F. M. CASE.

TABBING MACHINE.

APPLICATION FILED MAR. 18, 1916.

1,365,089.

Patented Jan. 11, 1921.

5 SHEETS—SHEET 1.

Fig. 2.

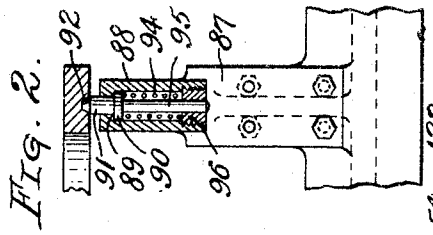


Fig. 1.

Witnesses:

A. L. Lord.

Inventor.

Francis M Case,

by Bill Brockett

Atty.

F. M. CASE.

TABBING MACHINE.

APPLICATION FILED MAR. 18, 1916.

1,365,089.

Patented Jan. 11, 1921.

5 SHEETS—SHEET 2.

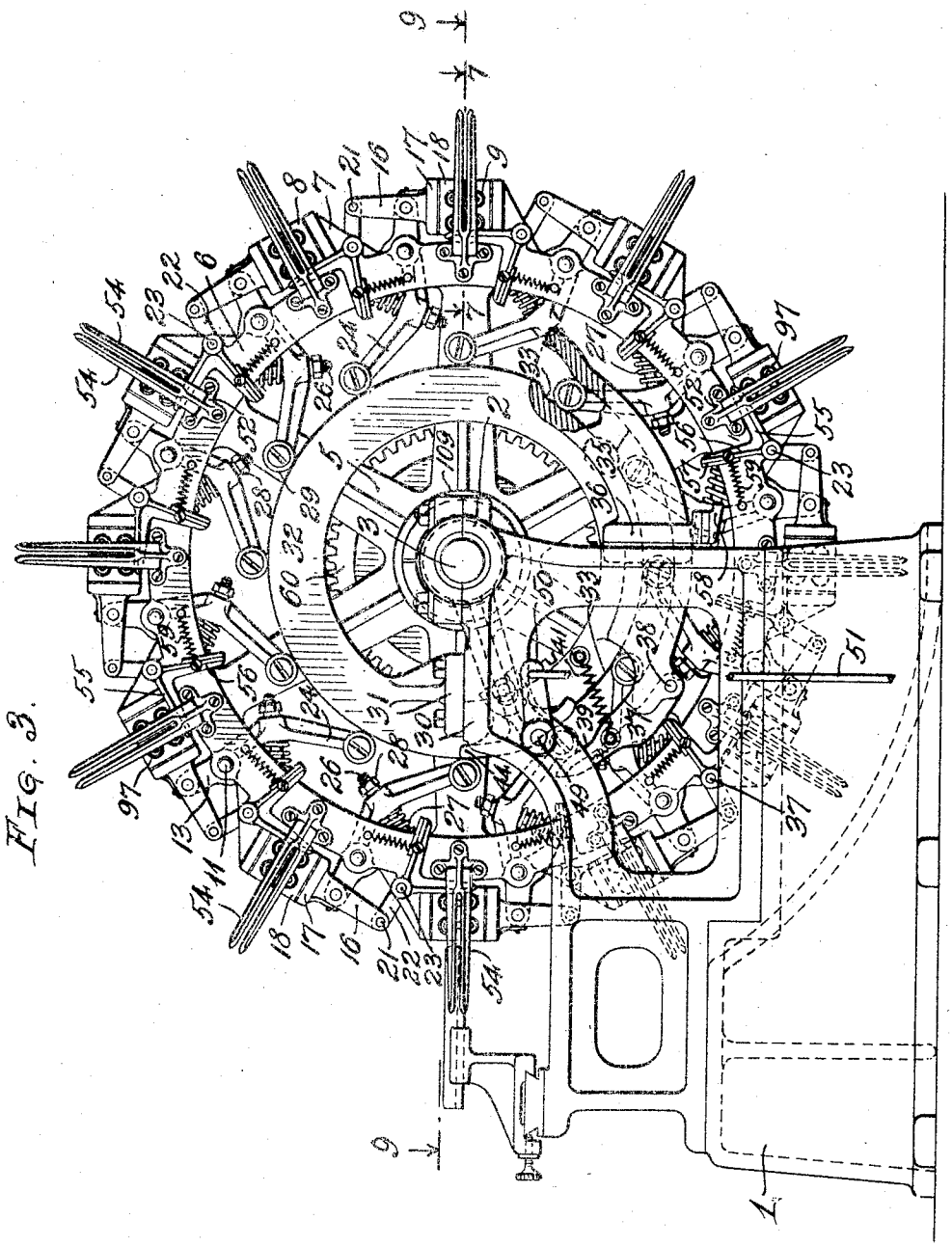


FIG. 2.

Witnesses:

A. L. Lord.

Inventor.

Francis M. Case

by B. W. Brockett

Atty.

F. M. CASE.

TABBING MACHINE.

APPLICATION FILED MAR. 18, 1916.

1,365,089.

Patented Jan. 11, 1921.

5 SHEETS—SHEET 3.

FIG. 4.

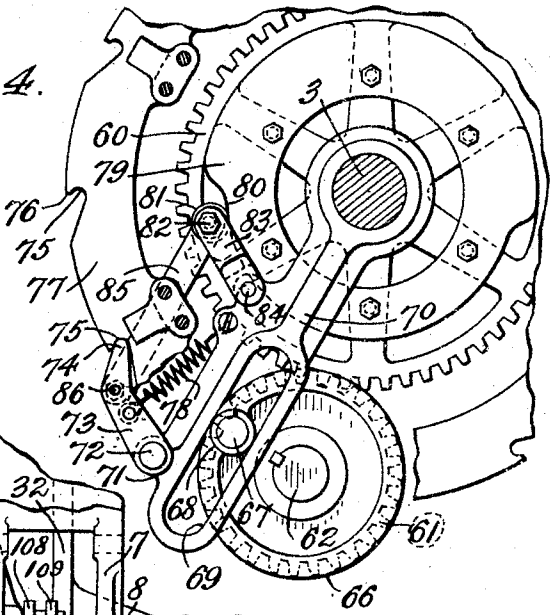
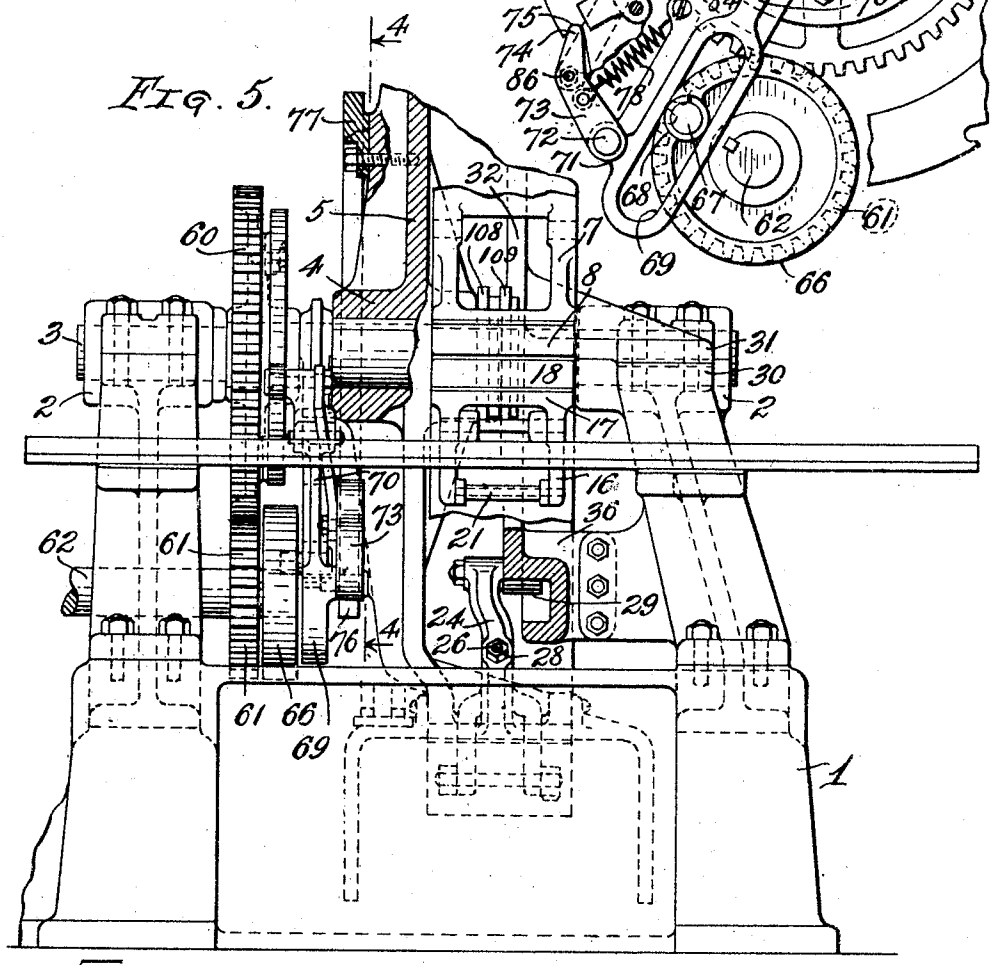


FIG. 5.



Witnesses:

A. L. Lord.

Inventor.

Francis M. Case,

by Bill Brockett

Atty.

F. M. CASE.

TABBING MACHINE.

APPLICATION FILED MAR. 18, 1916.

1,365,089.

Patented Jan. 11, 1921.

5 SHEETS—SHEET 4.

FIG. 6.

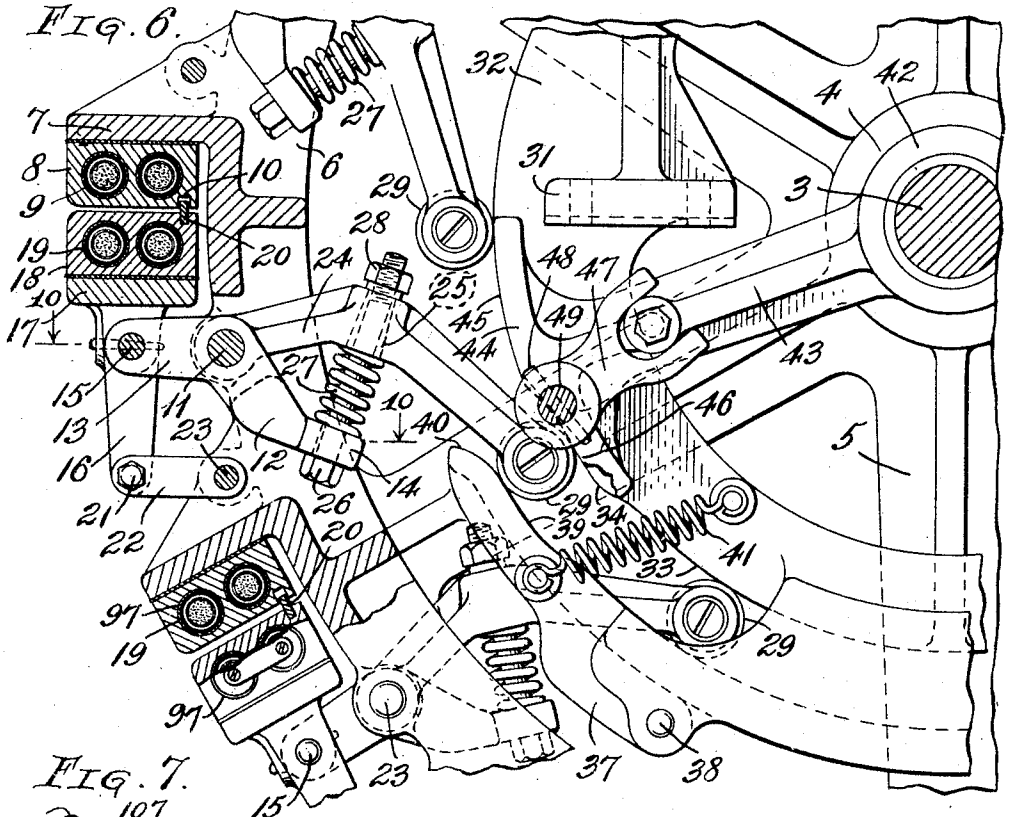


FIG. 7.

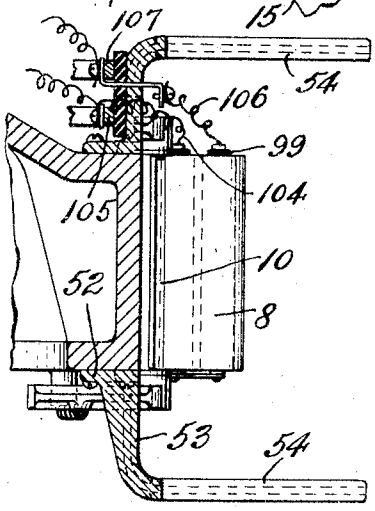
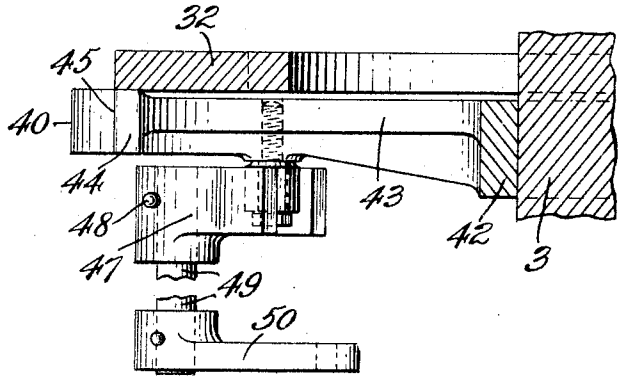


FIG. 8.



Witnesses:

A. L. Lord.

Inventor.

Francis M. Case,

by B. W. Brockett

Atty.

F. M. CASE.

TABBING MACHINE.

APPLICATION FILED MAR. 18, 1916.

1,365,089.

Patented Jan. 11, 1921.

5 SHEETS—SHEET 5.

FIG. 9.

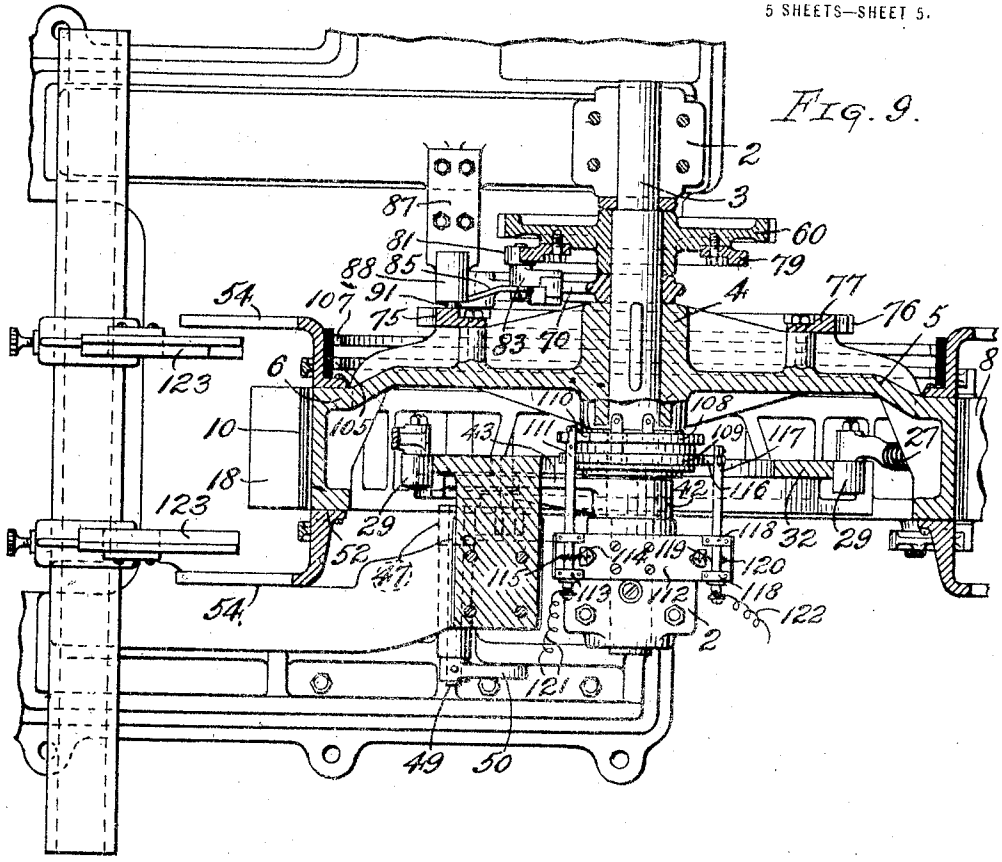


FIG. 10.

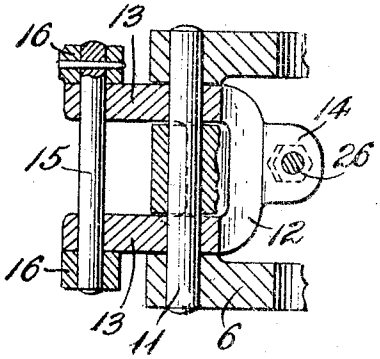
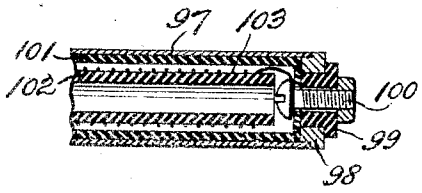


FIG. 11.



Witnesses:

A. L. Lord.

Inventor.

Francis M. Case

by B. W. Brockett

Atty.

UNITED STATES PATENT OFFICE.

FRANCIS M. CASE, OF CLEVELAND, OHIO, ASSIGNOR TO J. C. HUB, OF CLEVELAND, OHIO.

TABBING-MACHINE.

1,365,089. Specification of Letters Patent. Patented Jan. 11, 1921.

Application filed March 18, 1916. Serial No. 85,148.

To all whom it may concern:

Be it known that I, FRANCIS M. CASE, citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Tabbing-Machines, of which the following is a specification.

This invention relates to tabbing machines and particularly to that class of such devices utilized in applying celluloid tabs to cards or sheets.

More specifically the invention relates to an amalgamating machine comprising a movable conveyer, preferably of the wheel type and having upon its periphery a plurality of heated pressing devices adapted to receive a card with an applied tab and hold the same for a sufficient length of time to permit the heat to fasten the tab to the card with suitable mechanism for rotating the conveyer or wheel intermediately and for delivering cards thereto and ejecting them therefrom.

The invention may be further briefly summarized as consisting in the construction and combination of parts hereinafter set forth in the following description, drawings and claims.

Figure 1 represents a view in side elevation showing the device; Fig. 2 is a detailed view of the lock; Fig. 3 is a side elevation of the opposite side of the machine; Fig. 4 is a detailed view in side elevation showing the mechanism for rotating the wheel step by step; Fig. 5 is a view partly in elevation and partly in section looking from the front or the feeding end; Fig. 6 is an enlarged view partly in section and partly in elevation looking at a portion of the wheel and showing the mechanism for controlling the closing of the heated pads; Fig. 7 is a section upon the line 7—7 of Fig. 3; Fig. 8 is a view showing the cam for closing the pads in section and showing the temporary cam lever in top plan with its actuating devices in top plan; Fig. 9 is a horizontal sectional view taken through the center of the machine and showing some of the parts in elevation; Fig. 10 is a section on the line 10—10 of Fig. 6 looking in the direction of the arrows; and Fig. 11 is a detailed sectional view showing a portion of one of the heating elements utilized in the pads.

In the embodiment shown in the drawings 1 represents a frame provided with two spaced bearings 2 one on either side and toward the rear of the frame. Mounted in these bearings is a supporting shaft 3 adapted to receive a supporting wheel comprising a hub 4, spokes 5 and a pair of spaced rims 6. Integral with these rims, as shown in Fig. 6, are outwardly extending brackets 7, spaced evenly about the machine and having a flat face for receiving a stationary pad 8. This pad is provided with suitable openings 9 for receiving heating elements to be later described. There are twelve of these pads shown on the wheel set forth in the drawings and the faces of these pads are radially disposed with respect to the wheel. The face of each pad is provided with a longitudinally disposed slot 10, for a purpose to be described. Extending through a suitable bearing in the spaced rims 6 is a transverse shaft or pin 11, which carries a bell crank lever 12 having a pair of spaced radially extending arms 13 and rearwardly extending eye 14. The arms 13 receive a pin 15 projected through a pair of arms 16 on the outside of the arms 13. These arms 16 are preferably formed integral with a pad support 17 provided with a heated pad 18 having openings 19 for receiving heating elements. This pad is provided with a strip 20 for engagement in the slot 10 of the stationary heated element. The lower ends of the arms 16 are provided with openings for receiving a bolt 21 which is connected by links 22, one on either side of the wheel, to a pin 23 extending from one rim 6 to the other so that the faces of the two heating elements move in parallelism with respect to each other. Pivoted upon the pin 11 is a pad shifting lever 24 of substantially the form shown in the drawings and this lever is angular and is provided with an opening 25 shown in dotted lines in Fig. 6 for the reception of a bolt 26 extending through the eye 14. Between the lever 24 and the eye is a suitable tension spring 27 the tension of which may be adjusted by a nut 28 upon the bolt 26 on the outside of the lever 24. The extreme outer end of the lever 24 is provided with a friction roller 29 for a purpose which will later appear.

There is a complete movable pad mechanism just described for each of the relatively fixed pads.

Secured to the flat portion 30 of the frame is a foot 31 formed integral with an edge

cam 32 which is provided with a low portion 33 of a proper length to permit the release of the card when it reaches a point near the frame at the back so that the card will slip out by gravity, this cam portion being equal to about one third of the entire circumference. Between the extreme low portion 33 and the main edge of the cam 32 is an intermediate edge portion 34. The arrangement of these cam edges is such that as the conveyer or wheel rotates, which is in clock-wise direction as the parts are shown in Figs. 3 and 6, the friction roller 29 of each movable pad structure will pass from the extreme low portion 33, where the pads are the greatest distance apart, to the intermediate portion 34 where the pads will be partially closed so that the card with the tab will pass in between the pads but will not be free for easy movement therebetween. The further rotation of the conveyer or wheel carries the friction roller 29 on to the extreme high part of the cam 32 with the result that the movable pad engages the tab and forces it tightly against the card stock. The parts are held in this position until the friction roller of this particular pad structure reaches the low or release portion of the cam when the lower pad is released and the card may drop out of the machine.

In order to insure the release of the movable pad structures as they arrive at the low part of the cam an external cam 35 is formed upon the cam 32 and it engages on the outside of the friction rollers 29 and tends to rock the pad shifting lever 24 in counter clock-wise direction as shown in Fig. 3. This external cam is supported by a web 36 secured to the cam 32 and at its left, as shown in Fig. 3, it is provided with a pivoted extension 37 mounted upon a pin 38. This extension has a shoulder face 39 at a point corresponding to the point where the roller passes on to the intermediate cam edge 34 and a further curved nose shown at 40 permitting the passage of the roller onto the main edge portion of the cam 32. These parts are so positioned that when a fixed and a relatively movable pad are at the front, as shown in Fig. 6, the roller 29 is on the intermediate portion 34 and is held thereagainst by the extension 37 by means of a spring 41 arranged between the extension and the fixed point. The object of this yielding extension to the outer cam will appear later.

The receiving position of the pads is that represented in Fig. 6 by the two pads which have their faces separated and arranged horizontally in this figure and in feeding it is essential that, when the card with its tab supplied is placed between the pads, the operator should be able to cause these parts to be clamped immediately and before the wheel moves carrying the roller 29 onto the main edge of the cam 32 since the main supporting wheel receives intermittent movement as will be brought out in the description of the driving mechanism. Suitable mechanism therefore is provided for temporarily closing the pads upon the work until the supporting wheel moves and it comprises a hub 42 mounted upon the main supporting shaft 4 and provided with a radially extending arm 43 carrying at its outer end a temporary holding cam 44 and this cam has an edge face 45 coincident with the main edge of the cam 32 and an intermediate edge 46 corresponding to the intermediate cam edge 34. In other words the cam edge of this temporary holding cam conforms to the configuration of the edge of the cam 32 from the main portion to the extreme reduced portion 33 as is clearly shown in Fig. 6. The edge of this temporary holding cam is engaged by each of the rollers 29 inasmuch as they are made wide enough to accomplish this result. This temporary holding cam 44 normally assumes the position shown in Fig. 6, but, as soon as a card is placed between the pads, which are in receiving position, it is shifted counter clock-wise so that its edge face 45 will cause a clock-wise movement to be imparted to the pad shifting lever 24 near it, thus closing the lower pad against the work, the yielding extension 37 permitting this operation. This movement imparted to the temporary holding cam 44 is brought about through the instrumentality of a rocker arm 47 secured by a pin 48 to a shaft 49 mounted in the frame and extending to the side thereof where it is provided with an operating arm 50 connected to a suitable treadle rod 51 adapted to be actuated by any suitable treadle not shown, but capable of performing the operation, the arrangement of the treadle being unimportant so far as this invention is concerned.

In order to support the cards on either side of the pads as the former are carried around suitable brackets are provided on each side of the pads and are secured to the rims 6 and a description of one will suffice for both. Each of these brackets comprises a face plate 52, an outwardly extending arm 53 and spaced fingers 54, the spaces between the fingers of corresponding brackets being in alinement with the spaces between the corresponding pads.

In order to insure the positive release of the cards from the pads a suitable device is provided and it comprises a pair of fingers 55, which, in the instance of each complete pad structure, are arranged in pairs and keyed to the pin or shaft 23, one of these fingers being provided with a trip arm 56 having a face 57 adapted to engage a stop 58 secured to the frame or to any other stationary part and arranged in the path of

these trips as they move down to the rear at the bottom as shown in Fig. 3. When one of these trips is engaged, the fingers move clock-wise and engage the card and push it from between the pads. These fingers are held in normal position or inward toward the supporting wheel by a coil spring 59 one arranged between each trip arm and one of the rims 6 of the wheel.

Suitable mechanism is provided for intermittently rotating the supporting wheel and this mechanism is shown best in Figs. 4 and 5 and it will now be described.

Loosely mounted upon the main supporting shaft 3 is a gear wheel 60 meshing with the gear wheel 61 mounted upon a main driving shaft 62 extending to the outside of the frame where it receives a main driving gear 63 which meshes with a driving pinion 64, shown in dotted lines in Fig. 1, and driven by a pulley 65. Secured upon the shaft 62 inside of the gear 61 is a crank disk 66 provided with a crank pin 67 carrying a friction roller 68. This roller is adapted to engage in a slot 69 provided in the end of a rocker arm 70 loosely mounted upon the main supporting shaft 3. The rocker arm 70 is provided with an ear 71 carrying a pin 72 which receives a pawl 73 having a nose 74 and adapted for engagement in suitable notches 75 forming ratchet teeth 76 in a ratchet wheel 77 secured to the spokes 5 of the main supporting wheel. The pawl 73 is normally held in engagement with the ratchet wheel by a coil spring 78 and through the operation of the crank pin would tend to rotate the main supporting wheel one point for each revolution of the crank disk 66, but in order to prevent this and to hold the pawl out of engagement with the ratchet wheel during one movement of the rocker arm 70, the gear wheel 60 is provided with a cam 79 having a low portion 80 corresponding to one-half its circumference. The edge of this cam engages a friction roller 81 mounted upon a pin 82 supported in a link bracket 83 pivoted upon a pin 84 mounted upon the rocker arm. The pin 82 is connected by a link 85 with a pin 86 carried by the pawl near the outer end thereof.

The operation of this driving mechanism will now be described with reference to Fig. 4 and it must be understood that this figure is taken upon the line 4—4 of Fig. 5 looking in the direction of the arrows and the sprocket wheel 77 which is therefore in front in Fig. 4 is broken away as shown to show the parts beyond in full line. The crank disk 66 rotates in a clockwise direction and it has just completed its movement of the main supporting wheel for one step. The further movement of the crank disk causes the crank pin to move over the center and shift the rocker arm in counter-clockwise direction thus drawing the pawl with it. In the meantime, however, the gear 61 on the shaft 62 has, through the gear 60, advanced the high portion of the cam 79 causing it to engage under the roller 81 and raise the pawl out of the path of the sprocket. This position of the pawl continues during the next movement of the rocker arm 70 by the crank wheel but upon the next forward movement of the rocker arm the roller 81 will pass to the low part of the cam permitting the pawl to engage the ratchet wheel and move the conveyer or wheel so that for each two operations of the rocker arm the conveyer or wheel and the mechanism carried thereby is advanced one step. The object of having mechanism of this type is to impart a quick movement to the supporting wheel and at the same time permit sufficient time between movements to allow the operator to insert the work.

In order to lock the supporting wheel in its proper position as it is advanced a suitable device is provided and it comprises a support 87 secured to the frame having a cylindrical portion 88 provided with an inwardly extending flange 89. This flange receives the flange 90 and locking bolt 91 which has a tapered end 92 for engagement in suitable sockets 93 properly spaced on the outer face of the ratchet wheel 77. A coil spring 94 is arranged about a stem 95 integral with this bolt and thrusts against the flange 90 at one end and against a plug 96 secured in the cylindrical portion 88 at the other.

Heat may be supplied to the pads in any suitable manner but I prefer to heat them electrically by heating elements and each of these elements comprises a tube 97 adapted to fit into the opening of the pad provided at each end with a plug 98, one of said plugs being bored out to receive an insulating bushing 99 in which is mounted a binder screw 100. Within this tubular casing 97 is an insulating tube 101 adapted to receive the heating element which comprises a core 102 surrounded by a coil 103 of resistance wire. The two leads of this wire are connected under the two binding screws. These heating elements may be connected in any way desirable but I prefer to connect the two elements of the same pad in series in which case the ends of an inner and an outer element of the same pad on one side of the conveyer are connected together and the end of the innermost element on the opposite side of the conveyer is connected by a wire 104 with an inner bus bar ring 107. This arrangement is continued around the wheel and these bus bar rings are supplied with current by a suitable brush and collector ring mechanism shown in Fig. 9.

The brush and collector ring structure comprises a pair of collector rings 108 and

109 supported upon the hub 4 of the conveyer or wheel. The collector ring 108 is engaged by a brush 110 mounted in the brush support 111 supported upon an insulating block 112 by means of bearing blocks 113. The brush 110 is forced against the collector ring by a spring 114 secured to the block 112 at one end and to an arm 115 mounted in the brush holder. In like manner the collector ring 109 is engaged by a brush 116 mounted in a brush holder 117 supported by the block 112 and held thereon by bearing blocks 118. This brush is held down against its collector ring by a spring 119 and arm 120. The two brush holders are connected to the incoming wires 121 and 122.

A suitable table 123 is mounted in front of the machine in a position so that the work may be moved from the surface of the table in between the pads.

Assuming that current is supplied to the machine and that the heating elements have been given sufficient time to properly heat the pads and that power is supplied to the pulley 65 and that the parts at this particular moment are in the position shown in Fig. 6, the operator may then insert a card with a tab applied thereto, the card having been first moistened with alcohol, and may operate the treadle so as to rock the temporary holding cam in a counter-clockwise direction. This causes the movable pad to engage the work temporarily and when the main conveyer or wheel driving mechanism comes into operation the main conveyer or wheel will be moved one step and the card will be carried on clamped between the pads and will be held until the movable tab is shifted by the mechanism already described when the card will be released either by gravity or by the releasing fingers.

Having described my invention, I claim:—

1. In apparatus for securing tabs to sheets, a frame, a movable carrier mounted therein and traversing a circuit, a plurality of pressing devices each comprising a pad fixed upon the carrier and having a pressing face, a relatively movable pad mounted upon the carrier and having a pressing face in parallelism with the face of the fixed pad when in pressing position, and an actuating lever therefor mounted in the carrier, a cam secured to the frame in the path of the relatively movable pad operating lever and having a pad closing portion, a pad opening portion and an intermediate pad closing portion, the first portion holding the pads closed throughout a portion of the circuit, the opening portion holding the pads wide open for a portion of the circuit and the intermediate portion partially closing the pads to bring them into receiving position, and means for actuating the carrier.

2. In apparatus for securing tabs to sheets, a frame, a movable carrier mounted therein and traversing a circuit, a plurality of pressing devices each comprising a pad fixed upon the carrier and having a pressing face, a relatively movable pad mounted upon the carrier and having a pressing face in parallelism with the face of the fixed pad when in pressing position, an actuating lever therefor mounted in the carrier, a cam secured to the frame in the path of the relatively movable pad operating lever and having a pad closing portion, a pad opening portion and an intermediate pad closing portion, the first portion holding the pads closed throughout a portion of the circuit, the opening portion holding the pads wide open for a portion of the circuit, and the intermediate portion partially closing the pads to bring them into receiving position, additional means for positively opening the relatively movable pads at the opening portion of the cam, and means for actuating the carrier.

3. In apparatus for securing tabs to sheets, a frame, a movable carrier mounted therein and traversing a circuit, a plurality of pressing devices each comprising a pad fixed upon the carrier and having a pressing face, a relatively movable pad mounted upon the carrier and having a pressing face in parallelism with the face of the fixed pad when in pressing position, an actuating lever therefor mounted in the carrier, means for bringing the pads into pressing position and for holding them in such position during a predetermined portion of their course in the circuit of the carrier, means for opening the pads, means for actuating the carrier, a cam secured to the frame and having an edge closing portion in two steps, one a primary step for partially closing the pads and another secondary portion for holding the pads tightly closed upon the work, a cam groove adapted to positively engage the movable pad operating lever and open the pads, and means for actuating the carrier.

4. In apparatus for securing tabs to sheets, a frame, a movable carrier mounted therein and traversing a circuit, a plurality of pressing devices each comprising a pad fixed upon the carrier and having a pressing face, a relatively movable pad mounted upon the carrier and having a pressing face in parallelism with the face of the fixed pad when in pressing position, a lever structure for actuating the movable pad and comprising a lever pivoted to the carrier and on one side of its pivot engaging the relatively movable pad and having an arm projecting from the other side of its pivot, a lever arm pivotally mounted, a yielding connection between this arm and the actuating arm of the pad lever, means for engaging the lever actuating arms to close the pressing devices

and hold them closed during a certain portion of their movement in the circuit, and means for actuating the carrier.

5. In apparatus for securing tabs to sheets, a frame, a movable carrier mounted therein and traversing a circuit, a plurality of pressing devices each comprising a pad fixed upon the carrier and having a pressing face, a relative movable pad mounted upon the carrier and having a pressing face in parallelism with the face of the fixed pad when in pressing position, a lever structure for actuating the movable pad and comprising a lever pivoted to the carrier and on one side of its pivot engaging the relatively movable pad and having an arm projecting from the other side of its pivot, a lever arm pivotally mounted, a yielding connection between this arm and the actuating arm of the pad lever, a cam for engaging the lever to close the pressing devices and hold them closed during a certain portion of their movement in the circuit, and means for actuating the carrier.

6. In an apparatus for securing tabs to sheets, a movable carrier, a plurality of pressing devices arranged upon the carrier, means for closing said pressing devices upon the tabbed sheet, electrically heated units arranged in said devices, means for supplying current thereto comprising a pair of rings of opposite polarity mounted upon the carrier, electrical connections between the rings and the element, collector rings mounted upon the carrier, brush structures coöperating with the collector rings, and means for actuating the carrier.

7. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being movable through a predetermined path, and means spaced along said path for fully closing, fully opening, and partially closing said devices in order.

8. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being movable through a predetermined path, means located adjacent said path operable at will for closing said devices, and means for traversing said devices together over said path.

9. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being movable through a predetermined path, means located adjacent one portion of said path operable at will for closing said devices, means for traversing said devices together over said path, and means located adjacent another portion of said path for opening said devices.

10. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being movable through a predetermined path, means located adjacent one portion of said path operable at will for closing said devices, means for traversing said devices over said path, and means located adjacent another portion of said path for opening said devices by their movement along said path.

11. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being movable through a predetermined path, means located adjacent one portion of said path operable at will for closing said devices, means for traversing said devices over said path, and means located adjacent other portions of said path for fully opening and then partially closing said devices.

12. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being movable through a predetermined path, means located adjacent one portion of said path operable at will for closing said devices, means for traversing said devices over said path, and means located adjacent other portions of said path for fully opening and then partially closing said devices by their movement along said path.

13. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being movable through a predetermined path, means located adjacent one portion of said path operable at will for closing said devices, means for traversing said devices together over said path, and means for holding said devices closed while moving along said path.

14. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being movable through a predetermined path, means located adjacent one portion of said path operable at will for closing said devices, means for traversing said devices over said path, and means for holding said devices closed while moving along said path and for then opening and partially closing said devices.

15. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being movable through a predetermined path, means spaced along said path for fully closing, fully opening, and partially closing said devices in order, and means for supplying heat to said devices while traveling along said path.

16. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and

sheet, said devices being movable through a predetermined path, means located adjacent one portion of said path operable at will for closing said devices, means for traversing said devices over said path, and means for supplying heat to said devices while traveling along said path.

17. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being movable through a predetermined path, means located adjacent one portion of said path operable at will for closing said devices, means for traversing said devices over said path, means located adjacent another portion of said path for opening said devices, and means for supplying heat to said devices while traveling along said path.

18. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being movable through a predetermined path, means located adjacent one portion of said path operable at will for closing said devices, means for traversing said devices over said path, means located adjacent another portion of said path for opening said devices by their movement along said path, and means for supplying heat to said devices while traveling along said path.

19. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being movable through a predetermined path, means located adjacent one portion of said path operable at will for closing said devices, means for traversing said devices over said path, means located adjacent other portions of said path for fully opening and then partially closing said devices, and means for supplying heat to said devices while traveling along said path.

20. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being movable through a predetermined path, means located adjacent one portion of said path operable at will for closing said devices, means for traversing said devices over said path, means located adjacent other portions of said path for fully opening and then partially closing said devices by their movement along said path, and means for supplying heat to said devices while traveling along said path.

21. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure upon the assembled tab and sheet, said devices being movable together through a predetermined path, means for advancing said devices along said path by a step by step movement, and means operable at will for closing said devices between successive movements along said path.

22. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure upon the assembled tab and sheet, said devices being movable together through a predetermined path, means for advancing said devices along said path by a step by step movement, means operable at will for closing said devices between successive movements along said path, and means along said path for maintaining said devices closed while traversing said path.

23. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure upon the assembled tab and sheet, said devices being movable through a predetermined path, means for advancing said devices along said path by a step by step movement, means operable at will for closing said devices between successive movements along said path, and means for supplying heat to said devices while traveling along said path.

24. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure upon the assembled tab and sheet, said devices being movable through a predetermined path, means for advancing said devices along said path by a step by step movement, means operable at will for closing said devices between successive movements along said path, means for supplying heat to said devices while traveling along said path, and means for maintaining said devices closed while traversing said path.

25. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being bodily movable together through a predetermined path, each of said devices comprising a relatively stationary pad and a coöperating pad movable relative thereto and having a pressing face parallel with the face of the fixed pad when in pressing position, and means stationary relative to said movable pressing devices and located adjacent one portion of said path and operable at will for actuating said movable pad.

26. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being bodily movable together through a predetermined path, each of said devices comprising a relatively stationary pad and a coöperating pad movable relative thereto and having a pressing face parallel with the face of the fixed pad when in pressing position, means stationary relative to said movable pressing devices and located adjacent one portion of said path and operable at will for actuating said mov-

able pad, and means extending along said path for maintaining said pads in coöperating pressing relation while moving along said path.

27. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being bodily movable through a predetermined path, each of said devices comprising a relatively stationary pad and a coöperating pad movable relative thereto and having a pressing face parallel with the face of the fixed pad when in pressing position, means stationary relative to said movable pressing devices and located adjacent one portion of said path and operable at will for actuating said movable pad, and means for supplying heat to said pads while traveling along said path.

28. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, said devices being bodily movable through a predetermined path, each of said devices comprising a relatively stationary pad and a coöperating pad movable relative thereto and having a pressing face parallel with the face of the fixed pad when in pressing position, means stationary relative to said movable pressing devices and located adjacent one portion of said path and operable at will for actuating said movable pad, means for supplying heat to said pads while traveling along said path, and means located adjacent one portion of said path and arranged to open said devices in order by their movement along said path.

29. Apparatus for securing tabs to sheets, comprising a series of pressing devices for exerting pressure on the assembled tab and sheet, sheet holding means adjacent each of said pressing devices, said devices being movable through a predetermined path, means located adjacent one portion of said path operable at will for closing said devices, and means for traversing said devices and said sheet holding means through said path.

In testimony whereof I affix my signature.

FRANCIS M. CASE.