

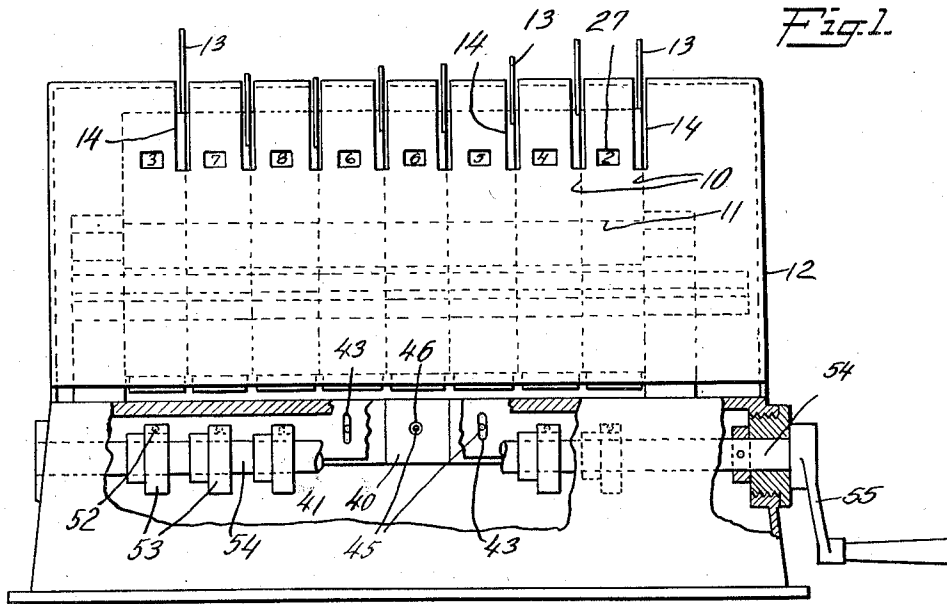
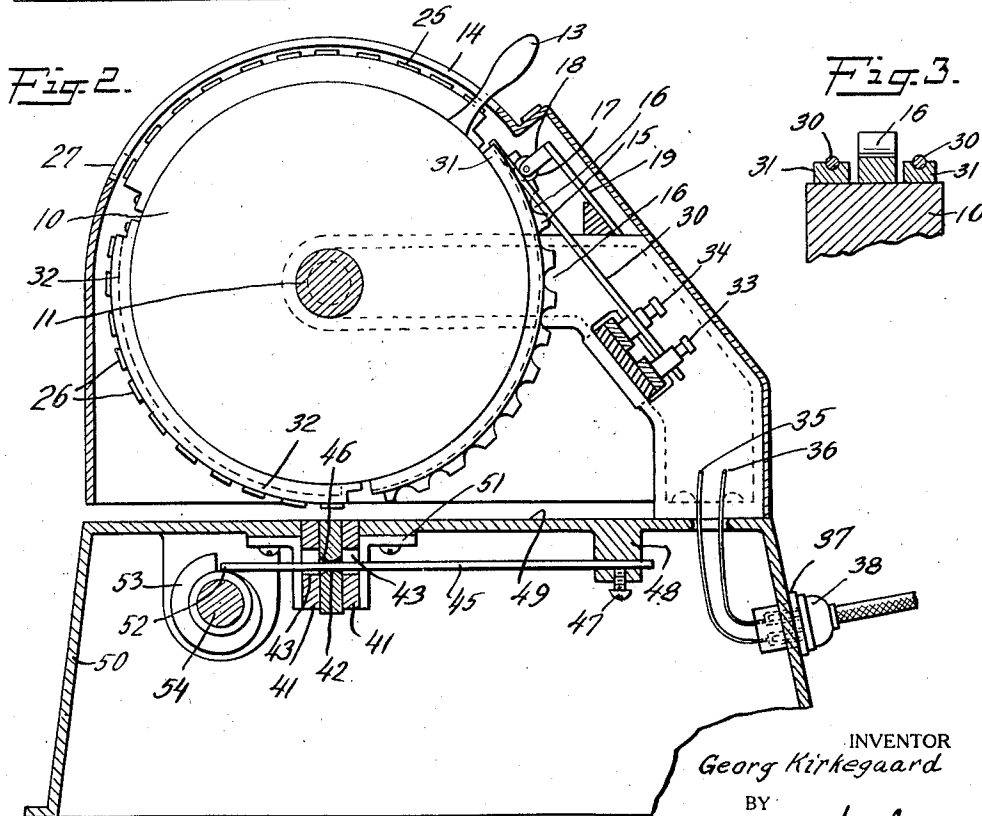
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PROCESS OF MAKING INDELIBLE IMPRINTS ON SHEET MATERIAL

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PROCESS OF MAKING INDELIBLE IMPRINTS ON SHEET MATERIAL.

Original application filed December 10, 1924, Serial No. 754,885. Divided and this application filed April 1, 1927. Serial No. 180,083.

This invention relates to safety check writing and particularly to processes of printing or marking designs on or placing marks on sheet material, such as checks.

5 This application is a division of application Serial No. 754,885 filed December 10, 1924.

There are many forms of check writers now in use by means of which the amount of money for which a check is drawn is im-
10 pressed in or printed on the body of the check in some suitable manner as by numbers, words, or both. Such devices, although affording some degree of protection, do not
15 absolutely insure against the check being raised or altered since the impression made thereon can by a skillful manipulation be voided or removed by chemicals, by pressure, or in some other manner.

20 This invention has for its salient object to so impress or print marks on a check that the marks cannot be voided, erased or eliminated.

Another object of the invention is to provide a novel process of indelibly printing or
25 marking on sheet material any desired characters or designs.

Further objects of the invention will appear from the following specification taken in connection with the drawings, which form
30 a part of this application, and in which

Fig. 1 is an elevational view partly broken away and partly in section of a machine constructed in accordance with the invention;

35 Fig. 2 is a transverse sectional elevation of the machine shown in Fig. 1;

Fig. 3 is a detail section showing the means for conducting the electric current to the carriers of the type or dies.

40 The process briefly described consists of making permanent imprints on sheet material by bringing the heated dies or type into contact with sheet material impregnated with suitable chemicals of such a character that the heat will cause to be produced in
45 the material patterns or marks corresponding to the patterns or marks on the dies. As above stated, sheet material impregnated with a solution of sugar and weak sulphuric acid may be used but other chemicals having
50 like properties can be used with satisfactory results. Further details of the invention will appear from the following description.

Any suitable form of mechanism or apparatus may be used for carrying out the

process and the machine particularly illus- 55 trated in the drawings comprises a plurality of type carriers 10 rotatably mounted on a shaft 11 which in turn is carried by a casing 12.

The carriers are independently rotatable 60 and each carrier has secured thereto a handle 13 which extends through a slot 14 in the casing 12.

Each carrier has secured thereto a rack 15 having a plurality of notches or grooved 65 depressions 16 therein adapted to coact with a roller 17 mounted in lugs 18 carried by a resilient supporting member 19.

Each carrier also has mounted thereon a plurality of die plates 25 and a plurality of 70 dies or type 26, the marks on the plates 25 corresponding to the marks on the type or dies 26.

These marks are so relatively arranged that when one of the marks 25 appears in 75 an opening 27 in the casing 12, the corresponding type or die will be disposed in operative position above the platen.

It is proposed in this machine to heat the dies and in the particular embodiment of 80 the invention illustrated the current for heating the dies is led to the carriers by means of resilient brushes 30, two brushes being provided for each carrier. The
85 brushes at their inner ends engage metallic strips 31, insulated from each other, and have a wiping action on these strips as the carrier is rotated, thereby maintaining the electric circuit. The strips 31 are connected
90 to high resistance or heating wires 32 disposed beneath the dies or type 26.

The brushes 30 are mounted in binding posts 33 and 34 which are insulated from the casing and are connected to lead wires 35 and 36 which in turn lead to a socket 37. A 95 plug 38 connects the socket to an outside source current.

In the present embodiment of the apparatus, a separate platen is provided for each carrier. Each platen comprises a vertically 100 reciprocable bar 40 slidably mounted between guides 41 and provided with an opening 42 therein. Slots 43 are formed in the guides 41 and each platen bar is mounted on and has extending therethrough a metallic 105 resilient strip 45. The bar 40 is preferably rounded as shown at 46 at the edges of the opening 42.

The strips 45 are secured in any suitable manner as by screws 47 to lugs 48 which extend downwardly from a check supporting surface 49 formed on the base 50 of the machine. The guides 41 are also secured as shown at 51 to the under surface of the support 49.

In order to raise and lower the strips 45 and with them the platen bars 40, the free ends 52 of the strips are disposed in engagement with cams 53, one cam being provided for each strip.

The cams 53 are mounted on a cam shaft 54, which is journaled in the base 50 of the machine and a crank 55 is secured to one end of the cam shaft.

As the cam shaft is rotated, the resilient strips 45 will be raised and with them the platen bars 40, thereby raising the paper into engagement with the type or dies above the platens.

The type or dies on the carriers may be arranged in any desired manner.

The check paper to be used in the machine above described is specially prepared by impregnating the paper with a suitable chemical solution. One solution that has been found satisfactory includes sugar in solution plus weak sulphuric acid.

When a check so prepared is placed in the machine and the dies are heated in the manner above described, the operator will rotate the crank 55 thereby causing the platens to raise the check into coactive relation with the heated dies. The action of the heated die on

the check will cause to be indelibly printed on the check the amount for which the dies have been set.

The dies are raised to a moderate temperature and not a high temperature so that the check is not burned by the action of the heated dies thereon, but is permanently discolored. The chemically prepared check obviates the necessity of heating the dies to a high temperature to burn the check, but impression made by the dies is clear, distinct and indelible, and cannot be voided, erased or otherwise eliminated without destroying the body of the check.

Although one specific embodiment of the invention has been particularly shown and described, it will be understood that the invention is capable of modification and that changes in the construction and in the arrangement of the various cooperating parts may be made without departing from the spirit or scope of the invention, as expressed in the following claim.

What I claim is:

A process of making permanent imprints on sheet material which consists of bringing heated characters or patterns into contact with sheet material that has been impregnated with a chemical solution having the chemical characteristics of a solution of sugar and diluted sulphuric acid.

In witness whereof, I have hereunto set my hand this 30th day of March, 1927.

GEORG KIRKEGAARD.