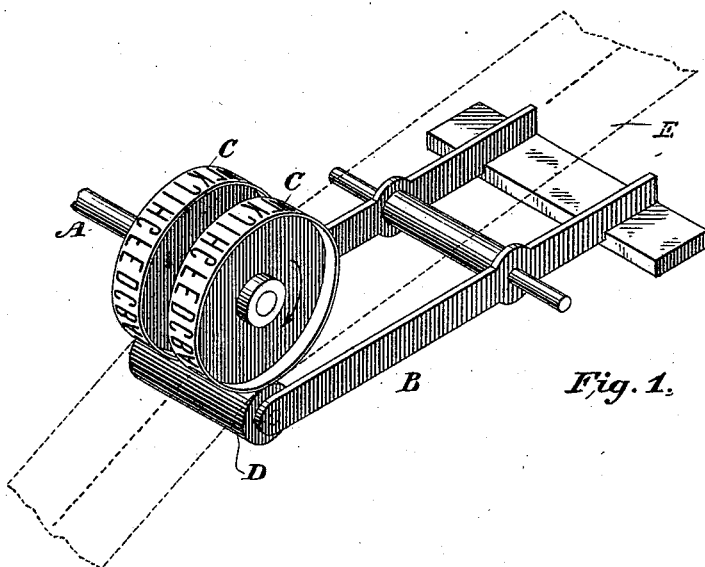


(No Model.)

D. H. BATES & H. VAN HOEVENBERGH.  
PRINTING TELEGRAPH.

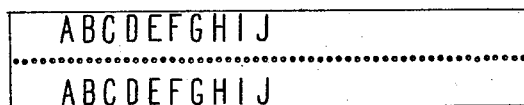
No. 455,294.

Patented June 30, 1891.



*Fig. 1.*

*Fig. 2.*



*E*

Witnesses  
*Geo. W. Breck*  
*Edward Thorpe*

*David H. Bates* Inventors  
*Henry Van Hovenbergh*  
By their Attorneys  
*Baldwin, Davidson & Wright*

# UNITED STATES PATENT OFFICE.

DAVID H. BATES AND HENRY VAN HOEVENBERGH, OF NEW YORK, N. Y.

## PRINTING-TELEGRAPH.

SPECIFICATION forming part of Letters Patent No. 455,294, dated June 30, 1891.

Application filed March 4, 1891. Serial No. 383,759. (No model.)

*To all whom it may concern:*

Be it known that we, DAVID H. BATES and HENRY VAN HOEVENBERGH, citizens of the United States, residing at New York city, New York, have jointly invented certain new and useful Improvements in Printing-Telegraphs, of which the following is a specification.

The object of our invention is to provide means whereby two or more copies of a message may be simultaneously printed by a single instrument, the duplicate messages being printed side by side upon a single ribbon of paper so prepared that the two copies of the message may readily be separated from each other or upon two ribbons of paper.

In carrying out our invention we employ two type-wheels or two series of characters operated together, and from both wheels or both series of characters the message is simultaneously printed in duplicate by the action of a single press-lever on a paper ribbon so prepared as to be readily divided longitudinally to separate the duplicate copies of the message. The characters are so arranged as to be read in lines transverse to the axis of the two series.

The invention is specially adapted for use in connection with railroad-telegraphs, where duplicates of all train-messages are requisite or desirable, and also in all cases where it is desired to retain in the telegraph-office duplicates of messages that are received and delivered.

The accompanying drawings show so much only of a telegraph-instrument as is necessary to illustrate our invention.

Figure 1 is a perspective view showing the end of a type-wheel shaft with two type-wheels mounted thereon, and the end of a press-lever carrying a platen of sufficient width to simultaneously print from both wheels. Fig. 2 shows a section of paper ribbon prepared according to our invention.

The type-wheel shaft A and press-lever B may be operated in any of the ways practiced in printing telegraphy.

C C represent two series of letters or characters arranged about the type-wheel shaft with corresponding letters side by side. Each series is shown as carried by a separate type-wheel; but obviously both series might be placed upon the periphery of a single wheel,

and however arranged they revolve in fixed relation to each other.

The platen D carried by the press-lever is of sufficient width to cause an impression to be taken from both series of letters simultaneously upon a paper ribbon of proper width that is passed between the platen and the type-wheels and fed toward or drawn from the type-wheels in any suitable manner.

The paper ribbon E (indicated in Fig. 2) is of sufficient width to receive impressions from both type-wheels, and is provided with a central longitudinal line of perforations, indentations, cuts, or other means, whereby it may be readily severed longitudinally into two strips on each of which the message is printed.

In railroad telegraphy where duplicates of a message are to be delivered to different officials on the same train the undivided strip may be delivered to one of the officers who may be charged with the duty of severing it and giving one of the copies to the other officer. There will therefore be no liability of one of the copies being lost during transmission from the telegraph-operator to the train. A further advantage attending the use of such a ribbon would be that the edge of a ribbon would always indicate that it had been severed from a similar ribbon, and thus show that a copy of the message was in the hands of another official on the train, or, in the case of ordinary commercial messages, that a fac-simile duplicate of the message was on file at the telegraph-office.

In transmitting telegrams over commercial lines one copy is necessary enough to book from, and heretofore and for many years the Western Union Telegraph Company in its printing service has required the sending operator to repeat the number of the message, the date, place from which transmitted, &c., and the check, all of which the receiving operator detaches for booking purposes, or else the receiving operator writes down the date, and in both cases errors are liable to occur. In private line or broker work the receiving-office sometimes needs to keep a record for file, using one copy for other purposes, or else one copy is needed to be mailed back to point of origin for comparison. In all such cases our invention supplies the necessary data, and as each copy of a message must be a duplicate in

every respect, including errors, if any, there is no chance for any misunderstanding or any controversy as to differences in the two or more copies of a single message.

5 We claim as our invention—

1. The combination, substantially as set forth, of two rotating series of like letters or characters having corresponding letters or characters in the two series arranged side by  
10 side in fixed relation to each other, the letters being arranged so as to be read in lines transverse to the axis of the two series, and impression devices for simultaneously taking an impression of corresponding characters from  
15 both type-wheels, whereby duplicates of the same message may be simultaneously printed.

2. The combination, substantially as set forth, of two series of letters or characters rotating in fixed relation to each other and hav-  
20 ing corresponding letters arranged side by

side, a paper ribbon of sufficient width to receive impressions from both series of letters and provided with a longitudinal line of perforations or indentations to facilitate its longitudinal division into two ribbons, and im- 25 pression devices for simultaneously printing on the ribbon from both series of letters duplicates of a message on opposite sides of the line of perforation.

In testimony whereof we have hereunto sub- 30 scribed our names this 2d day of March, 1891.

DAVID H. BATES.

HENRY VAN HOEVENBERGH.

Witnesses as to signature of D. H. Bates:

A. C. JUDD,

BEVERLY W. HILL.

Witnesses as to signature of H. Van Hoe-  
venbergh:

FRANK S. OBER,

EDWARD C. DAVIDSON.