

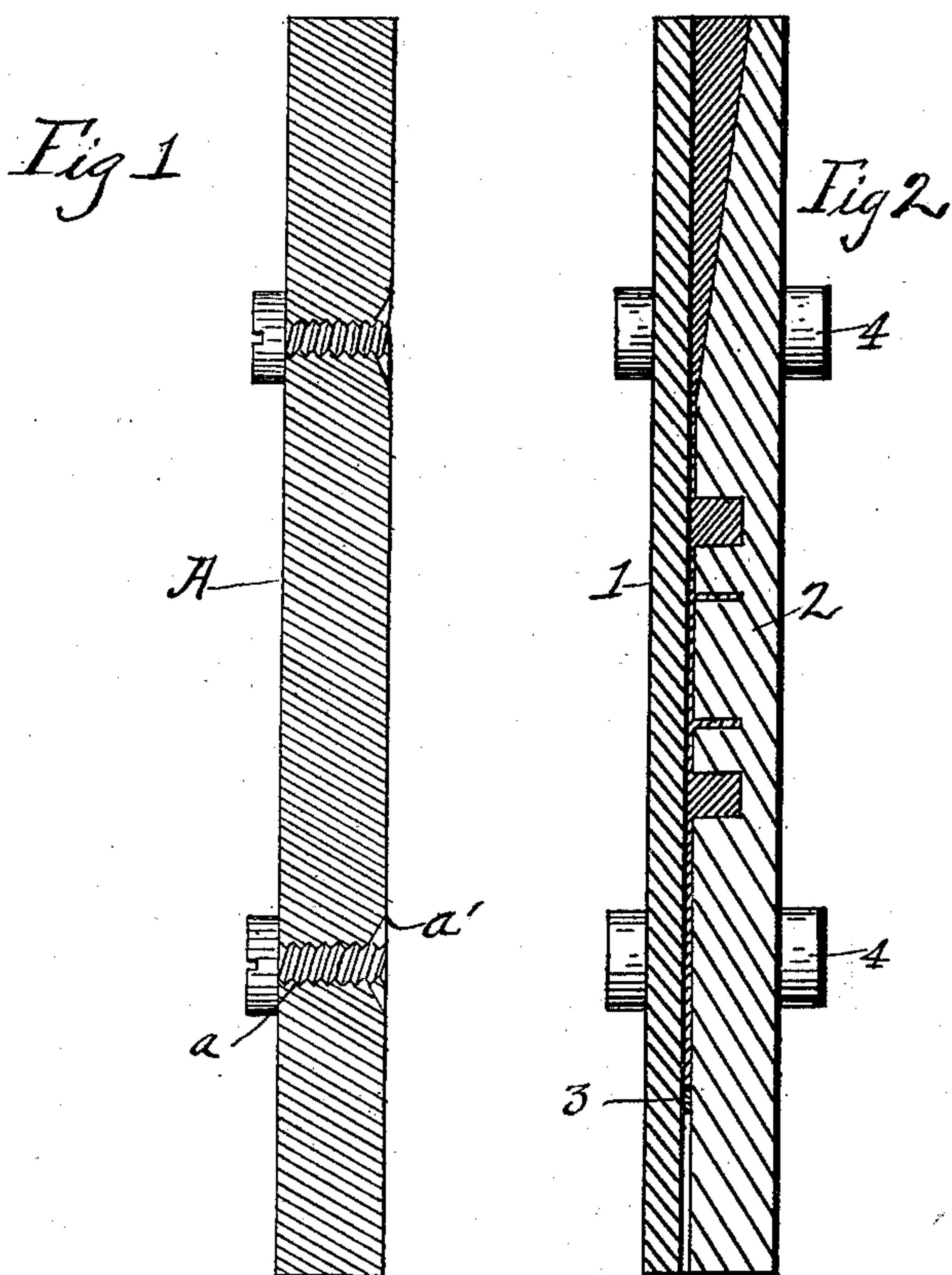
No. 666,098.

Patented Jan. 15, 1901.

J. KAEGI.  
PRINTING PLATE.

(Application filed Oct. 28, 1899.)

(No Model.)



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## PRINTING-PLATE.

SPECIFICATION forming part of Letters Patent No. 666,098, dated January 15, 1901.

Application filed October 28, 1899. Serial No. 735,032. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN KAEGI, a citizen of France, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have  
5 invented a certain new and useful Improvement in Printing-Plates as Used in the Printing or Embossing of Wall-Paper, &c., of which the following is a specification.

My invention relates to the process of producing printing-plates, and has for its object to produce printing-plates for the printing of wall-paper, oil-cloth, &c., greatly increasing the quality and uniformity of the product and reducing the amount of material used and  
15 time occupied in manufacturing.

Heretofore the manufacture of printing-plates for use on rollers for the purpose of printing or embossing wall-paper has been more costly through the greater waste of material and length of time occupied in preparing and finishing the plates after casting.  
20

For a better understanding of my new process of manufacturing printing-plates such as are now used on rollers for the purpose of  
25 printing or embossing wall-paper it may be necessary to explain briefly the old method of manufacturing the plates.

Preparatory to casting the plates the design or pattern is first made on wood or any  
30 other suitable material, with the design sunk or graved below the surface of the wood. This being arranged in a suitable position, a steel plate A, having deeply-recessed portions or apertures  $a'$ , which are threaded to receive a machine-screw  $a$  at intervals over its surface,  
35 is fixed in position fronting the design or pattern from which it is desired to get the impression, with a small space intervening between the steel plate and the graved design or pattern on wood. The melted metal as  
40 used for the plates is then poured into the open space between the steel plate and the design on wood, the molten metal running freely into and partaking on its one side a  
45 bas-relief of the design graved on the wood pattern and on its reverse side partaking a smooth surface, except at the portions which have been deeply recessed and threaded apertures provided with the machine-screws, into  
50 which the metal has run, and so forming a lug or projection on the back of the cast impression of the design. This old method has been

necessary, so that when the cast plate was to be removed the lugs on the back of the cast plate, together with the machine-screw, which  
55 is embedded in the metal, run around and, forming the lug, would fasten the cast plate to the steel plate, so as to allow a good hold being taken of the cast plate or impression sufficient to pull it off or separate it from the  
60 original in wood, it requiring more or less force to lift or remove it, according to the simplicity or the intricacy of the original design, and into which the molten metal has entered. After separating the cast plate from  
65 the steel plate it has been necessary to finish it by cutting off the lugs mentioned very carefully and dressing down the plate, so that all portions of the cast plate may be perfectly level, so that the plate may be properly mounted  
70 on rollers preparatory to printing. These old methods involve considerably more time and expense in cost of labor and material and increased risk of injury to the plate through the manipulation of cutting off the lugs and  
75 dressing the surface smooth.

Having thus given a brief general outline of the old system and methods in general use, I will explain the objects of my newly-invented process of making printing-plates for  
80 the purpose described, the objects of which are, first, to provide a new process of manufacturing printing-plates for the printing or embossing of wall-paper, oil-cloth, &c.; second, to provide a new and improved process  
85 of manufacturing printing-plates for the printing or embossing of wall-papers that will entirely dispense with the old necessity of casting plates having lugs or any form of projection or raised portion of metal on the reverse  
90 side from the design; third, to provide a process for making and for printing wall-paper, oil-cloth, &c., that will produce a finished plate ready to be placed in its position upon a roller or block without having any lugs  
95 or projections to be dressed off or removed, and thereby effecting a great saving in the cost of production by the reduction of labor, manipulation, time, and material.

Having fully described the various objects  
100 and advantages of my new process of manufacturing printing-plates for printing or embossing wall-paper, oil-cloth, &c., I will proceed to explicitly set forth the system and



operations of the process which constitutes my invention.

To carry my invention into effect, the method of making the printing-plate for the printing or embossing of wall-paper, oil-cloth, &c., and to accomplish the purpose of my process is as follows:

In illustrating the invention reference will be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional view showing the old arrangement of parts, and Fig. 2 is a sectional view of a mold and plate embodying the invention.

In the drawings, A denotes a steel plate having threaded holes *a* and a countersunk surface *a'*, and in practice it has been necessary to remove the lugs which formed in the recesses from the back of the cast plate.

In the method of forming part of this invention I employ a backing-plate 1 having a smooth surface, which I immerse in a bath of any suitable flux to insure the adhesion of the type-metal. I have found in practice that muriatic acid and zinc produce the result, although I do not wish to be limited to its use, as other fluxes may be used to coat the plate. The flux is applied to the backing-plate, and when still wet said plate is immersed in a molten metal, which causes a thin layer of metal to adhere to the backing-plate. The metal is then cast and adheres to the thin plate to produce the design-plate. The

smooth surface of the backing-plate is then placed toward the mold 2, care being taken to insert strips 3 around the edges of the pattern between the plate and mold. Clamps 4 hold the mold and plates together. The molten stereotype-metal is poured, and when sufficiently cool the steel plate is removed from the pattern with the new plate or cast impression adhering to its surface, which is now readily removed by inserting a sharp knife or sharp thin-edged tool between the back-plate and the cast plate. The cast plate is perfectly finished ready to be secured in the ordinary manner to the roller-block.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

The herein-described process of producing cast design-plates for printing or embossing, consisting in coating a backing-plate with acid and zinc or other flux, placing the mold and backing-plate face to face, casting the metal between the plate and mold, removing the cast design-plate from the mold and removing the cast plate from the backing-plate.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

JOHN KAEGI.

Witnesses:

K. C. McMICHAEL,  
R. M. PIERCE.