

**June 4, 1946.**

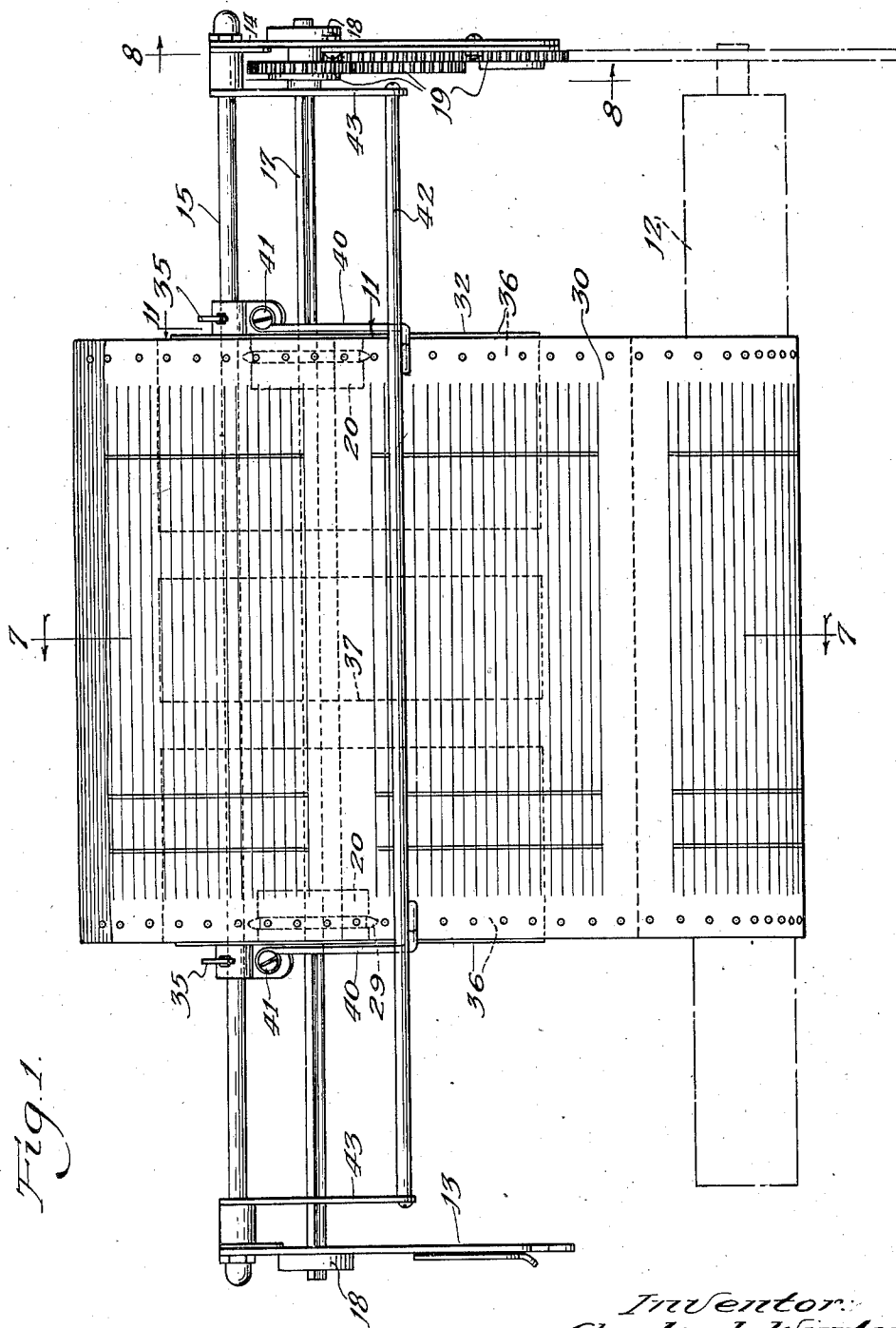
**C. L. WINTER**

**2,401,596**

### STATIONERY FEEDING DEVICE WITH RETRACTABLE PINS

Filed Dec. 11, 1943

3 Sheets-Sheet 1



Inventor:  
Charles L. Winter

By: *Charles Z. Winter*  
*Christen, Willis, Dancy, Schroeder & Merriam*  
*Attorneys*

June 4, 1946.

C. L. WINTER

2,401,596

STATIONERY FEEDING DEVICE WITH RETRACTABLE PINS

Filed Dec. 11, 1943

3 Sheets-Sheet 2

Fig. 2.

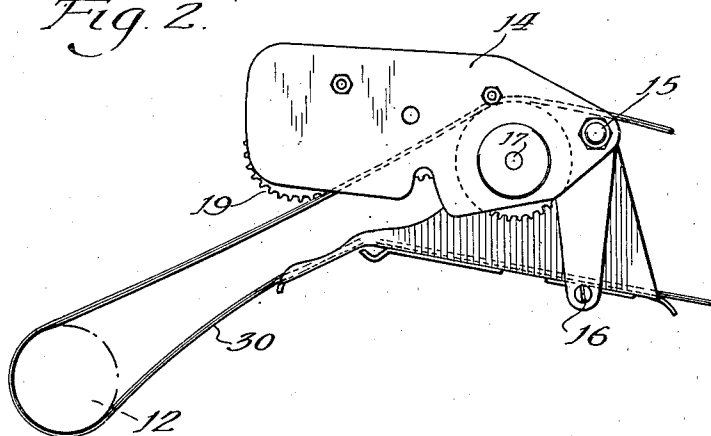


Fig. 3.

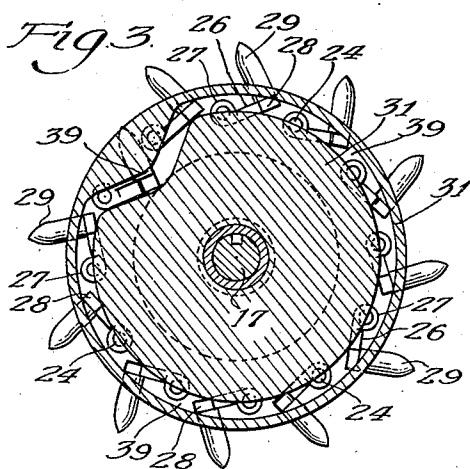


Fig. 4.

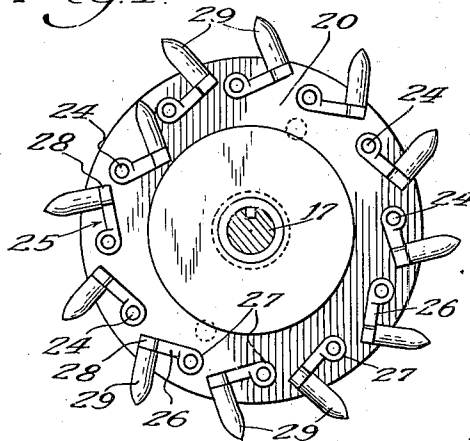


Fig. 5.

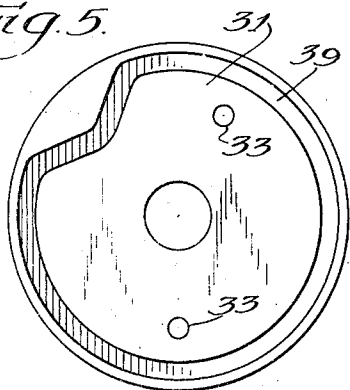
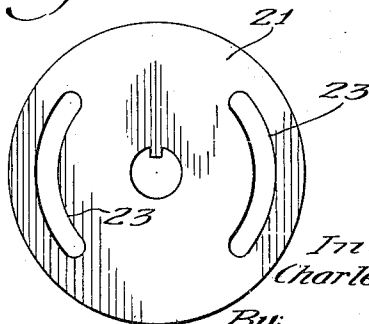


Fig. 6.



Inventor:  
Charles L. Winter

By:  
Chittton, Wilson, Duncanson & Mesum  
Attorneys

June 4, 1946.

C. L. WINTER

2,401,596

STATIONERY FEEDING DEVICE WITH RETRACTABLE PINS

Filed Dec. 11, 1943

3 Sheets-Sheet 3

Fig. 7.

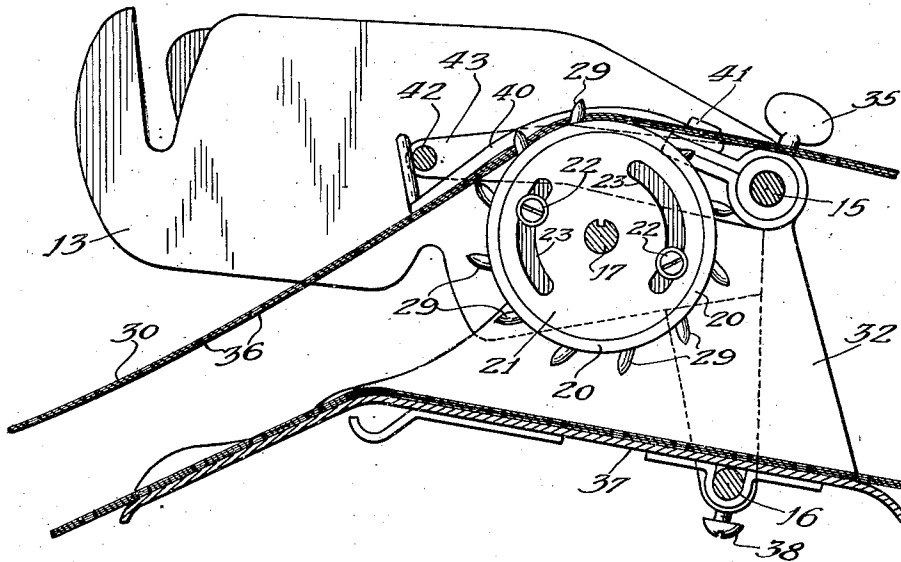


Fig. 8.

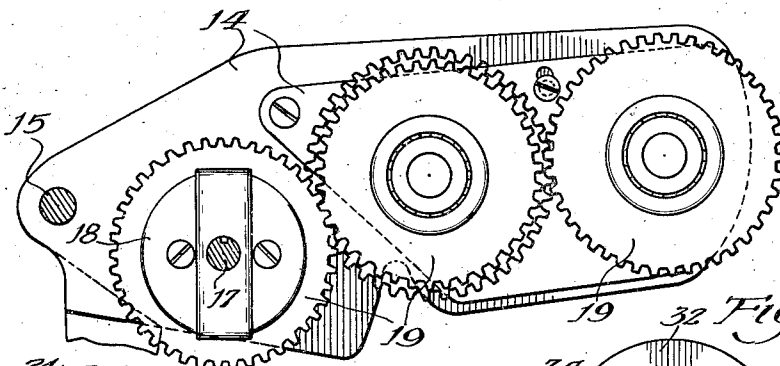


Fig. 9.

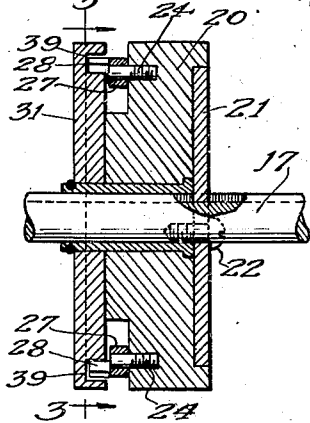


Fig. 10.

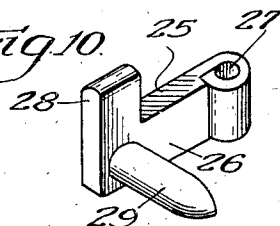
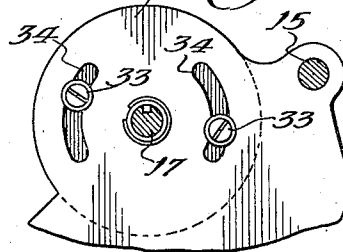


Fig. 11.



Inventor:  
By: Charles L. Winter  
Chittin, Wiles, Davies, Schroeder & Merriam  
Attorneys

## UNITED STATES PATENT OFFICE

2,401,596

STATIONERY FEEDING DEVICE WITH  
RETRACTABLE PINSCharles L. Winter, Chicago, Ill., assignor to United  
Autographic Register Co., a corporation of Illi-  
nois

Application December 11, 1943, Serial No. 513,879

1 Claim. (Cl. 197—133)

1 This invention relates to pin type feeding devices for marginally punched stationery, and more particularly to an improved feed wheel with cam retracted pins.

The primary object of the invention is to provide an improved feed wheel wherein the pointed feed pin is mounted on a fixed pivot in the wheel and is provided with a grooved cam for oscillating the pin into and out of engagement with the paper. The pins, when engaging the stationery, are inclined forwardly and are arranged so that with proper size holes, the stationery will be held in contact with the feeding wheel and the ordinary paper guides are not needed.

Another object of the invention is to provide a simple and compact unit which may be adjusted to accommodate various widths of stationery and the feed wheels may be rotationally adjusted to provide proper line spacing around a platen and also be properly aligned with each other.

Another object of the invention is to provide an adjustable cam-member so that the stationery may be released by the retracted pins at the desired point in the cycle.

The invention is illustrated in a preferred embodiment in the accompanying drawings, in which—

Figure 1 is a plan view of the improved device with the associated rotary platen indicated by dotted lines; Figure 2, a side elevational view of the device shown in Figure 1; Figure 3, a vertical sectional view of the feed wheel, taken as indicated at line 3—3 of Figure 9; Figure 4, an end elevational view of the feed wheel with the cam-member removed; Figure 5, an end elevational view of the cam-member; Figure 6, an elevational view of the driving hub of the feed wheel; Figure 7, a vertical sectional view, taken as indicated at line 7—7 of Figure 2; Figure 8, a fragmentary sectional view of the frame, taken as indicated at line 8—8 of Figure 1; Figure 9, a fragmentary sectional view of one of the feed wheels and operating cam; Figure 10, an enlarged perspective view of one of the feed units showing the pin, cam-fingers, and bearing; and Figure 11, a fragmentary sectional elevational view, taken as indicated at line 11—11 of Figure 1.

The apparatus is embodied in an attachment which may be fitted onto a typewriter machine having a power driven platen roll 12 as found in a tabulating machine, or the like. The attachment has an end plate 13 which is connected to a companion end plate 14 by an upper cross rod 15 and a lower cross rod 16. A cross shaft 17 is

2 journaled in bearings 18 and is driven in timed relation to the platen roll by means of a train of gears indicated at 19.

A pair of feed wheels 20 are secured to hubs 21 by screws 22 which extend through slots 23 in the members 21. The hub member, in turn, is splined to the driven shaft 17. The slots 23 enable the wheels to be adjusted rotationally with respect to each other and with respect to the platen 12. As shown in Figure 4, each of the feed wheels is provided with a concentric series of regularly spaced pivots 24 about which the feed units 25 may oscillate. Each feed unit, as best shown in Figure 10, as an arm 26 provided at one end with a bearing portion 27 and at the other end with a laterally extending cam-finger 28. The arm 26 is also provided near the finger 28 with a straight outwardly extending pointed feed pin 29 which is adapted in extended position to engage holes in marginally punched stationery 30 and draw it around the platen of the machine.

A cam-member 31 is adjustably secured to a bracket 32 by means of screws 33 which extend through arcuate slots 34, as shown in Figure 11. The carrier 32 is laterally adjustable on the cross bar 15 and is held in position by a thumb screw 35. The cam bracket 32 extends downwardly and has a laterally extending flange 36 which serves as a support for the stationery advancing to the platen beneath the feeding mechanism. If desired, an additional guide member 37 may be secured to the lower cross rod 16 by means of a screw 38, as shown in Figure 7.

As shown in Figures 3 and 5, the cam-member 31 has a cam groove 39 which receives each of the cam-fingers 28 on the feeding units 25, and as the wheel 20 is rotated, one or two of the pins 29, at one point in the cycle, will be retracted from extended position. It will be noted that in extended position each of the straight pins is inclined forwardly in the direction of movement. This inclination holds the paper in engagement with the wheel 20 until the pin is retracted by the cam. However, in some cases the perforations in the stationery may be so much larger than the diameter of the pins 29 that additional guides may be desirable.

As shown in Figures 1 and 7, a curved guide member 40 may be pivotally connected to each bracket 32 by means of a screw 41. Also, a guide rod 42 may be hinged to the cross rod 15 by means of arms 43. The rod may be turned up out of the way and guides 40 swung laterally while the stationery is being loaded into the machine.

3

It will be understood that rotation of the platen of the machine 12 will automatically drive the shaft 17 and the wheels 20. Preferably the peripheral speed of the pin mechanism is made slightly faster than the peripheral speed of the platen, by the gearing 19, so that the paper will be fairly taut around the platen. The mechanism is of light weight and may be operated at high speed.

The foregoing detailed description has been given for clearness of understanding only and no unnecessary limitations should be understood therefrom for some modifications will be obvious to those skilled in the art.

I claim:

In a typewriting machine having a driven rotary platen; a frame provided with cross rods mounted on said machine and having a drive shaft geared to said platen; a hub splined to

4

said shaft a feed wheel rotationally adjustable on said hub and having a series of regularly spaced feed units pivotally mounted on said wheel, each of said units having an arm extending from the pivot and provided near its free end with a laterally extending cam finger and a straight shanked feed pin disposed at an angle to said arm so as to project outwardly and forwardly from the wheel when extended; and a cam support member slidably mounted on a cross rod of the frame; and a cam member adjacent to said wheel and rotationally adjustable on said support member, said cam member having a groove to receive the cam fingers of the units and oscillate the pins into feeding engagement with the stationery during each rotation of the wheel.

CHARLES L. WINTER.