(No Model.) 2 Sheets—Sheet 1.

# D. B. SCOTT.

## PRINTING TELEGRAPH.

No. 350,469. Patented Oct. 5, 1886.

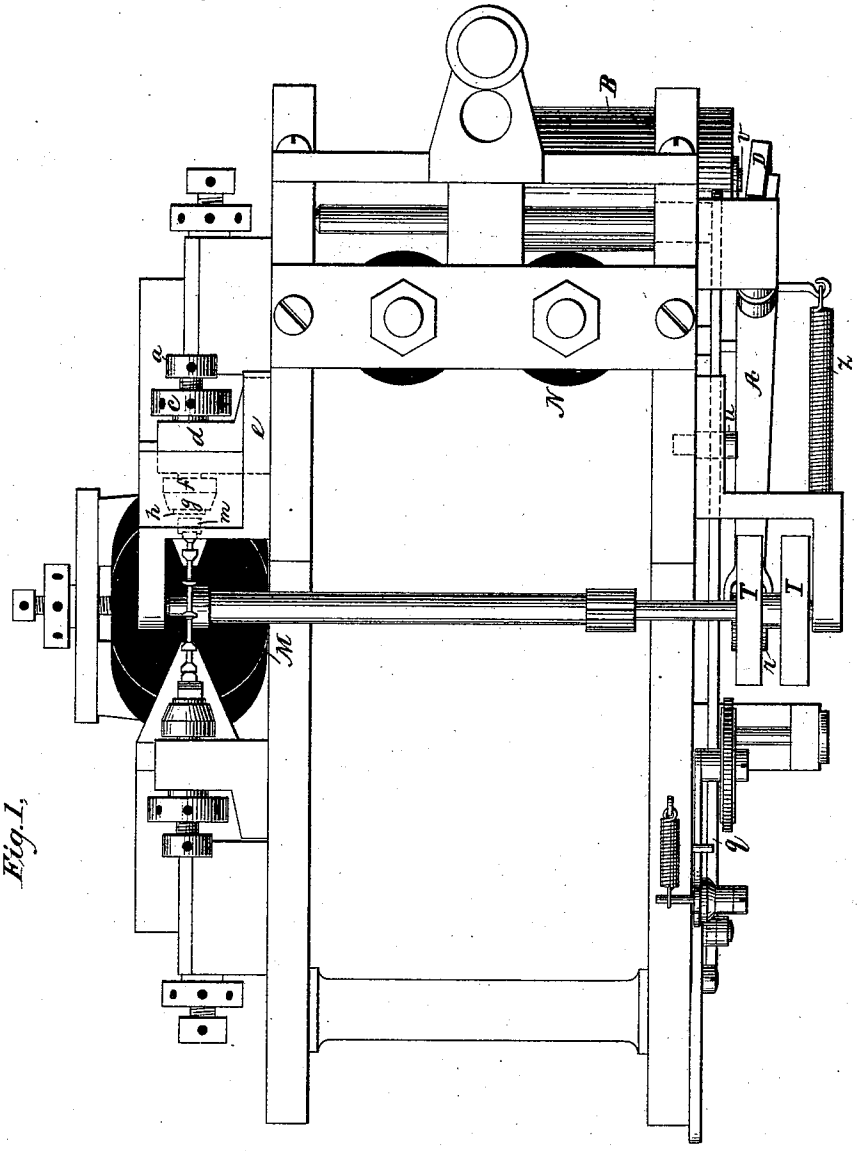



Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

# D. B. SCOTT.

## PRINTING TELEGRAPH.

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Fig. 2.

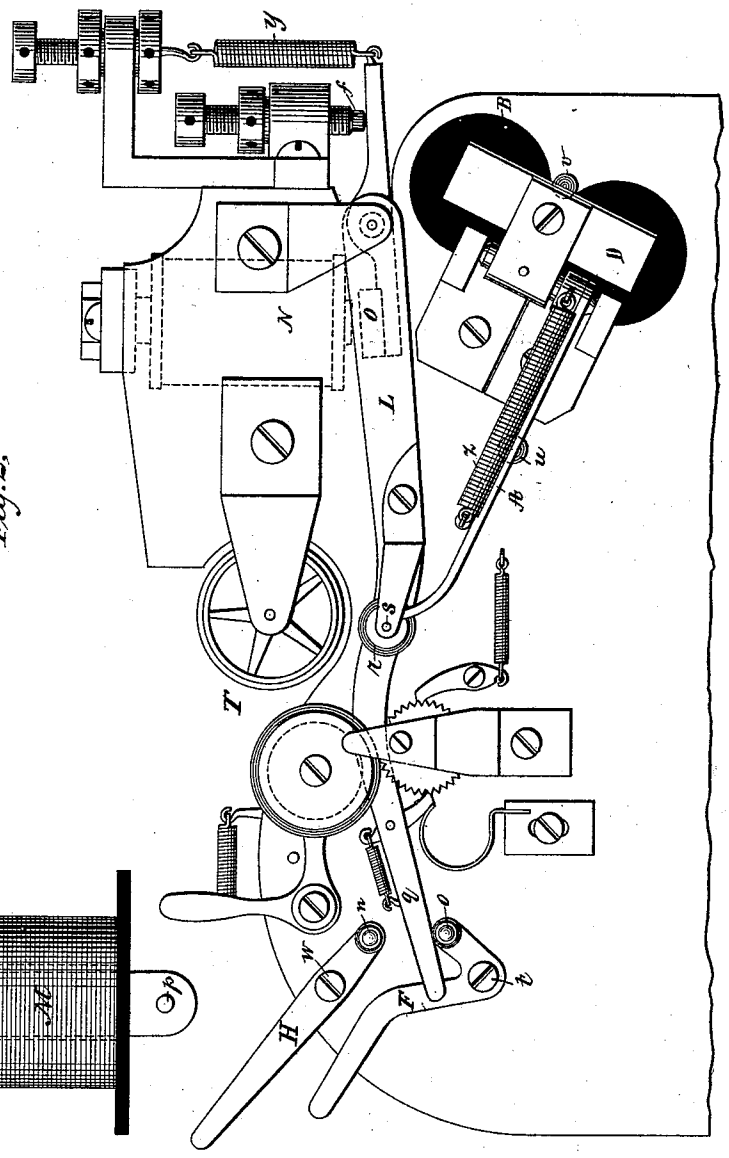
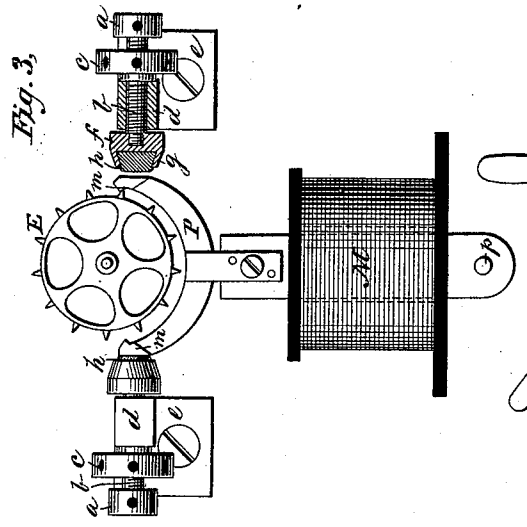


Fig. 3.



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# UNITED STATES PATENT OFFICE.

D. BRYCE SCOTT, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE WESTERN UNION TELEGRAPH COMPANY OF NEW YORK.

## PRINTING-TELEGRAPH.

SPECIFICATION forming part of Letters Patent No. 350,469, dated October 5, 1886.

Application filed May 24, 1886. Serial No. 203,079. (No model.)

*To all whom it may concern:*

Be it known that I, D. BRYCE SCOTT, residing in the city of Brooklyn, county of Kings, State of New York, a citizen of Canada, North America, have made a new and useful Improvement in Printing-Telegraph Apparatus, of which the following is a specification.

In printing-telegraphs the escapement-pallets are subject to a rapidly-reciprocating movement, they being impelled by considerable force, and thus the blows of the escapement mechanism upon rigid metallic buffers heretofore employed occasion injurious wear and disagreeable noise. Other parts of printing-telegraph apparatus are also subject to shocks and noise due to the limiting-buffers as usually constructed.

The object of my invention is to provide the vibrating mechanism of printing-telegraphs with limiting-buffers, which shall render the apparatus nearly noiseless and less subject to wear from the shock experienced when arrested at the extreme position of vibration.

I will now explain my invention by reference to the accompanying drawings.

Figure 1 represents a plan view of a printing-telegraph instrument provided with my improved forms of buffers. Fig. 2 is a side view of the printing-telegraph apparatus, showing the arrangement of limiting-buffers of the press mechanism. Fig. 3 is a side view of the type-wheel escapement apparatus provided with my improved form of buffers.

Figs. 1 and 3 illustrate the escapement mechanism, in which M is the escapement electro-magnet, P the escapement-pallets mounted upon an axial armature-lever pivoted at *p*, and E is the escapement-wheel mounted upon the type-wheel shaft. The buffers *h* limit the to-and-fro movement of the pallets P by contact of the surfaces *m* at the extremities of the pallets, and *f* is a cup-shaped holder having a rim, *g*, within which is fixed the buffer *h*. The holder-cup *f* is secured tightly upon the end of a screw, *b*, which passes through a bracket-arm, *d*, mounted upon a bracket, *e*, while the screw *b* is provided with a screw-head, *a*, and also with a tightening-nut, *c*. By this arrangement, upon loosening the tightened nut *c* and turning the screw-head *a*, the position of the buffer *h* may be adjusted to any required position with reference to the pallet-surface *m*, thus increasing or decreasing at pleasure the stroke of the escapement-pallets. In forming such buffers I may make the pieces *h* of leather, vulcanized fiber, or of other non-resonant tenacious material. Preferably, however, for escapement-buffers I employ a good quality of sole-leather.

The method of attaching buffer *h* within the cup-shaped holder which I prefer is as follows: The holder is first made in the form of a blank having a plain cylindrical rim, *g*, and within such cylindrical opening I place a cylindrical piece of sole-leather, whose outer end projects a little distance beyond the rim. The rim of the holder is then hammered down to the form of a frustum of a cone, thus pressing the sole-leather compactly within the rim. The outer end of the sole-leather about the rim *g* is then turned down by lathe or other suitable means, leaving a flat end projecting slightly beyond the rim.

Limiting-buffers such as those described may be employed in connection with the press mechanism of the printer, though in connection with the press-lever and the press-pad shifter ordinary vulcanized-fiber buffers in the form of sleeves mounted upon axial metallic pins may be employed.

In Figs. 1 and 2 I have shown the press-lever L having a free end, *q*, whose to-and-fro movement is limited by vulcanized-fiber sleeves *n o*, respectively mounted upon axial pins projecting from adjustable levers H F, the latter being pivoted at *w t*.

As will be seen in the drawings, N is the press-magnet, O the armature controlling the press-lever, and *y* a retracting-spring therefor. A limiting buffer-pin, *f*, made of vulcanized fiber is also employed as a back-stop for the armature-lever.

T represents the type-wheels, *r* the laterally-vibrating press-pad, and *s* a pin mounted upon the press-lever, upon which the press-pad is laterally moved by means of the lever A through the agency of the armature D, electro-magnet B, and retracting-spring *z*. The forward movement of the armature D is limited by the vulcanized-fiber sleeve or pin *v*, while the

backward movement of the armature-lever A is limited by similar buffer, *u*.

What I claim, and desire to secure by Letters Patent, is—

1. In a printing-telegraph, the combination of a type-wheel, an escapement-wheel, a clock-motor or other suitable apparatus for driving the type-wheel shaft, an escapement-anchor, an electro-magnet controlling said anchor, and limiting-buffers formed of sole-leather or other equivalent tenacious and non-resonant material, as and for the purpose described.

2. In a printing-telegraph, the combination of escapement apparatus consisting of escapement-pallets and limiting-buffers formed of sole-leather and a cup-shaped holder, as and for the purpose described.

3. In a printing-telegraph, an escapement-wheel, E, escapement-pallets P, having contact-pieces *m*, and limiting-buffers formed of sole-leather *h*, holder *f*, set-screw *b*, and brackets *e*, substantially as described.

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Witnesses:
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