

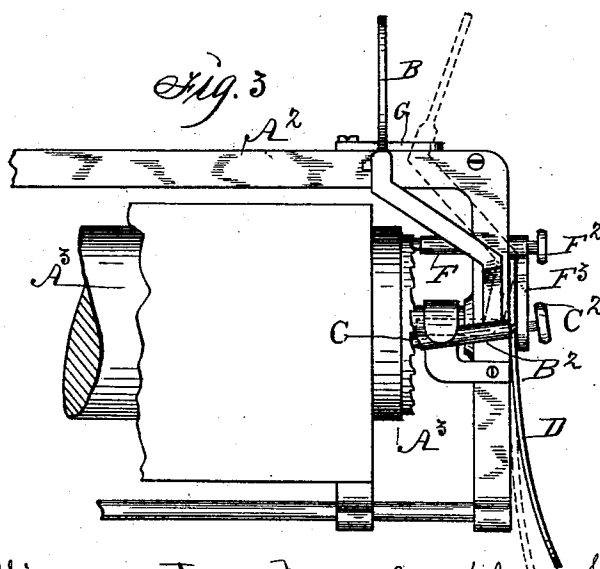
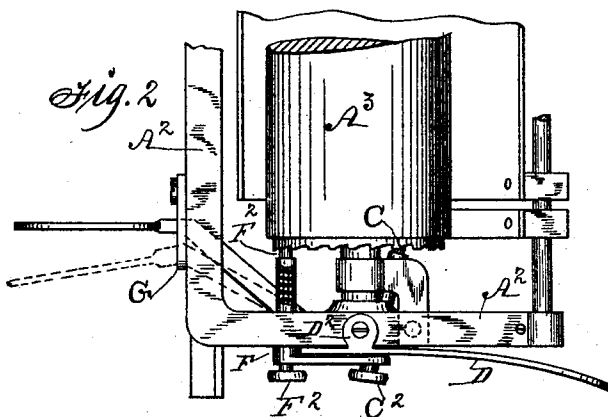
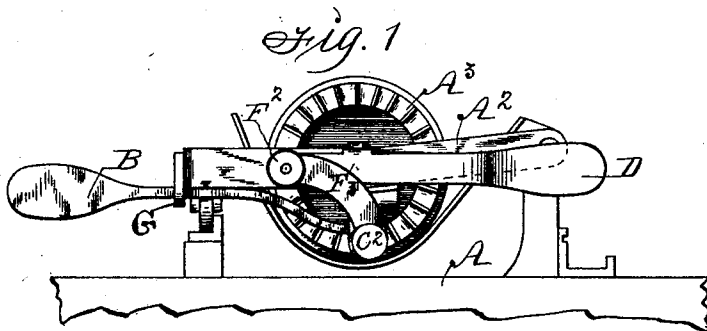
(No Model.)

A. S. DENNIS.

LINE SPACING MECHANISM FOR TYPE WRITING MACHINES.

No. 479,352.

Patented July 19, 1892.



Witnesses:

W. P. Smith.

R. H. Orwig.

Inventor: Adolphus S. Dennis,

By Thomas G. Orwig, atty.

UNITED STATES PATENT OFFICE.

ADOLPHUS S. DENNIS, OF DES MOINES, IOWA, ASSIGNOR TO THE DENNIS
DUPLEX WRITING MACHINE COMPANY, OF SAME PLACE.

LINE-SPACING MECHANISM FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 479,352, dated July 19, 1892.

Application filed October 10, 1891. Serial No. 408,391. (No model.)

To all whom it may concern:

Be it known that I, ADOLPHUS S. DENNIS, a citizen of the United States of America, residing at Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Line-Spacing Mechanism for Type-Writing Machines, of which the following is a specification.

My object is to facilitate the movement of a roller as required to move paper forward to produce spaces between the written lines and also as required to move paper backward on the roller whenever desired.

My invention consists in the construction and combination of levers, a pawl, and a detent with a roller and frame, as hereinafter set forth, pointed out in the claims, and illustrated in the accompanying drawings, in which—

Figure 1 is an end view of a roller and a portion of a frame upon which it is mounted and to which my device is attached. Fig. 2 is a top view, and Fig. 3 a bottom view, of the same frame and roller and the different parts of my device connected with each other and combined with the frame and roller as required for practical use.

A represents the main frame of a machine, and A² the sliding carriage hinged thereto and upon which is mounted a roller A³. The end of the roller has ratchet-teeth around its circumference adapted to be engaged by a pawl and detent.

B is the long arm of a bent lever pivoted to the under side of the carriage-frame A², and B² is the tubular short arm thereof, and within said short arm is a spring-actuated pawl C, adapted to engage the ratchet-teeth on the end of the roller A³ in such a manner that when the lever is vibrated it will by means of the pawl impart motion to the roller.

D is a curved lever that has a right-angled extension D², adapting it to be pivoted on top of the carriage-frame A² and to extend along the outside face of the frame.

F is a tube, in which is a spring-actuated detent F², carried in such a manner that in its normal position it will engage the ratchet-teeth of the roller A³ as required to retain the roller stationary.

F³ is a curved arm on the outer end of the tube F. Its lower end is perforated and the outer end of the pawl C extended through it and provided with a head C². The upper end of the arm overlaps the end of the short arm of the lever D in such a manner that the tube F and its arm F² and the pawl C can be jointly pressed out of engagement with the ratchet on the end of the roller as required to hold the pawl C and detent F² disengaged therefrom, so that the roller can be turned backward or forward by the direct contact therewith of the operator's hand.

G is an adjustable stop device connected with the front face of the carriage-frame A² by means of a set-screw extended through a slot therein and into a screw-seat in the frame or in any suitable way as required to restrict the motion of the lever B, so that the pawl C will be moved only from one ratchet-tooth to another at each motion of the lever.

To advance paper on the roller for the purpose of spacing the printed lines as the machine is operated, I simply press the lever B to move it, as indicated by dotted lines in Figs. 2 and 3, and each motion will move the pawl C from one tooth in the ratchet on the end of the roller, and in so doing rotate the roller a fraction of a revolution and advance the paper thereon a corresponding space. To double the space, two motions of the lever are made in succession.

To disengage the pawl C and detent F² simultaneously from the roller, I press the lever D toward the frame A² and then turn the roller by hand as required to move the paper backward or forward any distance desired.

I claim as my invention—

1. In a type-writing machine, a device for spacing, comprising a bent lever having a tubular short arm and a spring-actuated pawl in said arm adapted to engage a ratchet on the end of a roller, a tube having a spring-actuated detent therein adapted to engage the ratchet on the end of the roller, and a curved arm connected with the outer end of the pawl in the short tubular arm of the lever, and a lever adapted to engage the curved arm to simultaneously disengage the pawl and the detent from the ratchet on the end of the roller,

arranged and combined with a carriage-frame and a roller mounted thereon having ratchet-teeth on its ends, to operate in the manner set forth.

- 5 2. A lever carrying a spring-actuated pawl, with its short arm pivoted to the sliding carriage of a type-writing machine, a tube carrying a spring-actuated detent and having an arm extending at right angles and connected
10 with the outer end of the pawl, and a lever

pivoted to the frame and its short arm extended under the arm of the detent-carrier, and a roller carried by the frame, having a circular ratchet on its end, arranged and combined to operate in the manner set forth, for 15 the purposes stated.

ADOLPHUS S. DENNIS.

Witnesses:

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