Fig. 4.

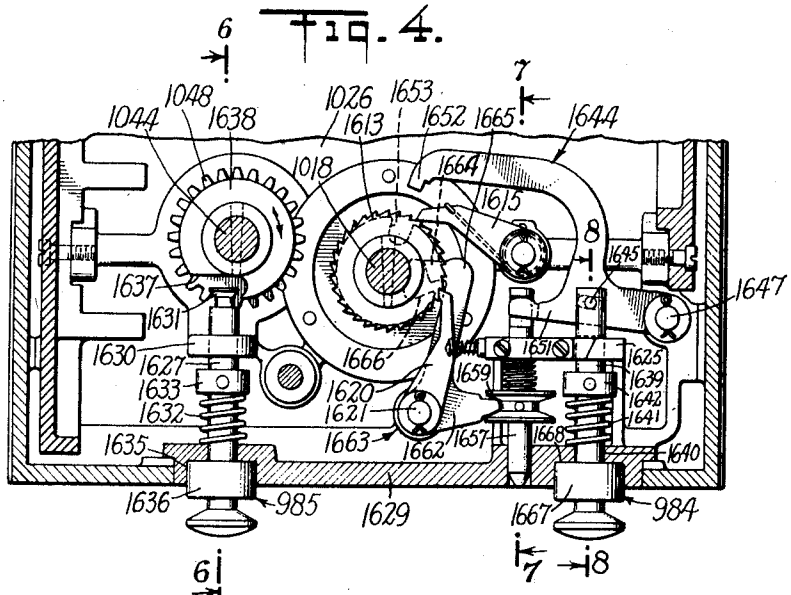


Fig. 6.

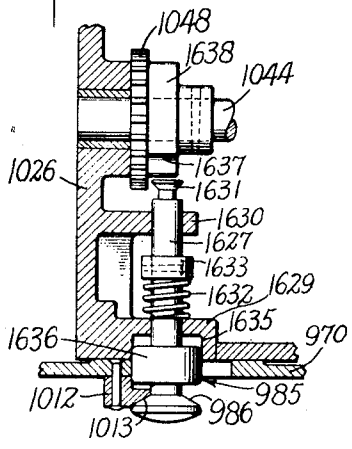


Fig. 7.

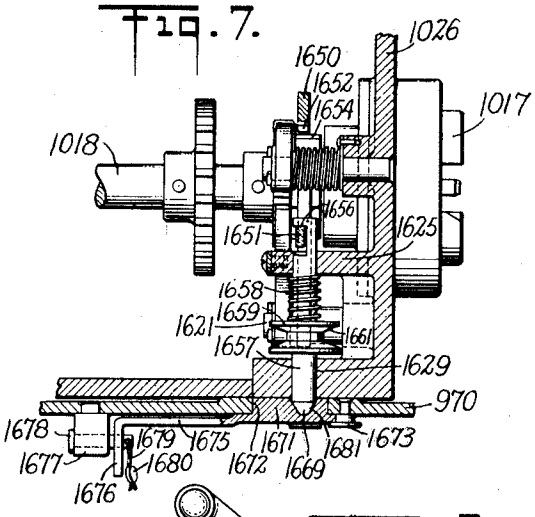


Fig. 8.

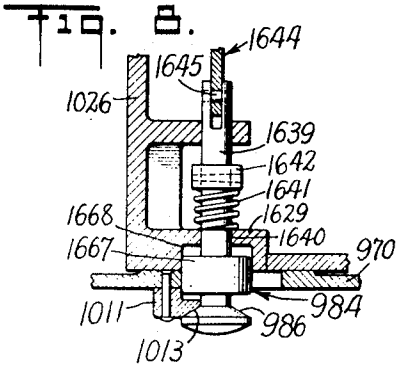
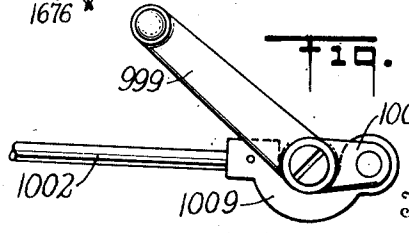


Fig. 9.



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2,522,237

UNITED STATES PATENT OFFICE

2,522,237

METER LOCKING MECHANISM FOR MAIL TREATING MACHINES

Commodore D. Ryan, Los Angeles, Calif., and Frank P. Sager, deceased, late of Alhambra, Calif., by Harry L. Sager, executor, Alhambra, Calif., and Ernest R. Bergmark and Herschel L. Atherton, Los Angeles, Calif., assignors to Commercial Controls Corporation, a corporation of Delaware

Original application April 29, 1940, Serial No. 332,305, now Patent No. 2,371,070, dated March 6, 1945. Divided and this application November 29, 1944, Serial No. 565,750

9 Claims. (Cl. 235—130)

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This invention relates to locking mechanism and more particularly to locking mechanism used in mail treating machines.

One of the objects of this invention is to provide a new and improved locking mechanism. Another object is to provide mechanism of the above character which is simple, thoroughly durable, and practical. Another object is to provide a construction of the above character which forms an efficient locking mechanism which protects the meter from being tampered with. Another is to provide a construction of the above character which is characterized by its sturdy construction and is well adapted to withstand the strains of hard usage. Still another object is to provide mechanism of the above character which may be easily operated. Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists, in the features of construction, combinations of elements, and arrangements of parts, all as will be illustratively described herein, and the scope of the application which will be indicated in the following claims.

Referring now to the accompanying drawings, in which is shown one of the various possible embodiments of this invention,

Figure 1 is a side elevation of a meter for a mail treating machine;

Figure 2 is a horizontal section taken through the base of the meter shown in Figure 1 and showing a portion of the power plant of a mail treating machine on which the meter is mounted;

Figure 3 is a view similar to Figure 2, but with the meter and certain parts on the power plant in different relative positions;

Figure 4 is a vertical section taken on the line 4—4 of Figure 1;

Figure 5 is a view similar to Figure 4, but with certain parts in different relative positions;

Figure 6 is a vertical section taken on the line 6—6 of Figure 4;

Figure 7 is a vertical section taken on the line 7—7 of Figure 4 with certain parts of the power plant being shown;

Figure 8 is a vertical section taken on the line 8—8 of Figure 4; and,

Figure 9 is a side elevation of certain parts mounted on the power plant taken on the line 9—9 of Figure 3.

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Similar reference characters refer to similar parts throughout the several views of the drawings.

This application is a division of Patent No. 2,371,070, which was filed on April 29, 1940.

Referring now to the drawings, the locking mechanism described hereinafter locks the meter, generally indicated at 10, to the power plant of a mail treating machine. In mounting meter 10 (Figure 1) upon the power plant, it is necessary that the meter be properly positioned on plate 970 of the power plant to establish the drive connection between the meter and the power plant. It is also necessary that the meter be held firmly in position on the power plant so that it cannot move during its operation and it is desirable that locking mechanism be provided which prevents the meter from being taken off of the power plant in the middle of a cyclical operation or being operated after the meter has been removed from the power plant. To properly position the meter upon the power plant, positioning and locking pins 983, 984, and 985 (Figures 1, 2, and 3) are provided. When the meter is mounted upon the power plant meter supporting plate 970, these pins extend through three spaced openings 992, 993, and 994 which openings are more or less egg shaped, as shown in Figures 2 and 3.

When mounting the meter on power plant plate 970, its three locking pins 983, 984, and 985 are entered into the larger end of the three openings 992, 993, and 994, as shown in Figure 2, and means are provided for shifting the meter until its pins engage the smaller ends of said openings. The meter is provided with a positioning pin 995 (Figures 1, 2, and 3) which extends through an elongated opening 996 formed in plate 970 against which pin the meter positioning and locking lever 997 engages during the rotation of said lever about its pivot pin 998 to shift the meter from its mounting position, as shown in Figure 2, to its locked operative position, as shown in Figure 3.

The means for operating the meter positioning and locking lever 997 includes crank handle 999 pivotally mounted on a bracket 163 by a shaft 164. Crank handle 999 is connected to a crank arm 1000 (Figures 2 and 9) through lugs 999a and 999b. Crank arm 1000 (Figure 3) is

connected to the meter positioning and locking lever 997 by means of a connecting rod 1002. The forward end of connecting rod 1002 is pivotally connected to the meter positioning and locking lever 997 by a ball joint 1003. This ball joint includes a ball-like member 1004 slidably mounted on connecting rod 1002. Member 1004 sets against a semi-spherical surface 1005 formed on the right-hand end (Figure 3) of lever 997 and is held in engagement with surface 1005 by a compression spring 1006 which is under compression between member 1004 and a collar 1007 fastened to connecting rod 1002. The compression spring is arranged to yieldingly urge lever 997 against a connecting rod stop collar 1008 securely fastened upon the connecting rod 1002, as shown in Figure 2.

Due to the above described construction the meter positioning and locking lever 997 will be positively returned to its unlocked position, as shown in Figure 2, by the connecting rod collar 1008 directly engaging the positioning and locking lever 997.

It is preferable to provide the rear end of connecting rod 1002 with a goose neck portion 1009 (Figures 3 and 9) to enable the operating crank arm 1000 to pass over center when the meter is positioned and locked upon the power plant and the crank arm is held in this over center locking position by the tension of compression spring 1006.

The rotation of crank handle 999 from its retracted position of Figure 2 to its locking position of Figure 3, will through its connecting mechanism rotate the meter positioning and locking lever 997 in a counterclockwise direction and during this rotation will engage the meter positioning pin 995, and through such engagement will move the meter into its operative locked position.

The movement of the meter into its operative position as shown in Figure 3 is employed to lock the meter to the supporting plate 970 by providing, adjacent the smaller end of each of the three openings formed in the meter supporting plate, locking members 1010, 1011, and 1012 each of which is provided with a cam surface 1013 (Figures 2, 3, 6, and 8) for engaging the annular locking grooves 986 formed in the meter positioning and locking pins. The engaging surfaces formed between the locking members and meter pins are tapered as shown in the drawings for drawing the meter down tightly onto the plate when moved into its locked position and for pulling pins 984 and 985 downwardly to unlock the meter, as will be described hereinafter. As shown in the drawings, the locking members may be fastened to the under surface of meter supporting plate 970 by rivets 1014, (Figures 2 and 3).

The advantage of the mechanism just described permits the meter to be placed onto the meter supporting plate 970 and then moved rearwardly and to the left, as viewed in Figures 2 and 3, along the surface of said plate into its operative position, at which time the coupling 982 on the power plant which supplies power to the meter is couplied to the coupling 1017 connected to the main drive shaft 1018 of the meter. To remove the meter from the power plant, crank handle 999 is moved to its unlocked position, as shown in Figure 2, and at this time the meter may be removed from its engagement with locking members 1010, 1011, and 1012 and then lifted upwardly from plate 970. The horizontal movement of the meter to or from its operative position is employed to connect or disconnect the meter driving coupling 982. In Figure 2, the coupling is shown disconnected and the meter ready to be lifted from the power plant, while in Figure 3, the coupling is shown connected and the meter is in its normal driving position.

The meter positioning and locking means just described provides a simple and effective mechanism for mounting the meter upon the power plant in its correct operating relation thereto or for removing the meter therefrom. It insures the correct aligning and connecting of the driving coupling 982 with coupling 1017 so that when the meter is moved to its operative position, it is automatically coupled with the power plant driving mechanism so that the printing drum within the printing drum housing 980 (Figure 1) may be driven when the power plant mechanism is actuated. The meter driving couplings 982 and 1017 are of the type commonly used in machines of this character in which the two parts can be connected only when presented in proper relation. The coupling 982 is operatively connected to the power plant driving mechanism while the coupling 1017 is connected to the adjacent end of the meter drive shaft 1018.

Positioning and locking pins 984 and 985, together with mechanism associated with them, prevent operation of the meter when it is removed from the power plant and also prevent removal of the meter from the power plant in the middle of a cyclical operation. Positioning pin 985 (Figures 4 and 5) has a vertically extending shank 1627 passing through a guide bore 1628 (Figure 5), formed in flange 1629, which flange is preferably formed as an integral portion of the meter end plate 1026 and extends forwardly therefrom. The upper end of shank 1627 is slidably guided in lug 1630, which lug preferably is formed as an integral part of the meter rear plate 1026. The shank at its upper end is provided with a locking head 1631. The locking pin 985 is yieldingly urged upwardly by interposing a compression spring 1632 between the top surface of flange 1629 and collar 1633, which collar is securely fastened to said shank by means of taper pin 1634.

The flange portion 1629 is provided with a suitable counterbore 1635 to permit a limited upward movement of said pin until its enlarged portion 1636 seats against the upper end of said counterbore. When the locking pin is in the above mentioned position, namely when its head portion 1636 seats against the upper end of the counterbored portion 1635, as shown in Figure 4, the locking head 1631 of said shank will move into locking engagement with a suitable locking notch 1637 formed in the hub portion 1638 of a gear pinned to the countershaft shaft 1044, thereby securely locking the countershaft from rotation in a clockwise direction, as viewed in Figures 4 and 5, while the reverse rotation of the countershaft is locked by the main shaft ratchet wheel 1613 and a pair of pawls 1615 and 1620 coacting therewith.

The positioning and locking pin 985 is moved downwardly to release its locking head 1631 from the locking notch 1637 when the meter is in its operative position on the power plant as is clearly shown in Figures 5 and 6. This action is due to the engagement of the cam surfaces formed upon the lower end of the locking pin 985 and locking member 1012 which member is mounted upon the power plant meter supporting plate 970 and which cams the pin 985 downwardly during the

movement of the meter into its locked position in the manner previously described.

Positioning and locking pin 984 is similar in construction to the locking pin 985 and is provided with a shank 1639 extending through guide bore 1640 formed in flange 1629 and through bracket 1625. The pin 984 is yieldingly urged upwardly by means of compression spring 1641 interposed between the upper surface of flange 1629 and collar 1642 which collar is securely fastened to said shank by means of taper pin 1643. The upper end of shank 1639 is bifurcated to receive a locking lever 1644 (Figure 8) and is pivotally connected to said lever by means of pin 1645 (Figures 4 and 8) which pin engages a longitudinal slot 1646 formed in said lever. One end of lever 1644 is mounted upon pivot pin 1647 which pin is suitably fastened to the meter end plate 1026 and the lever is maintained upon said pivot pin by means of washer 1648 and cotter pin 1649.

The locking lever 1644 is provided with two arms, an upper arm 1650 and a lower arm 1651. The locking lever upper arm 1650 is provided with a downwardly directed locking finger 1652 which is arranged to cooperate with locking notch 1653 formed in the periphery of locking disc 1654 which disc is preferably formed as an integral portion of the ratchet wheel 1613.

The lower arm 1651 of the locking lever 1644 is provided with an arcuate cam surface 1655 engaging a cooperating cam surface 1656 formed on the upper end of plunger 1657 which plunger slidably extends through bracket 1625 and the end plate flange 1629. The plunger is yieldingly urged downwardly by interposing compression spring 1658 between the undersurface of bracket 1625 and a collar 1659 secured to said plunger by means of taper pin 1660. The collar 1659 is provided with an annular groove 1661 into which the free end of arm 1662 of bellcrank lever 1663 operatively engages. The bellcrank lever 1663 is pivotally mounted upon the ratchet pawl pivot pin 1621 and is interposed between ratchet lever 1620 and the front face of the meter rear plate 1026. A locking finger 1664 is formed upon the upper arm 1665 of bellcrank lever 1663 and cooperates with locking notch 1666, which locking notch is formed in the ratchet wheel locking disc 1654.

The operation of this portion of the locking mechanism is briefly as follows:

When the meter is removed from the power plant, the positioning and locking pin 984 is moved upwardly under the influence of spring 1641 until the enlarged portion 1667 of the pin seats in the upper end of counterbore 1668 (Figure 4). This upward movement of the locking pin rotates the locking lever 1644 about its pivot 1647 in a clockwise direction, as viewed in Figure 5. This clockwise rotation of locking lever 1644 rotates the locking finger 1664 of the bellcrank lever 1663 into locking engagement with the notch 1666 formed in said ratchet wheel locking disc as is clearly shown in Figure 4. The motion is transmitted from the locking lever to the bellcrank through plunger 1657, and its collar 1659, to the arm 1662 of said bellcrank lever. When the meter is removed from the power plant, the locking finger 1664 of bellcrank 1663, in entering the locking notch 1666, positively locks the driving mechanism of the meter against operation in either direction. It also retracts the point 1669 of plunger 1657 into its guide bore 1670 to permit the placement or removal of the meter from the power plant.

When the meter is correctly positioned and

locked upon the power plant, the locking and positioning pin 984 will be withdrawn a predetermined distance due to the engagement of the cam surface 1013 of locking member 1011 and the surface 986 of pin 985. This position of the parts is clearly shown in Figure 8 and the downward movement of the locking pin 984 acts to rotate its connected locking lever 1644 in a counterclockwise direction and through its connection with plunger 1657 will swing the bellcrank 1663 in a clockwise direction to remove the bellcrank locking finger 1664 from engagement with the locking notch 1666 thereby releasing the power plant driving mechanism for operation.

The counterclockwise rotation of locking lever 1664 swings the locking finger 1652, carried by its arm portion 1650 to a position directly adjacent but not entering the locking notch 1653, as is clearly shown in Figure 5. It will be understood that finger 1652 of the locking lever 1644 does not enter into locking engagement with the locking disc when the locking pin 984 is pulled downwardly during the movement of the meter into operative position upon the power plant.

When the meter is removed from the power plant, should it be attempted to actuate the meter by pulling out the locking pin 984, there is no way for the person attempting such manipulation to know when the locking pin has reached its meter releasing position. If the pin is not moved far enough, the locking finger 1664 will not be released from its locking notch 1666 or if the pin is pulled out too far, the locking finger 1652 carried by arm 1650 of the locking lever will enter into locking engagement with the locking disc notch 1653, thereby locking the meter driving mechanism against operation.

The adjustment of pin 984 to operating position which is between the two just referred to locking positions of the mechanism is so critical that it necessitates a very accurate positioning of pin 984 to render the machine operative. This feature is incorporated for the purpose of discouraging attempts to tamper with the meter when removed from the power plant. If the person attempting to tamper with the machine, manipulated only the positioning and locking pin 984 and did not at the same time pull outwardly upon the locking pin 985, and did succeed in freeing the machine for operation, it would turn the undercut portion of the locking notch 1637 under the head portion 1631 of locking pin 985 and as a result thereof would not only lock the driving mechanism of the machine against operation, but would also lock the locking pin 985 against outward movement. As the meter driving mechanism can not be rotated in a reversed direction to release the engagement of notch 1637 with the head 1631, the meter would require returning for servicing in order to place it back in its normal operative condition.

As a further precaution to discourage tampering with the meter while it is removed from the power unit, the positioning and locking pin compression springs 1632 and 1641 are of sufficient strength to prevent manual manipulation of the pins. It would require special tools in order to accomplish the proper actuation of the pins to release the meter for operation.

Emergency means are provided for releasing the meter from the power plant should the driving mechanism of the meter or power plant become jammed or stuck during the operating cycle of the machine. This means includes providing

the meter supporting plate 970 of the power plant with a disc 1671 (Figures 2, 3, and 7) which disc is journaled in a suitable bore 1672 extending through said plate so that the upper surface of said disc is flush with the top surface of said plate. The disc is provided adjacent its lower surface with a flange for supporting it to plate 970 by means of headed rivets 1673 as is clearly shown in Figures 3 and 7, where it will be observed that the flange portion of the disc 1671 is retained between the heads of said rivets 1673 and the bottom surface of the meter supporting plate 970.

In order to assemble disc 1671, its flanged portion is provided with two notches 1674 positioned to register with the heads of rivets 1673 in order to permit the disc to be inserted into the bore 1672 when the disc is turned to an extreme inoperative position. The disc 1671 is provided with an arm 1675 (Figures 2 and 3) having a right angled end portion 1676 which right angled end portion is secured to a post 1677 by a headed locking pin 1678 (Figure 7) which pin extends through aligned bores formed in said post and portion 1676 of said arm. The post 1677 is securely riveted to the under surface of plate 970. The end of pin 1678 is provided with a transverse bore through which wires 1679 are passed. The ends of the wires are fastened together by means of a lead seal 1680 applied by an official of the Post Office Department. A conical depression 1681 (Figure 7) is provided in the upper surface of disc 1671 eccentric to the axis of rotation thereof to receive the point 1669 of plunger 1657 when the meter is locked in its operative position.

During the removal of the meter from the power plant, the tapered surfaces of the plunger point 1669 and conical depression 1681 will cam the plunger upwardly against the tension of its spring 1658. This upward movement of the plunger will cause the bellcrank 1663 to rotate about its pivot in a counterclockwise direction and as the meter driving mechanism is in its rest position, the locking finger 1664 of this lever may enter the locking disc notch 1666. However, should it be attempted to remove the meter from the power plant while the driving mechanism of the meter is in some other position than its normal rest position, the end of locking finger 1664 will engage the periphery of locking disc 1665 thereby preventing the camming of the end of plunger 1657 from the conical depression 1681 and as a result, the meter cannot be removed from the machine until the parts are returned to their rest position. This is for the purpose of preventing the removal of the meter while the stamp printing die is located opposite the printing aperture in the printing drum cover 980.

In the event that the mechanism in the meter or the power plant becomes inoperative through jamming, when the driving and driven mechanism of said meter and power plant are out of normal rest position, it will be impossible to remove the meter from said power plant in the normal and above described manner and it will necessitate the service of an authorized official of the Post Office Department to break the seal 1680, remove the wire 1679 from the end of the headed locking pin 1678 and thereafter withdraw the said headed locking pin from the end 1676 of the disc arm 1675 and thereafter to rotate the disc by means of manipulating the arm 1675 while simultaneously actuating the meter locking crank handle 999 and thereby permitting the pointed end 1669 of plunger 1657 to travel during the movement of the locking and positioning pins along their respective slots until the pins are free of their respective locking members, whereupon the meter may be lifted from the power plant.

Thus it will be seen that pins 984 and 985 control the operation of the meter preventing rotatiton of the printing drum when the meter is not mounted on the power plant and also preventing the removal of the meter from the power plant when the printing drum is not in its rest position. Accordingly, an efficient and practical locking mechanism which accomplishes the objects hereinabove described, as well as many others, has been disclosed.

As many possible embodiments may be made of the above invention, all without departing from the scope of the invention, it is to be understood that all matter hereinbefore set forth or shown in the accompanying drawings, is to be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. In locking mechanism for a mail treating machine including a meter and a power plant, said meter being detachably mounted on said power plant, in combination, a plurality of pins extending outwardly from said meter, said pins being capable of being withdrawn from said meter, locking means for locking the mechanism of said meter, means connecting said locking means and said pins, said pins when withdrawn from said meter acting to unlock said locking means, and means on said power plant acting to withdraw said pins from said meter and thus unlock the mechanism of said meter when said meter is mounted on said power plant.

2. In locking mechanism for a mail treating machine including a meter and a power plant, said meter being detachably mounted on said power plant, in combination, a plurality of pins extending outwardly from said meter, locking means for locking the mechanism of said meter, means connecting said locking means and said pins, said locking means being in locking position when said meter is not mounted on said power plant, and cam means on said power plant engaging cam surfaces on said pins to move said pins as said meter is moved into mounted position, movement of said pins moving said locking means to unlocked position.

3. In locking mechanism for a mail treating machine including a power plant having a meter detachably mounted thereon, said meter having mechanism which is cyclically operated, in combination, a plurality of pins extending from said meter, locking means for locking the mechanism of said meter, means connecting said locking means and said pins, said locking means being in locked position when said meter is not mounted on said power plant, means on said power plant operatively engaging said pins when said meter is mounted on said power plant, said last-mentioned means acting through said pins to move said locking means to unlocked position as said meter is locked in position on said power plant, and a locking pin actuated by one of said pins for locking said meter to said power plant when said locking means is moved to an unlocked position, said locking pin extending into said power plant, and means preveting removal of said locking pin from said power plant during a cycle of operation.

4. In locking mechanism for a mail treating machine, including a power plant having a meter

detachably mounted thereon, the mechanism of said meter being cyclically operated from a rest position, in combination, a pin mounted on said meter, said pin having a mushroom shaped head, said power plant having a hole therein into which said pin extends when said meter is mounted on said power plant, said meter being mounted on said power plant by sliding said meter with respect to said power plant with said pin in said hole, means on said power plant adjacent said hole for acting on the head of said pin to withdraw said pin from said meter, locking mechanism associated with said pin, said locking mechanism locking said meter when said meter is detached from said power plant, said last-mentioned means acting through said pin to unlock said meter when said meter is mounted on said power plant, a locking pin, means operatively connecting said locking pin with said first-mentioned pin, said locking pin extending into a hole in said power plant when it is in locked position and being moved into locked position when said first-mentioned pin is moved to unlocked position, and means associated with said locking pin to prevent its withdrawal from said power plant and thus prevent the removal of said meter from said power plant when the mechanism of said meter is not in rest position.

5. In locking mechanism for a mail treating machine including a meter and a power plant, said meter being detachably mounted on said power plant, in combination, a plurality of pins extending outwardly from said meter, locking means for locking the mechanism of said meter, means connecting said pins and said locking means, said locking means being in locked position when said meter is not mounted on said power plant, and means on said power plant engaging said pins to withdraw them from said meter as said meter is mouted on said power plant, movement of said pins moving said locking means to unlocked position.

6. In locking mechanism for a mail treating machine, including a meter and a power plant, said meter being detachably mounted on said power plant, in combination, a substantially flat meter supporting plate mounted on said power plant, a plurality of openings in said meter supporting plate, a plurality of pins extending downwardly from the bottom of said meter through said openings, head means formed on the lower ends of each of said pins, said meter being slid on said meter supporting plate as it is moved into operative position on said power plant, members on said supporting plate for engaging the heads of said pins to partially withdraw them from said meter as said meter is slid into operative position on said supporting plate, locking means for locking the mechanism of said meter, means operatively connecting said locking means and said pins, movement of said pins by said members moving said locking means to unlocked position.

7. In mechanism of the type described in claim 6 a locking pin, means operatively connecting said locking pin with one of said first-mentioned pins, said locking pin being moved downwardly into locking engagement with said supporting plate when said first-mentioned pins are moved to unlocked position whereby said meter is locked to said power plant when said first-mentioned pins are in unlocked position.

8. In locking mechanism for a mail treating machine, including a meter and a power plant, said meter being detachably mounted on said power plant, in combination, a control member extending outwardly from the housing of said meter, meter locking means controlled by said control member, means mounted on said power plant for actuating said control member to unlock said meter locking means when said meter is mounted on said power plant, a pin mounted on said meter, means operatively connecting said control member and said pin, said pin being moved into locking engagement with said power plant when said control member is moved to an unlocked position, whereby said meter may not be removed from said power plant until said control member is moved to locked position.

9. In locking mechanism for a mail treating machine, including a meter and a power plant, said meter being detachably mounted on said power plant, in combination, a meter locking member mounted on said meter, one end of said meter locking member extending outwardly from the casing of said meter, a shaft directly connected to the main driving shaft of said meter, a collar mounted on said shaft, said collar having a recess formed therein, a head portion formed on said control member, means to resiliently urge said head portion into said recess, means on said power plant for withdrawing said control member from locked position when said meter is being mounted on said power plant, said recess having a projecting portion, said projecting portion moving under the head of said control member if said meter is operated without withdrawing said control member from said meter, said projecting portion locking said control member in a meter locking position thus preventing further operation of the meter.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,878,283	Mack	Sept. 20, 1932
2,056,315	Finfrock et al.	Oct. 6, 1936
2,141,119	Wheeler, Jr., et al.	Dec. 20, 1938
2,168,457	Strother	Aug. 8, 1939
2,356,699	Rowan et al.	Aug. 22, 1944