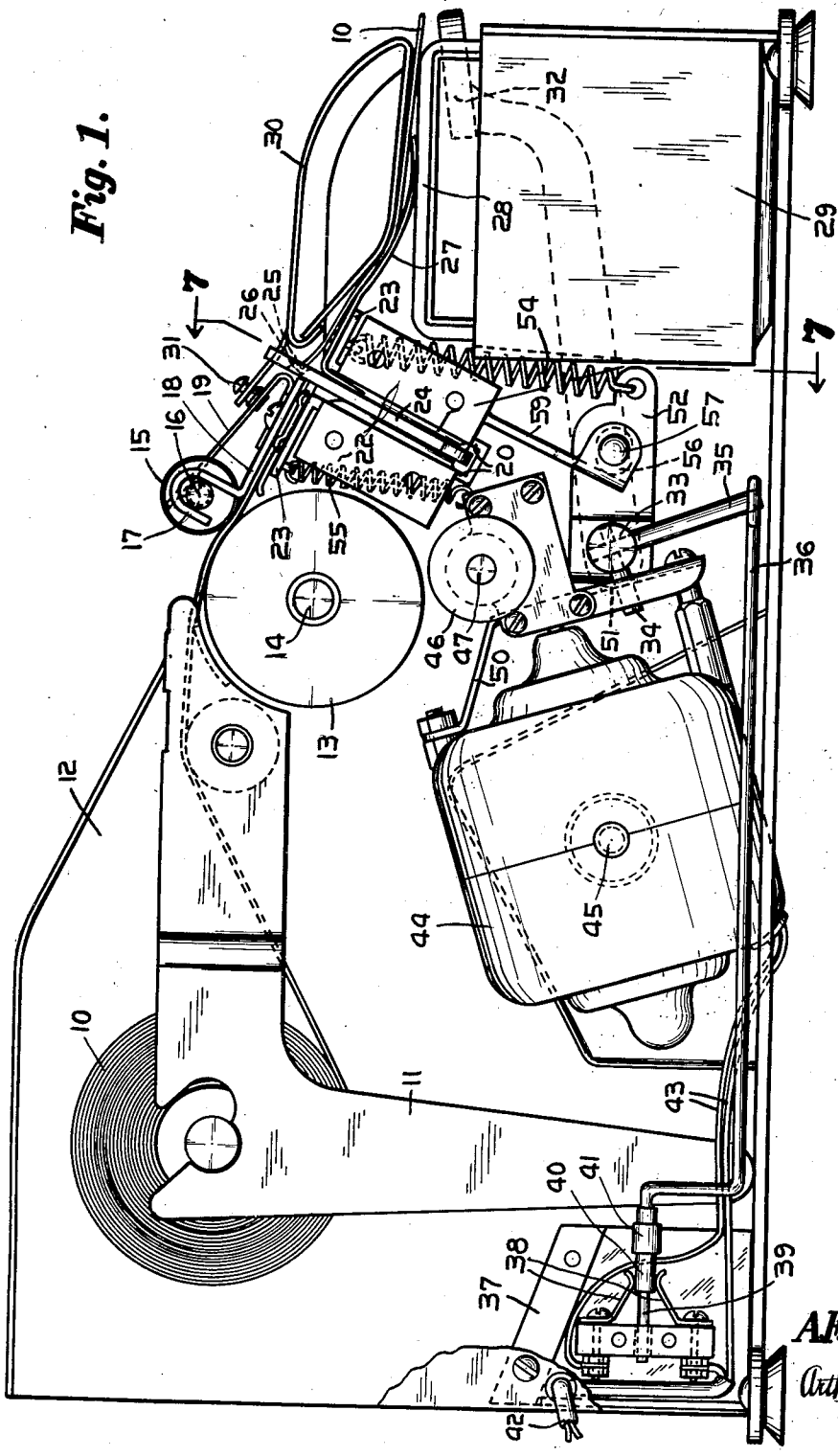
Nov. 20, 1934. A. F. GILLET 1,981,229

ELECTRICALLY OPERATED STRIP SERVER

Filed Dec. 7, 1931 4 Sheets-Sheet 1

Fig. 1.



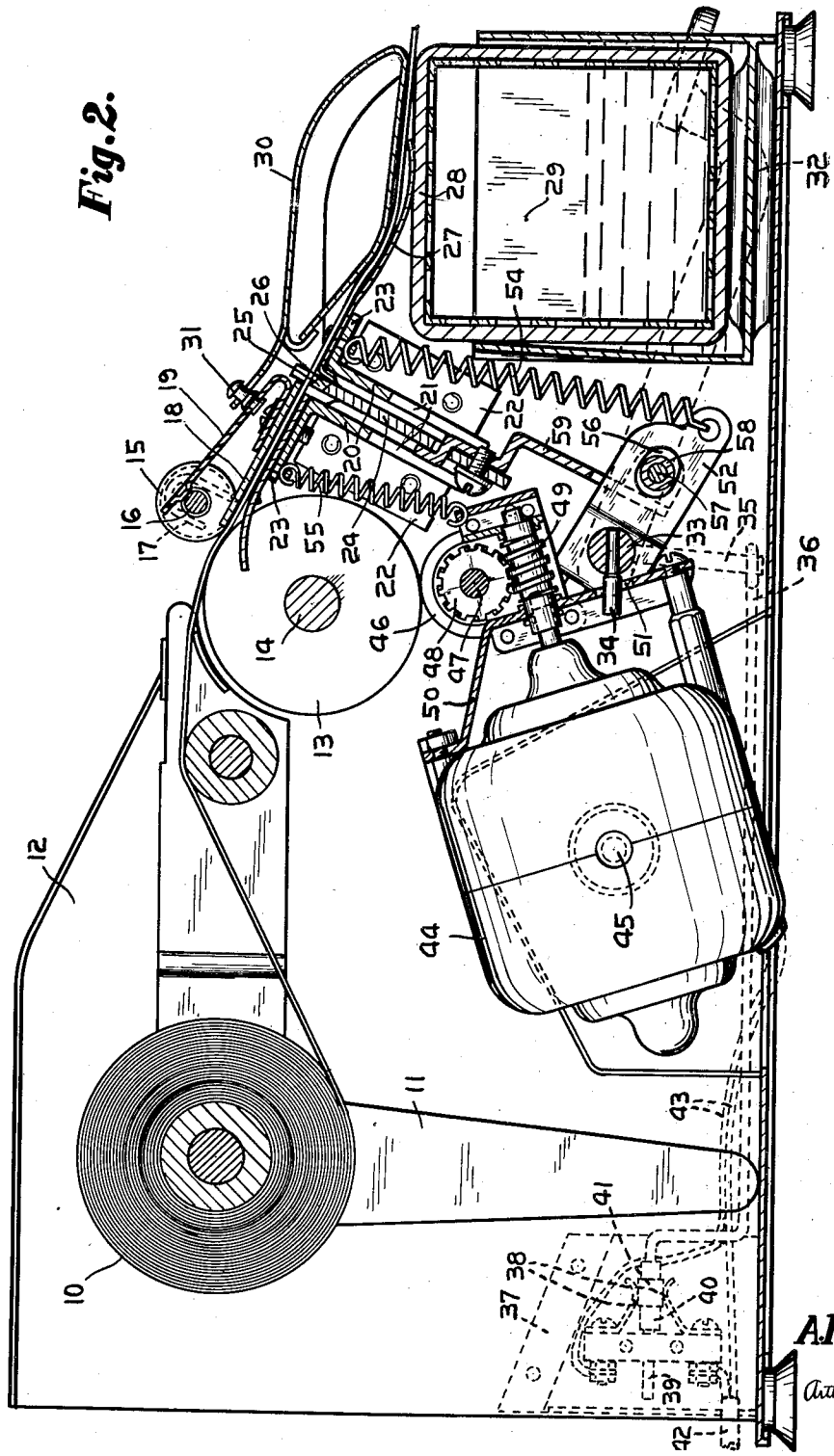
Inventor
A.F. Gillet
Arthur H. Sturges
Attorney

Nov. 20, 1934. A. F. GILLET 1,981,229

ELECTRICALLY OPERATED STRIP SERVER

Filed Dec. 7, 1931 4 Sheets-Sheet 2

Fig. 2.



Inventor

A. F. Gillet

Arthur H. Sturges

Attorney

Nov. 20, 1934. A. F. GILLET 1,981,229

ELECTRICALLY OPERATED STRIP SERVER

Filed Dec. 7, 1931 4 Sheets-Sheet 3

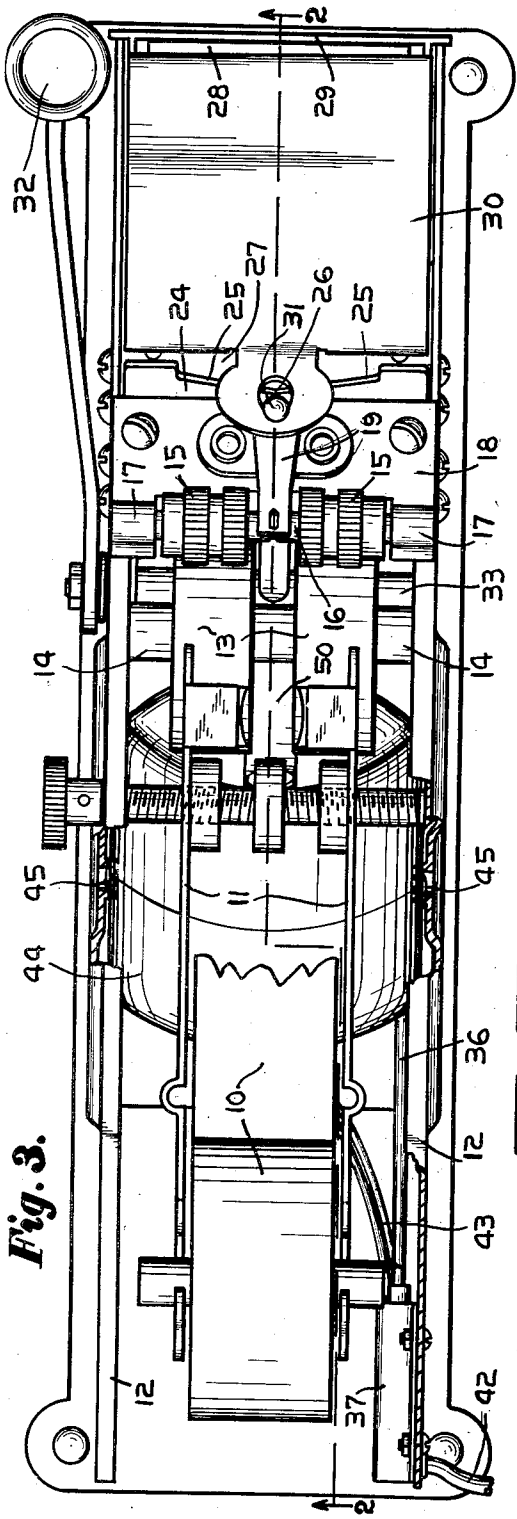
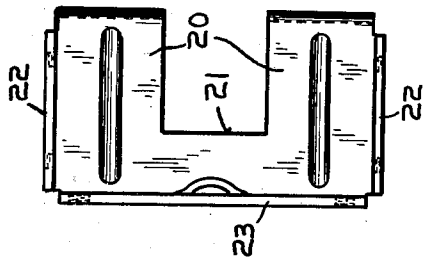


Fig. 3.

Fig. 6.



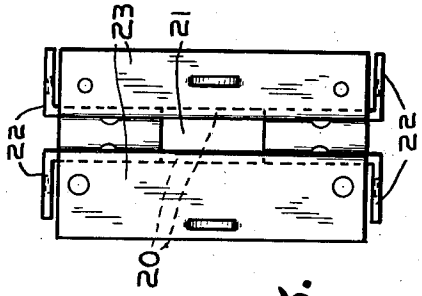


Fig. 5.

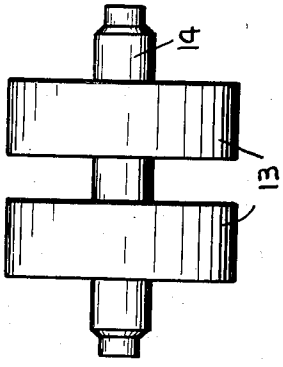


Fig. 4.

Inventor

A.F.Gillet

By Arthur H. Sturges

Attorney

Nov. 20, 1934. A. F. GILLET 1,981,229

ELECTRICALLY OPERATED STRIP SERVER

Filed Dec. 7, 1931 4 Sheets-Sheet 4

Fig. 8.

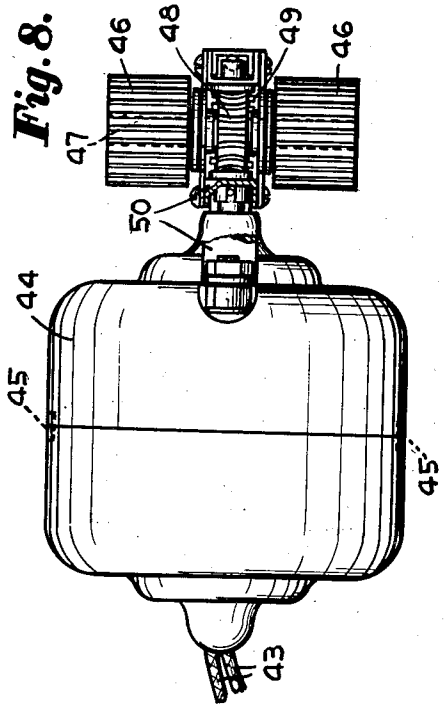


Fig. 9.

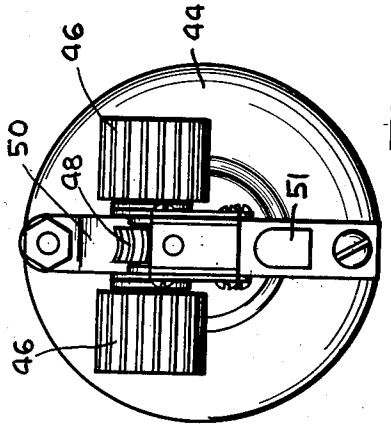
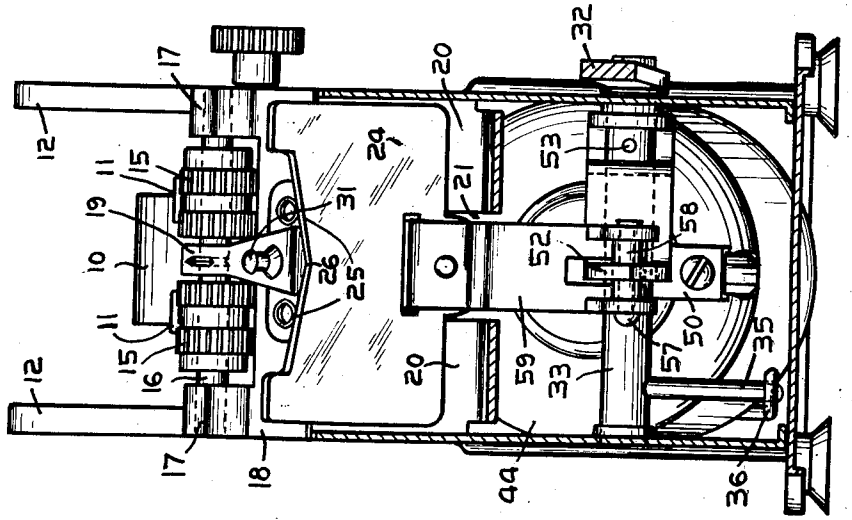


Fig. 7.



Inventor

A.F.Gillet

By Arthur H. Sturges

Attorney

Patented Nov. 20, 1934 1,981,229

UNITED STATES PATENT OFFICE

1,981,229

ELECTRICALLY OPERATED STRIP SERVER

Alexis F. Gillet, Omaha, Nebr., assignor to Jubilee Manufacturing Co., Omaha, Nebr., a corporation of Nebraska

Application December 7, 1931, Serial No. 579,494

5 Claims. (Cl. 271—2.4)

The present invention relates to improvements in electrically operated strip servers, and has for an object certain improvements over my prior co-pending application Serial No. 481,688, filed September 13, 1930.

In common with the objects of that prior application, the present invention has for its purpose to provide a machine which will retain a roll of gummed paper with associated mechanism for the purpose of advancing this strip as required out of the machine and severing same in suitable lengths; the strip being moistened as it emerges from the machine so that it is ready to be applied to packages to be wrapped.

The particular purpose of the present invention is to provide an electrical unit including a motor and driving rolls which are pivotally carried within the casing of the machine for movement into and out of operative contact with the feed rolls for the paper strip.

The invention also contemplates the association of an electrical switch with the motor in such relation that the circuit is opened and closed to the motor in accordance with the position of the driving rolls; the circuit being closed through the motor when the driving rolls are in contact with the feed rollers; the switch being open when the driving rolls are shifted out of operative contact with the feeding rollers.

The invention has for a further purpose a more direct mechanical operation for the knife which severs the strip in suitable lengths.

It is a still further object of the invention to provide a compact and simple motor, switch and drive roll assembly which includes also a connection to the knife for operating the same in such sequence that the paper strip will not be fed against the knife when the same is across the path of the strip but only when such knife is withdrawn so as not to cause buckling of the strip and the clogging of the machine.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views,

Figure 1 is a side elevation, with one wall of the casing broken away and showing an improved machine constructed in accordance with the present invention.

Figure 2 is a longitudinal vertical sectional view taken on the line 2—2 in Figure 3 and showing the engaged position of the parts.

Figure 3 is a top plan view of the improved machine with the cover removed and showing parts in section.

Figure 4 is an edge view of the feed rollers employed.

Figure 5 is a plan view of the knife guide.

Figure 6 is a side view thereof.

Figure 7 is a cross section taken on the line 7—7 in Figure 1.

Figure 8 is a plan view of the motor and driving connections, and

Figure 9 is an end view of the same.

Referring more particularly to the drawings, 10 designates a roll of gummed paper appropriately mounted in an adjustable frame 11 within the casing 12 of the machine. This gummed paper strip 10 is brought up over the feed rolls 13, which feed rolls are more particularly shown in Figure 4, and are preferably spaced apart upon a shaft 14 which is journaled in appropriate bearings in the casing 12.

The strip of paper passes above the feed rolls 13 which are preferably of rubber and such paper strip is pressed firmly against the peripheral edges of the feed rollers 13 by means of pressure rollers 15 which pressure rollers may have knurled peripheral surfaces, as indicated in Figure 3. The pressure rollers 15 are mounted upon a shaft 16, which shaft is slidably mounted in elongated bearings 17 carried by a plate 18. A spring 19, carried by the plate 18 bears against the shaft 16 and urges the pressure rollers 15 against the paper strip and against the feed rollers 13.

The paper strip passes through a throat or strip passage above the knife guide, which knife guide is shown more particularly in Figures 5 and 6 and comprises a substantially U-shaped sheet of metal or other material having the side guide walls 20 open at their ends and upper portions and formed with a slot 21 intermediately thereof.

Perforated end flanges 22 provide for securing the knife guide within the casing 12, and upper perforated flanges 23 provide for cooperating with other parts which form the strip throat or passage and which ease the movement of the paper strip through and past the knife guide. Through the knife guide is adapted to move the reciprocating knife 24, such knife 24 as indicated in Figure 7, having an upper knife edge composed of downwardly convergent surfaces 25 meeting in a central point 26, whereby to shear the paper strip from the outside toward the center during the upward movement of the knife

across the path of the strip, which upper position is shown in Figure 1.

After passing the knife, the strip is received upon a guide plate 27 which rests upon and terminates short of the moistening pad 28 which dips into the tank of water 29 whereby the pad is kept moist by capillary attraction. Above the guide plate 27 is a guard 30 bearing upon the strip not only upon the plate 27 but also upon the moistener felt 28 and insuring that the same is properly moistened. The guard plate 30 is pivotally hung from a pivot stud 31 carried by the spring 19 or other part.

The operating lever for the machine is indicated at 32 and the same projects along one side of the casing as indicated in Figure 3, being connected to a shaft 33 mounted transversely across the casing of the machine and carrying a short rearwardly projecting pin 34 and an elongated downwardly projecting pin 35. The latter is connected by a link or rod 36, running to the rear of the casing with an electrical switch 37 having spring contacts 38 which receive therebetween the sliding end portion 39 of the connection 36 which is bent upwardly at its rear end and thence rearwardly into alignment with the switch. On this rod end 39 are a sleeve or section 40 of insulation and a contact cylinder or section 41, preferably of greater diameter as compared with the insulating sleeve 40. The switch is connected by leads 42 with an external source of current, for instance the house current into which the machine may be plugged. Leads 43 are shown connecting the switch with the electric motor 44 which electric motor is pivotally mounted, as at 45 to the casing, whereby it may be swung back and forth to permit the pressure rolls 46 carried by and with such electric motor to be moved into and out of operative relation and contact with the lower portions of the feed rollers 13.

The pressure rollers 46 are mounted upon a shaft 47 which shaft contains a worm wheel 48, best seen in Figures 2, 8 and 9.

In Figures 8 and 9 the pressure rolls 46 are also shown to have knurled or roughened peripheries to take a better bite and contact with the rubber surface of the feed rollers 13. The worm wheel 48 engages a worm 49 on the armature shaft of the electric motor 44. The worm and worm wheel and the pressure rolls 46 are all carried by an extension frame 50 on the motor housing and in this extension frame is a slot 51 for receiving the short rearwardly projecting pin 34. The movement of the pin up and down in the slot 51 will cause the pivotal swinging of the electric motor and its assembly about the center 45 thus causing the pressure rolls 46 to move into and out of contact with the feed rollers 13. The two positions of the parts are shown in Figures 1 and 2.

The transverse shaft 33 also carries an arm 52 which arm is affixed thereto in any appropriate manner as by the pin 53, shown in Figure 7. A strong spring 54 is coupled between the arm 52 and a fixed part of the device, the spring tending to swing the shaft 33 in a counter-clockwise direction to the position shown in Figure 1, disengaging the various parts and causing the knife 24 to move up and sever the paper strip.

The lighter spring 55 will insure contact between the rubber feed rolls 13 and the pressure or drive rolls 46 at all times when the lever 32 is down or partly down. The spring 55 is weaker or of less tension than the spring 54, and is overcome by the latter when the lever 32 is released.

As shown in Figure 2 the arm 52 has an elongated slot 56 therein for receiving a pin 57 and roller 58 carried upon the knife bar 59 whereby certain loose movement is provided which is necessary to a connection between the reciprocating knife 24 and the oscillating arm 52 moving about the center of the shaft 33. This also forms an anti-friction connection which will facilitate the movement of the parts and prevent any possible disastrous binding.

In operation, the operator will depress the operating lever 32 which is normally in the position shown in Figure 1 to that shown in Figure 2. When so depressed, the transverse shaft 33 is partly turned thus moving with it the pins 34 and 35 and the arm 52. The short pin 34 rotates the electric motor and its driving unit to a position where the drive rolls 46 engage firmly with the feed rolls 13, this contact being furthered by the spring 55.

The movement of the longer pin 35 will act to shove the rod 36 rearwardly, and shift the contact section 41 of the switch between the spring contact fingers 38, thus closing the circuit and putting the motor 44 into operation, as a result of which the worm gearing will be driven causing corresponding movements in the drive rolls 46 and the feed rolls 13. This feeding movement of the paper strip will continue so long as the operating lever 32 is held depressed. By so doing the operator may control the length of paper strip desired, which strip is fed outwardly of the machine and appropriately moistened so that it is ready for application.

Also when the lever 32 is depressed the arm 52 will be moved downwardly drawing the knife 24 to a retracted position within its guard and leaving an unobstructed passage for the paper strip.

When the operating lever 32 is released, the parts will be promptly restored to the position shown in Figure 1 by a strong spring or springs 54 which will rotate the shaft 33 in a counter-clockwise direction thus quickly shifting the knife 24 upwardly across the path of the strip and severing that strip at the length required.

At the same time the switch is opened by reason of the contact section 41 moving out of the contact fingers 38 and being replaced by the insulating sleeve portion 40 so that current is cut off from the motor 44.

After the circuit is opened and the current cut off, the armature of the motor will nevertheless continue to revolve on account of the momentum acquired, which revolvable movement of the armature would continue to cause movement of the drive wheels 46. Such movement of the drive wheels would be transferred to the rubber feed rollers 13, causing the paper strip to be fed against the knife which at this time extends across the throat of the machine through which the paper strip is fed. Such movement would cause the buckling of the paper strip against the knife and the clogging of the machine. This situation is, however, saved by the fact that the motor and its drive unit are pivotally mounted so as to promptly withdraw the drive rolls 46 from contact with the feed rollers 13. Any additional movement occasioned by momentum or inertia will, therefore, have no effect on the feed rollers 13 which will be stopped promptly by reason of the friction developed by the paper strip and by the action of the pressure rolls 15.

I do not wish to be restricted to the size, form, and proportions of the various parts, and obviously changes could be made in the construction herein described without departing from the spirit of the invention, it being only necessary that such changes fall within the scope of the appended claims.

What is claimed is:

1. In an electrically operated strip server, an operating shaft, short and long pins on said shaft, a pivotally mounted electric motor, an extension frame on the motor having a slot to receive the short pin, a switch in circuit with the motor, connections to the long pin to open and close said switch, drive means carried by the extension frame of the motor and driven from said motor at reduced speed, and feed rollers for the strip engaged by said drive means.

2. In an electrically operated strip server, an operating shaft, short and long pins on said shaft, a pivotally mounted electric motor, an extension frame on the motor having a slot to receive the short pin, a switch in circuit with the motor, a rod connected to the long pin, said rod having an upturned portion in alignment with said switch to open and close same, drive means carried by the extension frame of the motor and driven from said motor at reduced speed, and feed rollers for the strip engaged by said drive means.

3. In an electrically operated strip server, a pivotally mounted electric motor, feed rollers for the strip, an extension frame having a slot, operating mechanism having a pin playing in said slot for shifting the motor, reduction gearing carried by said extension frame, drive rolls carried by said extension frame and driven by said gearing, said drive rolls being movable into and out of contact with the feed rollers on movement of said pin.

4. In an electrically operated strip server, a casing, an operating shaft mounted transversely across said casing and having long and short pins, a pivotally mounted electric motor moved by said shaft, an extension frame having a slot to receive the short pin, a switch, connections from the long pin to open and close the switch, drive means movable with and operated by said electric motor, and feed rollers for the strip engaged in one position by said drive means.

5. In an electrically operated strip server, an operating shaft having long and short pins, a pivotally mounted electric motor, an extension frame on the motor having a slot to receive the short pin, a switch in circuit with the motor, a rod connected to the long pin on one end and the other having an upturned portion in alignment with said switch to open and close same, drive means carried by the extension frame of the motor and driven from said motor at reduced speed, and feed rollers for the strip engaged by said drive means.

ALEXIS F. GILLET.