

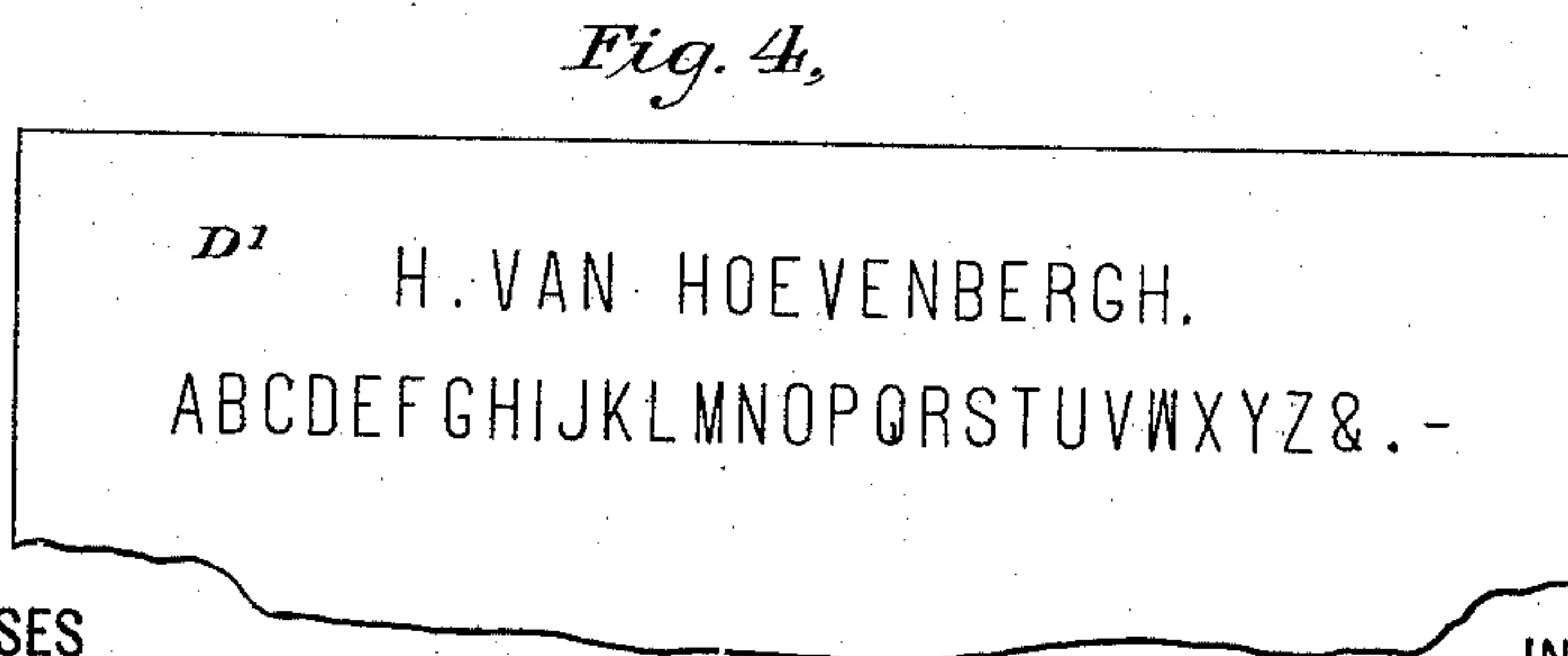
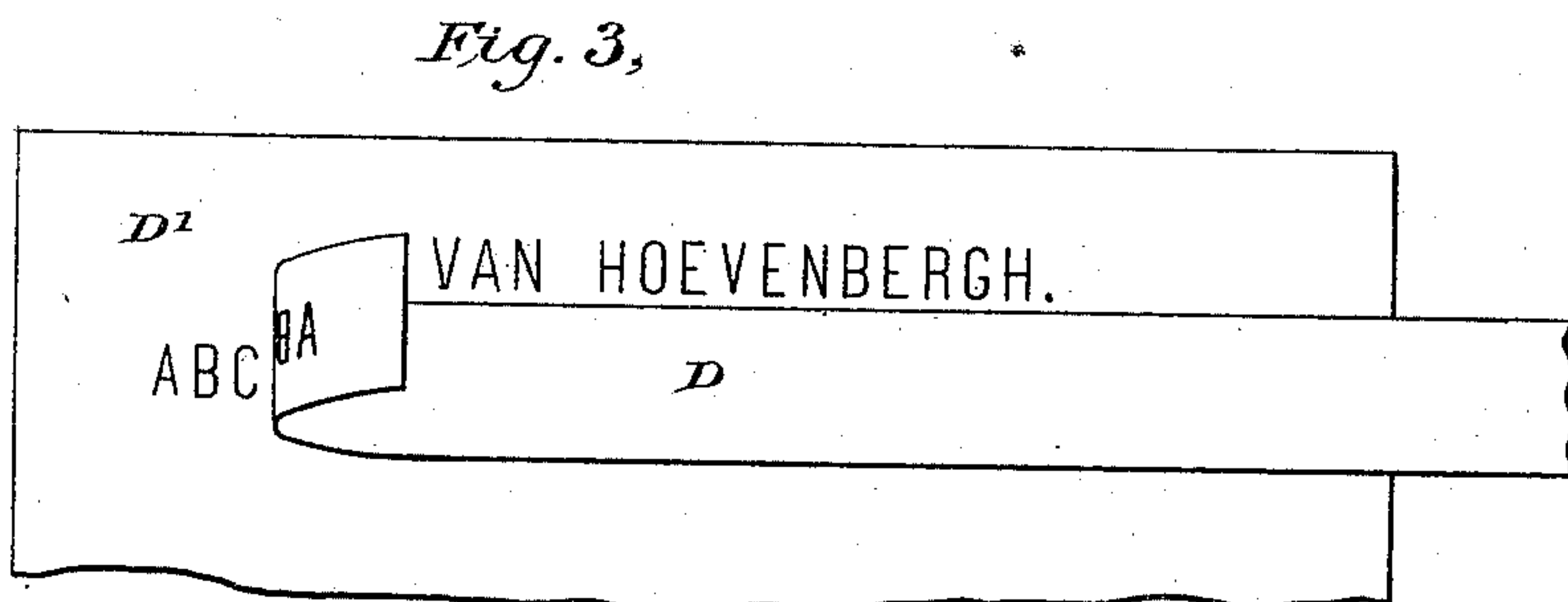
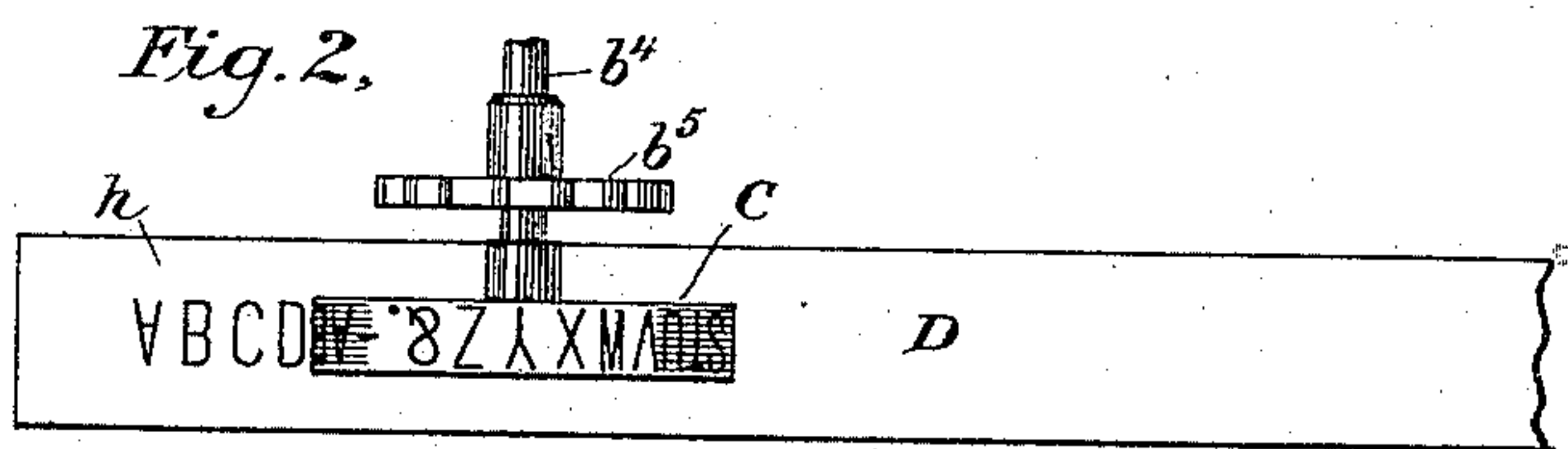
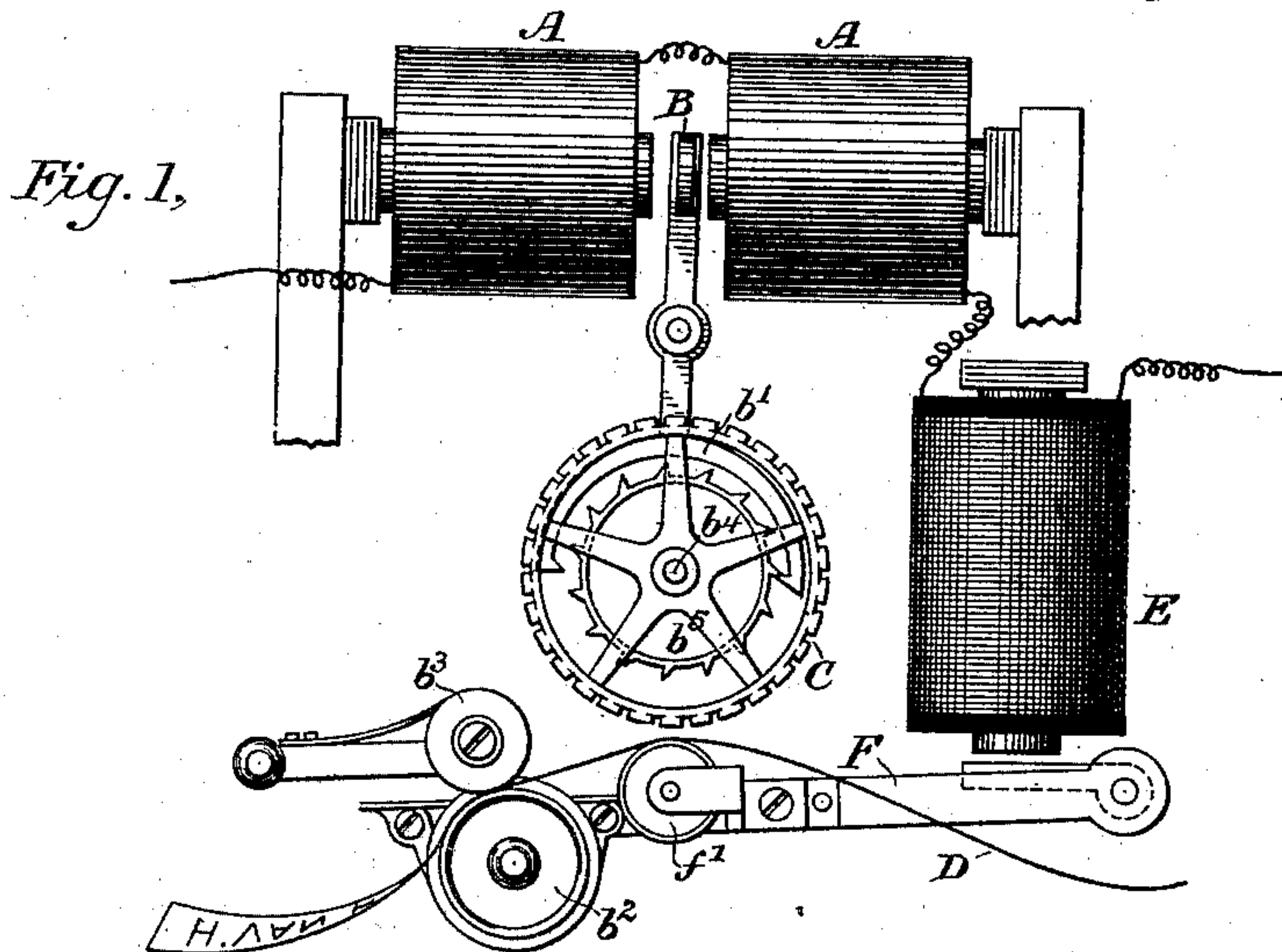
(No Model.)

H. VAN HOEVENBERGH.

PRINTING TELEGRAPH.

No. 316,679.

Patented Apr. 28, 1885.



WITNESSES

*Wm. A. Skinkie*  
*Jos. S. Latimer*

INVENTOR

*Henry Van Hoevenbergh,*

By his Attorneys

*Pope Edgcomb & Butler*



# UNITED STATES PATENT OFFICE.

HENRY VAN HOEVENBERGH, OF ELIZABETH, NEW JERSEY, ASSIGNOR TO  
THE BALTIMORE & OHIO TELEGRAPH COMPANY, OF BALTIMORE, MD.

## PRINTING-TELEGRAPH.

SPECIFICATION forming part of Letters Patent No. 316,679, dated April 28, 1885.

Application filed February 8, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY VAN HOEVENBERGH, a citizen of the United States, residing in Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Printing-Telegraphs, of which the following is a specification.

My invention relates to certain improvements in the method of employing printing-telegraph instruments and in the construction of the same.

The object of the invention is to provide means for receiving dispatches by means of a printing-telegraph instrument in such a manner that the original impression may be preserved, while a copy of the message may be delivered to the person addressed in a convenient form.

It has been customary to construct the type, which are formed upon the peripheries of type-wheels, in the reverse or "negative" form, so that an impression taken therefrom will appear upon the receiving slip in the direct or "positive" form. The slip of paper upon which the message has been printed is then delivered to the person to whom the message is addressed. This method of operation is objectionable for several reasons. The form in which the dispatch is presented is, for instance, inconvenient, for the reason that it extends along the continuous strip of paper, and, in addition, no copy of the message can be conveniently retained at the receiving-office.

My invention consists in constructing the type of a type-wheel in the direct or positive form, so that the impression taken therefrom will be reversed or negative, in employing an aniline or copying ink for printing, and making a press-copy or face-copy of the message upon suitable blanks which may be sent to the person for whom the message is intended, the original being preserved at the receiving-office of the telegraph system. Instead, however, of making the press-copy upon the transparent paper, as is usual, it will be understood that the copy is made by placing the slip upon which the message is first printed with its face downward upon the receiving-blank, thereby causing the message to appear in its proper positive form. I prefer also, in carrying

out this invention, to employ an aniline ink of a character which changes its color by reason of the operation of press-copying in a well-known manner. By so doing I am enabled at any time to determine by examination whether or not a copy has been taken of all its parts.

In the accompanying drawings, which illustrate the invention, Figure 1 is a front elevation of so much of the printing-instrument as is necessary to illustrate the invention; and Fig. 2 is a plan of the type-wheel, together with a strip of paper upon which the impressions are to be received. Fig. 3 illustrates the method of obtaining a copy of the impressions; and Fig. 4 shows the appearance of the message or copy which is designed to be sent to the person addressed.

Referring to these figures, A' A' represent electro-magnets, between which extends a polarized armature, B, which is designed to actuate an escapement-anchor, b'. The anchor b' engages the teeth of a scape-wheel, b<sup>5</sup>, which is mounted upon a shaft, b<sup>4</sup>, of a type-wheel, C. A printing-magnet, E, is employed for actuating the press-lever F, which is provided with a platen, f', and feed-rollers b<sup>2</sup> b<sup>3</sup>.

The electro-magnet E is designed to be operated in any convenient manner for actuating the press-lever, and the feed-rolls b<sup>2</sup> b<sup>3</sup> are constructed to advance the paper after an impression has been taken from the type-wheel in any well-known and convenient manner.

The type formed or engraved upon the periphery of the type-wheel are illustrated in Fig. 2, where it will be seen that they are positive—that is to say, they are in the form of ordinary characters—instead of negative, which is usually the form employed for type-wheels of printing-telegraph instruments. In the drawings they are also shown as being bottom side up. This construction is desired for the purpose of so placing the wheel that it may revolve in the direction in which it is customary for the type-wheels of printing-telegraph instruments to revolve, and the paper upon which the impressions are taken is fed forward in the same direction. This construction is especially desirable, for it will be readily understood that were the characters placed right side up the message, in order that it



might be printed in the proper direction so that its positive impression should read from left to right, would have to pass beneath the wheel in the opposite direction—that is, from left to right. This construction would necessitate a corresponding change in the organization of the instruments usually employed, and I prefer to avoid such change usually, so that my improvements may be readily applied to the ordinary instrument. For this reason the type-wheel is preferably constructed in the manner as already described.

The type-wheel is designed to be revolved in any usual and suitable manner, and the impressions taken therefrom will be in the negative, as shown at *h*, Fig. 2, upon slip D. The ink which is employed for printing these characters is preferably an aniline ink, though any suitable copying-ink may be used. When aniline ink is employed, it is preferably of the character which will change its color slightly upon being wet. When the messages have been printed upon the slips D, as described, these slips are designed to be turned with their faces downward upon strips or sheets of paper, as shown at D' in Figs. 3 and 4, these sheets having been previously prepared for receiving the copy thereof in any suitable manner, as, for instance, by wetting them. When the strips have been thus laid upon the sheets, they may be passed between rollers or placed in a copying-press or treated in any other suitable manner for the purpose of imparting a positive print or impression of the message to the receiving sheet or slip. The appearance of the message when thus copied is illustrated in Fig. 4.

The positive message is designed to be sent to its destination, while the slips from which the message has been press-copied, and which constitute the negative of the same, may be preserved for reference in case they may be so required.

This invention, it will be understood, is equal-

ly applicable to instruments using more than one type-wheel.

I claim as my invention—

1. In a printing-telegraph instrument, the combination, substantially as hereinbefore set forth, of a type-wheel having its characters formed positively, so that impressions taken therefrom will be the reverse of those characters as usually printed, means for revolving said wheel in the direction of the hands of a watch, and a paper-feeding device for advancing the tape for receiving the impressions in the direction of revolution of the type-wheel.

2. In a printing-telegraph instrument, the combination, substantially as hereinbefore set forth, of a type-wheel having its characters formed positively—that is to say, in the manner in which they ordinarily appear when printed—and means, substantially such as described, for effecting impressions therefrom upon the adjacent surface of a paper tape, which impressions will be negative—that is to say, the reverse of the characters as usually printed.

3. The combination, substantially as hereinbefore set forth, in a printing-telegraph instrument, of a type-wheel having its characters positive—that is to say, as they appear in print—and means for revolving said type-wheel in the direction of the hands of a watch.

4. The combination, substantially as hereinbefore set forth, in a printing-telegraph instrument, of a type-wheel the characters of which are positive, an inking-roller, and means, substantially such as described, for advancing a paper tape across the periphery of said type-wheel.

In testimony whereof I have hereunto subscribed my name this 7th day of February, A. D. 1884.

HENRY VAN HOEVENBERGH.

Witnesses:

DANL. W. EDGECOMB,  
CARRIE E. DAVIDSON.