

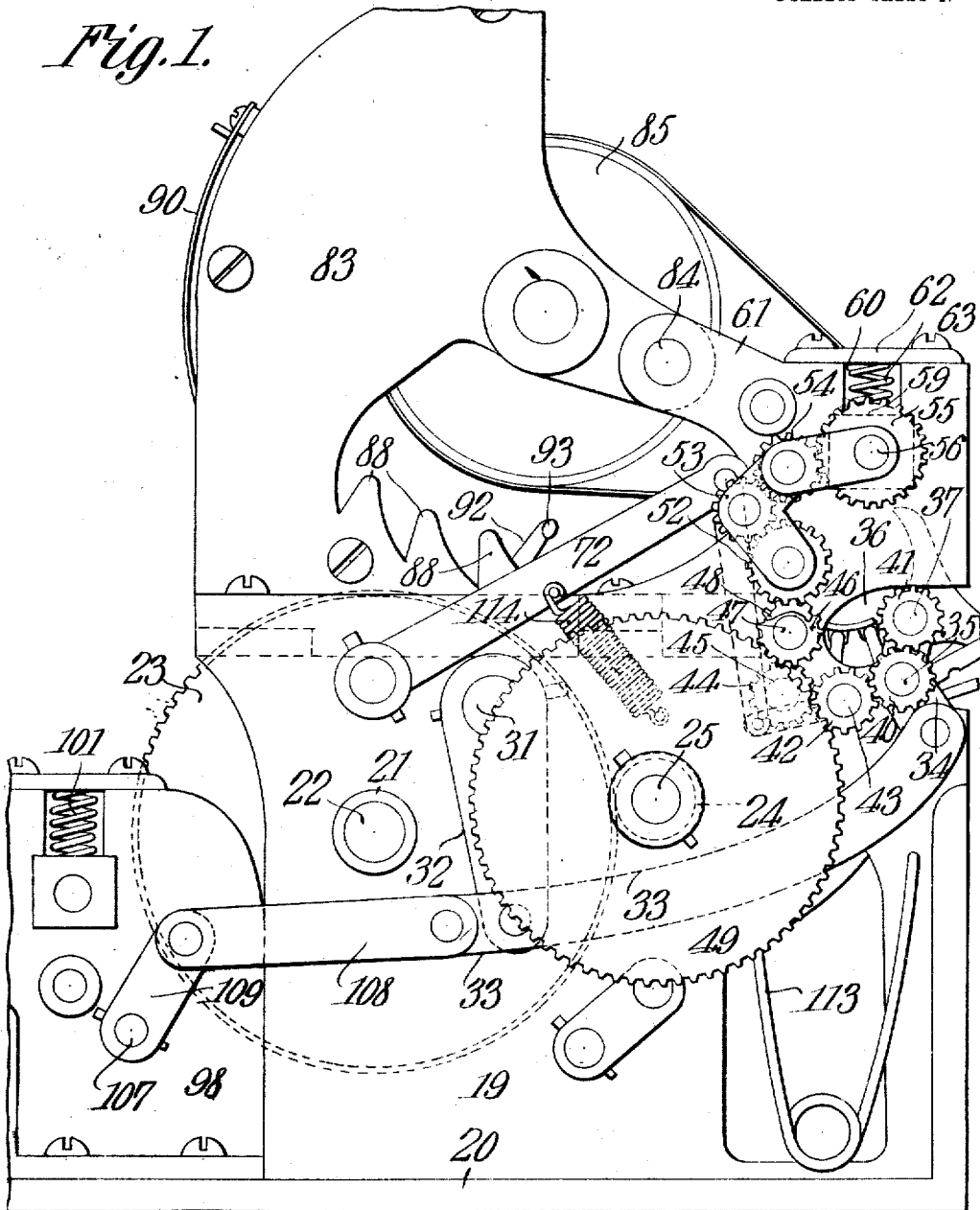
E. W. JENNINGS.
COIN WRAPPER.
APPLICATION FILED NOV. 9, 1907.

930,291.

Patented Aug. 3, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



Inventor

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Witnesses

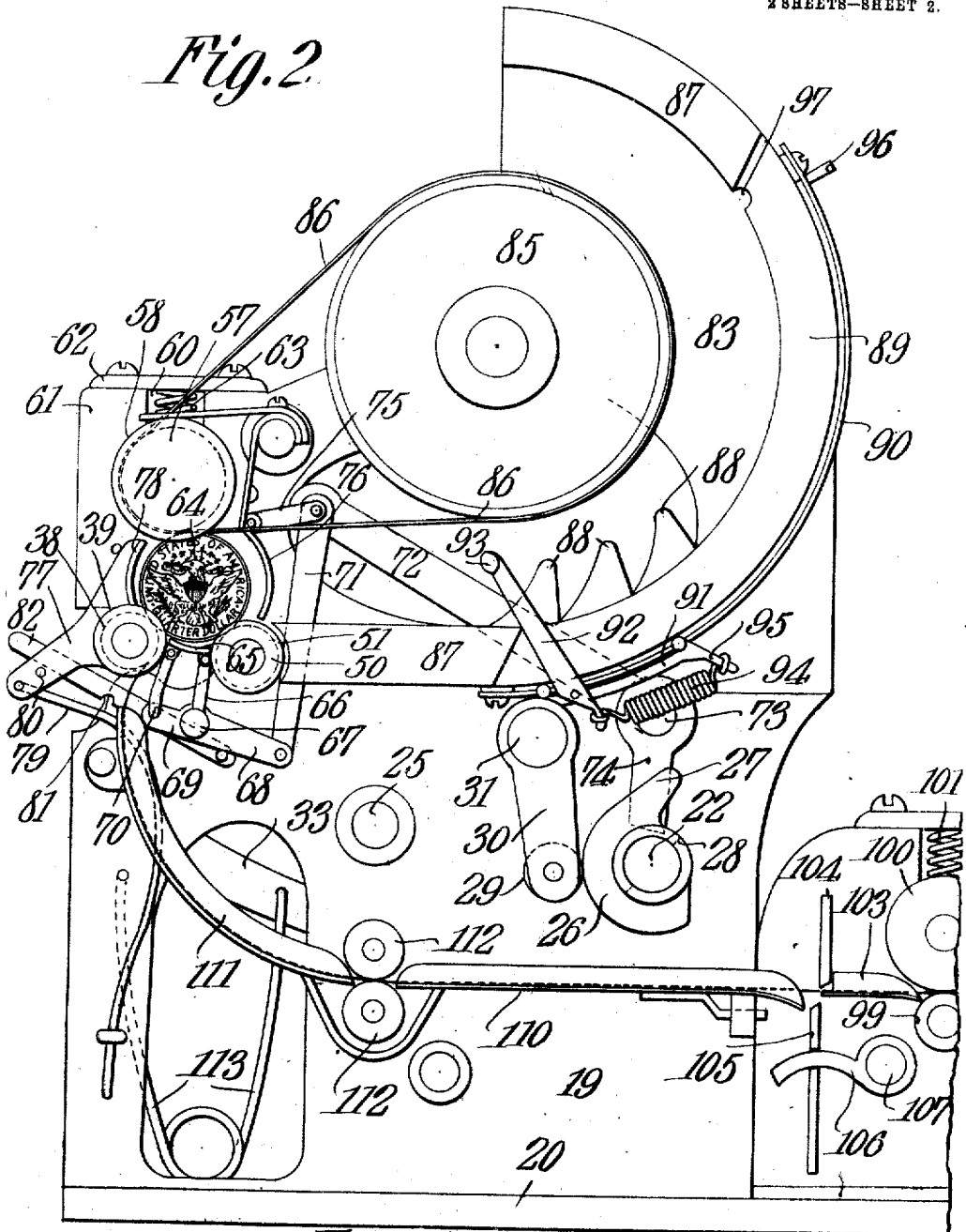
E. J. Stewart
H. J. Chapman

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 2 SHEETS—SHEET 2.

Fig. 2



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UNITED STATES PATENT OFFICE.

ERSKINE W. JENNINGS, OF NASHVILLE, TENNESSEE.

COIN-WRAPPER.

No. 930,291.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed November 9, 1907. Serial No. 401,480.

To all whom it may concern:

Be it known that I, ERSKINE W. JENNINGS, a citizen of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, have invented new and useful Improvements in Coin-Wrappers, of which the following is a specification.

This invention has reference to improvements in coin wrappers and its object is to automatically wrap like coins in stacks containing an aggregate predetermined value in coin.

The invention consists of a wrapping mechanism by means of which stacked coins are wrapped in paper and the ends folded over to retain the coins in place.

The coins are first stacked in any appropriate manner and each stack so formed is then placed in a wrapping machine by means of which a band of paper is wrapped around the stack of coins and then the ends of the wrapped paper are folded down upon the ends of the stack in such manner as to securely hold the wrapping against displacement with relation to the coins under ordinary handling.

The invention will be best understood by consideration of the following detailed description, taken in connection with the accompanying drawings forming part of this specification, in which drawing,

Figure 1 is a side view of the wrapping machine. Fig. 2 is also a side view of the wrapping machine, but from the opposite side to that shown in Fig. 1.

Referring to the drawings there is shown a supporting web 19 formed with a base flange 20 upon which it rests, and with other strengthening flanges or ribs where needed. Extending through a suitable boss 21 formed in the web 19 is a shaft 22, which may be considered as the drive shaft for the folding mechanism and receives power from any suitable source by means, not shown. This drive shaft carries a gear wheel 23 meshing with a pinion 24 upon another shaft 25 also mounted in suitable journal bearings in the web 19. The shaft 22 carries a cam 26 ending in a nose 27 and also another cam 28. The cam 26 engages a roller 29 on the free end of a rock arm 30 fast on rock shaft 31 journaled in the web 19 and extending through the same. The other end of the shaft 31 carries another rock arm 32 the outer end of which is connected to a link 33,

which latter at one end is connected to a short angle lever 34 pivoted upon a pin 35 fast in the web 19 near one side thereof where it is recessed or cut out, as shown at 36. That end of the lever 34 remote from the end connected to the link 33 carries the arbor 37 of a roller 38, which roller has flanged ends 39 for a purpose which will presently appear.

The pin 35 carries a pinion 40 meshing with another pinion 41 fast on the arbor 37. The pinion 40 is in mesh with another pinion 42 on the stud 43 projecting from the web 19 and the pinion 42 is driven by another pinion 44 also fast on the stud 45 on the web 19, while the pinion 44 receives motion from still another pinion 46 on the stud 47 rotatably mounted in the web 19 and carrying still another pinion 48 meshing with the gear wheel 49 fast on the shaft 22, which latter shaft, instead of the shaft 22, may, if desired, constitute the drive shaft. The stud 47 constitutes the arbor of a roller 50 similar to the roller 38 and having end flanges 51. The pinion 46 transmits motion to another pinion 52, and this pinion through other pinions 53 and 54 transmits motion to still another pinion 55 on an arbor 56 carrying a roller 57 having end flanges 58. The roller 57 is larger than the rollers 38 and 50, but, otherwise, is similar to them, and the arbor 56 is mounted in a sliding box 59 in a recess or guideway 60 formed in a bracket 61 erected on the top of the web 19. The guideway is closed by a cap plate 62, between which and the box 59 is located a spring 63 tending to urge the roller 57 toward the rollers 38 and 50. The three rollers are arranged in substantially triangular relation, and they all rotate in the same direction, the gear train being properly proportioned for this purpose and to give the same peripheral speed to the several rollers. The rollers 38, 50 and 57 are so grouped as to receive between them a stack of coin, such as has already been described, for the purpose of wrapping such stack in a strip of paper. Now, when the stack of coin is properly located between the rollers and the latter are brought into operative relation to the assembled coin, as indicated in Fig. 4 where the stack is represented at 64, the coins cannot escape from the rollers, since they are grasped at points separated by distances less than the diameter of the coins.

Located between the rollers 38 and 50 is a guard plate 65, which may be brought up close to the edge of the coins between said rollers. This guard plate 65 is pivoted at one end to the upper end of a post 66 projecting from the stud 67 fast on the web 19. This stud constitutes a pivot support for a short lever 68, the shorter end 69 of which is fast by a link 70 to the end of the guard plate 65 remote from the end pivoted to the post 66. The longer end of the lever 68 is connected by a link 71 to one end of an arm 72, the other end of which is fast on the rock shaft 73 suitably journaled in the web 19 and carrying another rock arm 74 the end of which is in the path of the cam 28. The free end of the arm 72 is connected by a link 75 to a pivoted guard plate 76 arranged to be moved into and out of operative relation to the stack of coins. Fulcrumed upon the roller 38 is a lever 77 carrying still another guard plate 78 between the roller 38 and the roller 57. The lever 77 has the end remote from the guard plate 78 under the control of a spring 79 and this end of the lever also carries a pin 80 arranged under certain conditions to enter a notch 81 in the latch bar 82.

Journalled in the plate 83 rising from the top of the web 19 and also connected as shown at 84 to the bracket 61 is a roller 85 around which there passes a belt 86 also extending around the roller 57. Extending about parallel with the belt 86 around the roller 50 and then curved to partly surround the roller 85, but concentric therewith, is a track 87. On each side of this track there are formed teeth 88 in a cut out portion of the respective plate 83, it being understood that there are two plates 83, although only one is shown, the other being removed from clearness of illustration. Through a portion of the length of the track 87 there is a longitudinal slot 89, and exterior to this slot there is a track 90 on which latter there travels a carriage 91 supporting a lever arm 92 extending through the slot 89 and terminating in a horizontally projecting arm 93. The other end of this lever arm 92 beyond its pivotal connection with the carriage 91 is connected by a spring 94 to a finger 95 on that end of the carriage remote from the end carrying the lever 92. That end of the track 90 away from the rollers carrying the stack of coins is provided with a stop projection 96 and the track at the side of the slot 89 has a notch or recess 97.

At one side of the base of the web 19 there is erected a support 98 carrying rollers 99 and 100, the latter being held to the roller 99 by a spring 101. These rollers are driven in any suitable manner, not shown, for feeding a paper web 102 along a guide strip 103 and under a stationary knife 104, while a movable knife 105 is arranged to cooperate

with the stationary knife 104 to cut the paper web when actuated by a rock arm 106 fast on the rock shaft 107 connected by a link 108 through the intermediary of another rock arm 109 to the link 33, before referred to. The paper web after being cut is fed along guides 110, 111 by feed rolls 112 suitably actuated and ultimately passes to the feed roll 38 to be guided and fed around the stack of coin. The link 33 is under the control of the spring 113 and the rock arm 72 is under the control of the spring 114.

Now, let it be assumed that a stack of coin is suitably introduced between the rollers and that a strip of paper is engaging the stack of coin. Let it further be assumed that the roller 85 is rotating in a direction to cause the lower run of the belt 86 to travel from the roller 57 toward the roller 85. This will mean that the roller 57 is rotating counter-clockwise, as viewed in Fig. 4, while the rollers 38 and 50 are rotating counter-clockwise, also, but their points of contact with the coin move oppositely to that of roller 57. All the rollers are positively driven by the interconnecting gearing. The guard plates 65, 76 and 78 coact with the rollers to direct the paper web around the stack of coins, while the flanges on the rollers crimp the paper web, which is wider than the stack of coins, down around the sides of the end coins, so that in the subsequent operation to be described, the coins will be held together in the stacked position. By the time this operation is completed, the nose 27 of the cam 26 engages the roller 29 and so through the rock arm 30 moves the shaft 31 on its axis, and through the link 33 moves the angle lever 34 about its pivot, forcing the roller 38 toward the roller 50 until the roller 38 is seated in the notch 36. This causes the lever 77 to also move toward the roller 50 under the action of the spring 79, since the roller 38 has been moved out of its path, and the lever 70 follows up the roller 38, since this roller forms a pivotal support for said lever. The upper end of the lever is held from reverse movement by a suitable pin on the bracket 61, and therefore the lower end of this lever is moved to a considerable distance by the spring 79 until the pin 80 engages in the notch 81 in the latch 82. In the meantime, however, the cam 28 has engaged the arm 74 and through the rock shaft 73 has caused the arm 72 to move against the action of the spring 114 in an upward direction, pulling the guard plate 78 out of the way and through the link 71 moving the lever 68 in the direction to pull the guard plate 65 downwardly out of the path of the roller 38. The said roller 38 by the movement described has lifted the wrapped stack of coins onto the track 87, and the belt 86 now causes this wrapped

stack to roll along the track 87 until it engages the arm 93 of the lever 92, the function of which arm is to prevent the stack from being unwrapped during the subsequent operation. As the wrapped stack of coins is rolled along the track 87, the ends are engaged by the fingers 88 in succession, making three folds, one for each pair of fingers, in each end of the wrapper, and the final fold being made by the engagement of the wrapper with the plate 83 beyond the fingers 88, this plate 83, one at each end of the stack, serving to crease down and compact the folds as the wrapped stack is rolled along the track 87 to the exit end thereof. The carriage 91 is carried along the track 90 by the lever 92 under the action of the wrapped stack of coins, until, ultimately, the finger 95 engages the stop 96, when the wrapped stack of coins will force the lever 92 against the action of the spring 94 until the arm 93 is seated in the notch 97 out of the path of the wrapped stack of coins. When the arm 97 is released, the spring 94 returns the lever 92 to its normal position and the carriage 91 gravitates to the other end of the track 90. The face of the roller 85 may be coated with soft rubber or other elastic medium to form a cushion which will take up any difference which may arise in the wrapping of the coin. After the wrapped stack of coins has passed onto the track 87, another stack of coins may be placed between the rollers after they have returned to their normal position by the disengagement of the cam 27 with the arm 30 and the disengagement of the cam from the arm 74, when the several parts will all return to the normal positions. The paper is fed forward and cut off by the knives 104 and 105, the parts all being timed in operation for this purpose, and the wrapping proceeds as before.

While I have described but one web 19 as supporting the whole structure, this does not, of course, preclude the use of two webs with suitable journal bearings for the several shafts.

I claim:—

1. A coin wrapping machine comprising a number of flanged rollers for directing a web of paper around a stack of coins between the rollers and at the same time crimping the paper web over the faces of the end coins, said rollers grasping and supporting the coins while being wrapped, stationary folders, means for carrying the stack so wrapped past the stationary folders in succession to fold down the ends of the paper web over the ends of the coins, and means for preventing the unwinding of the paper web while the stack is being carried past the folders.

2. A coin wrapping machine comprising a number of flanged rollers for directing a

web of paper around a stack of coins between the rollers and at the same time crimping the paper web over the faces of the end coins, stationary folders, means for rolling the stack so wrapped past the stationary folders in succession to fold down the ends of the paper web at the ends of the coins, and means for preventing the unwinding of the paper web while the stack is passing by the folders.

3. In a coin wrapping machine, a set of flanged rollers, guards normally located in the space between the rollers, means for positively rotating the rollers, means timed to move the guards from between the rollers when the coins have been wrapped, stationary folding fingers, means for rolling the wrapped coins past the stationary folding fingers, and means for preventing the unwrapping of the wrapper while being folded.

4. In a coin wrapping machine, a number of flanged rollers for directing a web of paper around a stack of coins between the rollers, a track for the wrapped coins, means for causing said wrapped coin to roll along said track, means for preventing the unwinding of the paper web from the coins while being rolled along said track, and stationary folders engaging the ends of the paper web beyond the coins in succession to fold the same against the faces of the end coins as the stack is rolled past them.

5. In a coin wrapping machine, a set of rollers for directing a web of paper around a stack of coins between the rollers, a track for the wrapped coins, guards coacting with the rollers to direct a paper web around the stack of coins, means for moving one of the rollers and one of the guards in a direction to propel the wrapped stack onto the track, means for rolling the wrapped stack along the track, and stationary folders in the path of the wrapped stack when rolled upon the track, said folders being arranged to engage the end of the paper web beyond the end coins of the stack to form successive folds of the paper web down upon the faces of the end coins.

6. In a coin wrapping machine, a set of flanged rollers spaced apart, when in operative position, a distance less than the diameter of the coins being wrapped, guards normally located in the space between the rollers, means for positively rotating the rollers, means timed to move the guards from between the rollers when the coins have been wrapped, stationary folders, timed to move one of the rollers toward the other rollers to eject the wrapped coins, and means for rolling the wrapped coins past the stationary folders.

7. In a coin wrapping machine, a set of flanged rollers in substantially triangular relation, one of said rollers having its journals elastically mounted for movement to and

from the other rollers, and means for moving another one of said rollers toward the remaining rollers to eject the wrapped coins from between the rollers in a direction lateral to the axis of said rollers.

5 8. In a coin wrapping machine, a set of rollers for directing a web of paper around a stack of coins between the rollers, a track adapted to receive the wrapped coins and leading from the rollers, stationary folding means carried by said track, and a belt passed around one of said rollers and over-riding the track in spaced operative relation thereto.

15 9. In a coin wrapping machine, a number of rollers for directing the web of paper around a stack of coins between the rollers, a track for receiving the wrapped coins in operative relation to said rollers, stationary folders carried by said track, a belt in operative spaced relation to the track for engaging and rolling the wrapped coins past the stationary folders and a traveling arm engaging the wrapped coins while on the track to prevent the unwinding of the paper web while the coins are passing the folders.

25 10. In a coin wrapping machine, a number of rollers for directing a web of paper around a stack of coins between the rollers, a track for receiving the wrapped coins in operative relation to the rollers, stationary folding fingers on said track, means for rolling the wrapped coins along the stack by the stationary folding fingers, a traveling means for preventing the unrolling of the paper web while passing the folding fingers, and means for returning the said traveling means for preventing the unwinding of the paper web to its initial position.

40 11. In a coin wrapping machine, a number of rollers for directing a web of paper around a stack of coins between the rollers, a curved track in operative relation to the rollers for receiving the coins after being wrapped, stationary folding fingers on the

track in the path of the wrapped coins, a roller concentric with the track and spaced therefrom, a belt passing around the roller and also around one of the coin wrapping rollers and extending in operative relation to the track, a carriage movable along the track, an arm carried by said carriage in the path of the wrapped coins for preventing the unwinding of the paper web while the coin stack is being moved by the folders, and means for returning the carriage to its initial position.

12. In a coin wrapping machine, a set of rollers for directing a web of paper around a stack of coins between the rollers, and constituting the support for the coins while being wrapped, and means for engaging the wrapped coins between the rollers and timed to engage and eject the said coins after being wrapped in the paper web in a direction lateral to the axes of the rollers.

13. In a coin wrapping machine, a number of flanged rollers for directing a web of paper around a stack of coins between the rollers and at the same time crimping the paper web over the faces of the end coins, said rollers coacting to grasp and support the coins while being wrapped, a track in operative relation to the rollers for receiving the coins after being wrapped, means for ejecting the coins from between the rollers and timed to act after the coins have been wrapped, stationary folding fingers along the track in the path of the wrapped coins, and means for rolling the wrapped stack of coins past the stationary folders in succession to fold down the ends of the paper web over the ends of the coins.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ERSKINE W. JENNINGS.

Witnesses:

JAMES WM. BRYAN,
RAYMOND BOATRIGHT.