

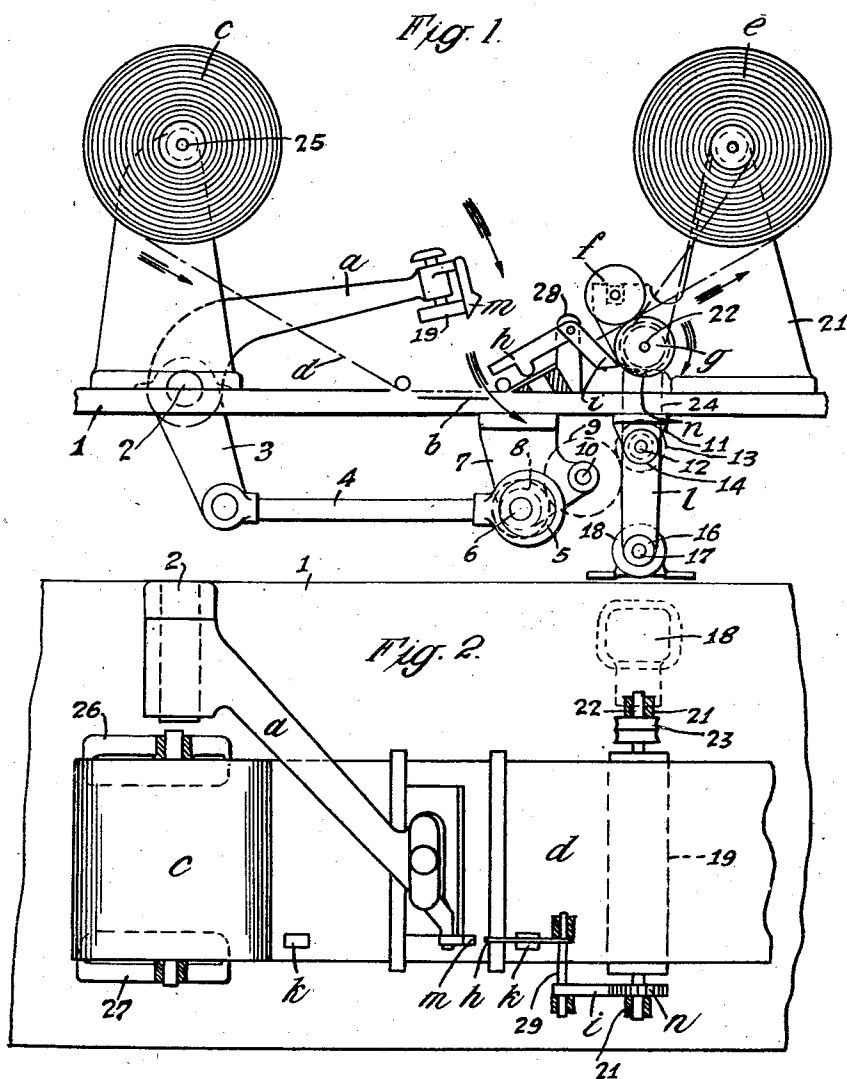
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B. FASSMANN

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ADDRESSING AND SIMILAR PRINTING MACHINE

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Inventor
Bruno Fassmann
By *W. O. Beeh*
Attorney

UNITED STATES PATENT OFFICE

BRUNO FASSMANN, OF TEMPELHOF, BERLIN, GERMANY, ASSIGNOR TO ADDRESSOGRAPH COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF DELAWARE

ADDRESSING AND SIMILAR PRINTING MACHINE

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This invention relates to addressing and similar printing machines of the kind having an oscillating printing arm and adapted to print intermittently on a travelling band or strip of paper, which may be drawn off a roll by a conveying device, and must be momentarily brought to rest for each printing operation. The chief object of the invention is to enable the intervals or distances apart on the paper band at which such periods of rest occur to be regulated according to the length of paper on which each printing operation is to be performed, without its being necessary to adjust the conveying device to allow for changes in such distances.

In machines for cutting travelling strips of paper into sections, the length of which sections is determined by the spacing apart of holes or perforations in the strip, through each of which perforations a finger normally resting on the surface of the paper is adapted to pass, the finger has been arranged to place a pawl in engagement with a ratchet wheel to stop the feed of paper, and the finger and pawl have been removed from engagement by the operation of a rotary cam so as to release the ratchet wheel and allow resumption of the feed.

According to the invention the paper band fed to the printing machine is provided at the desired distances apart with holes or perforations, a movable member adapted to bring about the stoppage of the travel of the paper being arranged to register in these holes immediately before each printing operation, and the said movable member is returned to its normal position by a catch on the printing arm on the return stroke of the latter.

In order that the said invention may be clearly understood and readily carried into effect, the same will now be described more fully with reference to the accompanying drawings or diagrams, wherein:—

Figure 1 represents in elevation an example of apparatus by which the invention can be put in practice.

Figure 2 is a plan in which the receiving roll *c* and upper conveying roller *f* seen in

Figure 1 are omitted for the sake of clearness.

The reference letter *d* indicates the paper band or web in which holes *k* (see Figure 2) are provided at any desired distances apart. The platen arm *a* is pivotally mounted on the frame 1 at 2 and includes a depending arm 3 to which a link 4 is pivotally connected, said link having an oscillatory movement imparted thereto by the eccentric 5 mounted on the shaft 6 journaled in the bracket 7 depending from the bed 1. The shaft 6 has a gear 8 thereon meshed with the gear 9 mounted on the counter-shaft 10 also journaled in the bracket 7. A bracket 11 depending from the bed 1, supports a shaft 12 having a gear 13 fixed thereon that is meshed with the gear 9. A pulley 14 on the shaft 12 has an endless belt 15 passed thereabout, which belt also passes about the pulley 16 on the shaft 17 of the motor 18. As the motor 18 operates, the link 4 and therefore the platen arm *a* will be operated to move the platen 19 at the outer end of the platen arm toward and away from the printing device *b* which is disposed in printing position. The printing device *b* is one of a series which may be sequentially passed through the machine in any desired manner as, for example, that disclosed in the patent to Duncan, No. 1,481,860, January 29, 1924. The paper is drawn off the storage roll *c* and suitably is guided through the printing position. A bracket 21 extends upwardly from the bed 1 and provides bearings for the shafts carrying the rollers *f* and *g*, the roller *g* being mounted on the shaft 22. On the shaft 22 is a pulley 23 and an endless belt or other suitable connecting means 24 is disposed about the pulley 23 and a pulley on the shaft 12. Therefore, when the shaft 12 is rotated, the shaft 22 and consequently the roller *g* will also be rotated and the rollers *f* and *g* securely clamp the web *d* therebetween whereby, when the roller *g* is rotated, said web will be moved so as to be withdrawn from the storage roll *c* which is supported on the shaft 25 carried by the brackets 26 and 27 supported by the bed 1. After passing the rollers *f*, *g* the paper can be passed on to any suitable cutting apparatus

to be cut into sections, or can be wound on to a receiving roll *e*, which latter can be driven from a pulley on the shaft of the roller *g*. By reason of the fact that the motor 18 will be continuously operated it is manifest that a continuous movement would be imparted to the web *d* if some means were not provided for interrupting movement thereof during the printing operation of the printing means.

Therefore, I provide suitable means for interrupting movement of the web during the printing operation and to this end I provide a bearing structure 28 in which a shaft 29 is journaled. On the shaft 29 a drop lever *h* is pivotally mounted which has a downwardly directed arm or projection which may selectively pass through each hole or perforation *k* in the paper band, and also fixed on the shaft 29 is a pawl or detent *i* which is moved when the projection on the arm *h* passes through one of the perforations. On the shaft 22 is a ratchet *n* and when the pawl *i* moves as above set forth, it engages this ratchet *n* and thus the roller *g* is held against movement and the belt 24 slips on the pulley 23. Since the roller *g* is held against movement, the movement of the web *d* will be interrupted and the parts are so timed that this interruption occurs at the time the platen 19 is making an impression from the printing device *b*, a suitable ink ribbon (not shown) being disposed between the printing device *b* and the web *d*. If desired, a slip clutch or the like may be associated with the pulley 23 in order that the belt 24 need not slip thereon during the time the movement of the web *d* is interrupted. As soon as the printing operation of the printing means is completed it is desirable that movement again be imparted to the web *d* and I therefore provide a pawl *m* at the outer end of the platen arm *a* and on the upstroke of the platen arm *a*, which follows the printing operation thereof, this pawl *m* engages the lever *h* and pivots the same to retract the projection thereon from the perforation *k* into which it has passed and this movement also retracts the pawl *i* from the ratchet *n* and therefore the roller *g* will again rotate to move the web. The projection on the lever *h* will ride on the web until it again passes into a perforation *k* at which time the movement of the web *d* will again be interrupted in the manner above described and the above described operation will be repeated.

What I claim and desire to secure by Letters Patent is:—

1. In a printing machine, printing means, means for moving a web having perforations therein past said printing means, continuously operating means for driving said web moving means, and means controlled by said perforations whereby said web moving means may be held against movement during the

printing operation of said printing means as said driving means continues to operate.

2. In a printing machine, printing means, means for moving a web having perforations therein past said printing means, continuously operating driving means, means connecting said web moving means and said driving means, and means controlled by said perforations whereby said web moving means may be held against movement during the printing operation of said printing means as said driving means continue to operate.

3. In a printing machine, printing means adapted to operate on a web having perforations at intervals therein, means for moving the web, continuously operating driving means, means interconnecting the web moving means and the driving means, and means including a portion movable through the perforations in said web for holding said web moving means against operation during the printing operation of said printing means as said driving means continue to operate.

4. In a printing machine, printing means adapted to operate on a web having perforations at intervals therein, a pair of rollers for moving the web past the printing means, continuously operating driving means, means interconnecting said rollers and said driving means, and means including a portion movable through said perforations to hold said rollers against movement during the printing operation of said printing means as said driving means continue to operate.

5. In a printing machine, printing means adapted to operate on a web having perforations at intervals therein, a pair of rollers for moving the web past the printing means, continuously operating driving means, means interconnecting said rollers and said driving means, and means including a portion movable through the perforations in said web and embodying a portion engageable with and including a portion for holding one of said rollers against movement when said other portion moves through one of said perforations whereby the movement of said web may be interrupted during the printing operation of said printing means as said driving means continue to operate.

6. In a printing machine, printing means adapted to operate on a web having perforations at intervals therein, a pair of rollers for moving the web past the printing means, continuously operating driving means, means interconnecting said rollers and said driving means, means including a portion movable through said perforations to hold said rollers against movement during the printing operation of said printing means as said driving means continue to operate, and means on said printing means for releasing

said holding means after the printing operation of said printing means.

7. In a printing machine, printing means adapted to operate on a web having perforations at intervals therein, a pair of rollers for moving said web past the printing means, means operating said printing means and said rollers, a ratchet associated with one of said rollers, a pawl, and detecting means movable through said perforations to move said pawl into engagement with said ratchet whereby said rollers may be held against movement to interrupt movement of said web past said printing means during the printing operation thereof.

8. In a printing machine, printing means adapted to operate on a web having perforations at intervals therein, a pair of rollers for moving said web past the printing means, means operating said printing means and said rollers, a ratchet associated with one of said rollers, a pawl, detecting means movable through said perforations to move said pawl into engagement with said ratchet whereby said rollers may be held against movement to interrupt movement of said web past said printing means during the printing operation thereof, and means carried by said printing means for retracting said detecting means after the printing operation of said printing means.

BRUNO FASSMANN.

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