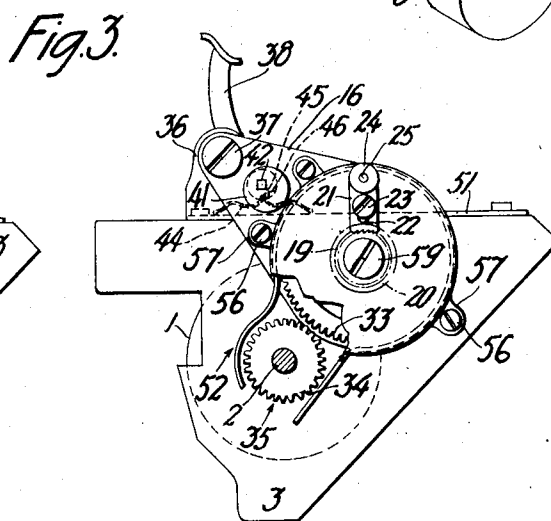
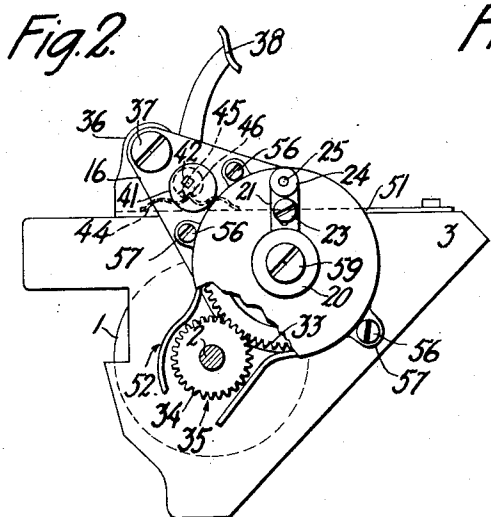
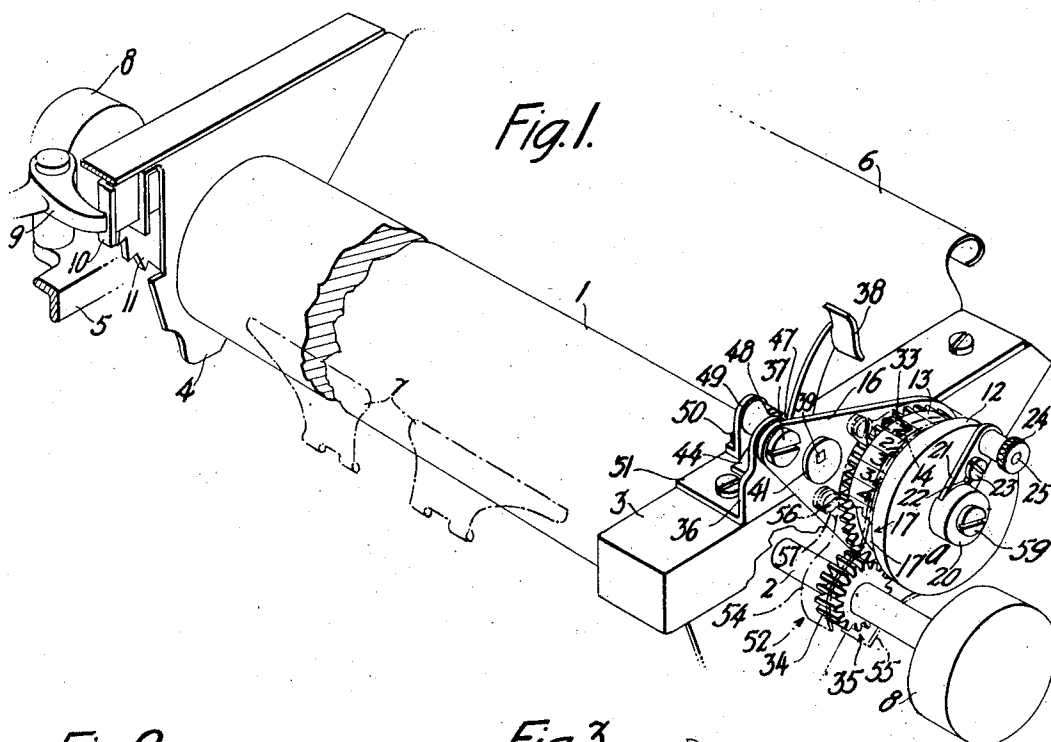


1,388,320.

Patented Aug. 23, 1921.
 2 SHEETS—SHEET 1.



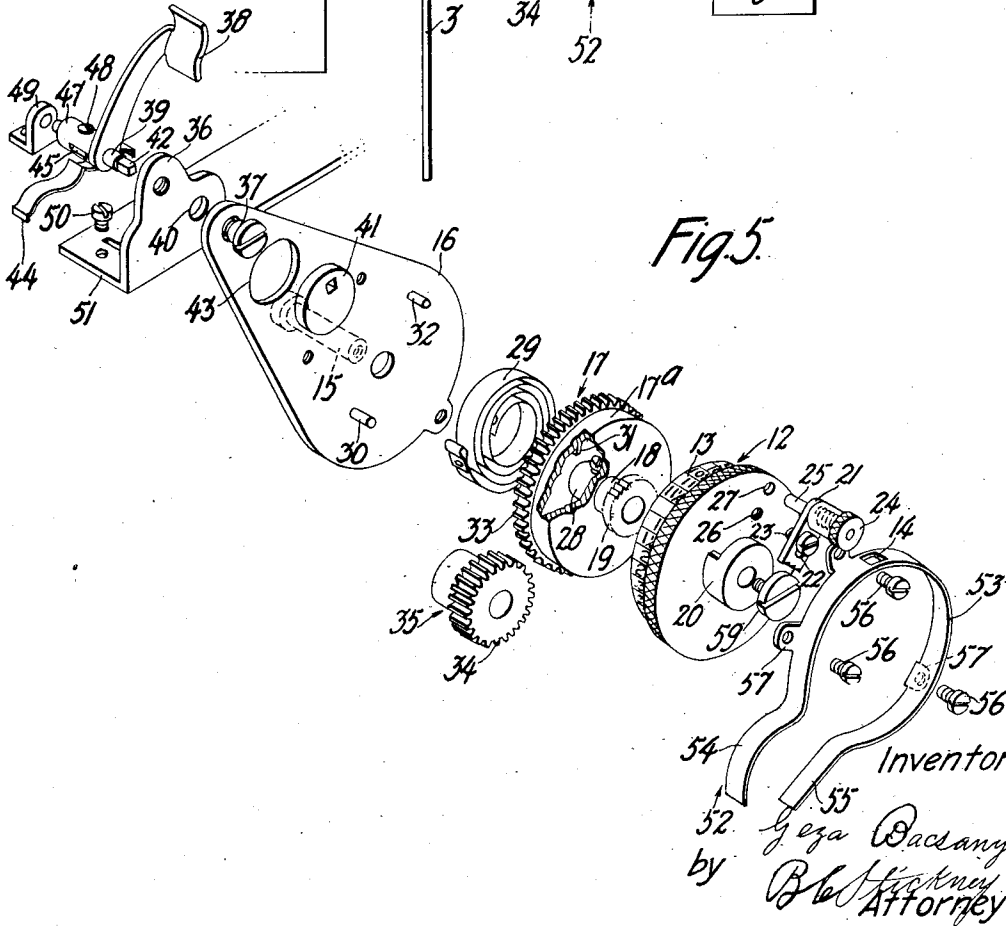
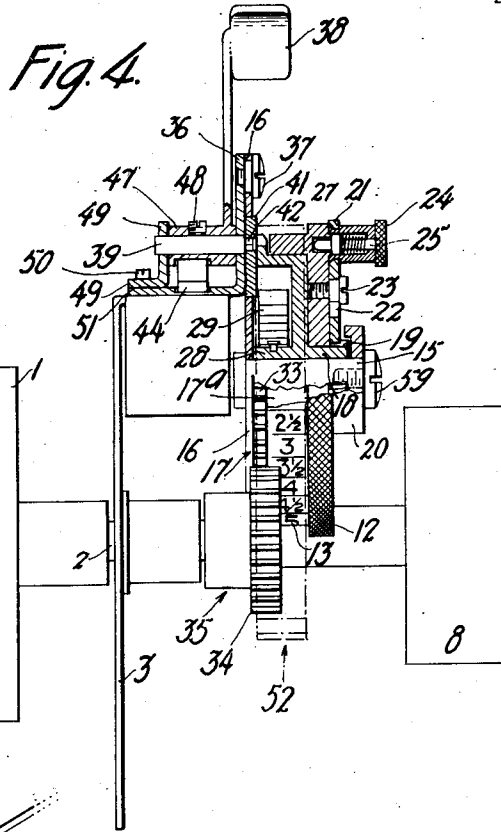
Inventor:
 Geza Bacsanyi
 by *Ob. Stickney*
 Attorney

G. BACSANYI.
TYPEWRITING MACHINE.
APPLICATION FILED FEB. 3, 1919.

1,388,320.

Patented Aug. 23, 1921.

2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

GEZA BACSANYI, OF DETROIT, MICHIGAN, ASSIGNOR TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE.

TYPEWRITING-MACHINE.

1,388,320.

Specification of Letters Patent. Patented Aug. 23, 1921.

Application filed February 3, 1919. Serial No. 274,639.

To all whom it may concern:

Be it known that I, GEZA BACSANYI, a citizen of the United States, residing in Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Typewriting-Machines, of which the following is a specification.

This invention relates to typewriting machines, and more especially to devices for determining the relationship of a work-sheet of given length to the number of lines of writing which are placed upon it. Some of the features enable the device to be used to indicate the number of line-spaces the work sheet has been advanced from a given line. The device is, however, herein illustrated as adapted to indicate the number of lines yet remaining available for writing upon a given work-sheet after the work-sheet has been inserted in the machine and some writing has been done.

The invention is herein disclosed as a device which is adapted to be geared to the platen at any desired time, with the result that after being thus geared, the device will indicate to the typist the number of lines remaining between the line then being written and the end of the work-sheet. To accomplish this result, the device is herein shown as comprising a pinion which may be moved into mesh with a driving pinion fast on the platen axle, so that the first-named pinion in being driven by the turning of the platen axle is adapted to wind a spring, the pinion thus turning away from a stop against which the spring normally holds it. To this first-named pinion, there may be adjustably attached a scale which bears numerals adapted to indicate to the typist the number of line of writing which may at any time be written upon the work-sheet,—the scale being adjustable by the typist to fit the length of the work-sheet in use at the time. When the spring is completely wound up so that the pinion can turn no further, the platen is necessarily locked, with the result that the device may be utilized as a page-end lock.

Other features and advantages will hereinafter appear.

In the accompanying drawings,

Figure 1 is a perspective view, partly

fragmentary, of an Underwood typewriter carriage, showing my invention as applied thereto.

Fig. 2 is an end view of the same, showing my device with the parts in position to display scale indications upon the platen as rotated.

Fig. 3 is a similar view with the parts disconnected so the platen may rotate independently of the scale.

Fig. 4 is a fragmentary front view, partly in section, of the parts seen in Fig. 2.

Fig. 5 is a dissected perspective view to show the mounting of the parts upon each other.

In the Underwood typewriting machine, the usual platen 1 is fast upon an axle 2 journaled in the shift frame, which includes ends 3 and 4, and which is mounted to shift upon the carriage 5. In inserting a work-sheet, the work-sheet may be inserted from the rear over the usual paper table 6, and pass up around the bottom of the platen until its leading edge coincides with the top of the usual wing scales 7. The platen may then be rotated (after casting on the usual feed-rolls, not shown) to advance the work-sheet either by the usual knobs 8 or the line-space lever 9, the latter being effective through the slide 10 upon the line-space wheel 11. When a work-sheet has been lined up with the top of the wing scale 7, the typist may adjust a wheel 12, so that a scale 13 forming a cup thereon, when viewed through an opening 14, will display to the typist the number of lines upon the work-sheet not yet written upon,—the total number of lines on the work sheet having been previously ascertained.

To permit this adjusting of the wheel 12, it is journaled upon a shaft 15 fast upon a swing plate 16, said swing plate being mounted upon the end 3 of the shift frame in a manner which will hereinafter be described. The wheel 12 is adjusted by rotating it relatively to a wheel 17, having a flat periphery 17^a, which the scale 13 overlies. The wheel 17, for this purpose, comprises a hub 18, forming a sleeve upon the shaft 15, said hub having fast thereto a toothed wheel 19 which projects from the hub and through the wheel 12 into an en-

larged hollow hub 20 of the wheel 12. As thus constructed, the wheel 12 is journaled upon the wheel 17. To adjustably fasten the two wheels together, there is provided a dog 21 comprising a slot 22 embracing a shouldered screw 23, so that when the dog is set toward the center of the wheel 12, it will engage the teeth of the wheel 19 and thereby cause the wheel 12 and the wheel 17 to turn together as a unit upon the shaft 15. To enable the typist to conveniently manipulate the dog 21, it is provided with a spring-pressed finger-piece 24 which normally tends to press a detent pin 25 inwardly, so that it will engage a hole 27 in the wheel 12. When the pin 25 engages the hole 27, it holds the dog 21 in engagement with the teeth of the wheel 19, but when the pin 25 is lifted out of the hole 27, the dog 21 may be withdrawn from the wheel 19, so that the wheel 12 may turn freely on the wheel 17. Thus the wheels may be turned relatively to each other and then locked in the desired position.

The wheel 17 has its sleeve hub 18 extended inwardly at 28 to form an anchor for a clock spring 29, said spring having its other end anchored in a post 30 upon the plate 16 in such a manner that the wheel 17 normally holds a lug 31 upon its inner surface against a pin 32 upon the plate 16. For compactness, the wheel 17 is formed as a cup within which the lug 31 stands and the spring 29 lies completely concealed. This structure provides means whereby the wheel 17 normally occupies one position, and the wheel 12 may be variably fastened to the wheel 17, with the result that the wheel 12 will normally display a selected one or another of its scale numbers through the opening 14.

To utilize this mechanism for causing the displaced scale number to indicate the number of lines which may yet be written upon the work-sheet, the wheel 17 is provided with teeth 33, which are adapted to be brought into mesh with teeth 34 of a pinion 35 fast upon the platen axle. To permit these two sets of teeth to be brought into mesh, the plate 16 is journaled upon an up-turned bracket-ear 36 fast on the end 3 of the shift frame, the bearing being formed by a shouldered screw 37 threaded into said ear. To swing the plate 16 upon its journaled screw 37, the typist may draw forward a handle 38 fast upon a shaft 39 which is journaled in an opening 40 in the ear 36. When thus drawn forward, the handle 38 rotates with it an eccentric plate or cam 41 fast to the squared end 42 of the shaft 39, thereby rotating the eccentric plate and consequently swinging the plate 16. Inasmuch as the amount of swinging of the plate 16 is only slightly in excess of that needed to clear the teeth 33 and 34, the eccentric member 41 may form a fairly close fit in the pinion 43 of the plate 16, in which it revolves, and the

plate may also fit the screw 37 closely. When drawn forward, the handle 38 separates the teeth 33 and 34, and then holds them separated because a detent spring 44 lying upon the top of the end 3 seats itself in the opening 45 on the shaft 39. The spring 29 immediately rotates the wheel 17 until the lug 31 strikes the pin 32.

The typist then inserts the work-sheet, as mentioned above, alining its leading edge on the wing scales 7, and clamps it against the platen by the usual feed rolls, not shown. Then the typist releases the dog 21 and adjusts the wheel 17 to bring to the opening 14 the scale number indicating the number of lines which can be written upon the work-sheet. Then the typist swings the wheel 17 into mesh with the wheel 35. This adjusts the device so that the scale at any moment of the ensuing writing indicates the number of lines as yet unwritten upon on the work-sheet.

If a new sheet is inserted of the same size, the typist may adjust it to the wing scales 7, and operate the handle 38 to first release the wheels 17 and 35 and then throw them in mesh. This repositions the lug 31 and the scale 13 for the new sheet.

When the handle 38 is pushed rearwardly against the tension of the detent spring 44, which is seated in the opening 45 upon the shaft 39, it turns the eccentric plate or cam 41 to move the teeth 33 into mesh with the teeth 34. When moved into this position, the detent spring 44 seats itself in a second opening 46 upon the shaft 39. In order to give the shaft sufficient diameter to enable the detent spring 44 to hold the handle 38 and other attached parts, the openings 45 and 46, instead of being in the shaft itself, are in an enlarged hub or sleeve 47 held to said shaft by a set screw 48. In order to steady the end of the shaft 39, it is journaled in a small bracket 49, held by a screw 50 upon the bracket 51, from which the ear 36 projects.

To indicate to the typist which reading or scale number of the scale 13 is to be read, and also to prevent the mechanism from becoming entangled with other things, such as the typist's dress, there is provided a casing 52 in the form of a strip which nearly embraces the scale 13 by means of a large circular bent portion 53 of the strip, in which bent portion the opening 14 is provided. In order to form a shield for the pinion 35, the ends of the strip 52 are extended over said pinion at 54 and 55, lying clear enough of the pinion to enable the plate 16 to swing without carrying the strip 52 against the pinion 35. The strip 52 is held in place by means of screws 56 which are adapted to pass through openings in ears 57 and to be threaded into openings 58 in the plate 16.

It should be noted that the number of

teeth 34 on the pinion 35 should either be identical with the number of line-spaces included in a single revolution of the platen 1, or else should be a multiple of said line-spaces. This will insure that the teeth 33 and 34 will always mesh when the wheel 17 is swung against the pinion 35.

By having the pinion 35 small, as shown in the drawings, the platen in going through a full revolution will only turn the much larger wheel 17 through part of a revolution, with the result that the lug 31 may be a fixed stop and yet allow several revolutions of the platen to take place, if desired, before the spring 29 is completely wound up. The relative size of the pinion 35 and the wheel 17 may be varied in different machines to suit the types of work the machines are intended to perform.

In Fig. 5, the separated parts show clearly how the mechanism may be assembled, by first putting the spring 29 in place in the cup on the wheel 17, which may be then placed against the plate 16. Over this may be placed the wheel 12, and the whole held together by screwing a headed screw 59 into the threaded end of the shaft 15. The guard strip 52 may be then sprung into place and the screws 56 inserted therethrough. The only point to be observed in assembling the device is to have the lug 31 properly positioned relatively to the pin or lug 32, so that the unwinding of the spring will bring the lug 31 upon the proper side of the pin 32. The adjustment of the wheel 12 upon the wheel 17 will be effected by the typist to suit the work in hand, and no attention need be paid to this adjustment in the assembling of the mechanism. The surface of the wheel 12 may be knurled, if desired, as illustrated in Figs. 4 and 5, for convenience in adjusting the wheel. The scale 13, illustrated in the drawings, is a scale provided for a special form of work in which it is desired to count certain lines as at full line-spaces apart, and intervening lines as at half line-spaces from them.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others.

Having thus described my invention, I claim:

1. In a typewriting machine, the combination with a pinion having a hub, of a scale having a hub into which said first hub projects, and a dog adapted to pass through an opening in said scale hub to variably engage the first hub to position the scale variably thereon.

2. In a typewriting machine, the combination with a revoluble platen, of a gear pinion connected to the platen axle, a gear wheel running in mesh with said pinion, a swinging carrier on which said gear wheel is journaled, a lever adapted to swing said carrier

to shift the gear wheel into and out of mesh with said pinion, said gear wheel having a hub and having also a portion of its periphery flattened, a number wheel having a cylindrical hub portion and a flange provided with numerals, said flange fitting over the flattened periphery of the gear wheel, the hub of said gear wheel being adapted to project into the cylindrical hub of the number wheel, and means for fixing said gear wheel and number wheel in relative position.

3. In a typewriting machine, the combination with a revoluble platen, of a gear pinion connected to the platen axle, a gear wheel running in mesh with said pinion, a swinging carrier on which said gear wheel is journaled, a lever adapted to swing said carrier to shift the gear wheel into and out of mesh with said pinion, said gear wheel having a hub and having also a portion of its periphery flattened, a number wheel having a cylindrical hub portion and a flange provided with numerals, said flange fitting over the flattened periphery of the gear wheel, the hub of said gear wheel being adapted to project into the cylindrical hub of the number wheel, and means on the number wheel projecting through said cylindrical portion and contacting with the hub of the gear wheel for fixing said gear wheel and number wheel in relative position.

4. In a typewriting machine, the combination with a revoluble platen, of a gear pinion connected to the platen axle, a gear wheel running in mesh with said pinion, a swinging carrier on which said gear wheel is journaled, a lever adapted to swing said carrier to shift the gear wheel into and out of mesh with said pinion, said gear wheel having a hub provided with teeth and having also a portion of its periphery flattened, a number wheel having a cylindrical hub portion and a flange provided with numerals, said flange fitting over the flattened periphery of the gear wheel, the hub of said gear wheel being adapted to project into the cylindrical hub of the number wheel, and means on the number wheel projecting through said cylindrical portion and provided with teeth, said last-named teeth being adapted to mesh with the teeth on the hub of said gear wheel for fixing said gear wheel and number wheel in relative position.

5. In a typewriting machine, the combination with a revoluble platen, of a gear pinion connected to the platen axle, a gear wheel running in mesh with said pinion, a swinging carrier on which said gear wheel is journaled, a lever adapted to swing said carrier to shift the gear wheel into and out of mesh with said pinion, said lever being mounted upon a shaft provided with a hub, said hub having flattened portions, a spring-detent adapted to cooperate with the flattened portions to hold the lever in each of several

positions, said gear wheel having a hub and having also a portion of its periphery flattened, a number wheel having a cylindrical hub portion and a flange provided with numerals, said flange fitting over the flattened periphery of the gear wheel, the hub of said gear wheel being adapted to project into the cylindrical hub of the number wheel, and means for fixing said gear wheel and number wheel in relative position.

GEZA BACSANYI.

Witnesses:

FRED A. GROSFIELD,
ANTHONY GROSFIELD.