

July 30, 1935.

C. G. MORTIMER

2,009,702

MACHINE FOR DELIVERING TAPE

Filed Dec. 1, 1931

2 Sheets-Sheet 1

Fig. 1

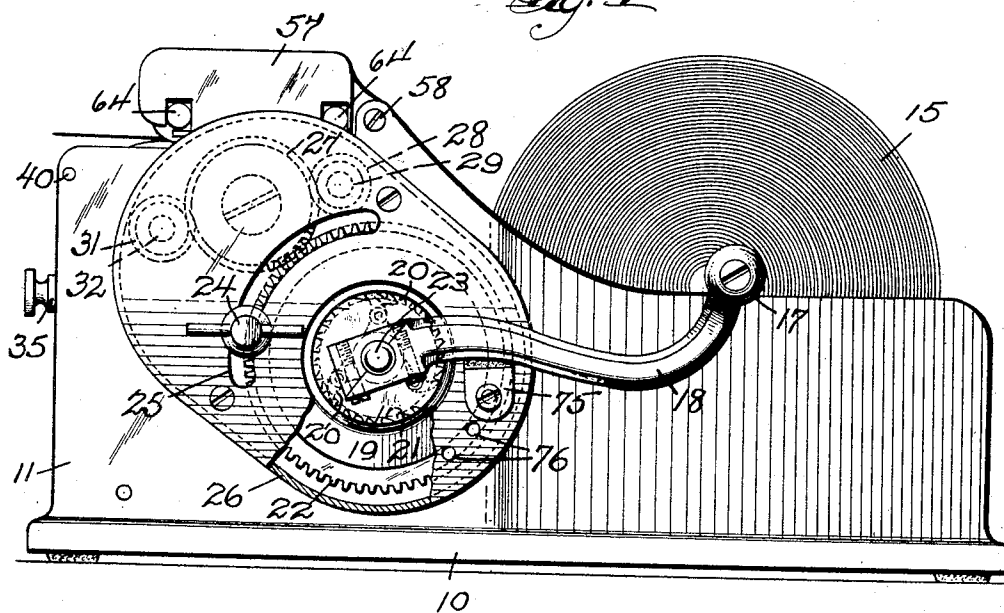
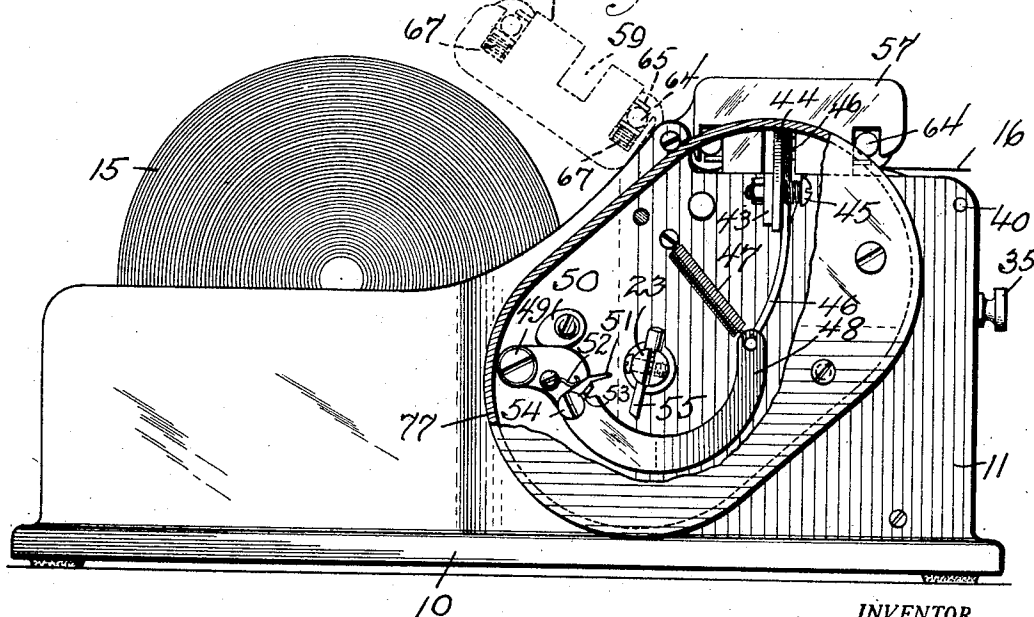


Fig. 2



INVENTOR.
Charles G. Mortimer,
BY
Wm. H. Campfield.
ATTORNEY.

July 30, 1935.

C. G. MORTIMER

2,009,702

MACHINE FOR DELIVERING TAPE

Filed Dec. 1, 1931

2 Sheets-Sheet 2

Fig. 3

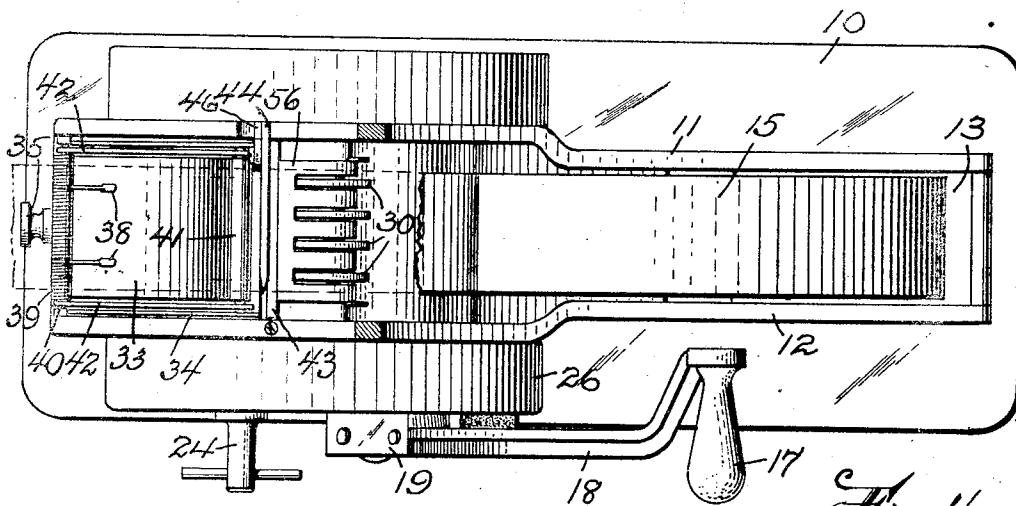
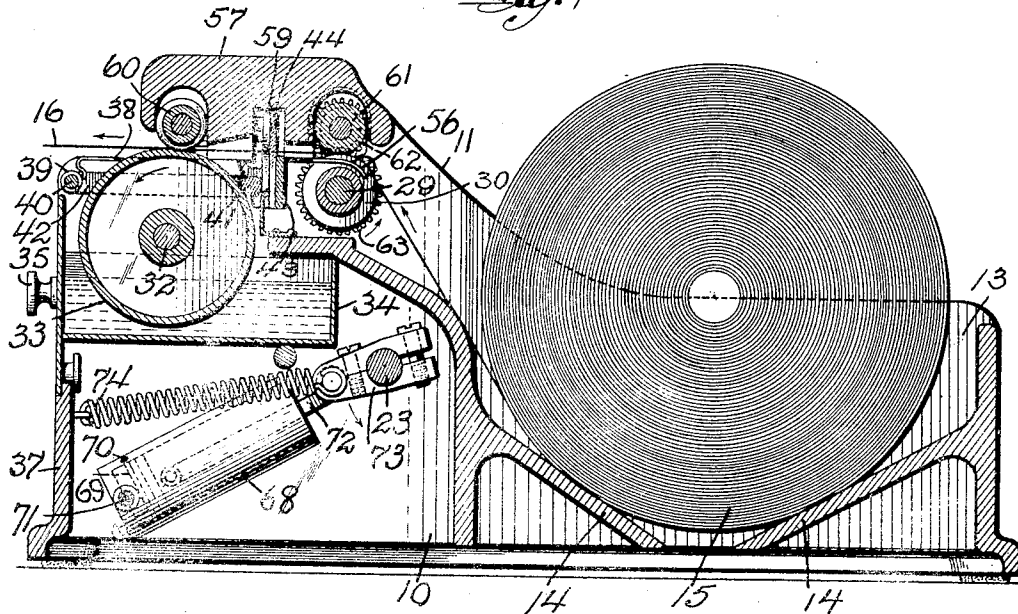


Fig. 4

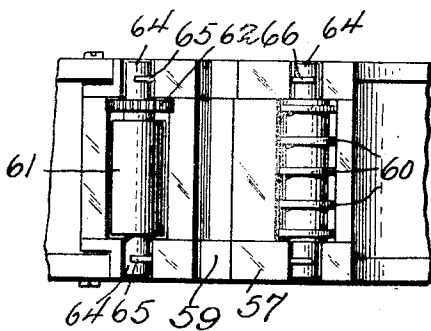


Fig. 5

INVENTOR.
Charles G. Mortimer,
BY *Wm. H. Campfield*
ATTORNEY.

UNITED STATES PATENT OFFICE

2,009,702

MACHINE FOR DELIVERING TAPE

Charles G. Mortimer, Glen Ridge, N. J.

Application December 1, 1931, Serial No. 578,301

1 Claim. (Cl. 164—42)

This invention relates to an improved machine for moistening and for delivering tape which tape is usually paper and is used for securing wrappings in place.

5 The object of the invention is to provide a machine which is positive in its operation and operates without shock or jar incidental to the operation of former types of machines and one that allows ready access to the feed and moistening rolls to enable one to easily feed tape to the machine or to correct any catching or dis-
10 arrangement of the tape.

The machine is illustrated in the accompanying drawings in which Figure 1 is a side view partly broken away, of my improved machine. Figure 2 is a side view of the side opposite to that shown in Figure 1, and with the casing partly broken away. Figure 3 is a central longitudinal section of the machine. Figure 4 is a top
15 view of the machine, with the roll holding cap removed. Figure 5 is a bottom view of the roll holding cap and a part of the machine adjacent thereto.

The machine comprises a metal base 10 including vertical side walls 11 and 12 which form a well 13 at the back of the machine. The well is provided with a bottom 14 on which the roll 15 of tape is deposited. The bottom tapers toward the center which holds the roll of tape central and allows an easy rotation of the roll when the part 16 of the tape which is being fed is pulled from the roll and passed through the moistening and cutting mechanism.

25 The feeding cutting and moistening mechanisms are all operated from the single handle 17 on a lever 18 which has a hub 19 carrying pawls 20 which engage a ratchet 21 on the gear 22. The lever 18 is fastened to the shaft 23 which extends through the machine and projects from the other side where the cutting mechanism, to be described hereinafter, is located.

30 The throw of the lever 18 can be regulated to control the maximum amount of tape fed by a stop 24 which is screw-threaded and when released can slide in the slot 25 in the side cover 26. This cover also protects the gear 22 and other associated parts that lie alongside the wall 12.

35 The moistening and feeding mechanism are operated in unison from the gear 22. I show a gear 27 in mesh with the gear 22. This second gear 27 is in mesh with a pinion 28 on a shaft 29 which carries a set of feed rolls 30. The gear 27 is also in mesh with a pinion 31 on a shaft 32
40 which shaft carries the moistening roll 33. The

shafts 29 and 32 extend from side to side of the machine and rotate in the side walls 11 and 12.

The water tank 34 is in the form of a tray with a knob 35 for its manipulation. It rests on a rod 36 and on the front wall 37 of the base. The moistening roll 33 extends into the water and as it rotates it carries the tape along and moistens the gummed face of the tape. To prevent the tape 16 from adhering to the moistening roll, I install spring fingers 38 which contact with the roll 33 near its top. These fingers are of wire and extend from the coiled springs 39 on a rod 40. These are at the point of the roll 33. At the rear is a wipe-off roller 41 which rotates idly on the roll 33 and turns back excess water. The
10 wipe-off roll is loosely rotatable in the ends of two parallel links 42 which flank the roll 33 and are pivotally secured at their front ends to the rod 43.

The cutting mechanism includes two blades to form a shear. The fixed blade 43 is secured in the machine in front of the feed rolls 30. The movable blade 44 shears across the front edge of the fixed blade and is pivoted at 45 near one end and near the pivot it is connected to a link 46
15 which pulls it down.

A spring 47 acts to raise the link and the blade. The link is pivoted at the bottom end to an arm 48 secured at its end to move on the pivot 49. Its return is limited by an adjustable nose 50 with a cam-like end against which the arm 48 rests. The arm 48 is curved to clear the end of the shaft 23. The arm 48 has a dog 51 which moves freely backward against a light spring 52 but on a forward movement it engages the shoulder 53 of the
20 arm 48 as it is pivoted on the pin or screw 54. This dog 51 is the path of a trip 55 fastened to project from the end of the shaft 23. When the handle 17 is operated to feed the tape the trip 55 lifts the dog 51 and the knife blade 44 is not operated. When the handle is released and swings back to normal the trip 55 pushes the dog 51 and in this way pushes the arms 48, the link 46 and the blade 44 down to sever the tape. After the cut is complete the tip 55 clears the
25 end of the dog and the spring 47 returns the arm 48 and its associated parts to normal position. The tape is prevented from following around with the spaced rollers 30 by the strip 56 which extends back from the fixed blade 43 and is slotted to allow the rollers 30 to project up through it.

To make the moistening roller and the feed rolls effective there are top rolls for each of them. In order to give easy access to the knife and these
30

rollers and to the tape 16, I mount the top rollers in a swinging bracket 57 pivoted at 58 to the side walls 11 and 12. The bracket is relatively heavy and by its weight it holds the tape down in feeding contact with the lower rolls and has the added advantage of allowing the tape to be fully exposed for feeding installation of a fresh roll. The bracket when thrown back remains out of the way until it is manually returned to its forward or lowered position. The bracket has a recessed part 59 for the reception of the movable blade 44 and the upper end of the link 46. The front top roller 60 is adapted to rest on the moistening roll 33 and the rear top roller 61 has a gear 62 which meshes with the gear 63 on the shaft 29 of the rolls 30.

The roller 60 runs idly but the rear top roller 61 has a gear 62 which meshes with the gear 63 on the shaft 29 of the rolls 30. The bracket 57 can swing freely and is held in place by its own weight and needs only to be lifted to make the rollers and cutting mechanism accessible. The top rollers are arranged with the ends 64 in the slots 65 in the side walls of the bracket 57. They are prevented from falling out by pins 66 and when placed in position over the rolls 33 and 30 they support the bracket by the springs 67.

To prevent a return slam by the lever 18 when the handle 17 is released, I provide a check 68, preferably an air check. The one shown comprises a cylinder with a piston 69 slidable therein. The cylinder has a restricted outlet 70 near its closed end. The closed end is pivotally secured as at 71 in order that it may rock. The piston 69 has a piston rod 72 pivotally secured to a crank 73 on the shaft 23. The crank is returned to normal position by a spring 74. The check is effective when the lever 18 has nearly resumed its normal position.

This construction is of great advantage because the release of the handle is not accompanied by a jarring of the machine. Such jarring is apt to displace the short length of tape between the feed rolls and the knife and also the roll 15 of tape especially when the roll has become small.

In my machine the return of the handle due to the pull by the spring 74 is unimpeded until the full force of the spring has been operative on the arm 48 of the cutting mechanism. This is necessary to secure a clean and positive cut through the tape. As soon as the cutting has been accomplished the check 68 becomes operative and the final movement of the handle and the clearing of the dog 51 by the trip 51 is cushioned and gentle. The return or normal position of the handle can be altered by the rest 75 which may be selectively placed in holes 76 in the casing 26. A casing 77 is placed over the parts operating on the outer face of the wall 11.

The spring 74 and the check 68 are approximately in line with the crank 73 when the handle is fully returned. This arrangement provides a maximum force by the spring when the crank is at right angle to its "at rest" position when the cutting takes place and a minimum of resistance by the check. As the crank swings to its normal position after the cutting has been accomplished the force of the spring diminishes but the check drives at its maximum resistance. In other words, when the spring is strongest the check is weakest and when the spring is weakest the check is strongest.

I claim:—

A machine for delivering tape comprising a frame, a shaft extending across the frame, a handle on the shaft for rocking the shaft, a tape feeding device, means for actuating the tape feeding device from the shaft on a forward movement of the handle, a cutting means actuated from the shaft on the return movement of the handle, a crank secured on the shaft, a spring secured at one end to the machine and at the other end to the crank and approximately in line therewith when the handle is fully returned and a check pivotally secured at one end to the machine and at the other end to the handle and approximately in line with the crank when the handle is fully returned.

CHARLES G. MORTIMER.