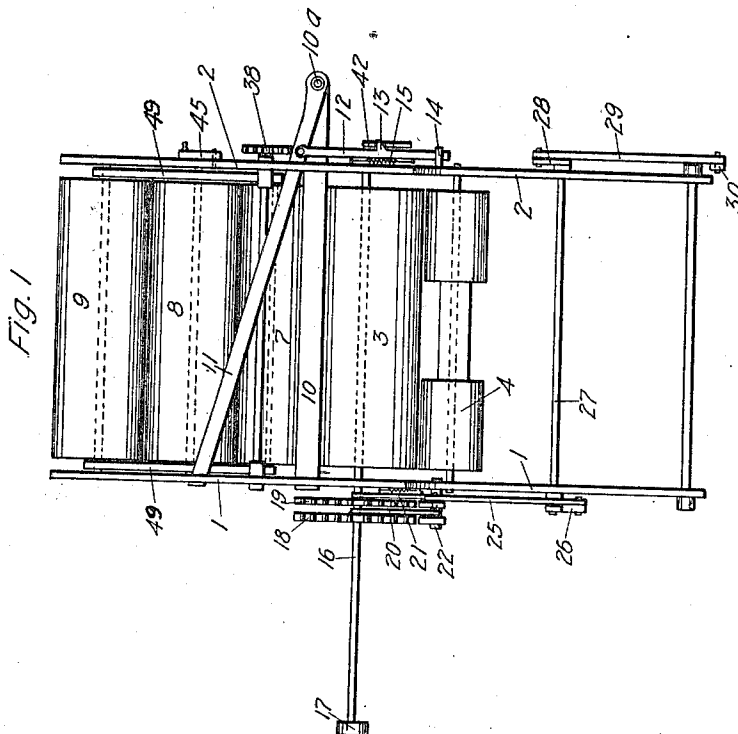
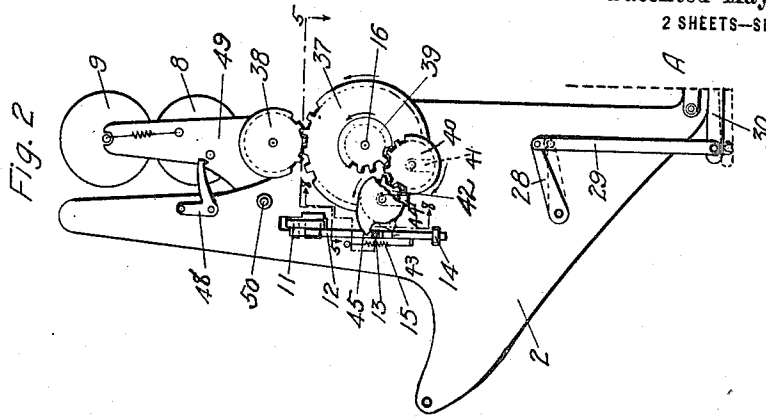


A. S. TREW.  
 CARD MAKING ATTACHMENT FOR ADDING AND LISTING MACHINES.  
 APPLICATION FILED JUNE 17, 1915.

1,224,813.

Patented May 1, 1917.  
 2 SHEETS—SHEET 1.



WITNESSES:

A. R. Moore

J. M. Griffin

INVENTOR

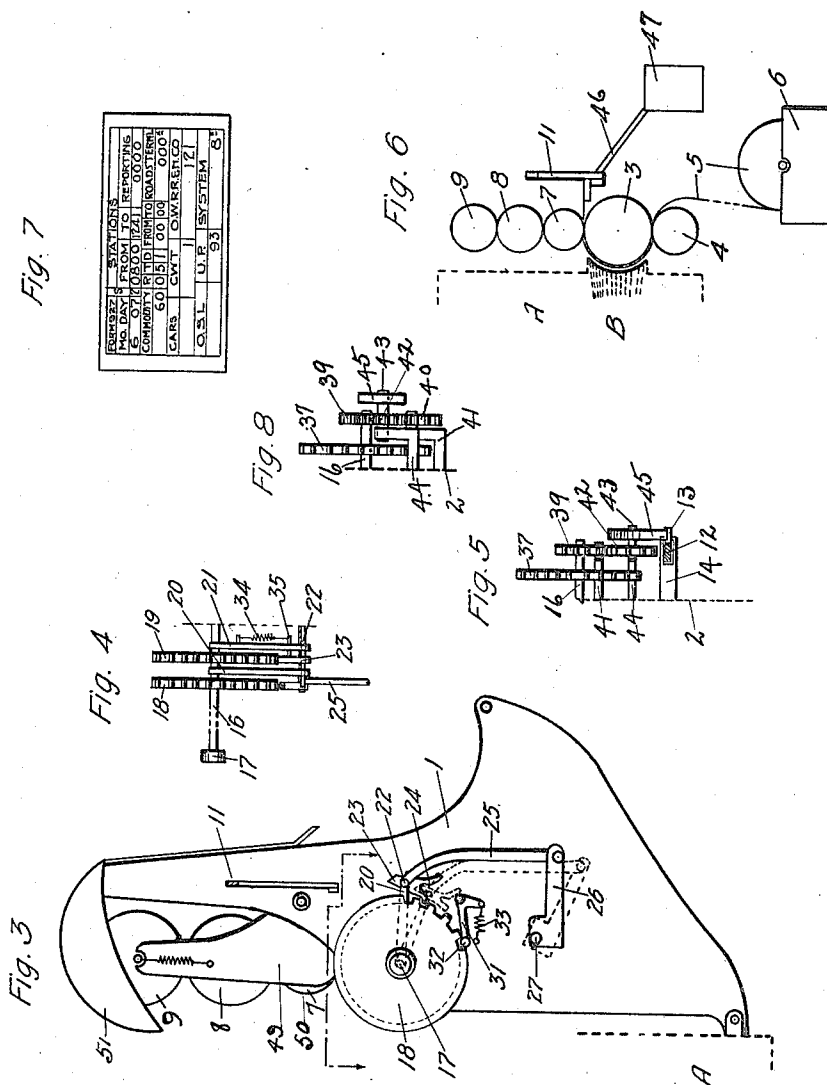
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2 SHEETS--SHEET 2.



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# UNITED STATES PATENT OFFICE.

ARTHUR S. TREW, OF PORTLAND, OREGON.

CARD-MAKING ATTACHMENT FOR ADDING AND LISTING MACHINES.

1,224,813.

Specification of Letters Patent.

Patented May 1, 1917.

Application filed June 17, 1915. Serial No. 34,585.

*To all whom it may concern:*

Be it known that I, ARTHUR S. TREW, a citizen of the United States, residing in the city of Portland, county of Multnomah, and State of Oregon, have heretofore invented a new and useful Card-Making Attachment for Adding and Listing Machines, of which the following is a specification.

My invention relates to card making attachments for adding and listing machines, and more particularly to a mechanism adapted to be attached to an adding and listing machine and operated in connection therewith for printing upon strips of card board fed therethrough, data from the printing mechanism of said adding and listing mechanism, as the latter is operated, and also for printing upon said card board suitable forms, with proper headings or captions, corresponding to, and arranged around the data printed thereupon by the adding and listing machine, together with means for cutting said material into tickets, said means being automatically actuated by the manipulation of the listing and adding machine.

In order that others may clearly understand my invention, I have shown one practical embodiment thereof in the accompanying sheets of drawings, which I will now describe.

Figure 1 is a front, or face, view of a machine embodying my invention;

Fig. 2 is a side view thereof, looking at the right hand side of Fig. 1;

Fig. 3 is a left hand side view thereof;

Fig. 4 is a fragmentary edge view of the gears shown at the left hand side of the machine in Fig. 1;

Fig. 5 is a fragmentary top plan view, on line 5—5, Fig. 2, of the gear mechanism shown at the right hand side of the machine, and in face view in Fig. 2;

Fig. 6 is a diagrammatic view showing the relative positions of the main operating parts of the machine;

Fig. 7 is a face view of one of the finished cards, half size; and

Fig. 8 is a fragmentary edge view, on line 8—8, Fig. 2, of the gears shown on the right hand side of the machine.

Referring now more in detail to the drawings, the invention comprises a small machine adapted to be attached to an adding and listing machine for the purpose of supporting and feeding strips of card board

in front of the printing mechanism of the adding and listing machine, with means for printing upon said card board suitable forms for classifying the printed data from the adding and listing machine.

The embodiment of the invention illustrated on the accompanying sheets of drawings, comprises two side members, 1 and 2, adapted to be attached to the back of an adding and listing machine, indicated in dotted lines at A, and between which side members is journaled a platen roller 3, directly opposite the printing mechanism B, of the adding and listing machine, indicated in dotted lines, Fig. 6. A contact feed roller 4, bears against the under side of said platen roller 3, and feeds the strip of card board 5, from a roll thereof, which may be supported in any desired manner, and at any convenient location, as in a box or frame 6. Mounted immediately above the platen roller 3, is a die roller 7, provided with a suitable form with headings or captions, and adapted to imprint the same upon the card board as it is passed between the platen roller 3, and said die roller 7. Above the die roller 7, are mounted ink rollers 8 and 9, the roller 8 being adapted to apply the ink directly to the die roller 7, the ink being supplied to the roller 9, in a manner well understood.

The card board 5 is fed upwardly between the feed roller 4, and the platen roller 3, around the platen roller adjacent the printing mechanisms B, of the adding and listing machine, and thence outwardly between the platen roller 3, and the die roller 7, through a card cutting mechanism, comprising a cutting bar 10, extended across the front of the machine, and through the side members, 1 and 2, as clearly indicated in Fig. 1, and to which is pivotally attached, as at 10<sup>a</sup>, a shearing bar 11, adapted to be intermittently drawn downwardly by means of a link 12, provided with a lug 13, operated in a manner hereinafter described. The lower end of said link 12, is guided in a lug 14, mounted on the side of the machine 2, and is normally held in raised or up position by means of a spring 15, attached at its upper end to the side member 2, and at its lower end to said link 12, as clearly indicated in Figs. 1 and 2.

The platen roller 3, is mounted upon a rod or shaft 16, which is extended laterally and provided with a turning knob 17, at the

side of the adding and listing machine, for convenient manipulation by hand. Mounted upon the shaft 16, are two gears, 18 and 19, shown in Figs. 1 and 4. Also mounted upon said shaft 16, are two arms 20 and 21, at opposite sides of the gear 19, provided at their outer ends with a short connecting shaft, or rod, 22, upon which is pivotally mounted a pawl 23, having a forked lower, or engaging, end, as at 24, Fig. 3, the short arm of which fork is adapted to engage the gear 19, as the arms 20 and 21 are drawn downwardly, for the purpose of rotating said gear 19. An operating arm 25, is attached at its upper end to the connecting shaft 22, and is connected at its lower end to an arm 26, secured to the end of a shaft 27, extending through the side members 1 and 2, and provided at its opposite end with an arm 28, connected by a link 29, to an operating arm 30, from the adding and listing machine, whereby the operation of said adding and listing machine operates through the connections just described, to intermittently advance the platen roller 3, through the gear 19, and thus to feed the card board through the machine.

Mounted upon the side member 1 of the machine, is a bell crank member 31, having a holding roller 32, adapted to yieldingly seat in the notches of the gear 18, being normally held therein by means of a spring 33, clearly shown in Fig. 3. This lever operates to insure uniform spacing and to prevent the feed roller, or platen, 3, from looseness, or undue movement. The long fork of the pawl 24, it will be noted from the dotted line position, shown in Fig. 3, engages the shaft of the bell crank 31, at the lower limit of its movement, and is thereby moved out of engagement with the gear 19, in the manner clearly indicated. Said pawl 23, is normally and yieldingly held inwardly in engagement with the gear 19, by means of a spring 34, attached at one end to a pin 35, upon the pawl 23, and at its other end attached to the arm 21, as clearly shown in Fig. 4.

Mounted upon the opposite end of the platen roller shaft 16, is a gear 37, adapted to mesh with a gear 38, upon the shaft of the die roller, and by means of which said die roller is positively operated. Mounted upon the same shaft, 16, outside of the gear 37, is a small gear 39, adapted to mesh with a gear 40, supported in a bracket 41. The gear 40 meshes with a small gear 42, upon a shaft 43, supported in a bracket 44, upon which is also mounted, to turn therewith, a revolving cam member 45, said cam member being adapted, as it revolves, to engage the projecting lug 13, upon the link 12, and to move the same downwardly with each revolution of the cam member 45, thereby also moving the shearing bar 11, down-

wardly for cutting the cards which fall down a suitable chute 46, and into a receptacle 47, indicated in Fig. 6.

A suitable latch, as at 48, may be provided on the side of the machine, as shown in Figs. 1 and 2, for latching an inner frame 49, in upright position. This frame 49, is pivotally mounted between the side members 1 and 2, as at 50, and may be moved backwardly and latched by means of the latch 48, for the purpose of lifting gear 38, out of mesh with gear 37, so as to permit convenient change of ink rollers 8 and 9. The ink rollers may be covered by a hood as 51, if desired.

It is to be understood, of course, that the die roller, or form printing member, and also the other rollers, are interchangeable, whereby to make possible the using of different forms and different headings or captions upon the cards which receive the printed data from a key-operated printing mechanism.

Another feature to be noted is the fact that the automatic operation of the cutting mechanism is brought about through the feeding movement of, the platen roller through the intermediate gears 39, 40 and 42, and the cam 45, thereby making it possible and simple to automatically regulate the operation of the cutting mechanism so as to make the cards absolutely uniform in size. The cutting mechanism, for example, may be operated one or more times during a revolution of the platen roller, depending upon the relative sizes of the gears between the platen roller and the operating cam member. This makes it possible to feed the card so that it will receive the data in so called single space, double space, or even greater than double space, without any change in the size of the card.

I am aware that my invention can be embodied in many different structures without departing from the spirit thereof, and I do not limit the invention therefore, to the particular mechanisms here shown in the embodiment of the same for illustrative purposes, except as I may be limited by the hereto appended claims.

#### I claim:

1. An attachment for adding machines for making cards comprising in combination a supporting frame adapted to be attached to the adding machine, a roller mounted therein, means for feeding a strip of cardboard around said roller, means for cutting said strip of cardboard into cards, and means for connecting said feeding means and said cutting means with an operating part of said adding machine, whereby the operation of the latter operates the former.

2. An attachment for adding machines for making cards comprising in combina-

tion a supporting frame, a roller mounted therein, means for feeding a strip of cardboard around said roller, a die roller mounted in said frame and bearing against  
 5 said first roller and between which said strip of cardboard passes, inking means, means for cutting said strip of cardboard into cards, and means for connecting said feeding means and said cutting means with  
 10 an operating part of said adding machine, whereby the operation of the latter operates the former.

3. An attachment for adding and listing machines comprising a supporting structure adapted to be attached to the adding machine, adjacent the printing mechanism thereof, means for supporting and feeding a strip of cardboard through said supporting structure adjacent the printing mechanism  
 20 of said adding machine, means in said supporting structure for printing a form upon said cardboard as it is fed through said supporting structure, means for cutting said strip of cardboard into cards, and means for  
 25 connecting the feeding means and the cutting means of said device with an operating part of said adding machine, whereby the operation of the latter operates the former.

4. An attachment for adding and listing machines of the character referred to comprising a self-contained structure adapted to be attached to an adding and listing machine adjacent the printing mechanism  
 35 thereof, said device comprising means for supporting and feeding a strip of cardboard therethrough adjacent the printing mechanism of said adding and listing machine, means for printing a form upon said cardboard as it is fed through said device, means  
 40 for cutting said cardboard into cards, and means for operatively connecting said card feeding means and said card cutting means

to operating parts of said adding and listing machine, whereby the operation of the  
 45 adding and listing machine automatically operates said card feeding and card cutting means.

5. A device of the character referred to comprising in combination a supporting  
 50 structure, a feed roller, a die roller therein, means for inking said die roller, means for feeding a strip of cardboard between said feed roller and said die roller, means for cutting said strip of cardboard into cards,  
 55 operating connecting means for operating said rollers and said cutting means, and means for connecting said supporting structure and said operating connecting means to a listing machine having printing mechanism,  
 60 whereby the operation of said listing machine automatically operates said feeding means and said cutting means, substantially as described.

6. A card making attachment for listing  
 65 machines comprising in combination a supporting structure adapted to be attached to said listing machine and having mounted therein platen and feed rollers, a die roller,  
 70 an inking roller for inking said die roller, a card cutting device, means for operating said rollers together for feeding a strip of cardboard around said platen roller and between it and the die roller, and operating  
 75 connections for connecting said operating means and said card cutting device with operating parts of said listing machine, whereby the operation of said listing machine automatically operates said card making attachment, substantially as described.  
 80

Signed at Portland, Multnomah county, Oregon, this 11th day of June, 1915.

ARTHUR S. TREW.

In presence of—

I. M. GRIFFIN,

W. M. JACKSON.