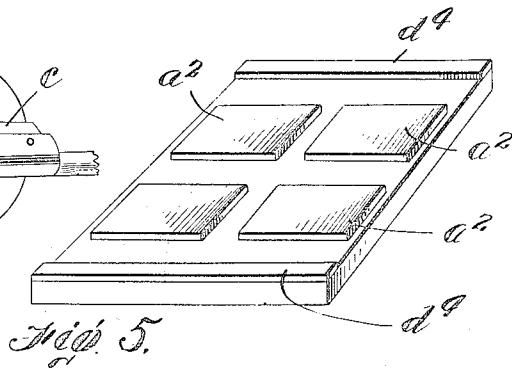
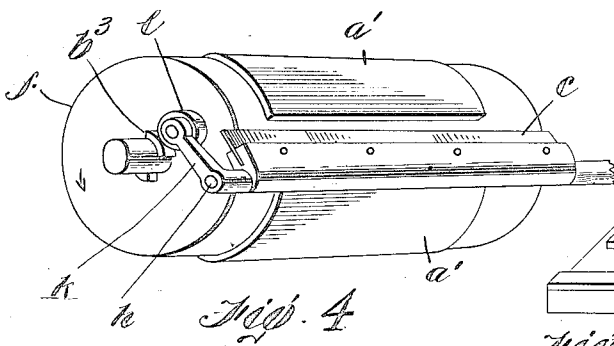
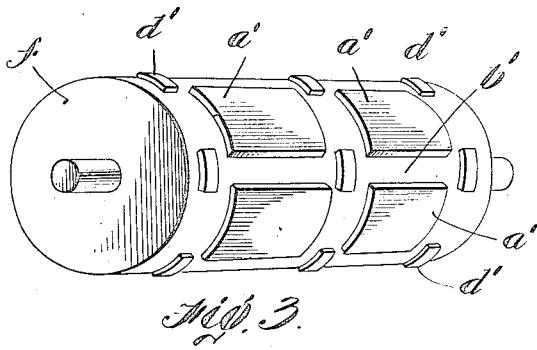
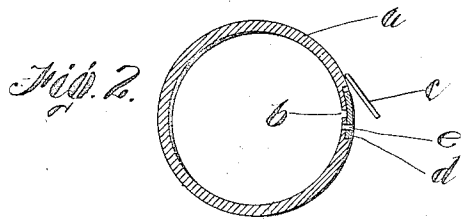
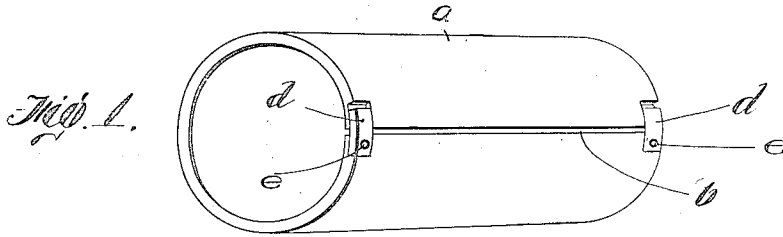


H. A. W. WOOD.
CLEANING DEVICE FOR INTAGLIO PLATES.

APPLICATION FILED FEB. 25, 1907. RENEWED MAR. 7, 1912.

1,042,517.

Patented Oct. 29, 1912.



Witnesses:

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CLEANING DEVICE FOR INTAGLIO-PLATES.

1,042,517.

Specification of Letters Patent.

Patented Oct. 29, 1912.

Application filed February 25, 1907, Serial No. 359,116. Renewed March 7, 1912. Serial No. 682,085.

To all whom it may concern:

Be it known that I, HENRY A. WISE WOOD, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Cleaning Device for Intaglio-Plates, of which the following is a specification.

In an application for patent filed February 8, 1907, Serial No. 356,317, I have set forth a method of preparing intaglio printing cylinders and other plates for making successive imprints without permitting the outside circumferences thereof to be reduced.

One form in which said invention is illustrated comprises the employment of a cylindrical shell which is longitudinally slit. When the slit in this shell is made parallel with the axis thereof and with the edge of the cleaning blade, it is obvious that the latter will snap into the slit or gap in the shell once during each revolution.

The principal object of the present invention is to provide means for preventing the cleaning blade from snapping into the channel when a divided shell is used such as that above mentioned, or in the case of flat or curved plates divided or separated from each other by similar gaps. These objects are accomplished with all types of plates and shells by the use of means for keeping the blade substantially at a position corresponding to the outer circumference or plane of the plate while it passes over the slit or gap. Several ways of accomplishing this result can be adopted within my invention.

Reference is to be had to the accompanying drawings which illustrate several forms of the invention and in which,

Figure 1 is a perspective view of a cylindrical shell slit longitudinally, showing one form of the invention. Fig. 2 is a transverse sectional view of the same showing the cleaning blade in position. Fig. 3 is a perspective view of a printing cylinder having curved plates thereon showing another way in which the invention can be carried out. Fig. 4 is a perspective view of a cylinder with plates thereon showing still another modification, and Fig. 5 is a perspective view showing flat plates and another way in which the invention can be carried out.

In all of the forms of the invention, a cleaning device for the intaglio printing surfaces is provided with means for keep-

ing it from snapping off the edge of the intaglio plate so as to be suddenly struck by the edge of the approaching plate. In certain forms, the stop for accomplishing this purpose is located on the printing cylinder or even on the plate itself for engaging the blade, while in other forms it is located in such position as to engage some other part of the cleaning device, as for instance, the blade holder.

Referring first to Figs. 1 and 2, it will be seen that the intaglio printing shell *a* is provided with a longitudinal slit or gap *b* which in this case is parallel with the axis of the shell and with the edge of the cleaning blade *c*. The gap in the shell extends throughout the length thereof.

For the purpose of holding the blade in such position that it will not snap into the slit or gap and so that it will engage the oncoming surface of the plate in a proper manner, the shell is provided with stops or bridges *d* countersunk into the same and preferably secured by a pin *e* or the like to one of the sides of the shell. This piece may be made of copper or any other desired material and is preferably reduced in thickness in the same manner that the shell is reduced, when the shell is prepared for repeated use, so that it always serves to bridge the gap and hold the blade in such position that it will not snap into the same and will be properly located to engage the oncoming surface of the shell in such a manner as effectively to clean it.

In Fig. 3 the invention is shown as applied to a cylinder *f* having curved plates *a'* thereon. In this case, bridges or stops *d'* are mounted on the cylinder, but not in contact with the plates, in such position as to bridge the gaps *d'* between them, so as to serve the same purpose as that above described. In Fig. 4 this principle is carried out by providing the shaft *h* with an arm *k* having a cam roller *l* thereon, the shaft of the printing cylinder *f* having cams *b³* for operating the roller. In this arrangement, the cleaning blade is held in engagement with the plates by the weight of the roller, or in any other desired way, except when passing the gap, at which time it is held in proper position by the operation of one of the cams.

In Fig. 5 are shown flat printing plates *a²* which may be provided with any of the dif-

ferent forms of the invention. They are shown, however, as provided with still another modification in which stops d^4 extend throughout the length of the printing surface so that the blade will at all times be held by the stops.

In the various forms of stops or bridges, it is to be observed that they may be made flat or cylindrical as the case may be or they may have a gently rising surface so as to lift the blade up to the plane of the plate. This surface may be extended entirely across the plate if desired or may be broken up so as to form bridges as indicated.

It will be noticed that in the form shown in all the figures the means for holding the cleaning device in proper position consists of an element which is fixed with respect to the printing surface so that when the invention is applied to a rotary press, it rotates with the shell or plate cylinder and when applied to a flat bed press, it moves with the printing surface.

While I have illustrated and described certain forms in which my invention may conveniently be embodied, I am aware that modifications may be made therein and that the several forms shown can be applied to other types of presses than those upon which they are indicated, without departing from the spirit of the invention as expressed in the claims. Therefore, I do not wish to be limited to the particular forms shown, but

What I do claim is:—

1. The combination with a cleaning device for intaglio printing surfaces, of means located at opposite ends of said printing surfaces engaging the cleaning device when it comes to the edge of the printing surfaces for preventing the cleaning device from

snapping off the edges of the printing surfaces.

2. The combination with an intaglio printing member, of a cleaning device, and means on said printing member for holding the cleaning device substantially at the height of the printing surface while passing a gap therein.

3. The combination with an intaglio printing cylinder having a slit or gap, of a cleaning device, and means located in position to engage the operative edge of the cleaning device while passing the gap for holding the same substantially at the height of the printing surface while passing a gap therein.

4. The combination with an intaglio printing plate, of a cleaning device, and a stop for said device located adjacent to the plate and movable therewith for limiting the motion of the cleaning device in one direction, toward the plate.

5. The combination with a printing cylinder having intaglio printing surfaces thereon separated by a gap, a cleaning blade, and means on said cylinder adjacent to said gap for holding the blade out of the gap when passing over it.

6. The combination with a printing member having intaglio printing surfaces thereon, with gaps between said surfaces, of a cleaning blade, and means on said printing member for holding the cleaning blade out of the gap when passing over it.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

H. A. WISE WOOD.

Witnesses:

MARY E. MCCADDEN,
ANNIE B. WALTERS.