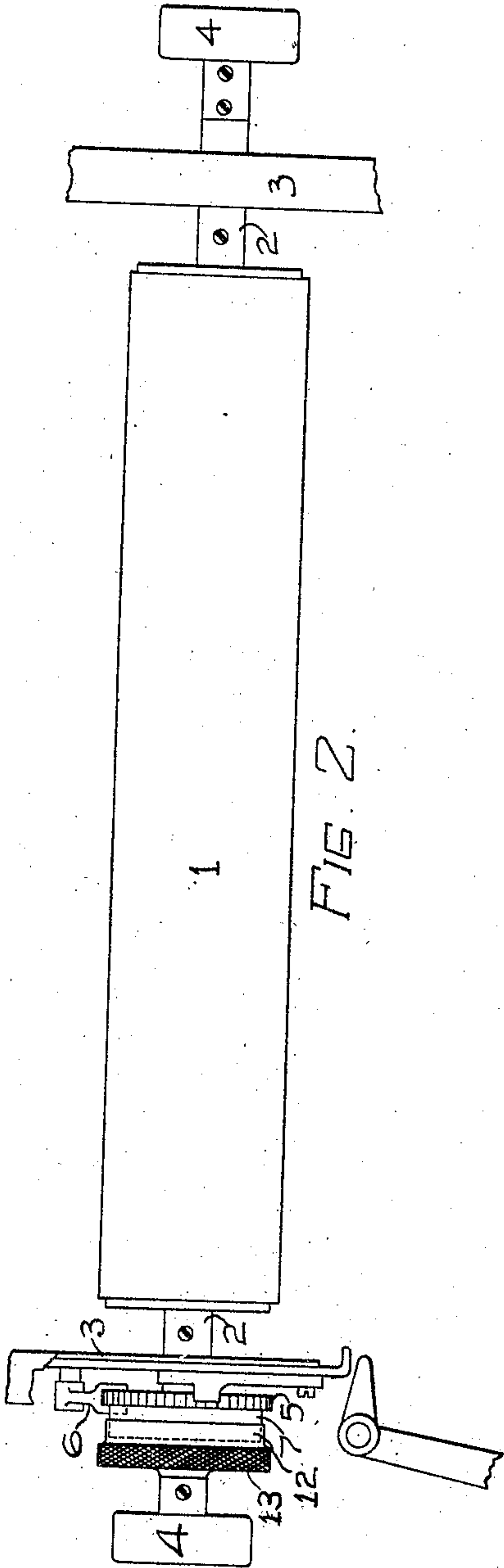


L. NEY.
TYPE WRITING MACHINE.
APPLICATION FILED APR. 5, 1909.

Patented Dec. 20, 1910.

978,926.



WITNESSES:
John C. Seft.
H. Frankfort

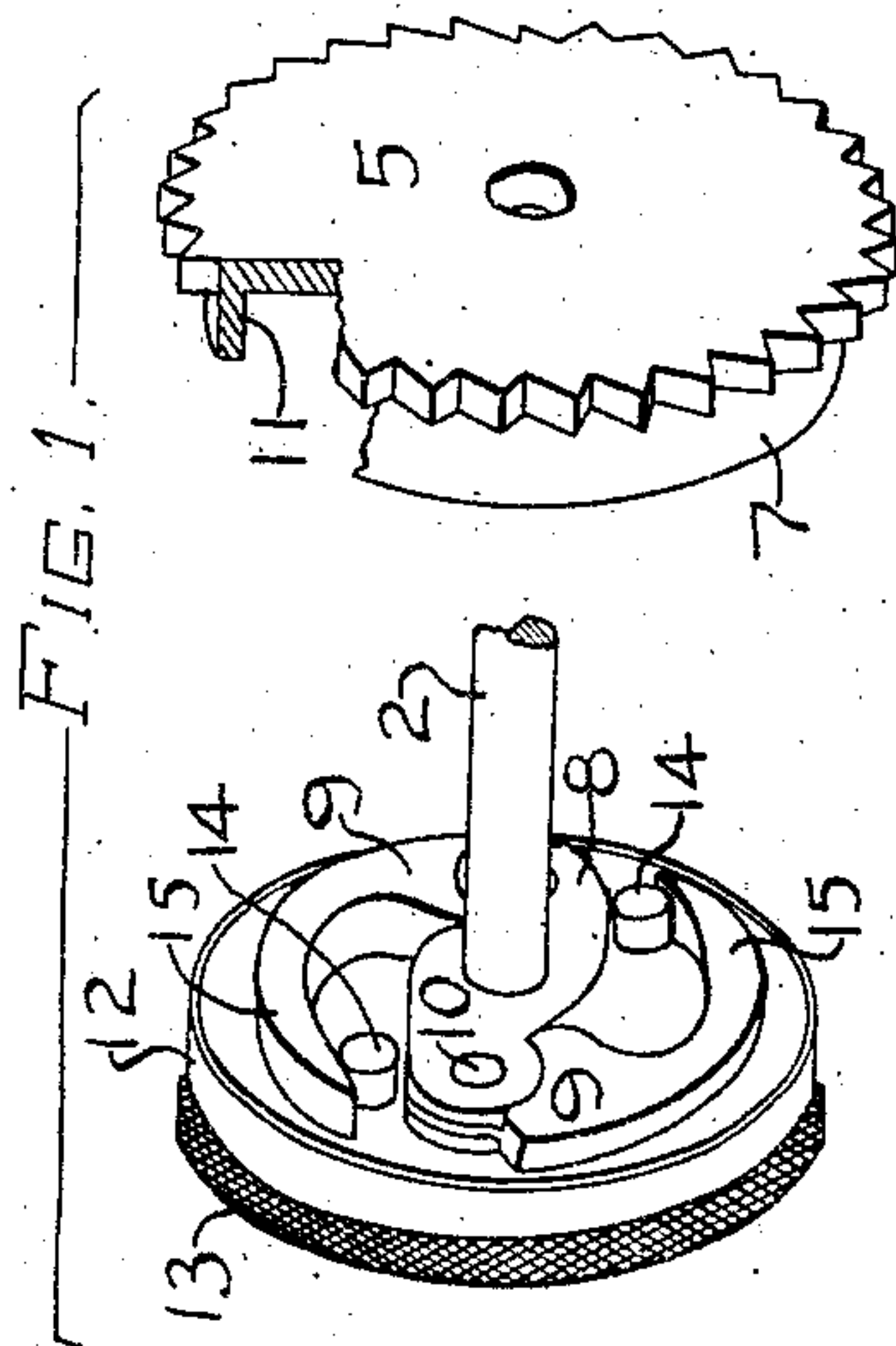


FIG. 3.

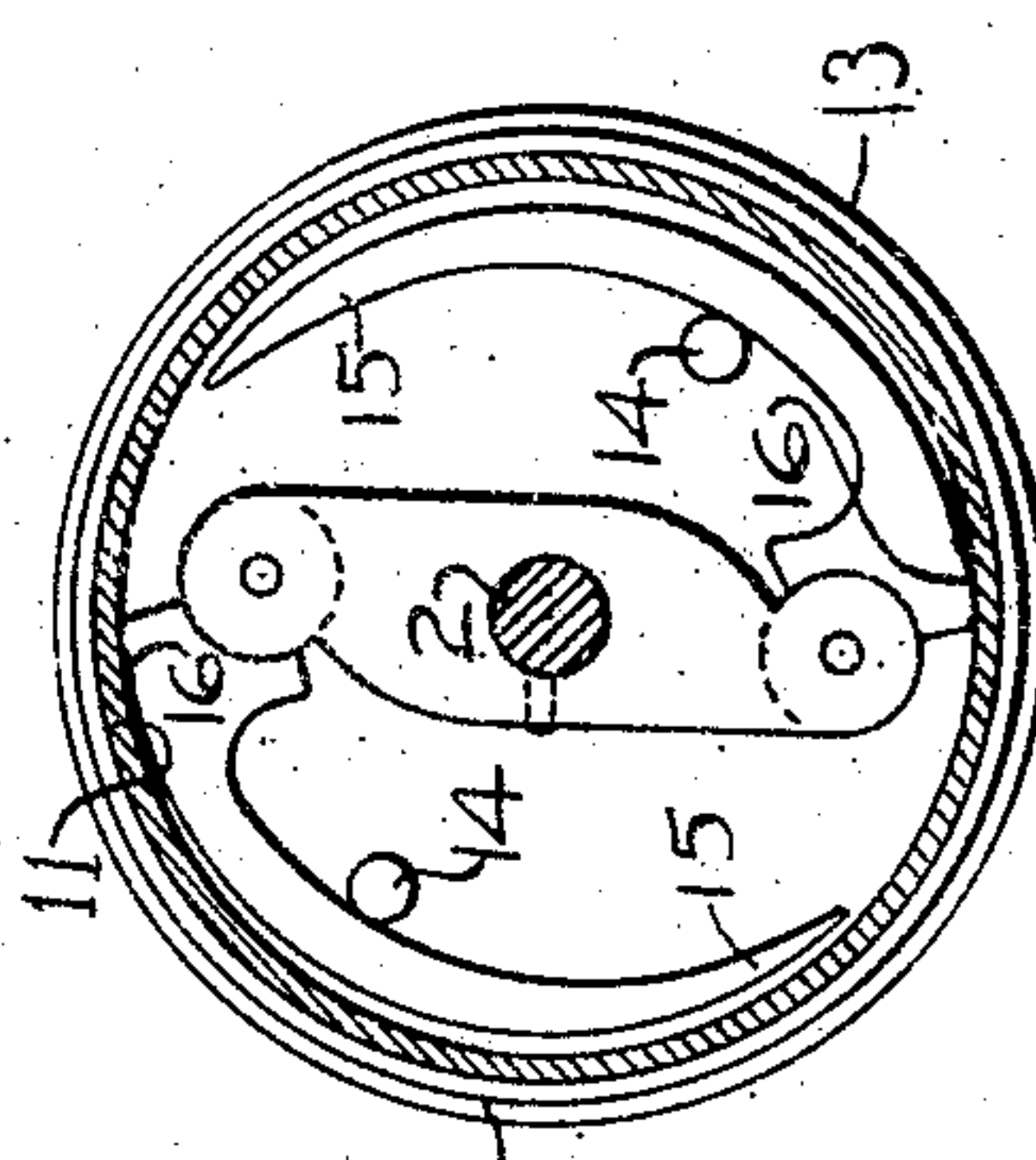
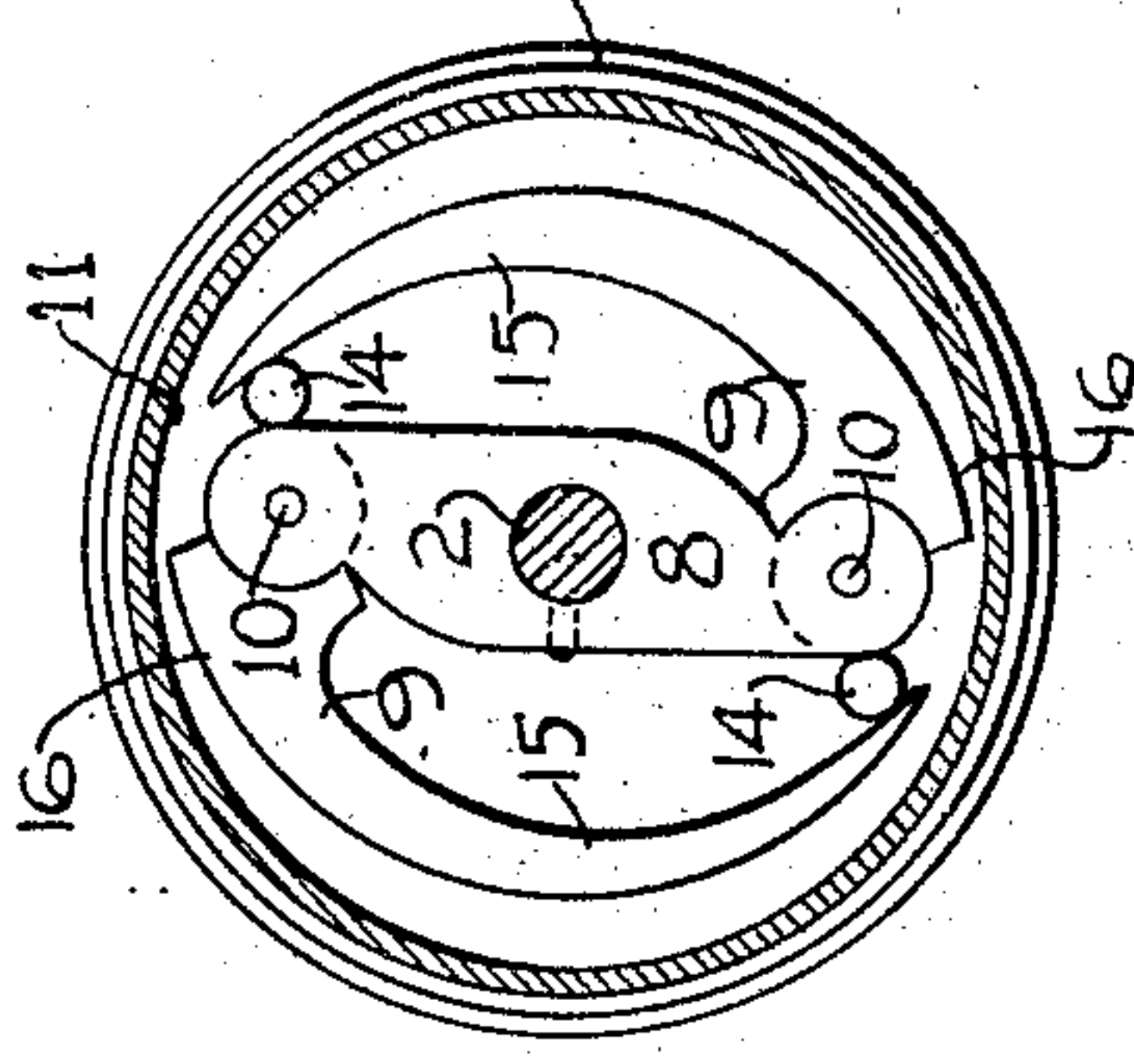


FIG. 4.



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LOUIS NEY, OF HARTFORD, CONNECTICUT, ASSIGNOR TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

TYPE-WRITING MACHINE.

978,926.

Specification of Letters Patent.

Patented Dec. 20, 1910.

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To all whom it may concern:

Be it known that I, LOUIS NEY, a citizen of the United States, residing in Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to devices for releasably connecting the platen to the line space wheel of a type-writing machine, to permit the platen to be rotated independently of the line space wheel, when required.

The principal object of the invention is to provide, at low cost, a simple device of this character readily applicable to existing machines, conveniently manipulable, and not liable to become deranged.

In the form of the invention illustrated in the drawings, the line space wheel, which is loose upon the platen axle, is provided with a drum; and a collar which is fixed upon the platen axle carries one or more dogs, to bite or grip the inner periphery of the drum. A finger wheel also loose upon the platen axle has projections to operate the dogs. The dogs are formed with arms having cam edges along which said projections slide with a wedging action, thus giving the finger wheel an effective purchase to drive the dogs against the friction surface on the drum. Moreover, said cam edges are of such form that they co-act with said projections to lock said finger-wheel itself against accidental backward or releasing movement.

In the accompanying drawings, Figure 1 is a perspective view showing parts of the mechanism slightly separated. Fig. 2 is a view of the platen and platen frame of an Underwood front strike writing machine, with the present improvements applied thereto. Fig. 3 is an end elevation partly in section, illustrating the manner in which the line space wheel is locked to the platen. Fig. 4 is a similar view, but showing the line-space wheel released from the platen.

The usual cylindrical platen 1 is fixed to an axle 2, whereby it is journaled in a platen frame 3, said axle having at each end the usual thumb wheel 4, for rotating the platen.

Loose upon the platen axle, outside of the platen frame, is a notched line-space wheel 5, usually engaged by a yielding detent 6. Upon this line-space wheel is shown a ring or drum 7, within which is contained a

clutching device comprising a cross arm 8 fixed upon the platen axle, and a pair of dogs 9 pivoted at 10 to the ends of the cross arms, in such positions that they can swing outwardly to grip forcibly the inner periphery of said drum 7. It will be seen that a diametrical line drawn through the pivots 10 will touch the periphery 11 at points very close to said dogs 9, so that the latter are enabled to secure a very strong grip upon said drum, and at points quite remote from the platen axle, to lock the platen securely to the line space wheel. Also loose upon the platen axle, and rotatable independently of the line space wheel, is a finger wheel 12 having a knurled periphery 13, and in the form of a cap to inclose the drum 7. Opposite pins 14 project inwardly from said finger-wheel 12 to engage arms 15 formed upon said dogs. These arms are provided on their inner sides with cam edges 16, which are curved slightly eccentrically to the platen axle 2, and when the line-space wheel is turned to the left at Fig. 3, the pins work along said cam edges with a wedging action, to turn the dogs around the pivots 10, to bite the inner periphery of the drum. The purchase of the pins upon the dog arms is very great, owing to the slight eccentricity of their cam edges; and the length of the arms is such that an enormous leverage is afforded to force the dogs to grip the drum. Said arms 15 may be slightly yielding, so as to insure the desired action of both of the dogs, that is, to permit further slight rotation of the finger wheel 12 after one of the dogs has become locked, in order to permit locking of the other dog, in case there should be any slight irregularity in the manufacture. It will further be observed that the eccentricity of said cam edges 16 is so slight that after the finger wheel 12 is turned to lock the platen to the line space wheel, there is no tendency on the part of said cam edges to turn said wheel back, but on the contrary they have the effect of frictionally holding or securing said wheel against accidental backward or releasing movement.

When the operator desires to release the platen from the line space wheel he simply turns the finger wheel 12 to the right, or in the direction opposite to the usual line spacing direction (while he holds the platen against turning); and when he desires to re-lock the platen to the line space wheel, he

turns said wheel 12 to the left as far as it will go, while with the other hand he holds the platen from rotating. The wheel 12 is arrested simultaneously with the locking of the platen, line-space wheel and finger wheel together. At any time the platen may be rotated by either thumb wheel 4.

It will be seen that the finger wheel 12 is conveniently placed between said line-space wheel and the adjacent thumb wheel 4.

Variations may be resorted to within the scope of the invention.

Having thus described my invention, I claim:

1. In a typewriting machine, the combination with a revoluble platen having an axle, of a member loose upon the platen axle and consisting of a line-space wheel, a second member also loose upon the platen axle and revoluble thereon manually independently of said line-space wheel, and a third member movable relatively to both the line-space wheel and the platen; said second member having means to enable said third member to arrest the rotation of said second member and simultaneously lock said platen and said first, second and third members together.

2. In a typewriting machine, the combination with a revoluble platen, of a loose line-space wheel, a movable dog between the line-space wheel and the platen to grip a friction surface provided upon one of the platen and wheel elements, a revoluble finger wheel, and means operated by said wheel to act upon both said dog and said wheel to cam or wedge the dog against said friction surface, and also to cam or wedge said finger-wheel to arrest it and lock it against accidental releasing or backward movement.

3. In a typewriting machine, the combination with a revoluble platen, of a loose line-space wheel, a pivoted dog between the line-space wheel and the platen, to grip a surface provided upon one of the platen and wheel elements, said dog having an arm, and a revoluble finger-wheel provided with a projection to turn said arm to cause the dog to bite said surface, said arm having a cam edge engaged by said projection and slightly inclined to the path of movement of said projection, to cooperate with the latter both to lock the dog against said surface and to arrest and lock said finger-wheel against accidental releasing movement.

4. In a typewriting machine, the combination with a platen and an axle therefor, of a loose line-space wheel, a collar fixed on said axle, a dog pivoted on said collar and having an arm, a drum or ring upon said line-space wheel to inclose said dog, and a revoluble finger-wheel carrying a pin or projection to move said arm to cause the dog to bite the inner periphery of said drum; said arm having a cam edge engaged by said projection, and slightly inclined to the path of

movement of said projection, to cooperate with the latter both to lock the dog against said periphery and to arrest and lock said finger-wheel against accidental releasing movement.

5. In a typewriting machine, the combination with a platen and an axle therefor, of a loose line-space wheel, a collar fixed on said axle, a dog pivoted on said collar and having an arm, a drum or ring upon said line-space wheel to inclose said dog, and a revoluble finger-wheel carrying a pin or projection to move said arm to cause the dog to bite the inner periphery of said drum; said arm having a cam edge engaged by said projection, to cooperate with the latter both to lock the dog against said periphery and to arrest and hold said finger-wheel against accidental releasing movement; said finger-wheel having the form of a cap inclosing said drum.

6. In a typewriting machine, the combination with a platen and an axle therefor, of a line-space wheel loose on said axle, a collar fixed on said axle, a pair of dogs pivoted on said collar, each having a springy arm, a drum or ring upon said line-space wheel to inclose said dogs, and a revoluble finger-wheel carrying a pair of pins or projections to move said arms to cause the dogs to bite the inner periphery of said drum, said arms having cam edges slightly inclined to the paths of movement of said projections, and engaged by said projections to cooperate with the latter, both to lock the dogs against said periphery and to arrest and lock said finger-wheel against accidental releasing movement.

7. In a typewriting machine, the combination of a revoluble platen, a loose line-space wheel, a friction drum or member, a friction dog engageable with said drum or member, and a finger wheel revoluble independently about the axis of the platen, and having means for forcing said dog into biting engagement with said drum or member, and for simultaneously arresting and locking said finger-wheel against accidental platen releasing movement.

8. In a typewriting machine, the combination with a revoluble platen and a platen axle, of a line-space wheel, an intervening friction drum or ring, a pair of dogs having pivotal support on the platen axle and engageable with said friction drum, arms extending from said dogs around the inner periphery of said drum, a finger-wheel revoluble on the platen axle, and projections connected to said finger wheel to engage the inner sides of said arms to force the dogs outwardly to bind said drum and lock the line-space wheel to the platen.

9. In a typewriting machine, the combination with a revoluble platen, a platen axle, and a line-space wheel, of an intervening friction drum or ring, a dog having a piv-

otal support on said platen axle and engage-
able with said friction drum, an arm extend-
ing from said dog around the inner periph-
ery of said drum, a finger-wheel revoluble
5 upon the platen axle, and a projection con-
nected to said finger-wheel to engage the
inner side of said arm, and by rotation of
said finger-wheel to swing the arm and dog

to force the latter outwardly to bind against
said drum and lock the line-space wheel to 10
the platen.

LOUIS NEY.

Witnesses:

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LYMAN D. BROUGHTON.