Nov. 24, 1931. G. DE'GIORGIO 1,833,391

DRAFT PRINTING APPARATUS

Filed Dec. 27, 1928

Fig. 1

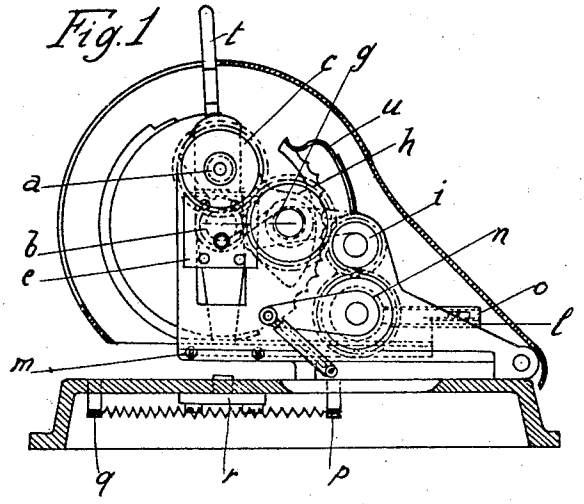
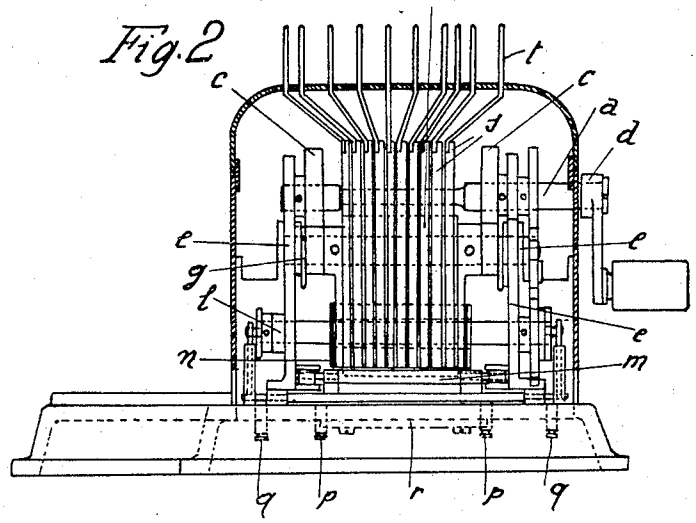


Fig. 2



$ 72160 Fig. 3

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UNITED STATES PATENT OFFICE

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DRAFT-PRINTING APPARATUS

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It is well known that when writing checks, bank drafts and the like by hand there is no sufficient security against forgery or alterations, as any kind of ink can be blotted out by a suitable chemical reagent. For this reason the method of typewriting the figures and letters with fatty inks has been resorted to and the characters impressed by the typewriter are generally made to cut or perforate the check or draft, and these cuts or perforations are entered by the ink. However not even this way assures an absolute security against forgery, because forgers have found it possible to alter the amounts by adding words or figures or by replacing words or figures with words or figures cut out from other checks or drafts.

The apparatus according to the invention has the object to eliminate the possibility of forgery on checks, bank drafts and the like. It provides essentially for the amount being printed with figures differing from each other in shape and size according to the scale of units they represent in the final figure showing the value of the draft, for example so that the height of the figures decreases gradually from the hundreds of thousands to the single units, and that all intermediate spaces are occupied by figures or signs. With such an arrangement it is not possible to add other figures as the whole available space is occupied, nor is it possible to put into the place of a figure of a higher order a figure of lower order cut out from another draft, because such figure has a different shape and size.

Where the draft has not sufficient figures to fill in the entire space provided for the sum, the empty space may be occupied by noughts, asterisks or signs. It is also advisable to provide for the writing which indicates the value of the draft being immediately preceded and followed by special signs; the sign in front of the sum may indicate the currency, and every single figure may be placed between small lines above and/or below it.

A further security against forgery is obtained in case the space provided for dividing the units from the fraction is made either narrower or wider than the spaces provided for the figures, so as to render it impossible to insert in such space a figure which might alter the amount written on the draft.

The most convenient method of realising the procedure above described is to arrange the types for printing the figures or numbers on the outside surface of narrow circular drums which are only slightly wider than the types, and which are arranged one beside the other and may rotate on the same horizontal shaft, so that these drums can be brought into, and secured in any desired position, the types being placed in a line on the lower side of the drums when the printing is to be done. One of these drums may be fitted with the types for the signs indicating various kinds of currency, so that the same apparatus can be used for writing various currencies. An intermediate drum, which may be made narrower or wider than the other drums carries the abridged signs indicating the fractions of the unitary value, or its place may be occupied by one single sign or mark if the apparatus is used for printing one kind of currency only. The signs following the final figure may also be of one single type.

The drums may easily be rotated by means of levers which pass to the outside through the casing or cover of the apparatus, and these levers have marked on them the figures and signs carried by the respective drum.

After the various figures and signs have been brought into line so as to reproduce the amount to be printed, the shaft carrying the drums is pushed by suitable mechanism against the draft or the like to be printed, which may be placed on a flat surface, a roller, or the like support, or the draft to be printed may be pushed by the said mechanism against the drums, the mechanism being controlled by means of a lever, a crank, a pedal, or in any other way, or it may be driven by a motor. The printing pressure should be regulated by a suitable spring instead of by hand pressure. The above described arrangement allows the figure representing the value of the draft and the like being rapidly formed and being printed any number of times without any additional operations. It has thus the advantage that the figures may be printed

on the counterfoil without any danger of incurring into errors, and that many drafts having the same value may be printed in a rapid succession.

For this purpose it is advisable to provide the apparatus with an inking pad by means of which the types are inked each time the drums are moved for a printing operation.

In the accompanying drawings, Figs. 1 and 2 are respectively a side and a front view of one form of apparatus for carrying this invention into practise.

Fig. 3 is a view of an amount as printed by the apparatus.

a and *b* are two shafts. The shaft *b* carries the drums *s* which are fitted along their periphery with the types of the figures and signs. The drums may be rotated by means of levers *t* and are held in place by springs *u* arranged in suitable seats. The shaft *b* is supported by two bearings *e e* which may be shifted in a vertical direction. The shaft *a* may be rotated by a crank handle *d* and carries the cams *c—c* which serve to push the spindle *b* with the drum downwards for the printing operation.

Springs *g g* serve to carry the shaft *b* and the drums upward. *f* is a stationary organ carrying the type for indicating the fraction of the currency, *h* and *i* are gear wheels which transmit the movement of the crank *d* to the shaft 1, which by means of cranks and a telescoping rod imparts the motion to the inking pad *m* which is acted on by spiral springs *pp*, *pp*. When moving to and fro the inking pad inks the types from below, and it receives ink from a roller *n* which is fed with ink from a container *o*. *r* is a small block which carries the paper to be printed. This small block is not rigidly secured to its support, but it rests on small springs or other elastic means, not shown in the drawings, so that it can be slightly shifted downwards.

The printing surfaces of the types on the drums and of the small block may be smooth or have lines or recesses so as to obtain on the paper either an ordinary print or perforations or cuts into which the ink penetrates more easily.

What I claim is:

1. A machine for printing the amount on checks and the like, comprising a series of type-carriers, each different from the other, and destined to print the cipher of a determined order in the number indicating the amount in which the check is drawn, each type-carrier also carrying types of ten ciphers, these types each being of graduated size and different in size with respect to adjacent types, and being of the same size on the same type-carrier, the size of the type indicating the order of the cipher which the particular type-carrier is destined to print in the number.

2. A machine for printing the amount on checks and the like according to claim 1 in which the type-carriers comprise wheels rotating around the same axis and independent of each other, the types being disposed on the periphery of the said wheels, means for printing the types on the check, and means for inking the types.

In testimony whereof I have signed my name to this specification.

GHINO DE GIORGIO.