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W. C. BUSH

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METHOD OF JOINING PRINTING ELEMENTS

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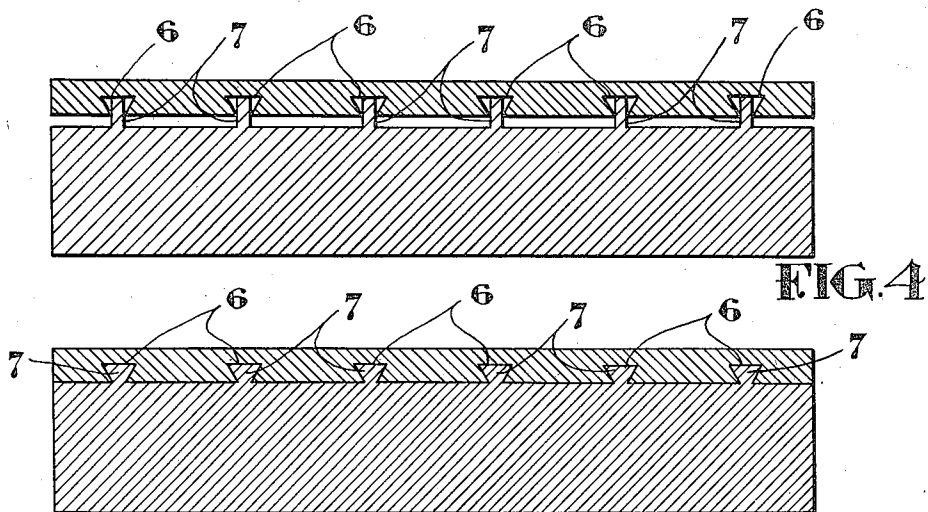
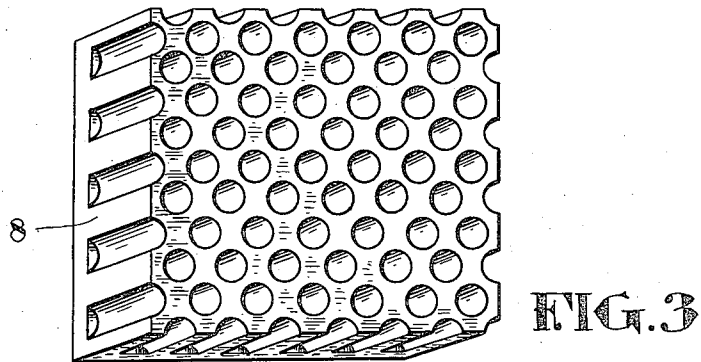
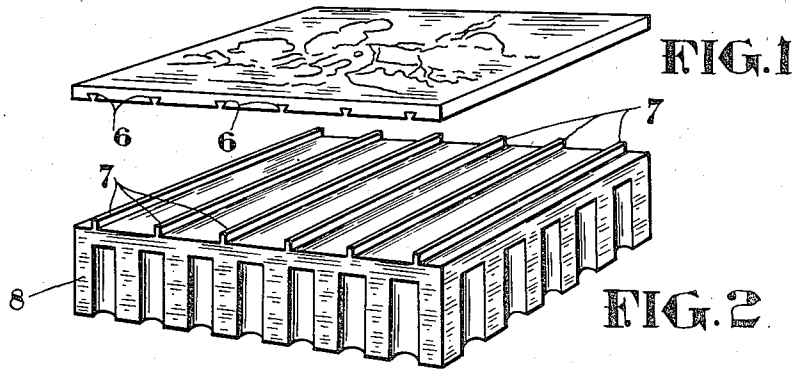


FIG. 5

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METHOD OF JOINING PRINTING
ELEMENTS

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signor of twenty-five per cent to Joseph R.
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2 Claims. (Cl. 29—148)

This invention relates to improvements in method of joining printing elements and is particularly concerned with the mounting of half-tones, zinc etchings, electrotypes and similar forms of metal printing plates. Its principal object is the provision of a simple and practical method of fastening a metal printing plate to a metal base so that the plate is adequately supported, throughout its entire area, to ensure uniform printing and is also permanently anchored against displacement in any direction.

More particularly, the present invention consists in fastening a metal printing plate to a base of softer metal by deforming portions of the base into interlocking engagement with complementary portions of the plate, the deformation of the base being accomplished by the application of pressure following initial assembly of the plate and base in interfitted relation and being effective to resist relative displacement of the plate and base in any direction. According to a preferred embodiment of this invention the plate supporting surface of the base is provided with straight sided projecting tongues or ribs which are fitted in dove tail grooves in the bottom of the plate and then deformed by the application of pressure to completely fill the grooves as the opposing surfaces of the plate and base are forced together. It will be understood, however, that the plate and base elements may be assembled in any other suitable manner that will result in portions of the base being deformed into interlocking engagement with the plate when the assembly is subjected to consolidating pressure.

Proceeding now to a more detailed description reference will be had to the accompanying drawing in which

Fig. 1 is a perspective view of a metal base and printing plate joined together in accordance with this invention.

Fig. 2 is a perspective view of the metal base to which the printing plate appearing in Fig. 1 is adapted to be fastened.

Fig. 3 is a perspective view looking toward the bottom of the base.

Fig. 4 is a transverse sectional view showing the printing plate and the metal base as they appear in assembled relation prior to the application of consolidating pressure.

Fig. 5 is a view similar to Fig. 3 but showing the plate and base elements as they appear after they have been fastened together by the appli-

cation of pressure to form a substantially unitary printing element.

As shown in the drawing the bottom of the metal printing plate 5 is shaped to provide a series of dove tail grooves 6 adapted to receive the straight sided ribs or tongues 7 projecting from the upper or plate supporting surface of the base 8 which is made of softer metal than the plate. The plate and base are initially assembled as shown in Fig. 3 where it will be noted that the ribs or tongues 7 are made of a height somewhat greater than the depth of the grooves 6 so that the plate is supported in spaced relation to the top of the base. This assembly is then subjected to pressure so that the ribs 7 are deformed to completely fill the grooves 6 as the lower surface of the plate is forced into flat contact with the top of the base. The plate and base are thus firmly keyed together by interlocking connections which hold the plate in flat engagement with the base and effectively resist relative displacement of the plate and base in any direction.

Having thus described my invention, what I claim is:—

1. A method of joining a metal printing plate to a base of softer metal which comprises forming grooves in the under surface of the plate, forming projections on the upper surface of the base, assembling the plate on the base with the projections of the latter fitted in said grooves and then subjecting said assembly to pressure whereby the projections of the base are deformed to completely fill the grooves in the plate as the opposing surfaces of the plate and base are pressed together.

2. A method of joining a metal printing plate to a base of softer metal which comprises forming dove tail grooves in the lower surface of the plate, forming straight sided tongues on the upper surface of the base so that the height of said tongues is slightly greater than the depth of the grooves, assembling the plate on the base with the tongues of the latter fitted in said grooves and engaging the bottom walls of the grooves to support the lower surface of the plate in spaced relation to the upper surface of the base and then subjecting the assembly to pressure whereby the tongues of the base are deformed to completely fill said grooves as the plate and base are forced together.

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