

June 8, 1937.

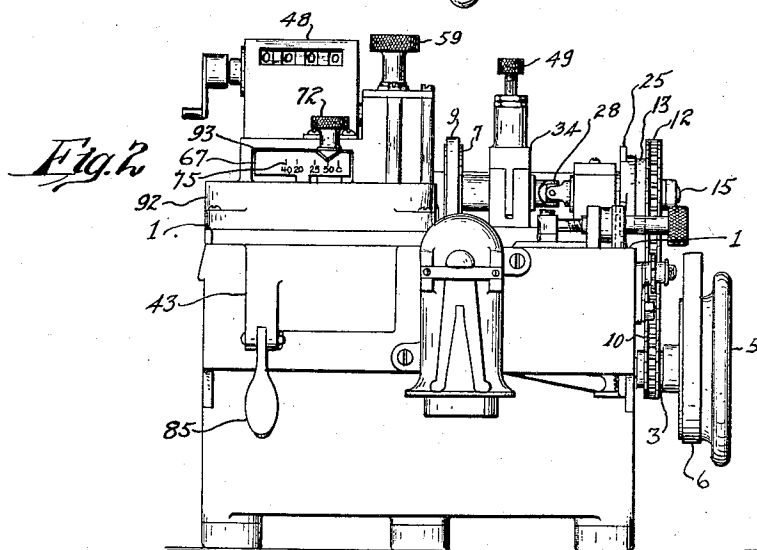
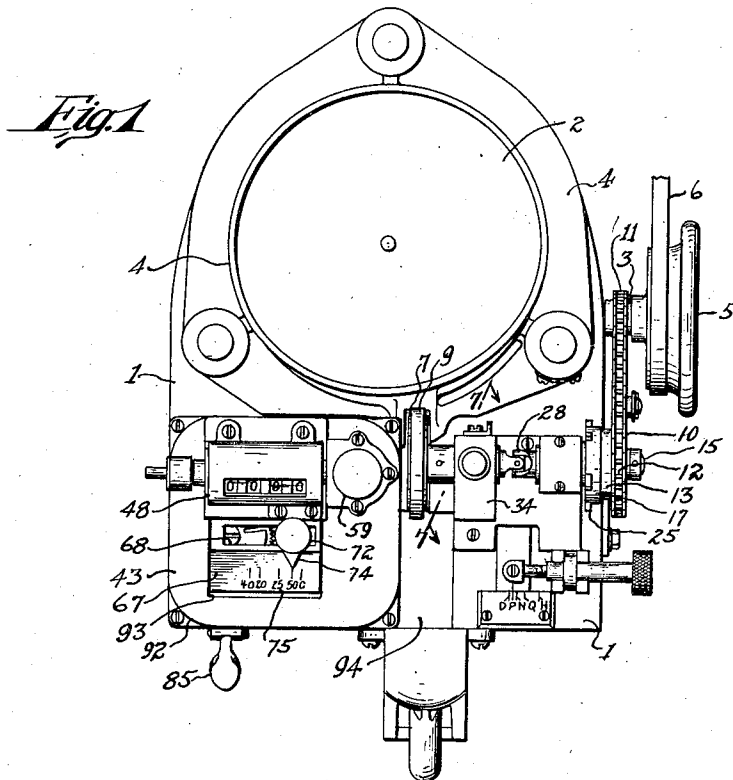
E. P. DONNELLAN

2,083,256

COIN COUNTING MACHINE

Filed Dec. 16, 1931

3 Sheets-Sheet 1



INVENTOR
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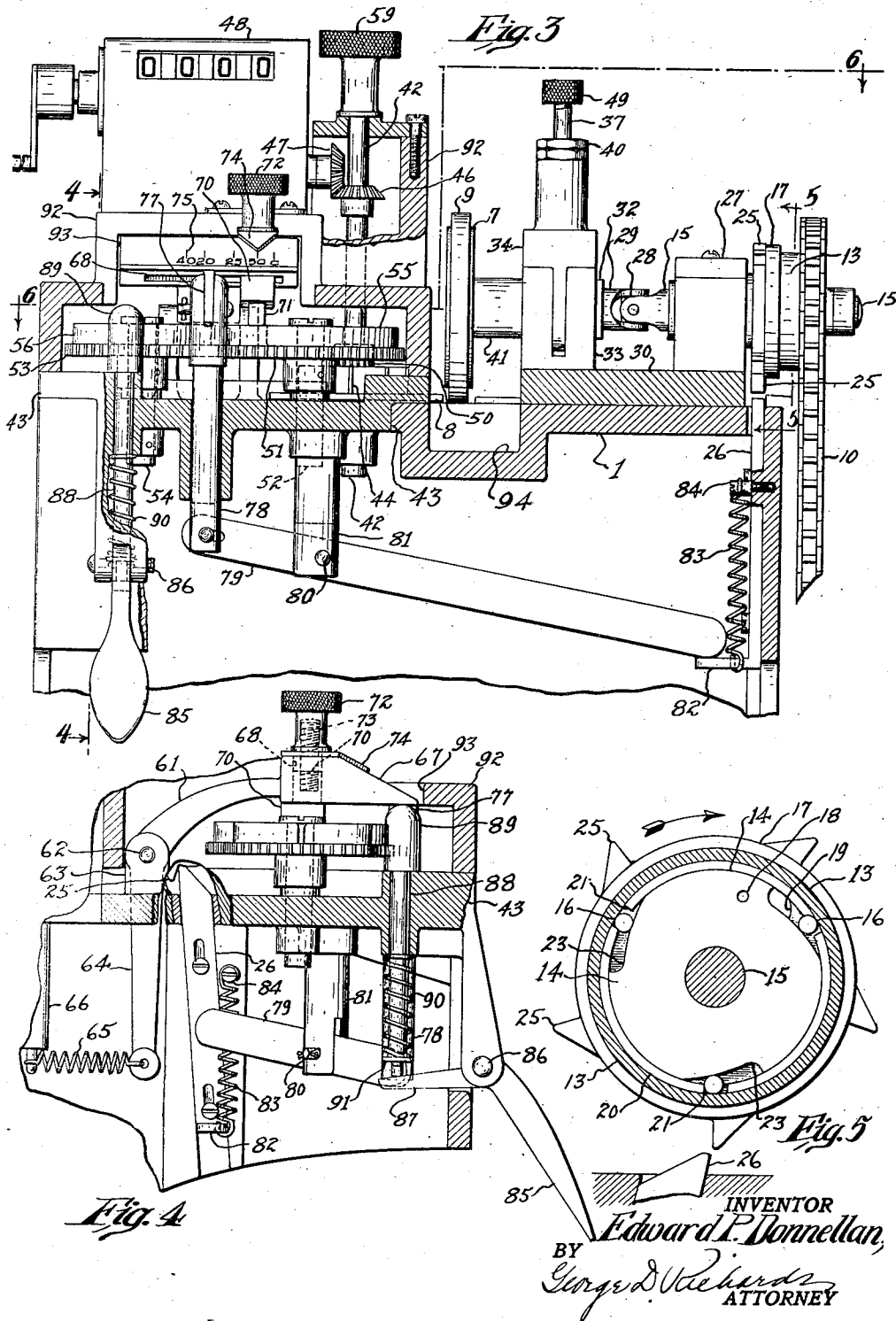
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3 Sheets-Sheet 2



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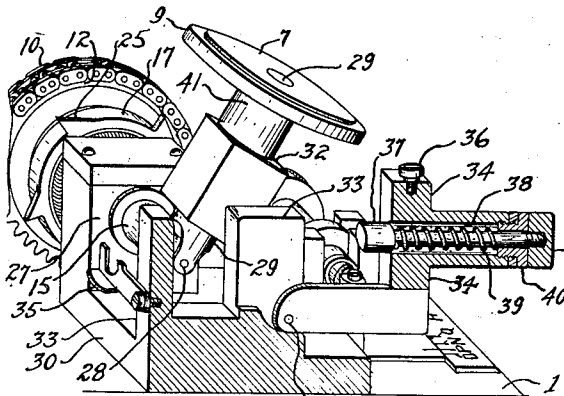
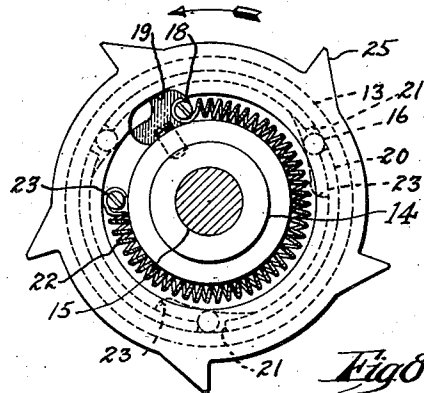
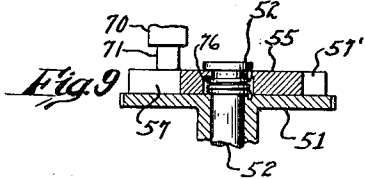
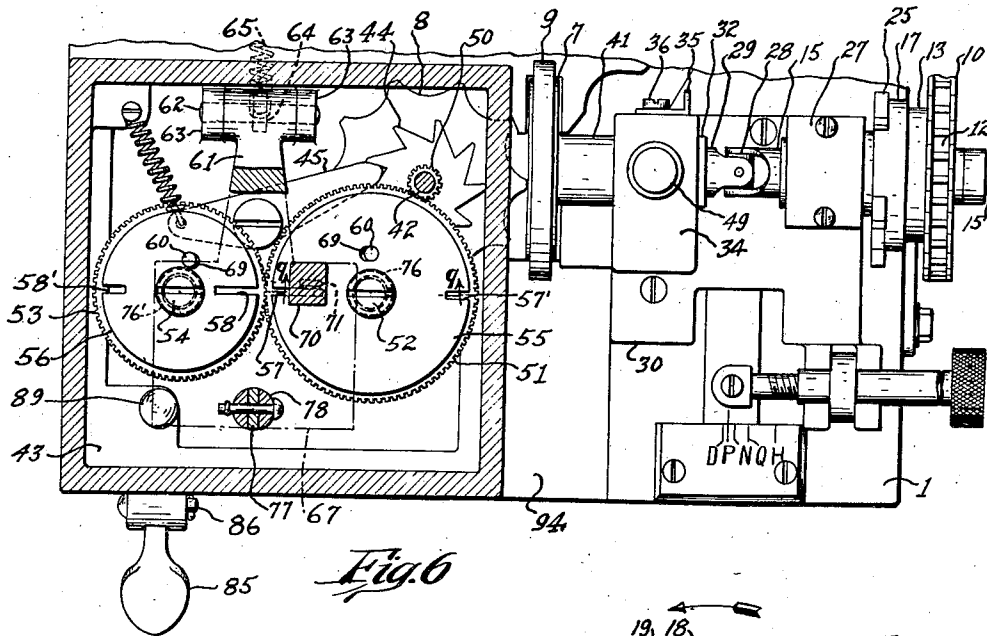
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Filed Dec. 16, 1931

3 Sheets-Sheet 3



UNITED STATES PATENT OFFICE

2,083,256

COIN COUNTING MACHINE

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Application December 16, 1931, Serial No. 581,360

8 Claims. (Cl. 133—8)

This invention relates, generally, to improve-
ments in coin counting machines of the type
shown in my United States Letters Patent No.
1,389,634, dated September 6th, 1921; and this
invention has reference, more particularly, to
improvements in such machines adapted to
count and deliver into a bag, wrapper or other
container a selected number or group of coins.

Heretofore, it has been customary to drive the
coin propelling wheel, i. e. the frictional wheel
which forces the coins past the counter star-
wheel, continuously, with the result that at times
when coins were not actually being fed through
the machine, excessive wear of the frictional
face of the propelling wheel took place, neces-
sitating frequent replacement of the frictional
material of the wheels.

This invention has for its principal object to
provide a novel means for stopping the opera-
tion of the coin propeller wheel upon the cessa-
tion or interruption of the feeding of coins,
thereby greatly enhancing the life of such wheel,
said novel means serving to automatically start
the operation of the coin propelling wheel upon
the resumption of the feeding of coins through
the machine.

Another object of the present invention lies
in the provision of a novel means for automati-
cally stopping the feeding of the coins when a
predetermined number of coins have been deliv-
ered, the said means being adjustable within
desired limits to provide for the automatic count-
ing of any desired number of coins.

Other objects of this invention, not at this
time more particularly enumerated, will be clear-
ly understood from the following detailed descrip-
tion of the same.

The invention is clearly illustrated in the ac-
companying drawings, in which:

Fig. 1 is a plan view of the improved coin
counting machine of this invention.

Fig. 2 is a view in front elevation of the struc-
ture shown in Fig. 1.

Fig. 3 is an enlarged view with parts broken
away of the structure shown in Fig. 2.

Fig. 4 is a fragmentary sectional view taken
along line 4—4 of Fig. 3.

Fig. 5 is an enlarged fragmentary sectional
view taken along line 5—5 of Fig. 3.

Fig. 6 is a part sectional view taken substan-
tially along line 6—6 of Fig. 3.

Fig. 7 is a fragmentary perspective view of the
coin propelling wheel and associated structure.

Fig. 8 is a rear view of the structure shown
in Fig. 5.

Fig. 9 is a fragmentary sectional view taken
along line 9—9 of Fig. 6; and

Figs. 10 and 11 are fragmentary, schematic
views illustrating the operation of a portion of
the coin counting mechanism.

Similar characters of reference are employed
in all of the above described views, to indicate
corresponding parts.

Referring now to the said drawings, the refer-
ence numeral 1 designates the bed-plate of the
machine. A centrifugal feed table 2 is counter-
sunk in an opening provided in the bed-plate 1
and turns freely within such opening. Table
2 is driven from a drive shaft 3 and the upper
surface of this table is surrounded by a coin
guiding and controlling means 4, which structure
is shown and described in my copending applica-
tion Serial No. 466,075 now Patent 1,921,155 is-
sued August 8, 1933, and which structure forms
no part of the present invention. Shaft 3 is
illustrated as driven by a power pulley 5 having
a driving belt 6 thereon, but this shaft may as
readily be hand driven, if desired.

The coin controlling and guiding means 4 di-
rects the coins, passing off of table 2, to the coin
propeller wheel 7, which propeller wheel is pro-
vided with a fibrous or other gripping peripheral
surface portion 9 for frictionally gripping the
coins to drive the same past the star wheel 8,
thereby rotating this star wheel and effecting
the counting of the coins. The coin propeller
wheel is driven from the drive shaft 3.

According to the preferred embodiment of the
invention, a sprocket chain 10 is driven by a
sprocket 11 fixed upon drive shaft 3. Chain 10
serves to drive a sprocket 12 which is secured
to an outer driving drum 13 of a roller clutch,
the inner, driven drum 14 of which is fixed upon
a shaft 15. Rollers 16 (see Figs. 5 and 8) serve
to transmit the drive between the drums 13 and
14. A collar 17 is mounted upon drum 14 so as
to have a limited turning movement on this
drum. Collar 17 has an annular flange 20 pro-
jecting between outer and inner drums 13 and
14, respectively. Flange 20 has radial slots 21
therein adapted to engage the rollers 16. A pin
18 is fixed to the inner drum 14 and extends
through an arcuate slot 19 provided in collar
17 to thereby limit the turning movement of
collar 17 on drum 14. A coil tension spring 22
has one end attached to pin 18 and its other
end attached to a pin 23' that is secured to collar
17. Spring 22 tends to turn collar 17 on drum
14 in a direction to cause the radial slots 21 to
move rollers 16 to the shallow ends of their

pockets 23 in drum 14, thereby completing the drive between the outer and inner drums. In the event that projections 25 on collar 17 engage an obstruction, such as the upper end of a link 26, the collar 17 is held stationary so that as shaft 15 and drum 14 advance in the direction of the arrows in Figs. 5 and 8, the rollers 16 drop into the deep portions of pockets 23, thereby ending the drive between the outer and inner drums 13 and 14 and causing shaft 15 to come to rest.

Shaft 15 is journaled in a bearing 27 provided on a base 30 that is mounted upon bed-plate 1. Shaft 15 is connected by a universal joint 28 to a stub shaft 29. Stub shaft 29 is journaled in a bearing block 32 of substantially square cross-section. Bearing block 32 is removably positioned within a bearing housing 33 provided on the base 30. Bearing housing 33 has a hinged cover 34 which is adapted to be turned away from the main portion of the bearing housing 33, thereby permitting the bearing block 32 to be lifted out of its bearing housing as illustrated in Fig. 7. The universal joint 28 permits the turning of stub shaft 29 so that the bearing block 32 may be thus lifted out of its bearing housing.

The hinged bearing cover 34 is hinged at 31 to the bearing housing 33 and is adapted to be retained in assembled relation upon the bearing block 32, during the operation of the machine, by a hook 35 pivoted upon the main portion of the bearing housing and cooperating with a screw 36 threaded into the hinged cover 34. A headed plunger 37 is longitudinally movable within an aperture 38 provided in the hinged cover 34 and a compression spring 39, contained within aperture 38, urges the head of plunger 37 outwardly of this aperture so that, with bearing cover 34 assembled upon the bearing housing, the head of plunger 37 presses downwardly upon bearing block 32, thereby holding this bearing block firmly within its bearing housing. Plunger 37 extends slidably through an adjusting sleeve 40 which is threaded into aperture 38 and has a manipulating knob 49 attached to its outer end. The coin propeller wheel 7 has its hub 41 fixed upon the free end portion of stub shaft 29 so as to be driven by this shaft.

The star wheel 8 is fixed upon a vertical shaft 42 which is rotatably mounted in a bearing provided in a casting 43 which is set in an aperture provided in the bed-plate 1. A ratchet wheel 44 is fixed to shaft 42 above star wheel 8 and cooperates with a pawl 45 to prevent reverse turning movement of the star wheel. A bevel gear 46 (see especially Fig. 3) is fixed upon shaft 42 and meshes with a similar gear 47 that is secured to the operating shaft of a coin register 48. The upper end portion of shaft 42 is provided with a knob 59 for manually turning this shaft and hence the star wheel 8, when desired. A pinion 50 is fixed upon shaft 42 adjacent ratchet wheel 44 and meshes with a gear 51, which gear is turnably mounted upon a vertical stud 52 fixed to casting 43.

Gear 51 meshes with a somewhat smaller gear 53 which is turnably mounted upon a vertical stud 54 also fixed to the casting 43. Gears 51 and 53 have circular plates 55 and 56 respectively mounted on the respective upper surfaces of these gears. Gears 51 and 53 have vertical pins 60 secured to their upper surfaces, which pins project into slots 69 provided in the circular plates 55 and 56. Slots 69 enable plates 55 and 56 to have a slight angular movement with respect to

their respective supporting gears. As especially shown in Fig. 9, a coil torsion spring 76 surrounds the upper portion of stud 52. The lower end of spring 76 is held in a recess provided in gear 51 and the upper end of this spring is held in a recess provided in the circular plate 55. Spring 76 normally tends to turn plate 55 upon gear 51 in a counter-clockwise direction as viewed in Fig. 6, so that the right end of slot 69 abuts the side of pin 60, as shown in this figure. Circular plate 56 is also provided with a coil torsion spring 76' which tends to turn plate 56 in a clockwise direction upon gear 53, as viewed in Fig. 6, whereby the left end of slot 69 in plate 56 abuts the side of pin 60, as shown in this figure.

Circular plate 55 is provided with diametrically opposite radial slots 57 and 57' extending inwardly from the periphery of this plate and the plate 56 is similarly provided with diametrically opposite, radially extending slots 58 and 58'. Slots 57 and 58 are illustrated as having equal lengths and are twice as long as their diametrically opposite slots 57' and 58'.

A bell crank lever 61 is pivotally mounted upon a pin 62 carried by spaced ears 63 extending upwardly from the horizontal portion of casting 43. Bell crank lever 61 has a depending arm 64 which is connected at its lower end to one end of tension spring 65. The other end of tension spring 65 is connected to a fixed support 66 provided on the bed plate 1. Tension spring 65 tends to cause bell crank lever 61 to turn in a clockwise direction about its pivotal pin 62, as viewed in Fig. 4. The upper arm of bell crank lever 61 has an enlarged indexing head 67 formed thereon, which indexing head is positioned above the circular plates 55 and 56.

Indexing head 67 is provided with a rectangular aperture or slot 68 (see especially Figs. 1 and 3), which slot extends vertically through the indexing head. A slide block 70 is mounted within slot 68 and is adapted to be moved along this slot in either direction transversely of the machine. Slide block 70 has a depending lock tongue 71 formed thereon, which lock tongue is adapted to engage in any one of the radial slots 57'—57', 58 and 58' of the plates 55 and 56. Tongue 71 therefore has a thickness which is somewhat less than the width of these radial slots and has a width which is substantially equal to the length of slots 57' and 58'.

A knob 72 is threaded upon a stud 73 (see Fig. 4) extending upwardly from the slide block 70 and a pointer 74 is retained upon the upper surface of the indexing head by the knob 72. Pointer 74 cooperates with legends 75 marked upon the upper forward surface of the indexing head 67. By grasping and manipulating knob 72, the slide block 70 may be moved transversely of slot 68 so that pointer 74 coincides with any one of the legends 75, which legends are 40, 20, 25, 50 and C, the first four of which legends indicate corresponding numbers of coins to be counted. The ratios of the numbers of teeth on pinion 50 and gears 51 and 53 are such as to cause gear 51 to make one complete revolution when the star wheel 8 has passed fifty coins, and the gear 53 makes one revolution when the star wheel passes forty coins. With pointer 74 on the C mark of the indexing head, the lock tongue 71 is positioned so as to ride over that annular portion of circular plate 55 which is not interrupted by either of the slots 57 or 57' and hence the star wheel 8 may rotate indefinitely, causing circular plate 55 to also rotate indefinitely without causing any

cooperative engagement between lock tongue 71 and slots 57 and 57'. In other words, when the pointer 74 is at the C mark on the indexing head, this mark indicates that the coin counter 48 will designate the number of coins which have passed through the machine for any desired period.

When the knob 72 is moved so as to cause the pointer 74 to coincide with the "50" mark or legend on the indexing head, the lock tongue is positioned so as to ride over that annular portion of circular plate 55 which is interrupted by the slot 57 but which is not interrupted by the slot 57'; so that with circular plate 55 turning under lock tongue 71, this lock tongue will snap downwardly into slot 57 when such slot rides under the lock tongue. The reason that lock tongue 71 snaps into recess 57 is because of spring 65 which urges lever 61 to turn in a clockwise direction and hence urges indexing head 67 downwardly. When knob 72 is adjusted so that pointer 74 coincides with the "25" mark or legend on the indexing head, the lock tongue 71 is positioned so as to ride over that portion of the circular plate 55 which is interrupted or broken by both slots 57 and 57'. When the pointer 74 overlies the "20" mark or legend of indexing head 67, lock tongue 71 is positioned so as to ride over that annular portion of the circular plate which is interrupted by both slots 58 and 58'. When pointer 74 overlies the "40" mark or legend, lock tongue 71 is positioned to ride over that annular portion of circular plate 56 which is interrupted by slot 58.

The forward portion of the indexing head 67 is formed with a depending lug 77 which is pivotally connected to the upper end portion of a vertical link 78. Vertical link 78 extends downwardly through a guide aperture provided in the casting 43 and has its lower end portion pivotally connected to one end of a transverse lever 79, which transverse lever is pivoted intermediate its length at 80 upon a stud 81 depending from the casting 43. The other end of lever 79 is adapted to engage a lower offset portion 82 formed on link 26. A coil tension spring 83 has its lower end connected to the offset portion 82 and its upper end connected to a stud 84 fixed in the frame of the machine, which coil tension spring tends to urge link 26 upwardly so that its upper end will engage one of the projections 25 of the roller clutch and effect the disconnection of this clutch.

A thumb lever 85 is pivoted at 86 upon the forward portion of casting 43 and has a rearwardly extending arm 87 that engages the lower end of a lift rod 88. Lift rod 88 extends vertically through a slide bearing aperture provided in the casting 43 and has an enlarged head portion 89 adapted to engage the underside of the indexing head 67 and effect the raising of this head against the tension of spring 65 when thumb lever 85 is depressed. A coil compression spring 90 surrounds the lower portion of lift rod 88 and by bearing at its upper end upon the casting 43 and at its lower end upon a washer 91 carried by the lift rod 88, this spring biases the lift rod to its lowermost position shown in Fig. 4. A housing 92 is mounted upon casting 43 and serves to enclose the gearing driven from the star wheel shaft 42 and associated apparatus. This housing 92 also serves as a support for the coin register 48 and has an aperture 93 in the top thereof to accommodate the indexing head 67 which projects outwardly somewhat of said aperture.

In operation, the pulley 5, turning under the influence of belt 6, causes drive shaft 3 to re-

volve and effects the rotation of centrifugal feed table 2. The sprocket 11, rotating with shaft 3, effects rotation of sprocket 12 and if a projection 25 of the roller clutch is not engaged by link 26, as shown in Fig. 3, then the roller clutch transmits rotary motion to shaft 15 and effects rotation of coin propeller wheel 7. Thus, coins placed on table 2 are delivered to the propeller wheel 7 which acts to drive the coins in succession past the star wheel 8, thereby effecting rotation of this star wheel and the counting of the coins by register 48. The coins on leaving the propeller wheel 7 pass into a delivery chute 94 to be disposed of in any manner desired.

Link 26 will be depressed so as not to engage the projections 25 of the roller clutch as long as the indexing head 67 is held in its upper position shown in Fig. 3 against the tension of spring 65, or in other words, as long as the lock tongue 71 rides on an uninterrupted portion of the upper surfaces of either plate 55 or plate 56. Thus, for example, with pointer 74 set on the C mark of the indexing head, the lock tongue 71 will ride on an annular portion of plate or member 55 which portion is not interrupted by either slot 57 or 57', so that member 55 may turn indefinitely under lock tongue 71 without permitting this tongue to drop into either of the slots 57 or 57'. If, however, the knob 72 is shifted so as to place pointer 74 on the "50" mark, for example, as shown in Fig. 3, the plate member 55 will turn until slot 57 arrives under the lock tongue 71 whereupon this tongue will snap downwardly into slot 57 under the action of spring 65. As tongue 71 together with the indexing head 67 move downwardly, the link 78 is depressed, causing the free end of lever 79 to move upwardly, thereby releasing link 26 and permitting this link to move upwardly under the action of spring 83 and effecting the disengagement of the roller clutch, as shown in Fig. 4. The drive for propeller wheel 7 is now broken so that this wheel no longer turns and hence the gripping, peripheral surface portion 9 of this wheel is not worn away by rubbing over a stalled coin held stationary by the locked star wheel 8.

Figs. 10 and 11 illustrate the action of plate member 55 after the lock tongue 71 has snapped into slot 57. Fig. 10 shows the relative positions of plate member 55 and gear 51 just as tongue 71 moves into slot 57. It will be noted that in this figure the right hand end of slot 69 is held against pin 60 by the action of torsion spring 76. The frictional drive of the coin propeller wheel on coin 95, however, tends to continue the turning of star wheel 8 in a clockwise direction causing gear 51 to be driven in a counterclockwise direction, as shown by the arrow, and against the tension of spring 76, so that with the plate member 55 held stationary by lock tongue 71, the gear 51 moves under plate member 55 until pin 60 strikes the left hand end of slot 69 as shown in Fig. 11, whereupon the gear 51 is locked against further movement by the locked plate member 55. The star wheel 8 is also locked against further turning and the coin 95 passes on into the chute 94 while at the same time the drive for the coin propeller wheel ceases.

If it is assumed that it is now desired to count and deliver 50 coins, the thumb lever 85 is depressed momentarily causing lift rod 88 to raise the indexing head 67 so that lock tongue 71 moves out of slot 57. As soon as tongue 71

disengages slot 51 the tensioned torsion spring 76 will rotate the plate 55 in a counter-clockwise direction somewhat as viewed in Fig. 11 so that the right hand end of slot 69 engages pin 60 as shown in Fig. 6. Thus, when thumb lever 85 is released, the lock tongue 71 engages the upper surface of plate or member 55 and not the slot 57, the slight counter-clockwise movement of member 55 serving to effect such desired engagement. As the thumb lever 85 was depressed to raise the indexing head, the lever 79 was actuated to depress link 26, effecting the engagement of the roller clutch and completing the drive for the coin propeller wheel 7. This wheel 7 now commences to revolve, thereby passing coins through the machine and rotating star wheel 8. The rotation of this star wheel causes gear 51 to rotate plate member 55 while lock tongue 71 rests upon the upper surface of this plate member so as to ride thereover. After the plate member 55 has made almost a complete revolution, the slot 57 passes under the lock tongue 71, whereupon this tongue snaps down into the slot 57, as illustrated in Fig. 10, stopping the rotation of the plate member and subsequently stopping the rotation of the gear 51 by the jamming of pin 60 against the left hand end of slot 69 as shown in Fig. 11. The fiftieth coin 95 passes through the machine into chute 94 just as gear 51 and the star wheel 8 stop moving. The engagement of lock tongue 71 in slot 57 also effected the disengagement of the roller clutch so that the propeller wheel 7 no longer revolves. If it is desired to count and deliver another 50 coins, the thumb lever 85 is again momentarily depressed, effecting a repetition of the previous cycle. If it is desired to count and deliver any other of the numbers of coins marked on the indexing head it is merely necessary to move knob 72 so that the pointer 74 lies opposite the desired marking. When 25 coins are being counted, the lock tongue will end the count by entering either slots 57 or 57' depending on which of these slots first arrives under the lock tongue, when 20 coins are being counted the lock tongue will end the count by entering either slot 58 or 58' of plate 56, and when 40 coins are being counted the lock tongue will end the count by entering slot 58 of plate 56.

Thus, it will be noted that any of the desired numbers of coins indicated on indexing head 67 may be readily counted and delivered by the machine of this invention. It will be obvious that other numbers of coins may be counted, if desired, by merely varying the number of teeth on gears 51 and 53. Only when the machine is actually counting coins does the propeller wheel 7 revolve and hence this wheel has a long life in use. Ready access may be had to this propeller wheel at any time by merely removing the hinged cover 34 of bearing housing 33, whereupon the propeller wheel may be turned up into the position shown in Fig. 7 as for replacement of the fibrous portion 9 or for repair.

Owing to the use of the roller clutch disclosed, the drive of the coin propeller wheel is positively stopped when link 26 engages a projection 25 of the clutch, there being no drag of this clutch and hence no added wear of the propeller wheel over that necessarily resulting from moving coins during counting operations. Although a roller clutch has been shown and described as driving the coin propeller wheel, it will be apparent that any suitable form of clutch may be used for this purpose.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. In a coin counting machine, in combination, a coin propeller wheel, transmission means for driving said coin propeller wheel, a clutch included in said transmission means, a coin actuated mechanism having a star wheel driven by coins propelled by said coin propeller wheel, said coin actuated mechanism comprising, a rotatable plate member having a recess therein, means connecting said plate member to said star wheel whereby the latter serves to rotate said plate member, an adjustable stop member, lever means extending between said stop member and said clutch, said stop member being arranged to ride on said plate member as said coin propeller wheel propels coins through said machine, said stop member acting to engage in said plate member recess to cause the stopping of said star wheel, after a predetermined number of coins have been delivered by said machine, while said stop member simultaneously operates said lever means to effect the disengagement of said clutch.

2. In a coin counting machine, in combination, a coin propeller wheel, transmission means for driving said coin propeller wheel, a clutch included in said transmission means, a coin actuated mechanism having a star wheel driven by coins propelled by said coin propeller wheel, said coin actuated mechanism comprising a rotatable plate member having recesses therein, gearing connecting said star wheel to said plate member whereby the latter is driven from said star wheel, an indexing head positioned adjacent said plate member, lever means operatively connecting said indexing head to said clutch, an adjustable lock tongue carried by said indexing head, spring means cooperating with said indexing head for urging said lock tongue against said plate member, whereby said lock tongue rides on said plate member as said coin propeller wheel propels coins through said machine, said lock tongue acting under the influence of said spring means to engage in one of said plate member recesses when the latter moves into coincidence with said lock tongue, thereby causing the stoppage of said star wheel after a predetermined number of coins have been delivered by said machine, said indexing head operating, while said lock tongue is moving into said plate member recess, to actuate said lever means and effect the disconnection of said clutch and the stoppage of said propeller wheel.

3. In a coin counting machine, in combination, a coin propeller wheel, transmission means for driving said coin propeller wheel, a clutch included in said transmission means, a coin actuated mechanism having a star wheel driven by coins propelled by said coin propeller wheel, said coin actuated mechanism comprising a rotatable plate member having circumferentially spaced recesses therein, gearing connecting said star wheel to said plate member whereby the latter is driven from said star wheel, an indexing head positioned adjacent said plate member, lever means operatively connecting said indexing head to said clutch, a lock tongue carried by said indexing head, said lock tongue being adjustable

over the surface of said plate member, spring means cooperating with said indexing head for urging said lock tongue against said plate member, whereby said lock tongue rides on said plate member as said coin propeller wheel propels coins through said machine, said lock tongue acting under the influence of said spring means to selectively engage in one of said plate member recesses when the latter moves into coincidence with said lock tongue, thereby causing the stoppage of said star wheel after a predetermined number of coins have been delivered by said machine, said indexing head operating, while said lock tongue is moving into said plate member recess, to actuate said lever means and effect the disconnection of said clutch and the stoppage of said propeller wheel.

4. In a coin counting machine, in combination, a coin propeller wheel, transmission means for driving said coin propeller wheel, a clutch included in said transmission means, a coin actuated mechanism having a star wheel driven by coins propelled by said coin propeller wheel, said coin actuated mechanism comprising a rotatable plate member having recesses therein, gearing connecting said star wheel to said plate member whereby the latter is driven from said star wheel, an indexing head positioned adjacent said plate member, lever means operatively connecting said indexing head to said clutch, an adjustable lock tongue carried by said indexing head, spring means cooperating with said indexing head for urging said lock tongue against said plate member, whereby said lock tongue rides on said plate member as said coin propeller wheel propels coins through said machine, said lock tongue acting under the influence of said spring means to engage in one of said plate member recesses when the latter moves into coincidence with said lock tongue thereby causing the stoppage of said star wheel after a predetermined number of coins have been delivered by said machine, said indexing head operating, while said lock tongue is moving into said plate member recess, to actuate said lever means and effect the disconnection of said clutch and the stoppage of said propeller wheel, and lever mechanism, said lever mechanism being manually operable to engage said indexing head to move said lock tongue out of said plate member recess, while at the same time causing said indexing head to actuate said lever means and effect the reengagement of said clutch.

5. In a coin counting machine, in combination, a coin propeller wheel, transmission means for driving said coin propeller wheel, a clutch included in said transmission means, a coin actuated mechanism having a star wheel driven by coins propelled by said coin propeller wheel, said coin actuated mechanism comprising rotatable plate members arranged side by side, said plate members having circumferentially spaced recesses therein, gearing connecting said star wheel to said plate members whereby the latter are driven from said star wheel, an indexing head positioned adjacent said plate members and movable toward and away from the latter, lever means operatively connecting said indexing head to said clutch, a lock tongue carried by said indexing head, said lock tongue being adjustable along said indexing head whereby said lock tongue may be positioned in the path of movement of a selected one of said recesses, spring means cooperable with said indexing head for urging said lock tongue against the plate member having the selected recess, whereby said lock tongue rides on said plate mem-

ber as said coin propeller wheel propels coins, said lock tongue operating to snap into said selected recess when the latter arrives opposite said lock tongue, thereby causing the stoppage of said star wheel after a predetermined number of coins have been delivered by said machine, said indexing head operating, while said lock tongue is moving into said plate member recess, to actuate said lever means and effect the disconnection of said clutch and the stoppage of said propeller wheel.

6. In a coin counting machine, in combination, a coin propeller wheel, a coin actuated mechanism having a star wheel driven by coins propelled by said coin propeller wheel, said coin actuated mechanism comprising, rotatable plate members arranged side by side, said plate members having circumferentially spaced recesses therein, gearing connecting said star wheel to said plate members whereby the latter are driven from said star wheel, each of said plate members having a lost motion connection with said gearing, spring members interposed between said gearing and said plate members for moving said plate members respectively to one limit of their respective lost motion connections, an indexing head positioned adjacent said plate members and movable toward and away from the latter, a lock tongue carried by said indexing head, said lock tongue being adjustable along said indexing head whereby said lock tongue may be positioned in the path of movement of a selected one of said recesses, spring means cooperable with said indexing head for urging said lock tongue against the plate member having the selected recess, whereby said lock tongue rides on said plate member as said coin propeller wheel propels coins, said lock tongue operating to snap into said selected recess when the latter arrives opposite said lock tongue and, after causing said plate member to move against the tension of said spring member to the other limit of its lost motion connection with said gearing, said lock tongue effects the stoppage of said star wheel after a predetermined number of coins have been delivered by said machine, and lever mechanism, said lever mechanism being manually operable to engage said indexing head to move said lock tongue out of said plate member recess, whereupon the spring member connected to said plate member operates to again move said plate member to engage said one limit of its lost motion connection with said gearing.

7. In a coin counting machine, in combination, a rotatable coin propeller wheel, a continuously rotating feed table, said feed table being operable to drive coins to said propeller wheel, transmission means having a clutch included therein and arranged for driving said coin propeller wheel, coin actuated mechanism having a star wheel driven by coins propelled by said coin propeller wheel, lever means connecting said coin actuated mechanism to said clutch, said coin actuated mechanism including an indexing head operable, after a predetermined number of coins have been counted, to actuate said lever means and cause the disconnection of said clutch, thereby effecting the stopping of said coin propeller wheel so that the same does not rub against stalled coins held by said star wheel.

8. In a coin counting machine, in combination, a bed plate having an opening therein, a continuously rotating feed table positioned within the opening of said bed plate, a drive shaft for driving said feed table, a spring pressed bearing housing mounted on said bed plate and having a removable cover, shafting journaled in said bearing

housing, a coin propeller wheel fixed on said shafting at one side of said bearing housing, said rotatable feed table operating to drive coins to said coin propeller wheel, a universal joint included in said shafting at the other side of said bearing housing, said spring pressed bearing housing cooperating with said universal joint to press said coin propeller wheel with a predetermined pressure against coins passing thereunder, transmission means for connecting said shafting to said drive shaft, a clutch included in said trans-

mission means, coin counting mechanism having a star wheel driven by coins propelled by said coin propeller wheel, lever means connecting said coin counting mechanism to said clutch, said coin counting mechanism including means operable, after a predetermined number of coins have been counted thereby, to actuate said lever means and to effect the disconnection of said clutch, thereby causing the stopping of said coin propeller wheel.

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