

Jan. 15, 1929.

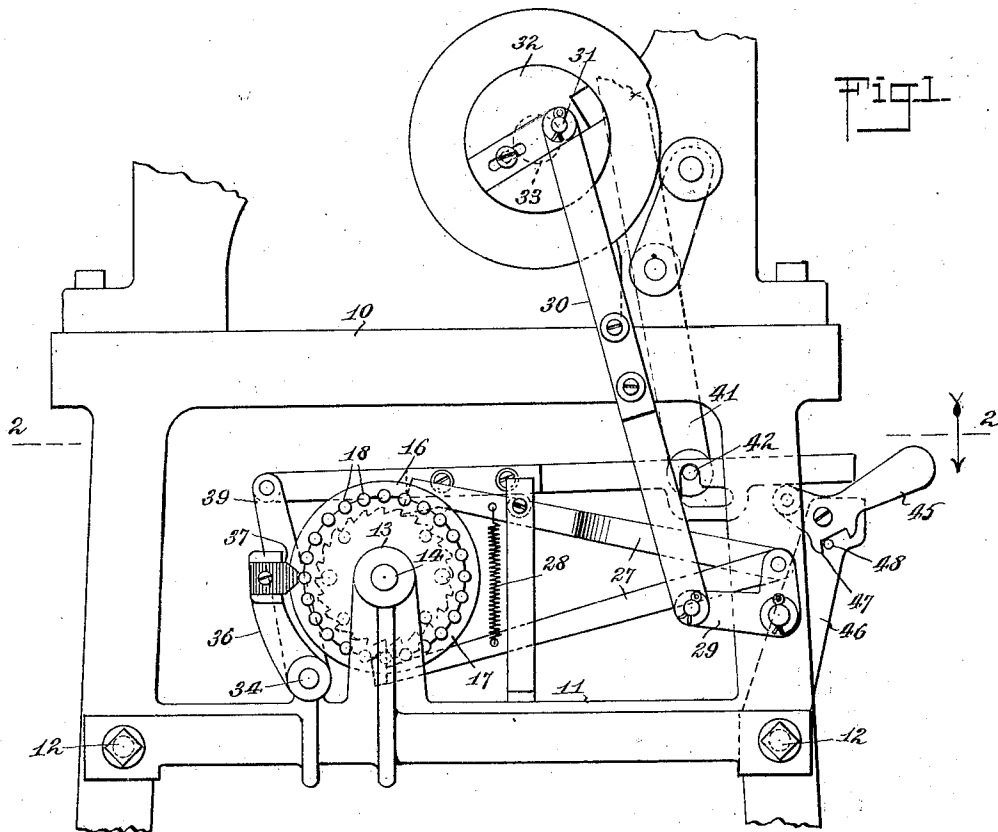
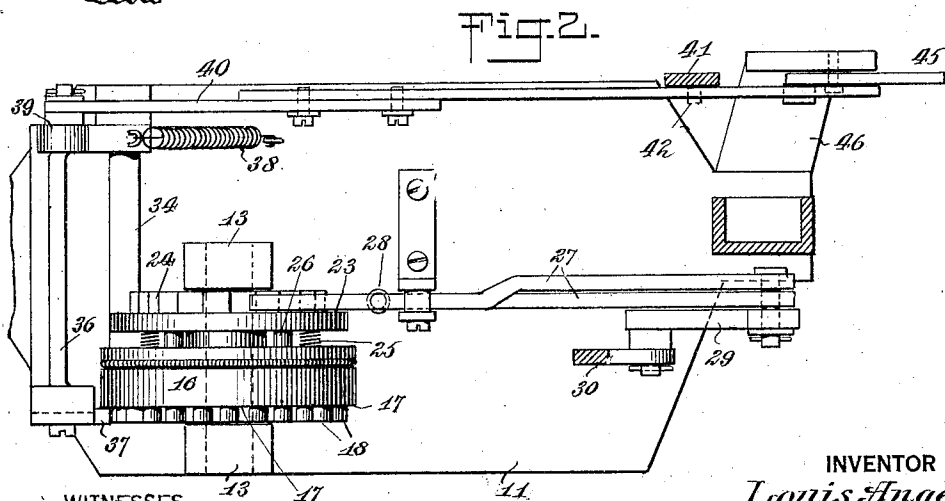
1,699,340

L. ANGELUS

SELECTOR MECHANISM FOR PLEATING MACHINES

Filed Feb. 3, 1927

2 Sheets-Sheet 1



WITNESSES

Witnesses
William P. Goebel.
Franklin J. Foster

INVENTOR

Louis Angelus

BY

Munro & Co.

ATTORNEY

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L. ANGELUS

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Fig. 2.

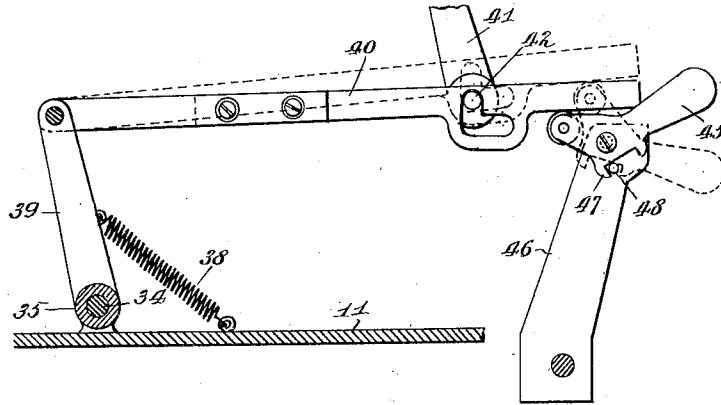


Fig. 4.

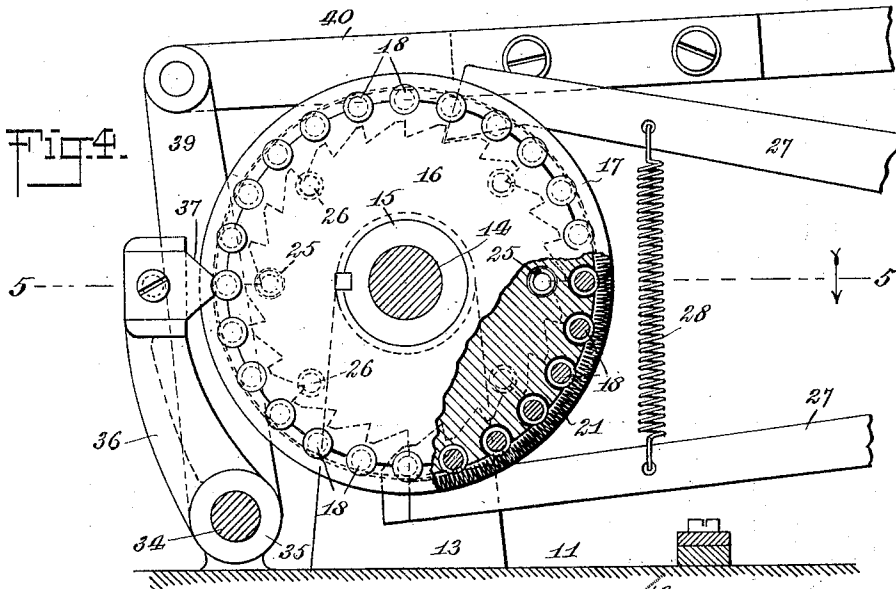


Fig. 6.

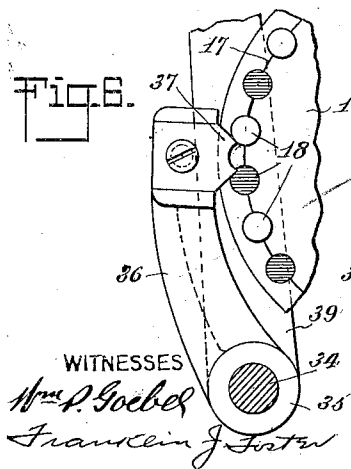
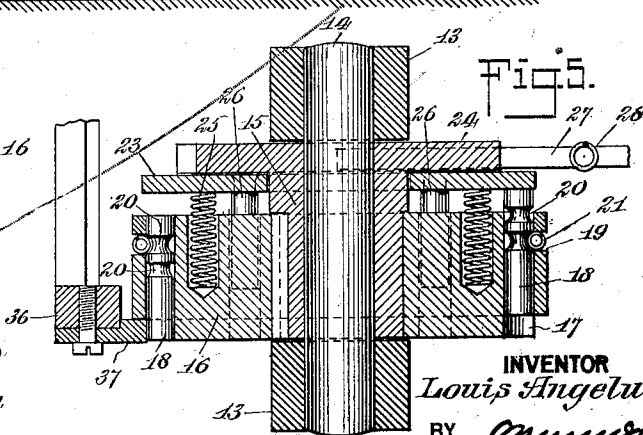


Fig. 5.



WITNESSES

Wm. P. Goebel
Franklin J. Foster

INVENTOR
Louis Angelus
BY *Mumford*
ATTORNEY

UNITED STATES PATENT OFFICE.

LOUIS ANGELUS, OF NEW YORK, N. Y.

SELECTOR MECHANISM FOR PLEATING MACHINES.

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The present invention is concerned with the provision of an improved selector mechanism for pleating machines. The selector mechanism is used for selectively rendering one of the pleating knives inoperative upon any desired stroke of the machine in order that straight pleating, box pleating or other types of pleating may be produced.

The present selector mechanism is an improvement over the mechanism now used in that it is mounted in a readily accessible position at the outside of the main frame instead of the inside, and in that the selector elements are in the nature of push buttons which may be expeditiously set and reset for controlling the knife to regulate the pattern of the pleating.

Objects of the invention are to provide a mechanism of this character which will be simple and practical in construction, easy and convenient to operate, and efficient in use.

With the above noted and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter set forth and pointed out in the claims. The invention may be more fully understood from the following description in connection with the accompanying drawings, wherein—

Fig. 1 is a fragmentary view in side elevation of a pleating machine, showing my improved selector mechanism and its associated parts.

Fig. 2 is a top plan view of Fig. 1.

Fig. 3 is a side elevational view showing the means for optionally rendering the selector inoperative.

Fig. 4 is an enlarged view mainly in side elevation and partly in section of the selector mechanism.

Fig. 5 is a transverse sectional view on the line 5—5 of Fig. 4.

Fig. 6 is an enlarged diagrammatic side elevational view showing a portion of the selector disc and its cooperating cam.

It is to be understood at the outset that the pleating machine of the present invention may be entirely conventional with the exception of the selector mechanism for one of the pleating knives. In order to avoid complicating the drawings therefore, I have eliminated all showing of the pleating knives, and numerous other conventional parts of the machine.

In the drawings, 10 represents the main frame of the machine, and 11 a platform bolted as at 12 to the frame and projecting laterally outwardly therefrom. Rising from the platform 11 are a pair of standards 13 journalling a short shaft 14 upon which is rotatable the hub 15 of a selector disc 16, the latter being keyed to the hub. The outer face of the disc is cut away adjacent its marginal edge as indicated at 17 to expose the ends of a series of push pins 18 arranged in an annular series and working through the disc. The rear face of the disc 16 is also cut away as at 19 to expose the rear ends of the push pins. Each pin is formed with a pair of notches 20 therein and a coiled annular contractile spring 21 lying in the cutaway portion 19 and embracing all of the pins engages in the pin grooves to prevent accidental sliding movement of the pins. The pins may be selectively manually pushed from the position shown at the left of Fig. 5 to the position shown at the right of Fig. 5. In the latter position, the outer end of the pin has moved out of the cutaway portion 17 and become inoperative to actuate an associated cam 22 as will be later described. The pins in either position are retained by the spring 21.

After the pins have been thrust inwardly, the means for restoring them to their outer operative positions has been illustrated as a resetting disc 23 encircling the hub 15 and normally held against a ratchet wheel 24 integral with the hub by coiled expansion springs 25 pocketed in the rear face of selector disc 16. Guide pins 26 working in suitable pockets in the selector disc prevent relative rotation of the discs 23 and 16. By manually grasping the disc 23 and pulling it forwardly, all of the pins will be restored to their projected operative position.

The disc is rotated with an intermittent step by step motion through the intermediacy of a pair of pawls 27, 27 engaged with opposite sides of the ratchet wheel and held in operative position by a connecting spring 28. The pawls are actuated by a bell crank lever 29 pivoted to the main frame 10 and oscillated by a link 30, one end of which is connected at 31 to an eccentric 32 on a driven shaft 33 of the machine.

A rock shaft 34 journalled in bearings 35 on the platform 11 carries an arm 36 which mounts a cam 37; this cam being spring urged against the selector disc in any suit-

able manner as by the spring 38. As the disc 16 is rotated step by step, such pins 18 as are projecting, serve to engage the cam and rock the arm 36. The pins which
 5 have been pushed inwardly to inoperative position, have no effect on the cam, and I am thus able to rock the arm 36 at any desired step of the ratchet wheel, or at all steps in accordance with the particular inter-
 10 vals at which the controlled pleating knife is to be operated.

A crank arm 39 fixed to rock shaft 34 is connected to a link 40 actuating a knife controlling link 41 through the intermediacy of
 15 a slot and pin connection with the link at 42. The pin is carried by the link 41 and the link 40 is formed with a bayonet slot so that upon slight elevation of the link 40, the entire selector mechanism will become
 20 inoperative to impart any motion to the link 41. I have shown means for lifting link 40 to render the selector mechanism completely inoperative at will. This means consists of a lever 45 mounted on a bracket
 25 46 connected to the main frame and engaging at one end under the link 40 to lift the same as the lever 45 is thrown. Ears 47 on the lever coact with the stop pin 48 on the bracket to limit the throw of the lever in
 30 both directions.

From the foregoing description, the operation of the selector may be briefly reviewed as follows. Step by step rotary motion is imparted to the selector disc through the
 35 pawls 27, bell crank 29 and link 30. Such of the pins 18 as may be in their forward or operative positions, rock the arm 36 through the cam 37, thereby actuating the link 40 and causing movement of the link
 40 41 which controls one of the pleating knives (not shown). Movement of the link 40, its associated link 41, and consequently the knife, may be timed to occur at any desired intervals by simply pushing in certain of
 45 the selector pins 18 to render them inopera-

tive. The entire selector mechanism may be rendered inoperative by depressing the lever 45 to lift the link 40, and bring the longer arm of the bayonet slot in this link into alignment with the pin 42. With the parts
 50 in this position, link 40 operates idly.

Various changes and alterations might be made in the general form and arrangement of parts described without departing from the invention. Hence I do not wish to limit
 55 myself to the details set forth, but shall consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

I claim:

1. In a pleating machine, the combination
 60 with a rocker arm adapted to control the throw of a pleating knife and a projection on the arm, of a rotatable selector disc, a plurality of pins arranged in an annular
 65 series around the disc and adapted to engage the projection to rock the arm as the disc is rotated, said pins being slidably mounted in the disc and adapted to be pushed inwardly to inoperative position by a direct man-
 70 ual thrust on any of them, a resetting disc mounted behind the selector disc normally spring held in spaced relation to the selector disc and adapted to be manually ad-
 75 vanced toward the selector disc to restore the selector pins to operative projected position.

2. In a pleating machine, the combination with a selector disc including an annular series of slidable selector pins and a rocker
 80 arm disposed in the path of the pins, of a link reciprocated by the rocker arm and adapted to actuate one of the pleating knives of the machine, slot and pin means whereby
 85 said link is rendered inoperative when tilted upwardly from its normal position, and a hand lever for tilting the link to render the latter inoperative.

LOUIS ANGELUS.