

May 20, 1924.

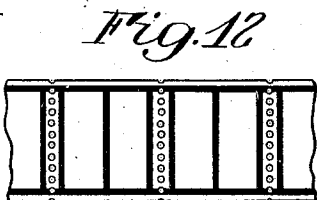
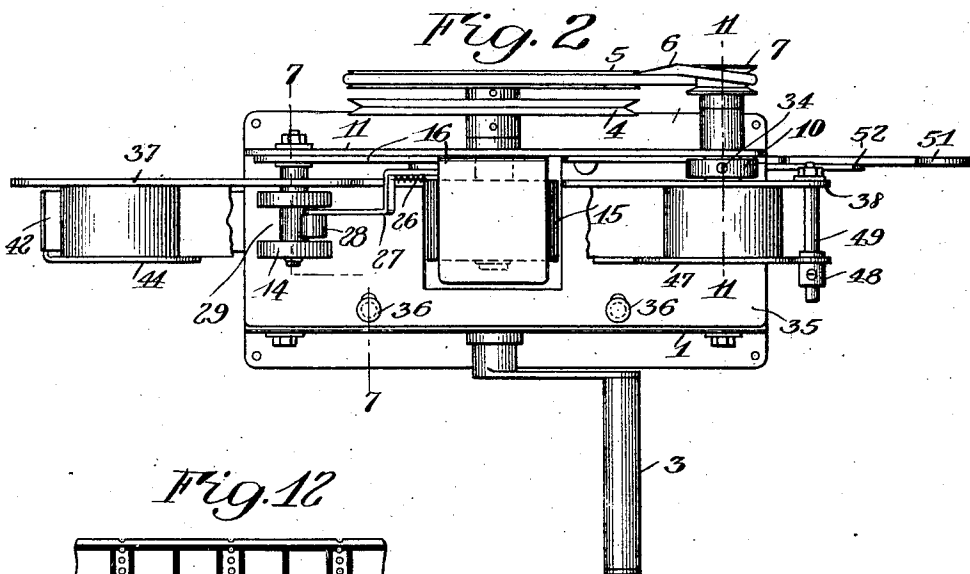
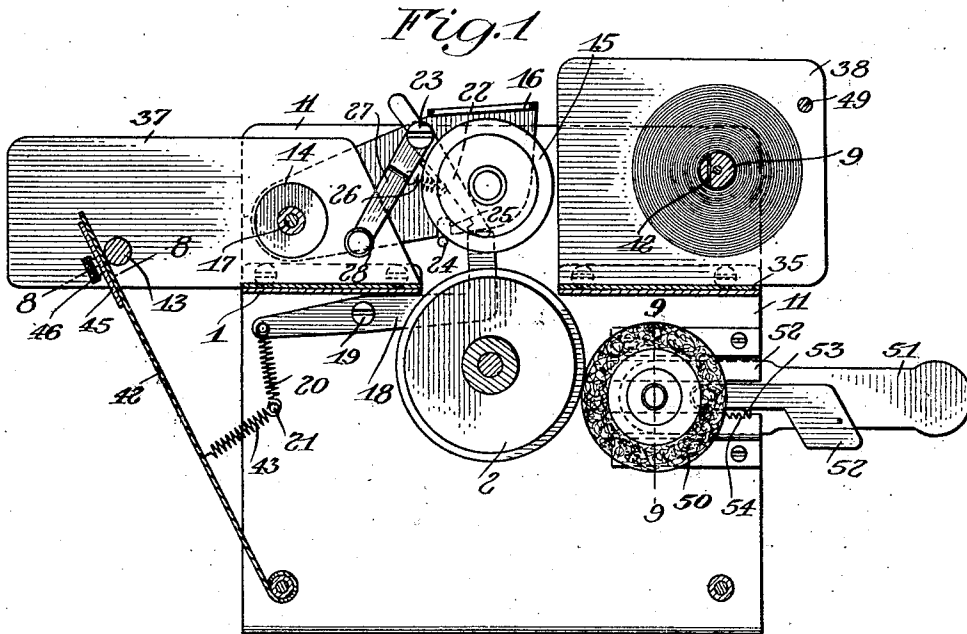
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W. J. BALKWILL

MACHINE FOR CANCELING STAMPS IN ROLLS

Filed May 5, 1922

3 Sheets-Sheet 1



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Fig. 3

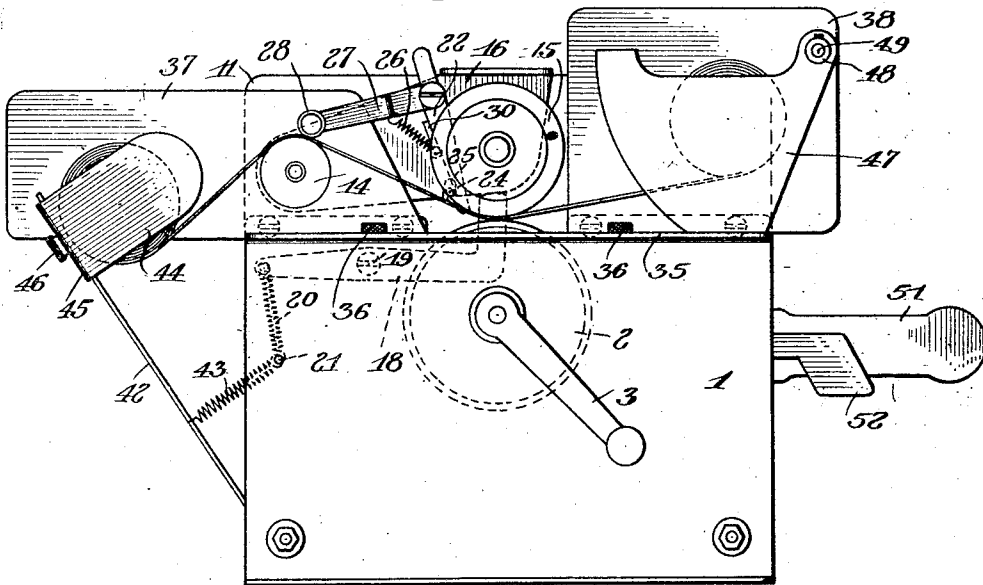
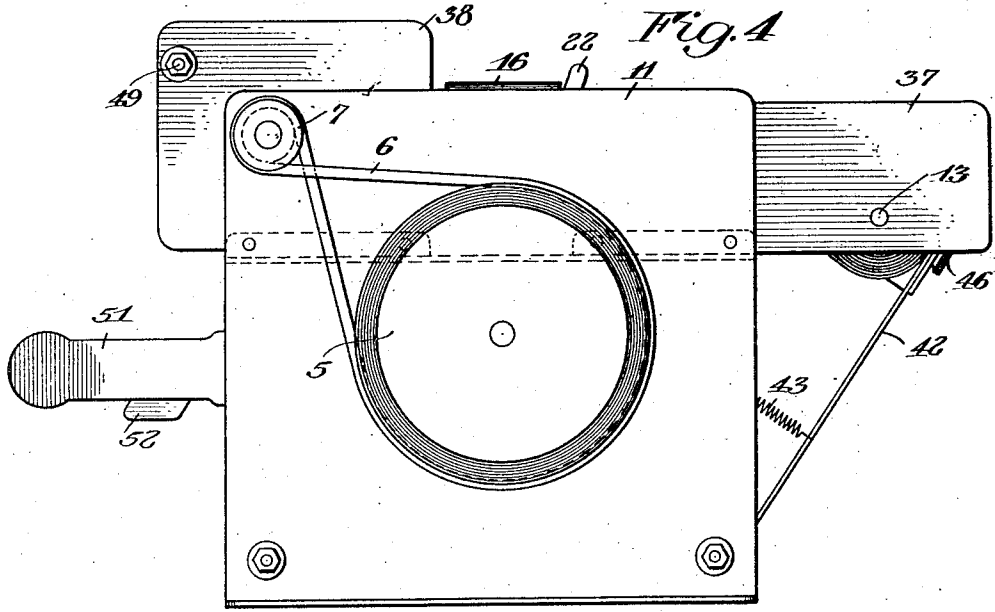


Fig. 4



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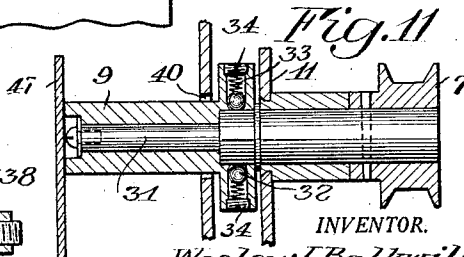
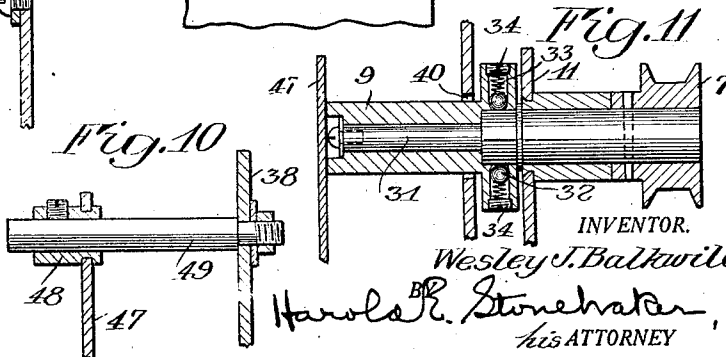
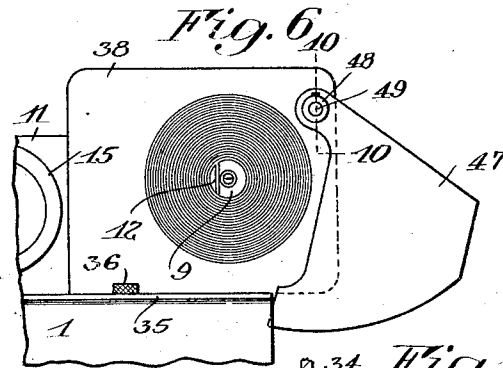
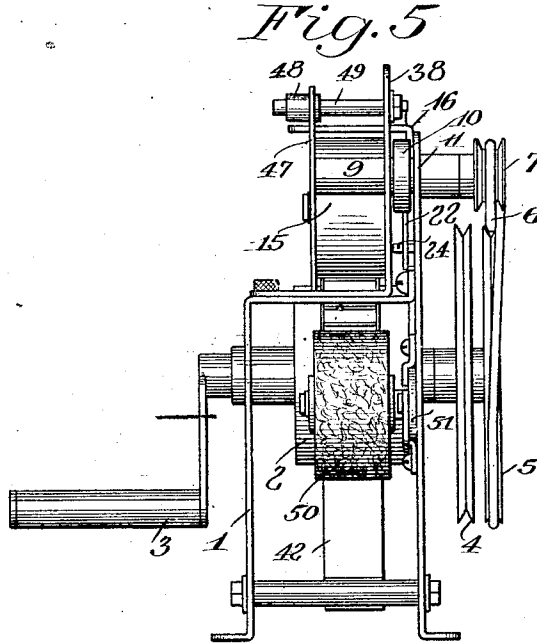
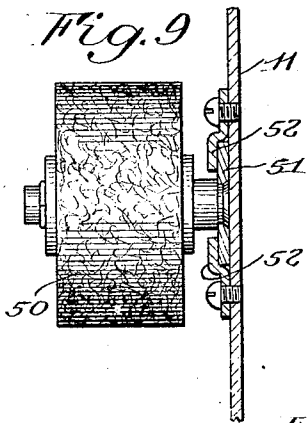
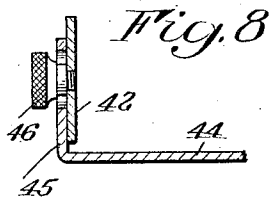
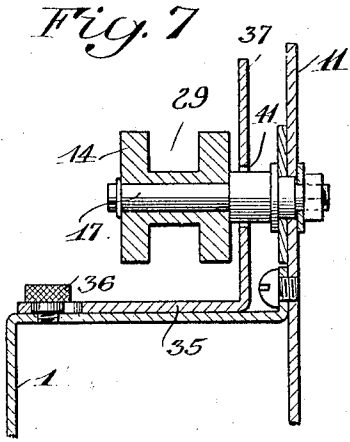
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MACHINE FOR CANCELING STAMPS IN ROLLS

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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE.

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MACHINE FOR CANCELING STAMPS IN ROLLS.

Application filed May 5, 1922. Serial No. 558,617.

To all whom it may concern:

Be it known that I, WESLEY J. BALKWILL, a citizen of the United States of America, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Machines for Canceling Stamps in Rolls, of which the following is a specification.

This invention relates to a machine for canceling stamps in rolls, such as are employed in the magazines of stamp affixing machines, and it has for one of its principal objects to provide a practicable, efficient machine which can be readily controlled and operates at a high speed.

A more particular purpose of the improvement is to afford an arrangement whereby the stamps can be cancelled without bringing the gummed or reverse surface of the stamp into contact with any ink or inked surface, this accomplishment being effected by automatic means that withdraws a pressure member from contact with the inking element before the end of the stamp strip reaches the printing element, so that the pressure member is never in contact with the inking element except when the stamp strip is located therebetween, thus protecting the pressure member and the gummed surface of the stamp strip against the inked surface.

Another object of the invention is to so construct the stamp receiving reel, on which the strip is wound after the canceling operation, as to wind the roll tightly, while at the same time making allowance for the variation in the diameter of the roll as its size increases, without affecting the proper cooperation between the printing element and the receiving reel.

A further object of the invention is to afford a simple and practicable arrangement which permits of readily adjusting the side walls of the delivery and receiving reels, to accommodate stamp strips of different widths.

The invention also comprehends certain other improved features, all of which will appear clearly from the following description when read in conjunction with the accompanying drawings, the novel features being pointed out in the claims following the specification.

In the drawings:

Figure 1 is a longitudinal vertical sec-

tional view, with parts in elevation, showing the normal position of the several parts when not in operation;

Figure 2 is a plan view;

Figure 3 is a view similar to Figure 1, illustrating the position of the parts when a stamp strip is travelling through the machine, the pressure member being locked in its lowermost position for holding the stamp strip against the printing element;

Figure 4 is a side elevation, looking in the opposite direction to Figure 3;

Figure 5 is an end view;

Figure 6 is an enlarged side view of the receiving reel, with its movable side wall thrown back out of operative position;

Figure 7 is a sectional view on line 7-7 of Figure 2;

Figure 8 is a sectional view on line 8-8 of Figure 1;

Figure 9 is a sectional view on line 9-9 of Figure 1;

Figure 10 is a sectional view on line 10-10 of Figure 6;

Figure 11 is a sectional view on line 11-11 of Figure 2, and

Figure 12 is a detail view of a portion of the stamp strip.

The invention is susceptible of various adaptations, and as one example of a practical embodiment, I have illustrated a mechanism intended for pre-canceling stamps in rolls or coils, such as are used in the magazines of stamp affixing machines, although it is to be understood that my improvements are not necessarily limited to the type of machine herein disclosed, or to stamp canceling machines.

In the drawings forming a part of this application, 1 designates a housing, constituting the base of the machine, and in the side walls of the housing 1 is mounted a spindle to which is fixed a printing element or wheel 2. The spindle on which the printing wheel 2 is mounted carries at one end a hand crank 3 and at its opposite end pulleys 4 and 5. Pulley 4 may be utilized for applying power where the machine is motor driven, while pulley 5 carries a belt 6 which cooperates with a pulley 7, the latter being fixed on a spindle 8 which carries the receiving reel or sleeve 9 on which the stamp strip is wound after it engages and is cancelled by the printing wheel 2. The spindle 8 is journaled in a bearing 10 that is carried

by the upstanding side wall 11 forming part of or mounted upon the housing 1.

The receiving reel 9 is slotted at 12 to permit insertion of the forward end of the stamp strip, and to hold it engaged with the receiving reel, while 13 designates the delivery reel on which the stamp roll or coil is initially positioned, when commencing the operation. The stamp strip feeds from the reel 13 over a roll 14, see Figure 3, thence between a pressure member or roll 15 and the printing wheel 2, and finally on to the receiving reel 9, it being understood that the stamp roll is loosely arranged on the delivery reel 13, while the printing wheel and receiving reel are positively driven through the gearing already described.

It is indispensable to a machine of this character that provision be made to effectually prevent any ink from reaching the gummed surface of the stamp, and in order to accomplish this it is essential that the pressure member 15 shall not come in contact with the inked surface of the printing wheel. This result is brought about by a locking mechanism that will now be described, and which permits the pressure roll to force the stamp strip against the printing wheel, as shown in Figure 3, while the stamp strip is feeding through the machine, and automatically withdraws the pressure roll out of contact with the printing wheel to the position shown in Figure 1, before the end of the stamp strip reaches the printing wheel.

To this end, the pressure roll 15 is journaled in a frame 16, which is pivoted on a spindle 17 carried by the stationary side wall 11, the aforementioned roll 14 being also journaled upon the spindle 17. The frame 16 is held in its uppermost position away from the printing wheel, as indicated in Figure 1, by suitable means such as a lever 18 pivoted at 19 on the housing and actuated by a spring 20 which is connected to a fixed stud 21. The frame 16 and roll 15 are held in lowered position, as indicated in Figure 3, by a latch 22 which is movable with the frame and preferably pivoted thereon at 23, said latch cooperating with a fixed abutment or pin 24, the frame being slotted at 25 to permit it to drop downwardly around the pin 24. The latch 22 is held in locking position by a spring 26 connected thereto, and having its opposite end connected to a lever 27 which is also movable with and preferably pivoted on the frame 16, and is controlled by the stamp strip. To this end, the lever 27 carries a laterally projecting anti-friction device or roller 28 adapted to overlie the stamp strip and the roll 14, as illustrated in Figure 3. The roll 14 is grooved or cut away centrally, as indicated at 29 in Figure 2, to permit the anti-friction roll 28 and lever

27 to drop downwardly, it being held in its uppermost position by the stamp strip.

In operating the machine, the stamp coil is first positioned on the delivery reel, and its forward end guided through manually and secured to the receiving reel. The frame 16 is then depressed manually and automatically locked, and the parts are ready for the canceling operation. As soon as the end of the stamp strip passes beyond the anti-friction roller 28, and before said end reaches the printing wheel, the lever 27 falls downwardly through the groove 29 in the roll 14, assuming the position illustrated in Figure 1, and during this movement of the lever 27, under the impulse of spring 26, the said lever strikes a lug or projection 30 on the latch 22, see Figure 3, throwing said latch to the position illustrated in Figure 1, and thereby releasing the frame 16, which immediately is elevated by the spring 20, so as to move the pressure roll 15 out of contact with the printing wheel 2.

Inasmuch as the printing wheel and the receiving reel spindle travel at fixed rates of speed through the gearing already described, and whereas the stamp roll on the receiving reel constantly grows larger, as the strip is wound up, and it is desirable to wind the strip as tightly as possible without tearing, I provide a frictional connection between the receiving reel or sleeve 9 and the spindle 31 on which it is mounted. To this end, I employ a plurality of friction devices, preferably steel balls 32 carried in pockets in the receiving sleeve 9 and cooperating with a surface on the spindle 31. The balls 32 are actuated against the spindle by means of springs 33, the tension of which can be adjusted by set screws 34, to vary the resistance to slippage between the receiving reel and the spindle on which it is mounted and which is positively driven.

The stamp rolls or coils are made in different widths, and it is therefore necessary to provide for corresponding adjustment of the side walls for the delivery and receiving reels. This I accomplish by providing a bottom wall 35 which is adjustable on the top of the base or housing, being held in adjusted position by set screws 36, while 37 and 38 are vertical side walls carried by the bottom wall 35 and cooperating respectively with the delivery reel 13 and receiving reel 9. The wall 38 has a suitable opening 40 to accommodate the spindle of the receiving reel and the wall 37 has an opening 41, see Figure 7, to accommodate the spindle of the roll 14, and thus by adjusting the bottom plate 35 laterally on the base or housing, both of the upstanding walls 37 and 38 are simultaneously adjusted in accordance with the width of the stamp

roll. The walls at the opposite ends of the reels are adjusted in a manner that will now be made clear.

The stamp coil is maintained on the delivery reel by a pivoted follower 42 actuated by a spring 43, see Figure 1, said follower engaging the outer periphery of the stamp coil, as indicated in Figure 3, and holding it against the delivery reel with sufficient pressure to maintain the proper tension of the strip as it is drawn through the machine by the receiving reel. The follower 42 carries an adjustable side wall 44 which has a lateral flange 45 that is adjustable laterally on the follower by the set screw 46. In this manner, the wall 44 can be positioned on the follower 42 to afford an adjustment corresponding to that of the opposite side wall 37. Cooperating with the delivery reel 9 is a movable wall 47 which is pivoted on a collar 48, see Figure 10, to permit the wall 47 to be shifted from its normal position illustrated in Figure 3, to that illustrated in Figure 6, when it is desired to initially position the strip or to remove the stamp coil. To adjust the wall 47 to accommodate a varying width of stamp coil, the collar 48 is adjustable on a spindle 49, which is fixedly attached to the vertical wall 38.

The printing wheel 2 is inked by an inking roll 50 mounted on a carrier in the form of a slide 51, which is movable endwise in a guideway formed by a side wall of the housing and the flanged plates 52 secured to the housing, as shown in Figure 9. The carrier 51 is moved inwardly until the inking roll 50 contacts with the printing wheel 2, and is held in such position by releasable locking means comprising a lever 53 carrying a pawl 54 which cooperates with a series of teeth 55 arranged on one of the flanged plates 52, as shown in Figure 9.

The invention is not limited to the precise details disclosed, and this application is intended to cover any modifications or departures coming within the intended scope of the improvements, or of the following claims.

I claim:

1. The combination with a printing element and means for feeding a strip past the same, of a pressure member movable toward the printing element to hold said strip thereagainst, a spring for actuating the pressure member away from the printing element, a fixed locking abutment, a latch movable with the pressure member, and a controlling lever also movable with the pressure member and operatively connected to said latch, said lever acting when held upwardly by the strip to hold the latch in locking position,

and when released by the strip to move the latch to unlocking position and thereby release the pressure member.

2. The combination with a printing element and means for feeding a strip past the same, of a pressure member movable toward the printing element to hold the strip thereagainst, a spring for actuating the pressure member away from the printing element, a fixed locking abutment, a latch movable with the pressure member, a controlling lever also movable with the pressure member and operatively connected to said latch, and a grooved roll over which the strip passes, said lever being held above said groove in the roll when the strip is feeding through and arranged to fall through the groove to move the latch and release the pressure member when the end of the strip has passed the roll.

3. The combination with a printing wheel and means for feeding a strip past the same, of a pressure roll, a pivoted frame in which said roll is journaled, spring actuated means engaging said frame to move it away from the printing wheel, a fixed locking abutment, a spring actuated latch pivoted on said frame for engaging the locking abutment, and means controlled by the strip for releasing the latch before the end of the strip reaches the printing roll.

4. The combination with a printing wheel and means for feeding a strip past the same, of a pressure roll, a pivoted frame in which said roll is journaled, spring actuated means engaging said frame to move it away from the printing wheel, a fixed locking abutment, a spring actuated latch pivoted on said frame for engaging the locking abutment, and a lever pivoted on said frame and acting when released to move the latch to unlocking position, the lever being held in locking position by the strip.

5. The combination with a printing wheel and means for feeding a strip past the same, of a pressure roll, a pivoted frame in which said roll is journaled, spring actuated means engaging said frame to move it away from the printing wheel, a fixed locking abutment, a spring actuated latch pivoted on said frame for engaging the locking abutment, a lever pivoted on said frame and acting when released to move the latch to unlocking position, and a grooved roll over which the strip passes, said lever being held above the groove in the roll by the strip and movable downwardly through the groove when released by the strip.

In witness whereof, I have hereunto signed my name.

WESLEY J. BALKWILL.