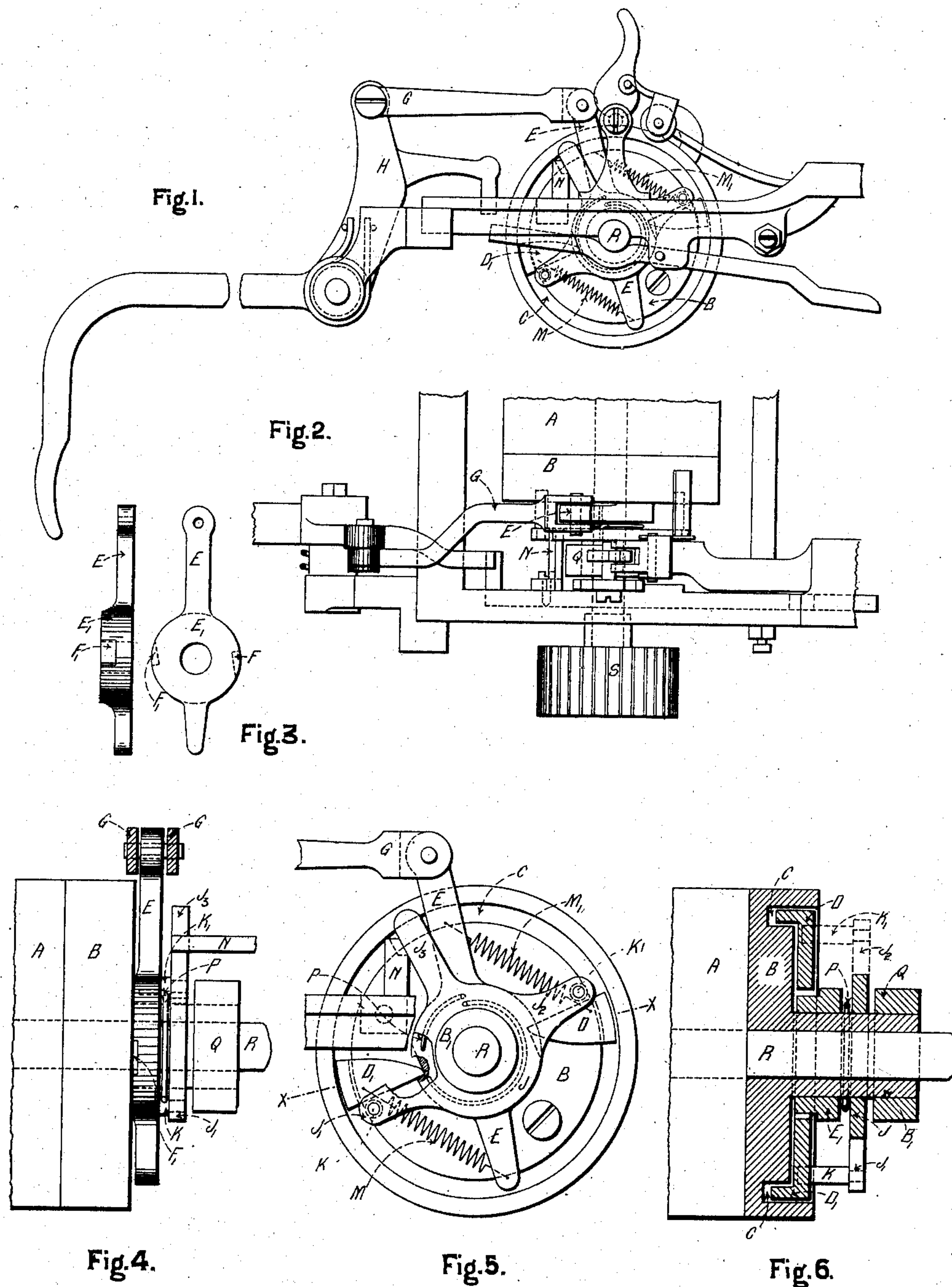


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J. S. SOUTHERDEN.
LINE SPACER FOR TYPE WRITING MACHINES.

APPLICATION FILED FEB. 20, 1906.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN STEPHEN SOUTHERDEN, OF BRISBANE, QUEENSLAND, AUSTRALIA.

LINE-SPACER FOR TYPE-WRITING MACHINES.

No. 864,207.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed February 20, 1906. Serial No. 302,092.

To all whom it may concern:

Be it known that I, JOHN STEPHEN SOUTHERDEN, a subject of the King of the United Kingdom of Great Britain and Ireland, and a resident of 159 Queen street, Brisbane, in the State of Queensland, Commonwealth of Australia, have invented certain new and useful Improvements in Line-Spacers for Type-Writing Machines, of which the following is a specification.

This invention relates to mechanism for operating the platen of a type writing machine, its object being to provide simple and effective means whereby the space between the lines of the type writing is not limited to fixed distances but can be varied to any distance within the operating range of device and whereby when the same is at rest, the platen is free to be rotated in either direction.

The invention consists in the general construction, arrangement of parts and combination of devices as hereinafter described and illustrated in the accompanying drawings in which the reference letters indicate like parts in all figures.

Reference being made to the drawings:—Figure 1 is an end elevation of the device attached to the platen of a Remington pattern machine. Fig. 2 plan. Fig. 3 side and front elevation of lever for operating the dogs. Fig. 4 front elevation of the device on enlarged scale with frame of machine removed. Fig. 5 end elevation of same. Fig. 6 section through $x-x$ of Fig. 5 looking downwards.

A is the platen, B a circular plate attached to the right hand end of the platen formed integrally with a central boss B^1 , said plate is recessed on the face and provided with a concentric groove C which receives the gripping dogs D and D^1 of which there may be one or more.

E is a lever provided with a boss E^1 fitting round the boss B^1 , the boss is notched out on opposite sides at F and F^1 to half the depth of its thickness forming a shoulder for engaging with the points of the dogs and for retaining them in the concentric groove. The notches also engage with the straight edge of the dogs and as the lever E is moved forward throw the dogs out of their parallel position in the groove when the opposite sides of the heads of the dogs engage with the opposite sides of the concentric groove forming a rigid compact when the continued forward motion of the lever E rotates the platen to the limit of its travel which can be regulated by any simple adjusting device.

The movement of the lever E is controlled by an arm G pivotally connected to same, the other end of which is pivotally connected to the arm H of the line spacing lever of the machine.

J is a circular plate having three radial arms J^1 , J^2 and J^3 , to the arms J^1 and J^2 are attached pins K and K^1 which engage with the dogs D and D^1 , said engagement

occurring on the return motion of the lever E and of that of the arm J^3 to its rest position against the stop N, preventing the dogs D and D^1 following the backward travel of the lever E, which continues its movement until it coincides with the position of the radial arm J^3 , the pressure of the bearing surface of the notches F and F^1 against the points of the dogs is then relieved which renders the dogs inoperative, the same being released from gripping the groove C, when the platen can be freely rotated in either direction.

M and M^1 are light spiral springs attached to the lever E and to the head of the dogs D and D^1 for pulling the same towards the lever E, which on its forward movement by the notches in its boss pushes the points of the dogs in the opposite direction, when the dogs assume a cross position in the grooves, gripping both sides of same forming a rigid compact as before described.

P is a helical spring attached to the plate J and to the lever E holding same together.

Q is a collar fitting round and secured to the boss B^1 holding circular plate J in position.

R is the platen spindle and S a finger wheel secured to the end thereof, for rotating the platen.

In Fig. 5 to avoid confusion and to show clearly the lever E and the circular plate J and its arms, the arm J^3 is shown out of line with the lever E which only occurs when the lever E is pushed forward, the notches F and F^1 in the boss E^1 engaged with the dogs D and D^1 and the dogs jammed in the groove C by which means the platen is rotated, on releasing the spacing lever the connecting arm G draws the lever E backwards and the dogs D and D^1 are brought back to their parallel position in the groove by the springs M and M^1 further backward movement of the dogs being arrested by the pins K and K^1 on the radial arms J^1 and J^2 , the platen can then be freely rotated by the finger wheel S.

The various parts of the machine are not indicated by reference letters as they form no part of the invention and are simply illustrated for showing the adaptability of the invention to a machine of the Remington pattern.

I would also have it understood that the invention may be incorporated with other machines by modifying the arrangement of parts without departing from the spirit of the invention.

Having now described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In improvements in line spacers for type writing machines, the combination of a platen, a circular plate recessed on face, having a concentric groove, gripping dogs engaging with said groove a central boss fitting round platen spindle, said plate attached to the right hand end of the platen and a lever having a boss fitting around said central boss and having notches therein for engaging with said dogs.

2. In improvements in line spacers for type-writing

machines the combination of a platen, a circular plate recessed on face having a concentric groove for receiving gripping dogs, a lever having a boss which is provided with notches for engaging said dogs and spiral springs attached
5 to said lever and dogs.

3. In improvements in line spacers for type writing machines the combination of a platen, a circular plate attached to end thereof said plate having a circular groove therein, dogs having a portion extending into said groove,
10 a lever for forcing said portions into contact with the sides of the groove, spiral springs for releasing dogs and connecting arm pivotally connected to end of lever and to arm of line spacing lever of machine.

4. In improvements in line spacers for type writing machines the combination of a platen, a line spacing circular plate operated by a lever and dogs, a plate having radial arms provided with pins engaging with said dogs and a radial arm engaging with stop on machine, said plate connected to lever by a helical spring and collar fitting round boss of line spacing circular plate. 15 20

In witness whereof I have hereunto set my hand in presence of two witnesses.

JOHN STEPHEN SOUTHERDEN.

Witnesses:

E. GARLAND ABELL,

C. S. POWERS.