

T. F. NOLAN.  
PLATEN OR ROLLER FOR TYPE WRITING MACHINES OR THE LIKE.  
APPLICATION FILED APR. 30, 1904.

Fig. 1.

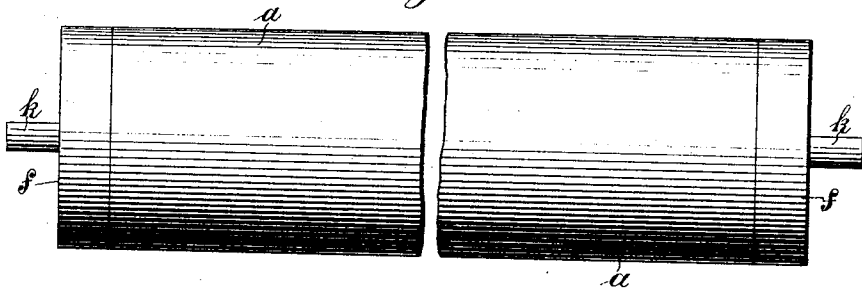


Fig. 2.

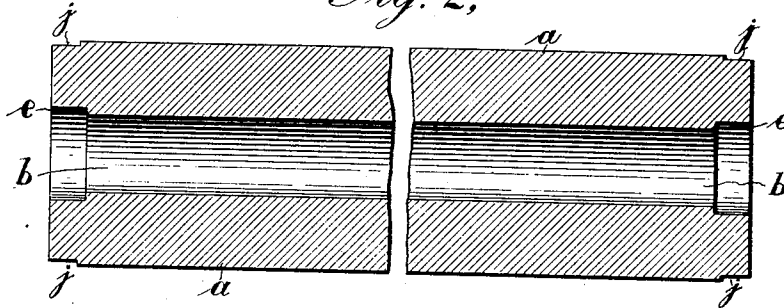


Fig. 3.

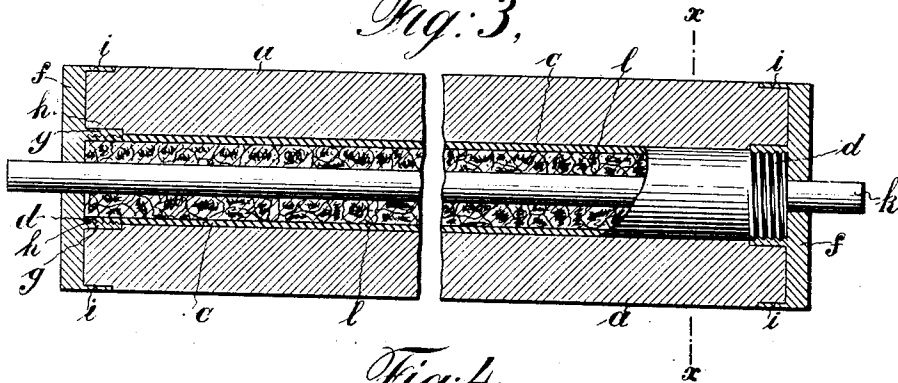
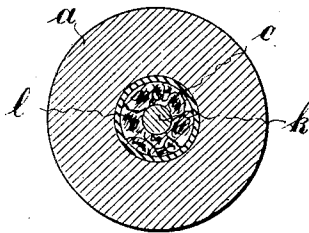


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## PLATEN OR ROLLER FOR TYPE-WRITING MACHINES OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 782,871, dated February 21, 1905.

Application filed April 30, 1904. Serial No. 205,655.

*To all whom it may concern:*

Be it known that I, THOMAS F. NOLAN, a citizen of the United States of America, and a resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Platens or Rollers for Type-Writing Machines or the Like, of which the following is a specification.

My invention has reference to a novel platen or roller for type-writing machines and the like. It is the special object of this invention to provide a platen or roller for type-writing machines and other purposes which is practically noiseless, light, and durable. At the same time the top surface is elastic to a certain extent and will not rot or decay, and the impact of the keys will not leave any impression thereon. All these properties are desirable for a platen or roller used in type-writing machines and the like.

The type-writing machines used to-day all produce a great deal of noise by the impact of the keys on the platen or roller. This noise is multiplied when a number of machines are used in the same room, making it very disagreeable for people who must transact other business therein. By means of my novel platen or roller, however, the noise produced by the machines is so greatly lessened that any number of machines may be used in one room without interfering with or disturbing other business.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 represents in side elevation a platen or roller which embodies my invention. Fig. 2 illustrates the roller in longitudinal section with certain inner portions omitted. Fig. 3 is a longitudinal cross-section of the roller, showing all parts and one detail in elevation; and Fig. 4 is a cross-section on line *x x* of Fig. 3.

Similar letters of reference denote like parts in all the figures.

The platen or roller is usually of circular shape. It is made of felt, compressed wool, or other suitable material turned, cut, or pressed into the desired shape. The roller consists of the circular-shaped body *a*, which

when made of felt or wool is pressed into the shape shown in Figs. 2, 3, and 4 in such a manner that a circular hollow interior space *b* remains. The surface of the roller is finished by applying a suitable dressing and then polishing. In the hollow space there is provided a metal tube *c*, which extends throughout the entire length of the roller and is provided at each end with a screw-thread *d*. The outside surface of the roller is so finished that it is relatively firm and solid, while the interior portion is relatively yielding and elastic, owing to the material from which the roller is made. This part of the roller constituting a tube is so constructed that the opening therein is somewhat smaller than the metal tube inserted therein. This is a marked feature of this roller, because the solidity of its interior body is reinforced by the insertion of the tube, which has a somewhat larger diameter than the opening. Hereby additional strength and compactness is imparted to the roller, because the felt or compressed wool constituting same is further compressed on its interior surface. In place of the metal tube substitutes either hollow or solid may be used. These may be made of wood or artificial compositions, provided grooves or threads can be produced on their ends.

As shown in Figs. 2 and 3, the ends *e* of the interior opening in the roller-body are somewhat enlarged where the screw-thread on the outer surface of the tube ends is located. The ends of the roller are closed off and strengthened by caps *f*. (Shown in Fig. 3.) These caps are preferably made of metal and provided with an interior tubular portion *g*, having on its inside a screw-thread *h*. The outside ends extend rear and inwardly into a circular flange *i*. The cap *f* is secured to the roller by simply screwing it thereon, the top end surface *j* of the roller-body being somewhat reduced (see Figs. 2 and 3) for receiving the flange *i* of the cap and producing a flush surface in this manner.

The outer surface of the cap *f* may be smooth, as shown in Fig. 1, or it may be knurled or corrugated, so as to enable the user to turn the roller.

A shaft *k* runs through the center portion of the roller, by means of which said roller is mounted in the machine. If it is desired, this shaft may be dispensed with and the roller held by other devices—as, for instance, shields or threaded rods fitting into the caps.

The caps *f* further assist in holding the entire roller firmly together and keep the edges on the ends always in the same even condition.

Another feature of my novel invention consists in muffling the interior portion of the roller by means of cork *l* or other suitable materials which are non-conductors of sound. This sound - non - conductive core combined with the sound - non - conducting material of which the roller-body is constructed produces a doubly effective result as to making a noiseless platen or roller. Any sound or noise that may be created by the impact of the keys cannot penetrate through the roller, because it is deadened within its interior by the material employed and sound-non-conductive core.

The cork or other sound-deadening material of course is inserted in the tube before the caps *f* are applied to the roller. Said sound-deadening material is compressed therein, and when the cap is attached it keeps same in position. These light and yielding materials have the tendency to expand when compressed in the center of the roller and fill up the entire space therein. In its principal feature the platen or roller comprises a relatively firm or solid yet fully resilient body. The materials of which the roller is composed distinguish it from any roller heretofore known and made of other materials and applied for the same or similar purposes.

My novel platen or roller constructed as above described is far superior to the rubber or composition rollers in general use, particularly for type-writing machines. My rollers made of felt or compressed wool or other suitable material with the noise-deadening core inside and a hardened outside surface will always remain hard, smooth, solid, and compact, yet fully resilient enough to answer the purpose intended. Any defects that may possibly occur on the surface of the roller by long-continued use may be quickly repaired by redressing and repolishing the surface. This novel roller further will not break as rollers made of rubber compositions. By virtue of the material of which it is constructed the roller will always remain elastic. When used in type-writing machines, its resiliency will always be maintained. It yields suffi-

ciently to the impact of the keys without lessening any of its firm or solid qualities necessary for producing good and satisfactory work.

My novel platen or roller when used in type-writing machines presents another advantage. Its solid compact yet smooth surface will not give way permanently to the impact of the keys, as happens quite often with the rollers made of rubber or compositions. The resiliency in my roller is different from that of rubber or composition rollers, the natural qualities of felt, compressed wool, or similar materials imparting these qualities into my roller.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A platen or roller for type-writing machines and the like comprising a roller-body made of sound-non-conductive light and elastic material having a hardened, resilient outer surface, a central circular opening therein, a metal tube in the opening of somewhat larger diameter than said opening, sound-non-conductive material in said tube, caps on the outside ends of the roller-body and flush therewith, and a shaft in the center of said roller.

2. A platen or roller for type-writing machines and the like comprising a roller-body made of felt or compressed wool having a hardened resilient outer surface, a central circular opening therein, a metal tube in the opening of somewhat larger diameter than said opening, sound-non-conductive material in said tube, caps on the outside ends of the roller-body and flush therewith, and a shaft in the center of said roller.

3. A platen or roller for type-writing machines and the like comprising a roller-body made of felt or compressed wool having a hardened, resilient outer surface, a central circular opening therein, a metal tube of somewhat larger diameter in said opening, screw-threads on its outside ends, compressed cork pieces in said tube, a cap on each end of the roller-body having a tubular inner extension with screw-thread on the inside and an inwardly-extending flange on the outside flush with the body of the roller, and a shaft in the center of same.

Signed at New York, N. Y., this 28th day of April, 1904.

THOMAS F. NOLAN.

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