

S. A. C. KRISTENSEN.
PROCESS FOR THE PRODUCTION OF PRINTING BLOCKS OF SLIGHT WEIGHT.
APPLICATION FILED FEB. 27, 1914.

1,166,840.

Patented Jan. 4, 1916.

Fig. 1.

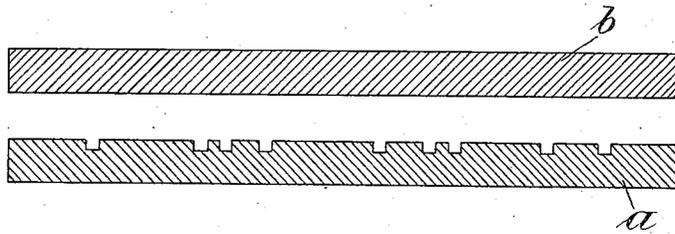


Fig. 2.

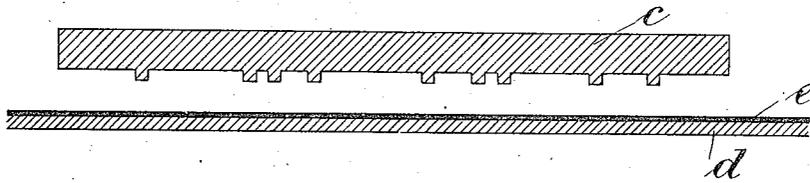
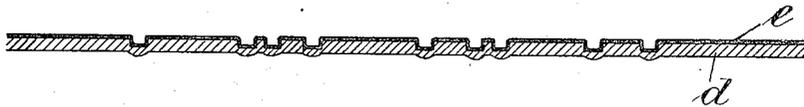


Fig. 3.



INVENTOR
SIGVALD A. C. KRISTENSEN.

BY

Knights Bros.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

SIGVALD ALFRED CHRISTIAN KRISTENSEN, OF COPENHAGEN, DENMARK.

PROCESS FOR THE PRODUCTION OF PRINTING-BLOCKS OF SLIGHT WEIGHT.

1,166,840.

Specification of Letters Patent.

Patented Jan. 4, 1916.

Application filed February 27, 1914. Serial No. 321,566.

To all whom it may concern:

Be it known that I, SIGVALD ALFRED CHRISTIAN KRISTENSEN, a subject of the King of Denmark residing at 11 Abel Kathrinesgade, Copenhagen, Denmark, have invented new and useful Improvements in Processes for the Production of Printing-Blocks of Slight Weight, of which the following is a specification.

The shipment of printing blocks is rather troublesome on account of their weight and, especially in case of blocks for pictures in the daily papers, etc., this is felt as a great inconvenience.

The object of the present invention is to produce printing blocks of but slight weight.

A matrix, *i. e.* a negative cast of type, blocks, etc., is first made of a material suitable for this purpose, *i. e.* a substance which is waterproof, able to stand a certain amount of heat and a certain, quite considerable pressure without being damaged, and the matrix is now treated in the ordinary manner by being rubbed with oil. Then a flong of unsized paper (blotting paper) is coated with a mass consisting of metal powder stirred up in an efficient adhesive, for instance water-glass, until the paper is covered by a uniform coating. As soon as a film has been formed, by drying, on the surface of the mass thus superimposed, the paper is placed on top of the matrix, with this layer facing the matrix, then it is tapped into all its cavities by means of a brush and, finally, the entire thing is brought into a hot drying press. After being dried, the paper flong with the metallic coating adhering thereto is removed, and, if necessary, the irregularities on the rear side of this flong are filled with a suitable substance, for instance plaster of Paris and celluloid. After this filling substance has been dried, the plate thus produced may be placed on a wooden base, and a block ready to be printed has then at once been produced, it being an exact reproduction of the original type form, blocks, etc., and being hard and durable enough to stand a very large number of impressions, exactly as a stereotyped printing block.

In the accompanying drawing, one way of carrying out the process is illustrated. In Figure 1, *a* is the form, such for instance as an etching, to be reproduced, and *b*, a lead plate to be used as a matrix before it has received an impression from the form. Fig.

2 shows the lead matrix *c* thus made and the paper flong *d* provided with a coating *e*. Fig. 3 shows the final printing plate of light weight, consisting of the flong *d* and the hardened and impressed coating *e*.

Instead of applying the metallic mass on the paper flong it may be applied, by means of a soft brush, directly on the matrix, and only when the layer is dry a piece of fine linen cloth or tissue paper coated with the mass is placed on top and tapped into all the cavities of the matrix by means of an especially soft brush. The filling substance is applied immediately thereafter on the rear side and is exposed to a slight pressure, until it is dry. In this case, the drying should be effected without heat.

For the production of the matrix forming the basis for this process, for instance lead or celluloid will be very suitable. When lead is used, the printing form is pressed thereagainst at a pressure sufficiently heavy to stamp the form completely into the lead.

When making casts of autotypes, the process is, at the beginning, the same, but as there are here, in opposition to type-forms, live-etchings, wood-cuts or the like, no depressions on the rear side of the block formed, there is no use for any filling material. Instead of this, the smooth rear side is coated with an adhesive substance, in order that the impression may be placed on a smooth surface cast in ordinary stereotype plates or, as the case may be, on flat cast plates or on cylindrical cast plates for printing in a rotary press.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. Process for the production of printing plates of insignificant weight by the use of an auxiliary block; said process consisting of the following steps: first, producing a negative by pressing said auxiliary block against the form to be reproduced; second, providing a second block in the form of a flong of unsized paper; third, coating one of said blocks with a paste of metallic powder and water-glass; fourth, pressing the two blocks against each other with the coated side between them; fifth, drying the blocks in a hot drying press; and sixth, removing the second block with the adhering coating, which now constitutes the printing plate.

2. Process for the production of printing

plates of insignificant weight by the use of an auxiliary block; said process consisting of the following steps: first, producing a negative by pressing said auxiliary block
5 against the form to be reproduced; second, providing a second block in the form of a flong of unsized paper; third, coating said second block with a paste of metallic powder and water-glass; fourth, pressing the coated
10 side of the second block against the auxiliary block; fifth, drying the blocks in a hot drying press; and sixth, removing the second block with the adhering coating, which now constitutes the printing plate.

The foregoing specification signed at 15
Copenhagen, this 6th day of February, 1914.

SIGVALD ALFRED CHRISTIAN KRISTENSEN.

In presence of—

CARL FOX MUILO,

JULIUS LEHMANN.