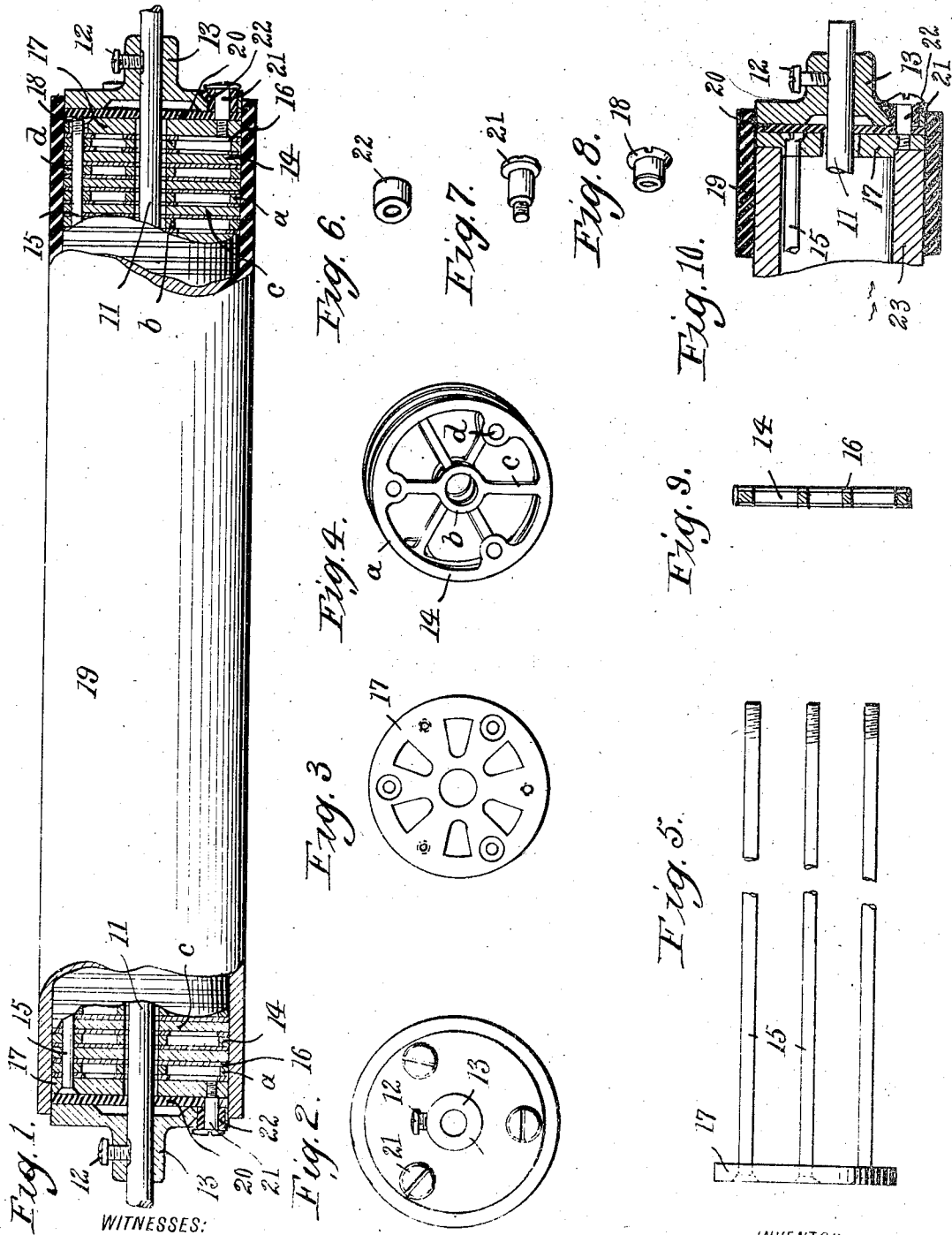


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TYPE WRITER PLATEN.

APPLICATION FILED MAY 18, 1914. RENEWED DEC. 30, 1916.

1,235,754.

Patented Aug. 7, 1917.



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WILLIAM A. LORENZ, OF HARTFORD, CONNECTICUT.

TYPE-WRITER PLATEN.

1,235,754.

Specification of Letters Patent.

Patented Aug. 7, 1917.

Application filed May 18, 1914, Serial No. 839,218. Renewed December 30, 1916. Serial No. 139,926.

To all whom it may concern:

Be it known that NILS H. ANDERSON, citizen of the United States, and resident of Middletown, in the county of Middlesex and State of Connecticut, has invented certain new and useful Improvements in Type-writer Platens, of which the following is a specification.

My present invention relates to typewriter platens such as are employed in part to support the writing paper and against which the type of the type-bars operate when printing.

The purpose of the invention is to provide a platen of the above class wherein the noise, caused by the operation of the said type against the platen will not be transmitted to the carriage in which the platen is supported, but will thus be materially lessened.

The invention therefore belongs to that particular class of platen shown and described in my companion application #837,162 and wherein a novel form of platen is shown, though the present device is equally applicable to platens made up of wooden tubes such as are now very commonly used.

As will be noted from the drawings forming a part of this specification and from the descriptions and claims to follow, the essence of the invention consists in providing certain rubber or other suitable soft insulating materials intermediate of the connection of the several parts and particularly between the end of the platen and its supporting connection with a typewriter carriage so as to cause the vibration or noise caused by the blow of the type bar to be retarded or localized.

With the above objects in view my invention further resides and consists in certain features of construction and arrangements of materials and combination of parts as is clearly shown in the several figures of the accompanying drawings and in which—

Figure 1 is a side elevation of my improved form of platen and having its two end portions broken away to show central vertical sections of said parts.

Fig. 2 is a detached outer side view of one of the two end inclosure caps of the roll.

Fig. 3 is a similar side view of one of the two end disks of the roll and intermediate of which the series of smaller disks are located.

Fig. 4 is a perspective view of one of the smaller metal disks of which the roll is formed.

Fig. 5 is a detached and broken side view of the end cap shown in Fig. 3 and the connecting rods shown in Fig. 1.

Fig. 6 shows a detached perspective view of one of the cushioning or insulating washers shown in Fig. 1.

Fig. 7 is a perspective view of one of the several screws used for the attachment of the end disks shown in Figs. 1 and 3.

Fig. 8 shows a detached perspective view of one of the nuts used upon the ends of the rods for securing the disks together.

Fig. 9 shows a detached vertical sectional view of a modified form of disk and insulating means; and

Fig. 10 shows a central vertical, section of one end of a platen illustrating the application of my invention to a tubular wood form of platen roll.

As before stated I have shown my invention in Figs. 1 to 9 inclusive as applied to the particular form of platen illustrated in my prior application referred to, but as will also be seen from Fig. 10 of the drawing it can be used in connection with other forms of platens.

Referring in detail to the characters of reference marked upon the drawings 11 represents the supporting shaft which extends through the platen and which is designed to be seated and rotated in a typewriter carriage, not shown. This shaft is obviously arranged central of and extends freely through the intermediate portion of the platen and is secured to the end portions thereof by means of set screws 12 passing through the hubs of the metal end caps 13 which form a part of the platen.

The form of platen illustrated in detail is made up of a series of metal units 14 as shown in Figs. 1 and 4 and which are

stamped from sheet metal and include an annular rim portion *a*, a hub portion *b* and bridge or spoke members *c*, which tie the opposite sides of the rim together. Suitable holes *d* are formed through these enlargements of the rim to accommodate tie rods 15. Felt insulating disks 16 which may be cut to conform in size and shape to the metal units are arranged between the several disks 14. The metal and felt members thus alternate and are strung along in a series and upon the several tie rods 15 to form the roll or core of the platen.

The ends of the roll in this instance as in the case of the construction shown in Fig. 10 each is made up of a round metal disk or plate 17 which like the units are insulated from the metal units by means of insulating washers. One of these plates is provided with a series of countersunk holes to receive the head ends of the rods 15 while the plate of the other end is provided with a series of larger holes in which a threaded nut 18 is seated and to receive the threaded ends of the said rods. These end plates together with the series of metal units and washers form the roll as shown in Fig. 1, while similar plates and the wooden core as shown in Fig. 10 form the roll in the other instance. These rolls, as is the custom, are covered with a layer of relatively hard rubber 19 which forms the striking surface against which the type bars operate.

My invention is equally applicable to most any form of core and as will be noted in Fig. 10 can be applied to the common form of a hollow wood core 23. This figure shows the ends of the wooden tube inclosed by the plates 17 and includes means for insulating and cushioning the same and roll from the carriage in a manner to prevent vibration. I provide intermediate of these plates 17 and the supporting cap indicated by 13 an insulating washer 20 which may be formed of felt or rubber. The supporting caps 13 are secured against the said insulating washers 20 and to the end caps by screws 21 which are placed in the outer end of the platen and pass through the rubber washers 22 fitted in tapered holes of the supporting members 13. There may obviously be any required number of these screws sufficient to secure the parts together. In practice, however, I find that three as indicated in the drawings are ample. Owing to the enlargement of these holes the outer ends of the washers are permitted to spread and better serve to hold the parts together.

From the foregoing it will be noted that the body of the platen including the inner roll or core is insulated through the felt and rubber washers from the end supporting caps 13 which latter are secured to the supporting shaft. There is thus no direct metal

connection between the core or platen proper and the supporting shaft, but the latter is spaced and separated by flexible and yieldable insulating materials and which while forming a durable and rigid connection mechanically speaking, yet serve to absorb the sounds incident to the operation of the type bars striking against the platen. A platen when constructed along the lines illustrated forms a very materially quieter operating device than anything which I have yet tried.

Having thus described my invention what I claim and desire to secure by Letters Patent is:

1. The combination with a typewriter platen core, of end caps for supporting the platen and having holes therethrough, insulative bushings fitted in the holes, means passing through the bushings and engaging the platen core for insulatively connecting the caps to the core.

2. In a typewriter platen, the combination with a platen roll, of end plates secured to the roll, end supporting caps for the plates, screws for securing the said caps to the ends of the plates, and rubber bushings surrounding the screws and contained in said caps whereby the platen support is insulatively cushioned from the platen proper.

3. In a typewriter platen of the class described, the combination with a platen roll, of caps secured to the ends of the roll, separate cushioning pieces arranged between each of the caps and the roll, means for securing the caps to the platen, yieldable insulative cushions secured between said caps and their attaching means, and a supporting shaft secured solely in said caps and adapted to support the platen in a carriage.

4. A platen roll comprising a platen core, a flexible insulating washer secured to each end of the platen core, caps covering the said insulating washer and forming the ends of the platen, screws for attaching the caps to the platen core, rubber washers surrounding the screws for insulating the caps from the platen, and a supporting rod extending through the said platen core and caps.

5. In a typewriter platen, the combination of a platen comprising a series of metal and insulating units arranged side by side, a series of tie rods extending therethrough, plates engaged by the opposite ends of the rods, a flexible insulating washer arranged against the outer face of each of the said plates, a supporting cap arranged against the said flexible washers, means for insulatively securing the end caps to the plates, and a supporting rod extending through the said end caps and adapted to be supported in a typewriter carriage.

6. A typewriter platen having an outer cylinder with a continuous working surface, a core reinforcing said cylinder, caps at the

ends of the core, means securing the end
caps to the core, sound absorbing means in-
terposed between the end caps and the core
and said fastening means so as to completely
5 sound insulate the caps from the core, and
a shaft extending through the core and end
caps and supported by the end caps only.

Signed at Chatham in the county of
Middlesex and State of Connecticut this
14th day of May A. D., 1914.

NILS H. ANDERSON.

Witnesses:

HUBERT C. HODGE,
THOMAS S. BROWN.