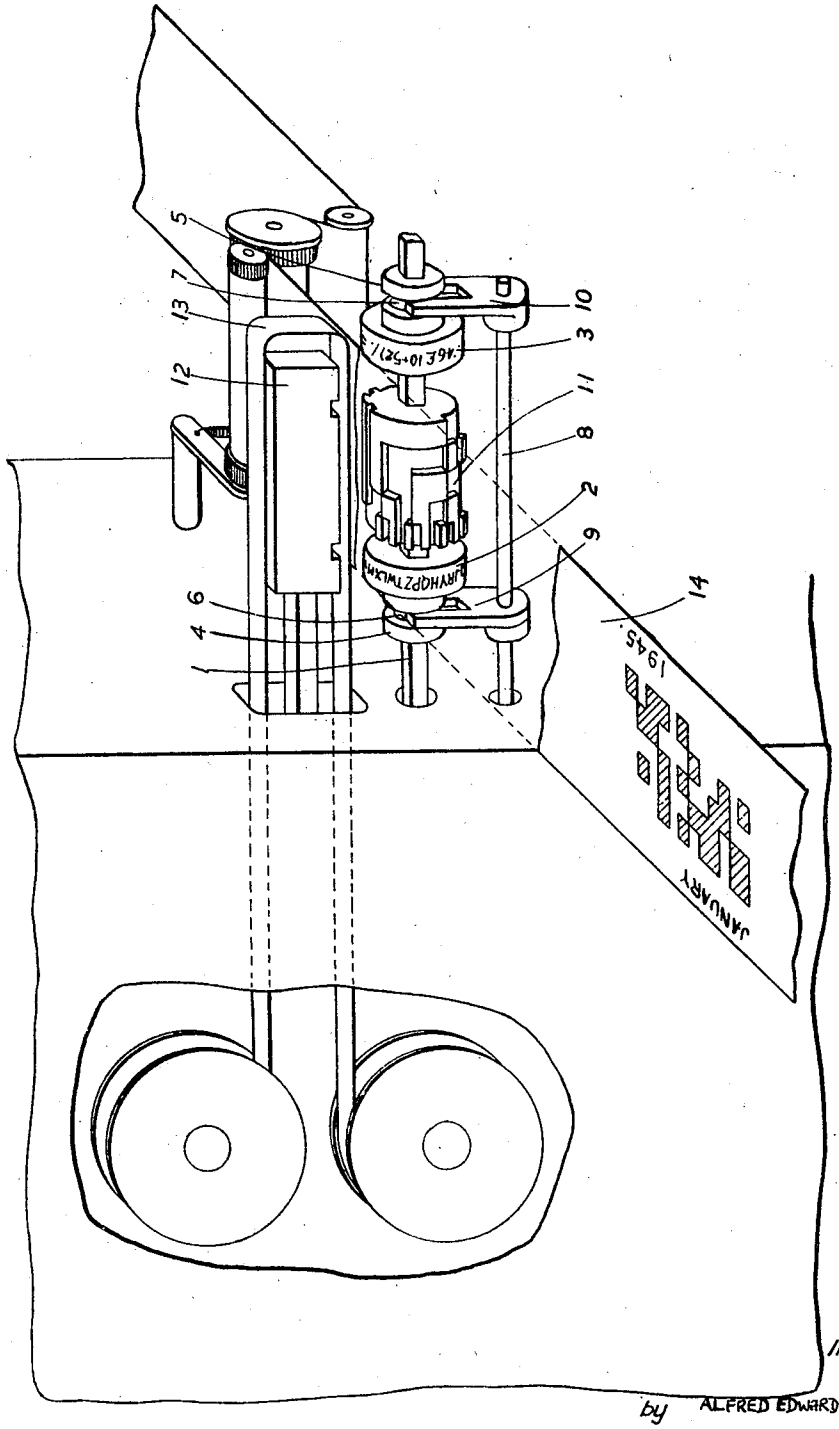
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PRINTING TELEGRAPH APPARATUS

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PRINTING TELEGRAPH APPARATUS

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This invention relates to printing telegraph apparatus and particularly to apparatus for printing both the coded signals and the corresponding characters.

The present invention provides telegraph printing mechanism whereby characters and the corresponding code representations may be printed simultaneously.

The present invention also provides telegraph printing mechanism whereby a character and the corresponding code representation may be printed simultaneously in the same transverse line across a telegraph or like tape.

The present invention may also provide telegraph printing mechanism whereby characters and the corresponding code representations may be printed simultaneously and in transverse lines with successive code representations abutting longitudinally along the telegraph or like tape.

The nature of the invention will be understood from the following description of one embodiment read with reference to the accompanying drawing.

In the embodiment to be described, a type-wheel spindle, positioned rotatably by any well-known telegraph selecting and translating means in accordance with the five-unit code, is in the form of a spline shaft 1.

Slidably mounted on the shaft are two type-wheels 2, 3. Type-wheel 2, carries around its periphery, characters in one "case," and the other type-wheel 3, similarly carries characters in the other "case." Each type-wheel is fixed to a boss 4 and 5 respectively, and each boss has an annular groove 6, 7. A rod 8 mounted to slide in guides parallel with the axis of the type-wheels carries two arms 9, 10, having forked ends adapted to engage the grooves in the type-wheel bosses. The longitudinal end-ways position of the rod 8 is under the control of the "case" shift mechanism positioned by the selecting and translating mechanism of the telegraph receiver.

The arrangement is such that for each change of "case" the rod 8 is moved into one or other of its two endways positions, thereby moving the two type-wheels 2, and 3 along the spline shaft, whilst keeping their distance apart constant.

Fixed to the shaft between the two type-wheels is a drum 11 carrying rows of projections arranged parallel to the axis of the shaft, there being one row for each character on either type-wheel 2 or 3. Each row of projections represents the five-unit code characteristic corresponding to the associated character on the slidable type-wheels. For this purpose projections are provided in each row corresponding to the marking signals only of the signal combination.

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Mounted above the type-wheels 2 and 3 and code drum 11 is a printing hammer 12 provided with a resilient printing surface, of such dimensions that only one line of projections on the drum 11 will be struck at any one blow and at the same time only one character on one of the two type-wheels 2 and 3.

An ink ribbon 13 is fed between the hammer 12 and the type-wheels 2 and 3 and code drum 11 so that the ribbon moves in a direction parallel with the axis of the type-wheel.

A paper tape 14 is fed between the ink ribbon and the type-wheels 2 and 3 and code drum 11, so that it moves at right angles to the axis of the type-wheels.

The arrangement is such that after each angular positioning of the type-wheel spindle, the hammer 11 strikes the ink ribbon 13 against the paper tape 14 and the paper tape against one or other of the type-wheels 2 and 3 and against the code drum 11, whereby a character in one "case" or the other and its corresponding code combination are printed simultaneously on the paper tape. Characters in one "case" are printed adjacent one edge of the paper tape and characters in the other "case" are printed adjacent the opposite edge.

According to an alternative arrangement of the invention, the type-wheels and code drum may be inked by an inking roller and the paper struck directly against them by the hammer.

What is claimed is:

1. A telegraph printing mechanism comprising a rotatable shaft adapted to be rotatably positioned in accordance with a predetermined telegraph code, tape moving mechanism adapted to move a recording tape at right angles to the axis of said shaft in response to said code, a code drum having a printing surface representing code representations, said drum axially mounted on said shaft and positioned in register with the major portion of the tape width, a pair of type wheels having printing surfaces containing characters corresponding to the code representations on said drum, said wheels axially mounted on said shaft, each wheel disposed adjacent a different end of said drum, means for moving said wheels in tandem in either direction along said shaft in response to said code, alternate of said wheels adapted to be respectively positioned in printing proximity to a different edge of the tape when said wheels have been moved in different

directions along said shaft, and means for causing said drum and a selected one of said wheels to simultaneously impress a graphic marking on the tape in response to said code, such marking being determined by the angular position of said shaft and in response to said code.

2. A telegraph printing mechanism as claimed in claim 1 wherein said means for moving said wheels in tandem in either direction along said shaft comprises a pair of bosses, each attached to one of said wheels and each having an annular groove therein, a pair of arms each adapted to engage the groove in a different one of said bosses, a member connecting said arms and movable along an axis parallel to said shaft.

3. A telegraph printing mechanism as claimed in claim 1, wherein said means for graphically marking said tape comprises an ink ribbon and

a printing hammer in operative relation to said wheels and said drum, said ribbon disposed between said wheels, drum and said hammer.

ALFRED EDWARD THOMPSON.

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