

(No Model.)

C. L. HEALY.

TYPE WHEEL FOR PRINTING TELEGRAPH RECEIVERS.

No. 366,628.

Patented July 12, 1887.

Fig. 1.

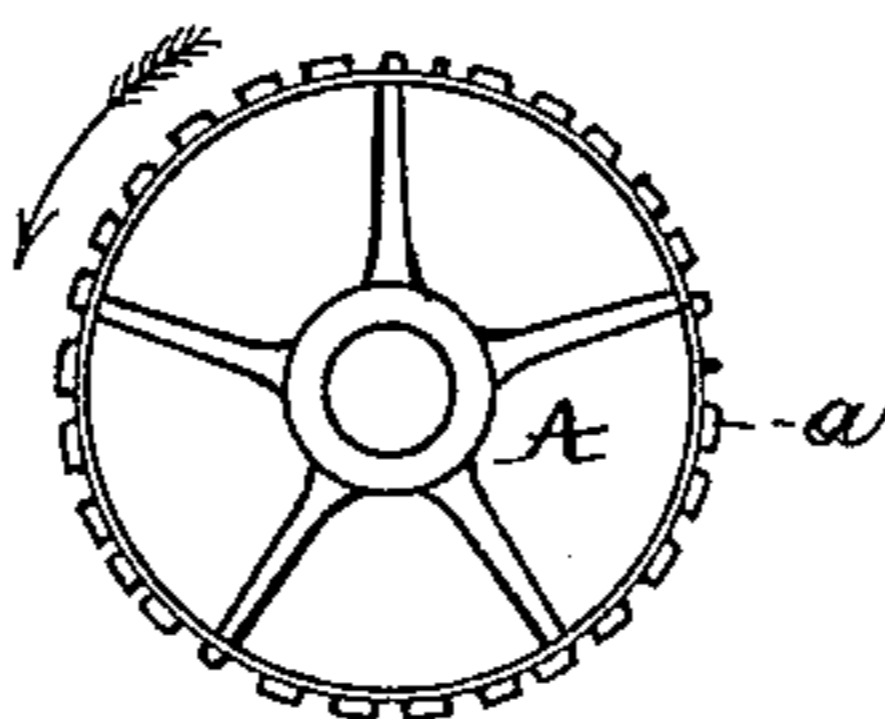


Fig. 2.

←
123450.1234567890.1131537
8482848BS3

Fig. 3.

←
1234560.1234567890.1131537
8482848BS3

Fig. 4.

←
\$1234567890.CBSUR%@£1131537
8482848S.

Fig. 5.

←
1234567890.C1131537.S1131537
8482848.8482848B*

ATTEST:

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UNITED STATES PATENT OFFICE.

CLARENCE L. HEALY, OF BROOKLYN, ASSIGNOR TO THE COMMERCIAL TELEGRAM COMPANY, OF NEW YORK, N. Y.

TYPE-WHEEL FOR PRINTING-TELEGRAPH RECEIVERS.

SPECIFICATION forming part of Letters Patent No. 366,628, dated July 12, 1887.

Application filed March 19, 1886. Serial No. 195,868. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE L. HEALY, of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Type-Wheels for Printing-Telegraph Receivers, of which the following is a specification.

In the accompanying drawings, forming a part hereof, Figure 1 is a side view of a figure-wheel for stock-quotation printers; Fig. 2, a view of the surface of the wheel laid out flat, showing the arrangement constituting my invention; Fig. 3, a view like Fig. 2 of a modified arrangement, and Figs. 4 and 5 similar views of arrangements of the characters of figure-wheels now in use.

In printing-telegraph receivers having two type-wheels, one of such wheels is provided with letter-types for printing the names of stocks, and is known as the "letter-wheel," while the other wheel has figure-types for giving the price bid or asked for the stocks, and is known as the "figure-wheel." In the preferred form of "printer" now in use the tape is printed in two lines, the letter-wheel printing only on the top line and the figure-wheel only on the bottom line, and hence it becomes essential that each wheel should carry all the characters necessary for printing its line upon the tape. The letter-wheel, with a complete alphabet and the other necessary characters, has thirty types in number, and this number of types is thus made controlling for the figure-wheel.

Since there are only ten figures and seven fractions employed on the figure-wheel, room is left for other characters, such as the letters B and S, which are considered essential and are used, in connection with the figure 3, to denote that a bid or sale is made on three days' time, as "27 $\frac{1}{2}$ B 3," or "27 $\frac{1}{2}$ S 3." Other letters are also used, such as "C U R," as well as the marks "\$, %, £." Periods or dots, usually two or three, are employed, and sometimes the small letter "@" to divide the price bid from the price asked, as "118 $\frac{1}{2}$ @ $\frac{1}{2}$," which indicates that 118 $\frac{1}{2}$ was bid for the stock and 118 $\frac{1}{2}$ was asked for it. This division can also be made by printing three periods or dots, as "118 $\frac{1}{2}$... $\frac{1}{2}$." The fractions have also been repeated for the

purpose of filling out the figure-wheel. These features of arrangement will be found in Figs. 4 and 5.

The type-wheels revolve always in one direction, and characters are printed in succession as they occur upon the wheels. If after printing one character it is desired to print a preceding character upon the wheel, it is necessary to turn the wheel forward another revolution, and this essential feature of operation increases the number of revolutions in a day's run greatly. Since the figure line upon the tape has many more characters than the letter line, the loss in time is more largely in running the figure-wheel.

I have conceived that it is possible to arrange the characters upon the figure-wheel of a two-wheel printer so that the number of revolutions required to print the stock reports for a day will be largely decreased, and it is my object to produce an arrangement which will reduce the number of revolutions to the minimum.

In the drawings, A is the figure-wheel, of usual or any suitable construction, and a represents the types cut upon its periphery. It is shown with its characters developed in an arrangement constituting my invention in Figs. 2 and 3.

One feature of my invention, which is independent of other features, is the arrangement of the figure 3, representing the usual time upon which a time bid or sale is made after all the other characters. The letters B S, which precede this figure 3, are preferably placed directly in front of it, as shown in Figs. 2 and 3. This of itself saves largely in the number of revolutions, since the expression "B 3" or "S 3" is frequently used, and when used occurs almost without exception at the end of the quotation.

In my improved wheel no capital letters except B and S are used. The letter C, denoting a "call," is discarded as not of frequent occurrence. If desirable, the expression can be printed by the letter-wheel on the top line of the tape, as can also any expressions for which the letters U R and characters \$, %, £ are used, these letters and characters being all omitted. My improved type-wheel has but

one set of fractions, which come next to the three or four characters last on the wheel. I have found that the whole numbers, including the cipher, are most frequently used, and of these the cipher and the whole numbers below five. My object, therefore, in using one set of fractions and dispensing with as many other characters as possible, is to make room for an extra set of whole numbers, or as near a complete extra set as can be placed upon the wheel. The two sets of whole numbers enable a lesser number to be printed after a greater in the same revolution by running to the next set of numbers. These periods or dots are used one following each set of whole numbers and one (the unison dot) preceding all the other characters. Following the fractions may be the character "@," as shown in Fig. 2, the use of which has been before explained; but this character may be omitted and the partial set of whole numbers made more complete by one number, as shown in Fig. 3, and the expression for which the character "@" is used be made by printing three dots or periods.

Not only are the whole numbers greatly predominant in number over fractions in giving the price of the stock, but the number of shares almost invariably leads the price, and this is always printed in whole numbers.

I have found that my improved figure-wheel

makes a saving in number of revolutions of from thirty per cent. to fifty per cent.

What I claim is—

1. In a figure-type wheel for stock-quotation printers, having types for whole numbers and fractions, the combination therewith of a figure-type representing the usual time of a time bid or sale located after the other characters, substantially as set forth.

2. In a figure-type wheel for stock-quotation printers, having types for whole numbers and fractions, the combination therewith of types B, S, and 3, located at the end of the line of characters, substantially as set forth.

3. In a figure-type wheel for stock-quotation printers, the combination therewith of types for two sets of whole numbers, one set of fractions, the letters B S and the final figure 3, substantially as set forth.

4. A figure-type wheel for stock-quotation printers, having types for whole numbers and fractions, and provided with types @, B, S, and 3, located at the end of the line of characters, substantially as set forth.

This specification signed and witnessed this 11th day of March, 1886.

CLARENCE L. HEALY.

Witnesses:

E. L. REID,

A. W. KIDDLE.