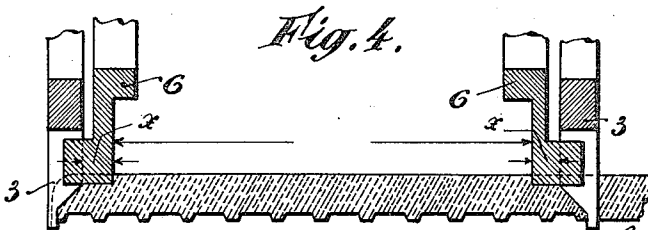
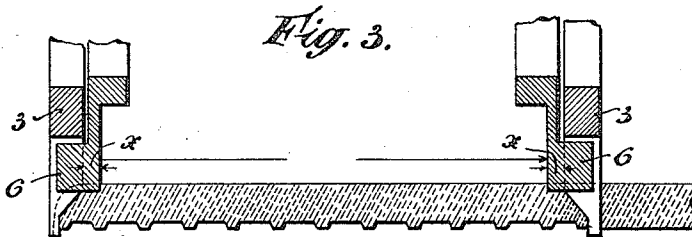
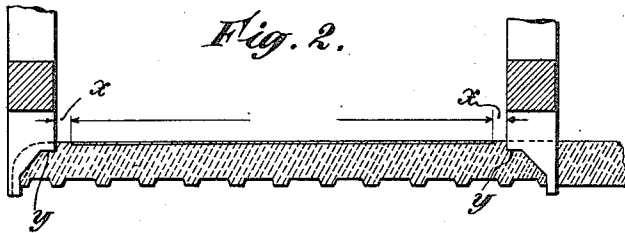
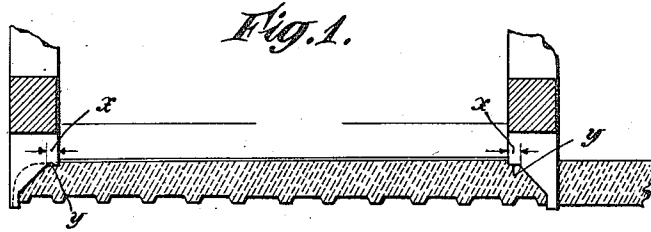


A. EGLI.
 DEVICE FOR FINISHING STEREOTYPE PRINTING PLATES.
 APPLICATION FILED OCT. 31, 1911.

1,042,208.

Patented Oct. 22, 1912.

2 SHEETS—SHEET 1.



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 Anna Hoyer.

Inventor:
 Arnold Egli
 by *Arnold Egli*

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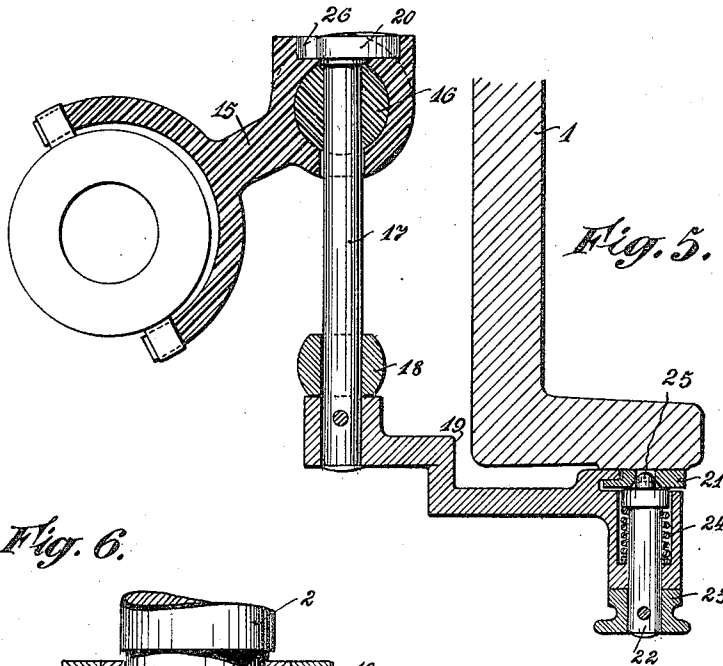


Fig. 5.

Fig. 6.

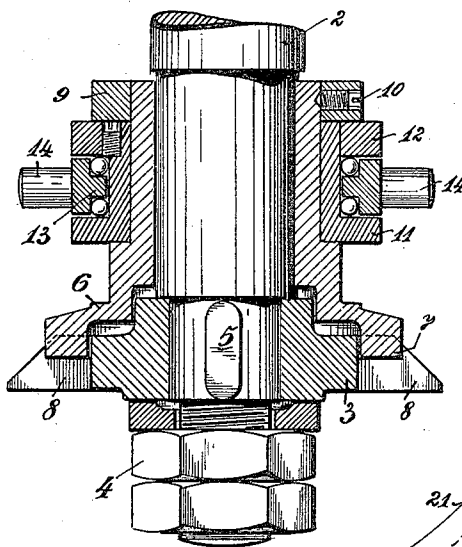
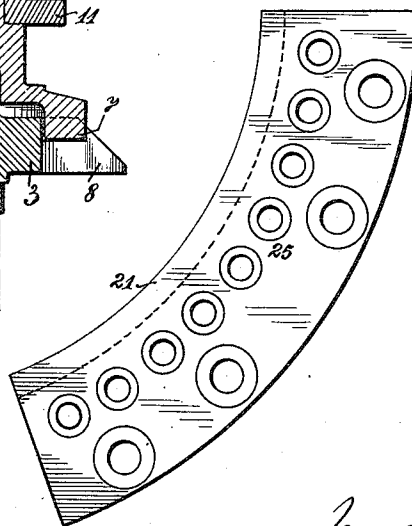


Fig. 7.



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UNITED STATES PATENT OFFICE.

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DEVICE FOR FINISHING STEREOTYPE PRINTING-PLATES.

1,042,208.

Specification of Letters Patent.

Patented Oct. 22, 1912.

Application filed October 31, 1911. Serial No. 657,708.

To all whom it may concern:

Be it known that I, ARNOLD EGLI, a subject of the King of Prussia, residing at Plauen i. Vogtl., in the Kingdom of Saxony, German Empire, have invented certain new and useful Improvements in Devices for Finishing Stereotype Printing-Plates, of which the following is a specification.

The present invention has for its object an improvement in milling devices for machines and apparatus for finishing stereotype printing plates for rotary printing presses.

The novel feature resides in the fact that in addition to the fixed cutters for severing the plates a movable cutter is provided for the purpose of cutting away the places marked *x* on the drawing in a single operation with the casting.

Hitherto the trimming cutter has been formed so as to act simultaneously on the place marked *x* also. As, however, the length of the composition never remains the same, while the length of the plate must of course be constant, a finishing operation can be avoided only in the case of plates exactly corresponding to the predetermined lengths and widths. The shrinkage of the matrix and the irregular dimensions of the composition itself however invariably necessitate a finishing operation when only fixed cutters are used.

My invention is shown in the accompanying drawing, in which—

Figure 1 is a section of a printing plate with certain theoretical length of composition and two fixed cutters which cut through the plate and also cut the facets required for clamping the plate in the press and for adjusting the plate by means of the projections *y*. Fig. 2 shows the printing plate with the same cutters but with a shorter composition; the places marked *x* which have no longer been acted upon by the parts of the cutters marked *y* have to be cut away by hand or in a special apparatus. Fig. 3 shows a plate with normal, that is to say, theoretical length of composition and the cutting devices 3 and 6 forming the object of the present invention in the normal position. Fig. 4 shows the same plate as in Fig. 3 with shortened composition and the cutters 6 displaced relatively to the fixed cutters in such a way that the places *x* which according to Fig. 2 had to be further

treated by hand or otherwise are here treated in one operation by the movable cutters. Fig. 5 is a section through the means for adjusting the movable cutters. Fig. 6 is a section of the cutters, and Fig. 7 is the scale for the adjusting lever.

My invention resides in the fact that the edges of the plate to be treated can be simultaneously acted upon by two cutters, a relatively fixed cutter and a movable cutter, the former effecting only the severing and the latter only the trimming of the plate.

The fixed cutter 3 is held upon the shaft 2 mounted in the frame 1, by means of a key 5 and a nut and counter nut 4. Upon the same shaft 2 the movable trimming cutter 6, which is formed on the lower end of a sleeve, is mounted in such a manner that it can be displaced in the axis of the shaft 2, its teeth 7 engaging in the tooth intervals 8 in the fixed cutter 3 which drives a movable cutter. Between the collar of the movable cutter 6 and a nut 9, which is held in place by a set screw 10, a thrust bearing comprising the bushing 11, nut 12 and ball bearing ring 13 is fixed upon the sleeve of the movable cutter 6. The ball races are formed in such a manner that the ball bearing ring 13 is guided in the axis of the driving shaft 2 and runs concentrically therewith. On its periphery the ball bearing ring 13 carries on opposite sides a pin 14. These pins are engaged by a forked lever 15 movably mounted on a spindle 16 secured in the frame. In the spindle 16 and an eye bolt 18 also fixed to the frame 1 is rotatably mounted a spindle 17 which at one end carries the lever 19 and on the other end a cam 20 which engages in a slot 26 in the forked lever 15. Lever 19 is arranged to move over a scale 21 (Fig. 7) screwed to the frame upon which scale the lever 19 can be adjusted in fixed positions, marked by holes 25, into which a bolt 22, having a knob 23 is forced by a spring 24. The movements of the adjusting lever 19 are transmitted by the spindle 17 and cam 20 to the forked lever 15 so as to positively displace the latter in the axis of the shaft 2. Thus the movable cutter 6 can be easily moved into any desired position relative to the fixed cutter 3.

I claim:

1. In a device for finishing stereotype

plates, the combination with a relatively fixed rotary cutter and a driving shaft therefor, of a movable cutter adapted to be moved relative to said relatively fixed cutter in the
5 axis of said shaft and driven by said relatively fixed rotary cutter, and means independent of said driving shaft for displacing said movable cutter relative to said relatively fixed cutter.

10 2. In a device for finishing stereotype plates, the combination with a relatively fixed rotary cutter and a driving shaft therefor, of a movable cutter adapted to be moved relative to said relatively fixed cutter in the
15 axis of said shaft and driven by said relatively fixed rotary cutter, and means independent of said driving shaft for displacing said movable cutter relative to said relatively fixed cutter, and a scale cooperating
20 with said adjusting means for determining the displacement of said movable cutter.

3. In a device for finishing stereotype plates, the combination with a relatively fixed rotary cutter and a driving shaft
25 therefor, of a movable cutter adapted to be moved relative to said relatively fixed cutter in the axis of said shaft and driven by said relatively fixed rotary cutter, and means independent of said driving shaft for displacing
30 said movable cutter relative to said relatively fixed cutter, and a scale cooperating with said adjusting means for determining the displacement of said movable cutter, and means for holding said adjusting means in
35 fixed position.

4. In a device for finishing stereotype printing plates, the combination with a relatively fixed rotary cutter and a driving shaft
40 therefor of a movable cutter loosely mounted on said shaft and in engagement with said relatively fixed rotary cutter to be driven thereby and provided with a sleeve, a forked lever, means on said sleeve in engagement with said lever, a rotary spindle,
45 a cam on said spindle engaging said forked lever, and an arm secured to the other end

of said spindle for rotating said spindle, thereby operating the forked lever to shift the movable cutter in the axis of said driving shaft.

50 5. In a device for finishing stereotype printing plates, the combination with a relatively fixed rotary cutter and a driving shaft therefor of a movable cutter loosely mounted
55 on said shaft and in engagement with said relatively fixed rotary cutter to be driven thereby and provided with a sleeve, a forked lever, means on said sleeve in engagement with said lever, a rotary spindle, a cam on said spindle engaging said forked
60 lever, and an arm secured to the other end of said spindle for rotating said spindle, thereby operating the forked lever to shift the movable cutter in the axis of said driving shaft, and a scale cooperating with said
65 arm for determining the displacement of said movable cutter.

6. In a device for finishing stereotype printing plates, the combination with a relatively fixed rotary cutter and a driving shaft
70 therefor of a movable cutter loosely mounted on said shaft and in engagement with said relatively fixed rotary cutter to be driven thereby and provided with a sleeve, a forked lever, means on said sleeve in
75 engagement with said lever, a rotary spindle, a cam on said spindle engaging said forked lever, and an arm secured to the other end of said spindle for rotating said spindle, thereby operating the forked lever to shift
80 the movable cutter in the axis of said driving shaft, and a scale cooperating with said arm for determining the displacement of said movable cutter, and means on said scale and said arm for holding said arm in fixed
85 position.

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

ARNOLD EGLI.

Witnesses:

WILHELM DUNKEL,
ROBERT H. NIER.