(No Model.)

J. G. LAWRENCE.

PLATEN FOR TYPE WRITERS.

No. 599,183. Patented Feb. 15, 1898.

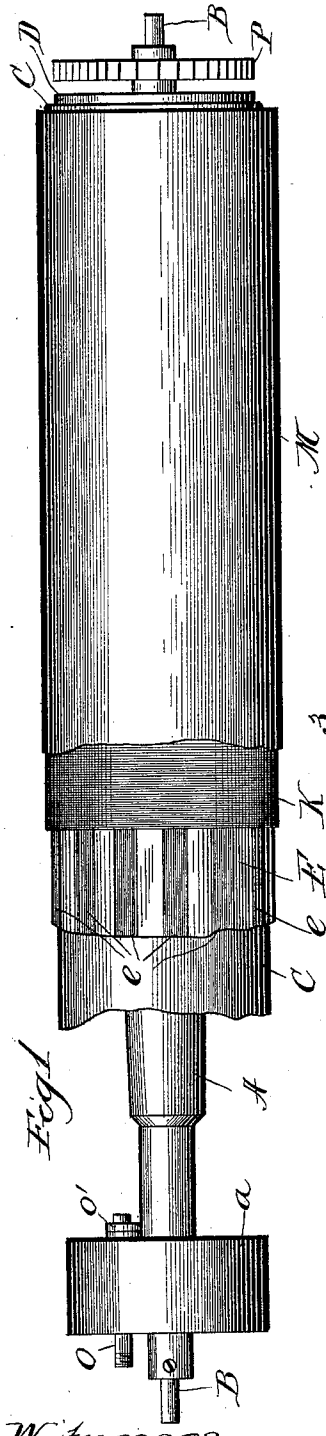


Fig 1.

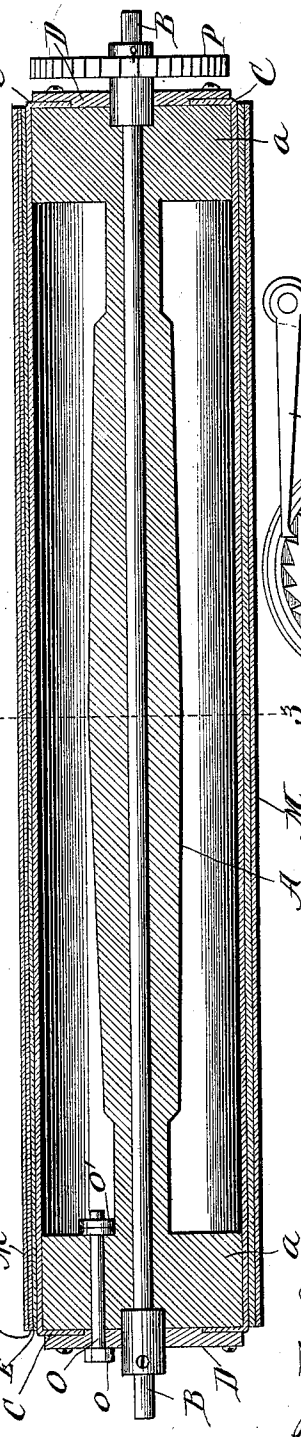


Fig 2.

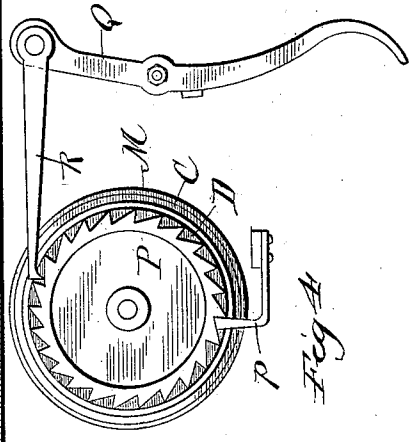


Fig 4.

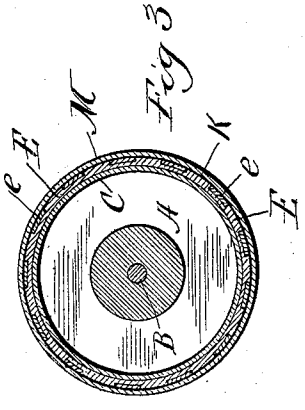


Fig 3.

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UNITED STATES PATENT OFFICE.

JOHN GREENLEAF LAWRENCE, OF NEW HAMPTON, IOWA.

PLATEN FOR TYPE-WRITERS.

SPECIFICATION forming part of Letters Patent No. 599,183, dated February 15, 1898.

Application filed October 14, 1896. Serial No. 608,882. (No model.)

To all whom it may concern:

Be it known that I, JOHN GREENLEAF LAWRENCE, a citizen of the United States, residing at New Hampton, in the county of Chickasaw and State of Iowa, have invented certain new and useful Improvements in Platens for Type-Writers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention has for its object the deadening of the noise incident to the contact of the type with the platen; and it consists in various details of construction, as hereinafter fully pointed out.

In the accompanying drawings, Figure 1 is a side elevation of the platen, some portions being broken away to show the internal construction. Fig. 2 is a central longitudinal sectional view of the platen. Fig. 3 is a transverse section on the line 3 3 of Fig. 2. Fig. 4 is an end elevation.

The core or body of the platen may be characterized as a spool, preferably of wood, having an intermediate portion A of considerably less diameter than that of the finished platen, and enlarged ends *a a*, adapted to receive and support the covering-tube. The central portion A of the body of the platen is only of such size as may be necessary for strength, and I prefer to have it of the greatest diameter midway of its length.

The covering of the platen is built up of several tubes, preferably of rubber, the inner one C being of sufficient length to overlap the ends of the spool and having its ends somewhat contracted, so that they will be drawn down flat against the ends of the spool, where they are secured by means of plates D D, made fast to the spool by screws or other suitable means.

The tube E, of rubber or other similar material, is superimposed upon the tube C, and into it there are molded a number of metal strips *e*, arranged longitudinally as to the platen and being of sufficient width to receive the face of the type and being spaced apart a sufficient distance so that, if desired, the intervening spaces may receive the impact of the type. The tube E is tightly wrapped with thread, as indicated at K, for the purpose of preventing the casing of the platen from presenting an uneven surface when inflated, and over the thread K there is tightly fitted an outer tube M. Cement may be used, as found necessary, to prevent the escape of air between the inner tube C and the ends of the spool, and, if desired, the several tubes may be cemented together.

The case may be inflated in any desired manner. I show for this purpose a simple form of inflating-tube O, set through one of the ends *a* of the spool and being provided at its inner end with a check-valve *o'* and having its outer end covered by a screw-cap *o*. I have not deemed it necessary to show the details of construction of the check-valve *o'*, for the reason that devices of this character are well known and any efficient form is suitable.

The platen is provided with gudgeons B B, by means of which it may be pivotally mounted upon the carriage of a type-writer, and at one of its ends is fixed the usual ratchet-wheel P, by means of which it is rotated and with which coöperates a spring-retaining pawl *p*. The hand-lever for rotating the platen is shown at Q, and the pawl pivotally connected with this lever and coöperating with the ratchet P is shown at R.

The platen is adapted for use only when the lines are to be double spaced, and is adjusted for manifolding by being simply shifted as for a single space, when the shifting-lever will always bring a reinforced section to the printing-line. As the ratchet P is always so proportioned that each tooth represents the width of a single line and the intervening space between it and the following line, it will be seen that this adjustment is accomplished without difficulty and without necessitating any special construction of the shifting mechanism.

I have not shown the platen as mounted upon the type-writer, for the reason that it is adapted for use on any of the standard makes of machines of this character. It is obvious that the metallic strips may be introduced into the covering of any platen without regard to whether it is pneumatic or not, the

object being to adapt the roller either for manifolding or for the writing of single copies.

By the use of the pneumatic platen, as herein described, almost all of the noise incident to the contact of the type with the platen is overcome, while the platen is sufficiently hard to insure a perfect impression. When the platen is adjusted for manifolding, a little noise results, but not sufficient to prevent the operator from distinctly understanding ordinary conversation, so that the great difficulty existing in "dictating to the machine," due to the noise of its operation, is wholly obviated.

I claim as my invention—

1. As an article of manufacture a cylindrical platen having its face circumferentially divided into two series of alternating sections of differing density, the several sections of each series being of substantially uniform density and adapted to successively receive the impact of type in the printing of successive lines.

2. In a platen, the combination with a rigid core having enlarged ends, of a flexible air-tight hollow cylinder fixed upon the core, a flexible non-elastic wrapping wound upon the cylinder, and a flexible tube sleeved upon the cylinder over the wrapping to form a printing-surface and being in fixed attachment to the rigid portion of the platen.

3. In a type-writer platen the combination with a cylindrical pneumatic cushion, of an elastic casing sleeved upon the cylinder for receiving the impact of the type and having alternate longitudinal sections of differing density.

4. In a type-writer platen the combination with a carrying-frame of an elastic casing for receiving the impact of the type, and strips of non-yielding material embedded longitudinally within the casing and being spaced apart.

5. In a type-writer platen the combination with a rigid core in spool form, of a flexible casing inclosing the core and having air-tight connection with the ends, and strips of metal or other non-yielding material embedded longitudinally within the casing and being spaced apart.

6. The combination with a cylindrical type-writer platen having a body portion and a superimposed casing having alternate circumferentially-arranged sections of differing density, of means for rotating such platen step by step, the length of the steps coinciding with the spacing of sections of the platen of like density.

7. The combination with a cylindrical type-writer platen having a body portion and a superimposed casing having alternate circumferentially-arranged sections of differing density, of means for rotating such platen step by step, the length of the steps coinciding with the spacing of sections of the platen of like density, and means for changing the angular relation of the platen to such rotating mechanism whereby either set of sections of the platen may be brought to a desired register.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN GREENLEAF LAWRENCE.

Witnesses:
J. H. POWERS,
A. G. LAWRENCE.