April 8, 1930. G. S. HILTZ ET AL 1,753,656

PRINTING TELEGRAPH

Filed March 1, 1928

Fig. 1.

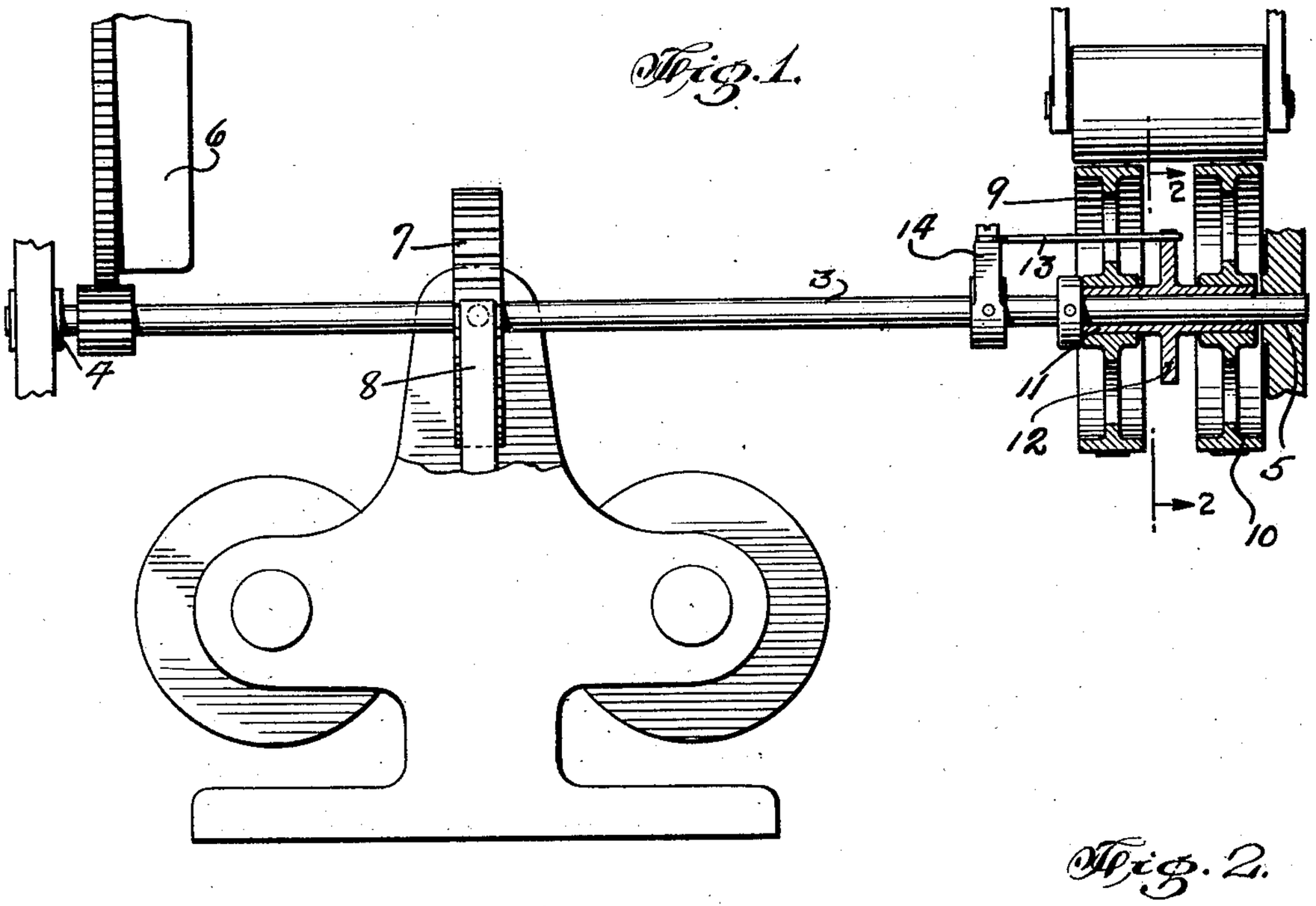
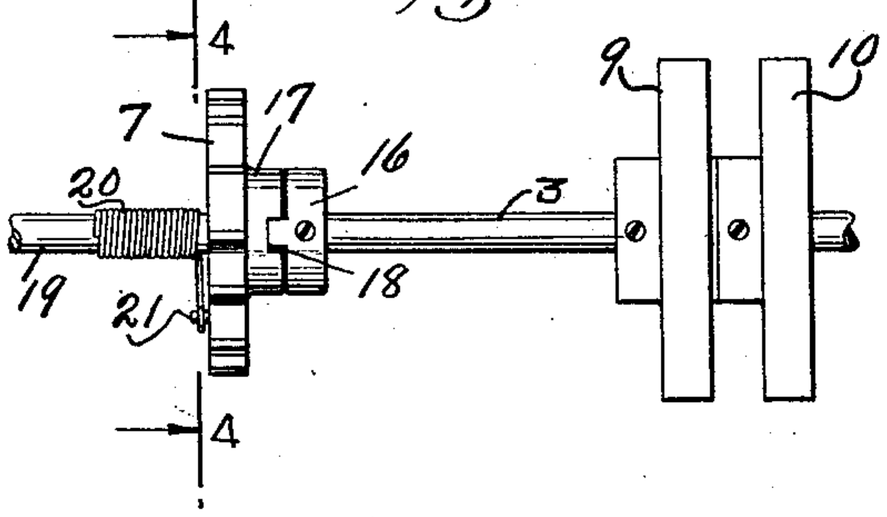
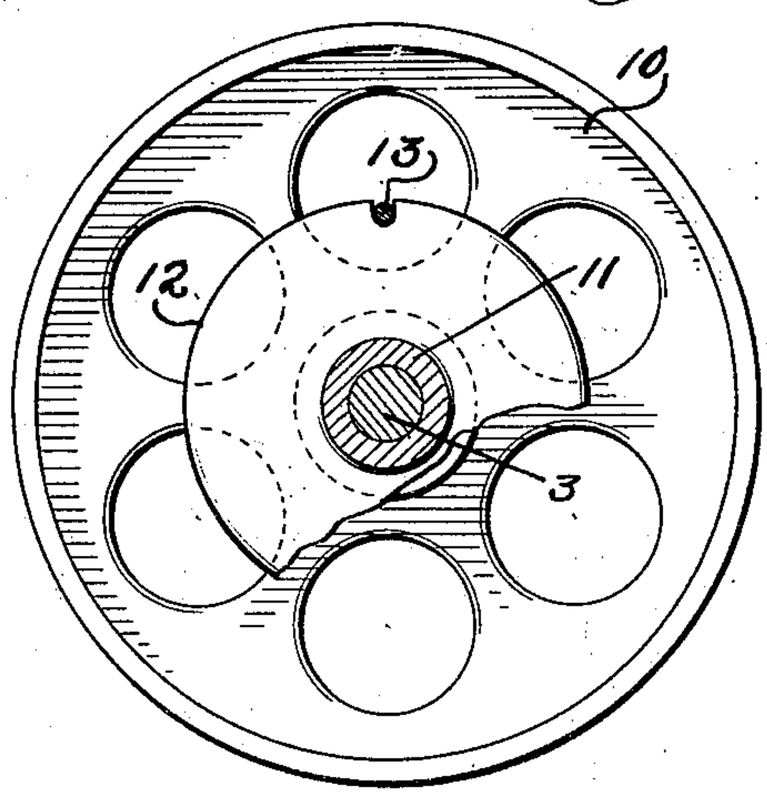


Fig. 2.

Fig. 3.





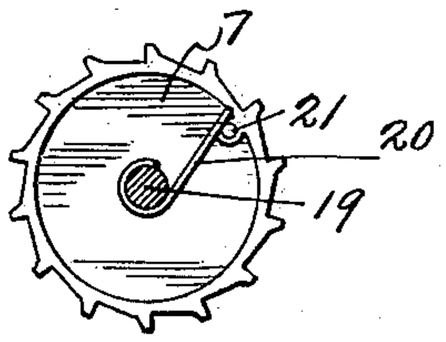


Fig. 4.

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UNITED STATES PATENT OFFICE

GEORGE S. HILTZ, OF BROOKLYN, NEW YORK, AND WILLIAM F. PURCELL, OF HOBOKEN, NEW JERSEY, ASSIGNORS TO STOCK QUOTATION TELEGRAPH COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK

PRINTING TELEGRAPH

Application filed March 1, 1928. Serial No. 258,158.

Our invention relates to an improvement in printing telegraphs and has for one of its objects the provision of new driving mechanism for the typewheels thereof.

In printing telegraphs of the type to which our invention relates, the typewheels heretofore have been rigidly attached to a spring driven type shaft. Rotation of the type shaft is controlled by electrically operated escapement mechanism.

In such machines, when operated above a predetermined speed, the typewheels sometimes do not respond properly and fail to make satisfactory impressions upon the tape. We have determined that these results may be due to flywheel action of the typewheels or a rebounding action at the escapement mechanism.

The present invention overcomes the objections above mentioned in a simple manner.

Our improved construction eleminates the rigid drive heretofore used, one form of our invention providing for movement in two directions between the typewheels and typeshaft, while the other permits of movement of the typewheels in one direction relative to the escapement mechanism. As a consequence the flywheel effect of the typewheels, i. e., the tendency of the typewheels to continue in motion upon the movement of the scape wheel being arrested is neutralized and absorbed.

Fig. 1 is a view in part sectional elevation of one embodiment of the invention in which movement in two directions is permitted of the typewheels relative to the typeshaft;

Fig. 2 is a section on the line 2—2 of Fig. 1;

Fig. 3 is an elevational view of another embodiment of our invention; and

Fig. 4 is a section on the line 4—4 of Fig. 3.

Referring first of all to Figures 1 and 2, 3 designates the typeshaft of a conventional stock ticker or printing telegraph mounted in suitable bearings 4 and 5, and driven through a gear train from a spring (not shown) enclosed in a spring barrel or housing 6.

Rotation of the typeshaft is controlled by electrically operated escapement mechanism comprising scape wheel 7 fast upon the shaft 3 and pawls 8. (One pawl only has been shown.)

The apparatus thus far described is conventional design and familiar to those skilled in this art.

Heretofore the two typewheels 9 and 10 have been fixedly secured to the typeshaft.

By the present invention, however, we have improved prior constructions by providing for slight relative movement between the wheels and typeshaft. In the construction illustrated in Figs. 1 and 2 we mount a sleeve 11 loosely upon the typeshaft, end motion of the sleeve being prevented by suitable means.

Rigidly mounted upon the sleeve 11 are the typewheels 9 and 10 above referred to. Intermediate the typewheels the sleeve is provided with an offset, which may take the form of an annular flange or fin 12. To this flange is secured one end of spring or yielding means 13, the other end of this spring being rigidly attached to an arm or other suitable device 14 clamped fixedly to the typeshaft.

By the above construction, therefore, we provide for slight movement in two directions of the typewheels 9 and 10 relatively to the typeshaft 3, the drive for the typewheels being through the yielding means 13. It will be evident with this construction that shocks and jars incident to the intermittent operation of the escapement mechanism will be cushioned by the driving connection 13, and the flywheel action of the typewheels neutralized.

In the embodiment of our invention as illustrated in Figs. 3 and 4, the male element 16 of a dog clutch is rigidly secured to the typeshaft, this clutch element having slight play relative to and cooperating with the female element 17 of the clutch as indicated at 18. This member 17 is carried by the scape wheel 7. The scape wheel is frictionally held to the portion 19 of the typeshaft by a spring 20 coiled about the same, one end of this spring extending outwardly toward the periphery of the scape wheel where it engages a pin 21.

Obviously by this arrangement the scape wheel is yieldingly driven from the typeshaft through the spring 20, so that abrupt stop-

ping of the scape wheel will be cushioned by the spring. It will be apparent also that the flywheel action of the typewheels 9 and 10 will be neutralized by the slight play permitted between the clutch members 16 and 17.

In both forms of our invention, therefore, the typewheels are driven through a yielding drive connection to the typeshaft, the drive connection of Figs. 1 and 2 permitting of movement of the typewheels relatively to the typeshaft in two directions, while in Figs. 3 and 4 this movement is in one direction.

What we claim is:—

1. In printing telegraphs, the combination of a typewheel, an intermittently rotated shaft, a spring for rotating said shaft, a scape wheel yieldingly mounted on said shaft, a second shaft having movement relatively to the first mentioned shaft and carrying said typewheel, and a coupling for coupling the scape wheel to the last mentioned shaft, and constructed for relatively rotary movement on one direction of rotation.

2. In printing telegraphs, the combination of a typewheel, a shaft carrying the same, a second shaft, a spring for driving the same, a scape wheel loosely mounted on the last mentioned shaft, a spring for driving said last mentioned shaft, a spring for connecting the scape wheel to its shaft, and a lost motion coupling for coupling the two shafts to each other.

3. In printing telegraphs, the combination of a typewheel, a shaft carrying the same, a second shaft, a spring for driving the same, a scape wheel loosely mounted on the last mentioned shaft, a spring for driving the last mentioned shaft, a spring coiled about the last mentioned shaft and frictionally held thereto and having one end in engagement with the scape wheel yieldingly to connect the scape wheel to the shaft, and a coupling comprising two members having slight relative rotary movement for coupling the scape wheel to the first mentioned shaft, one coupling member being carried by the shaft, the other by the scape wheel.

This specification signed this 29 day of February, 1928.

GEORGE S. HILTZ.

This specification signed this 29 day of February, 1928.

WILLIAM F. PURCELL.