G. A. KITZ.

PRINTING PRESS.

APPLICATION FILED SEPT. 28, 1912.

1,068,063. **Patented July 22, 1913.**

2 SHEETS—SHEET 1.

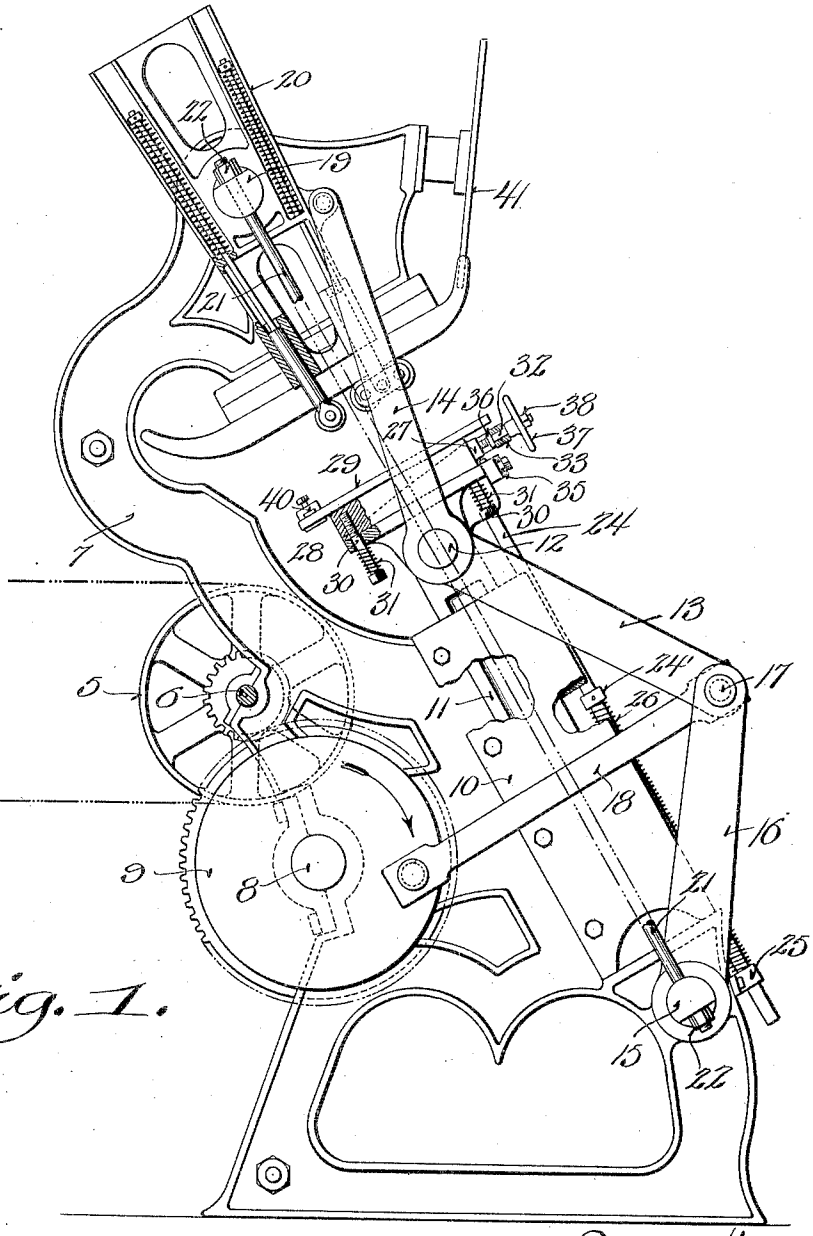


Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 2.

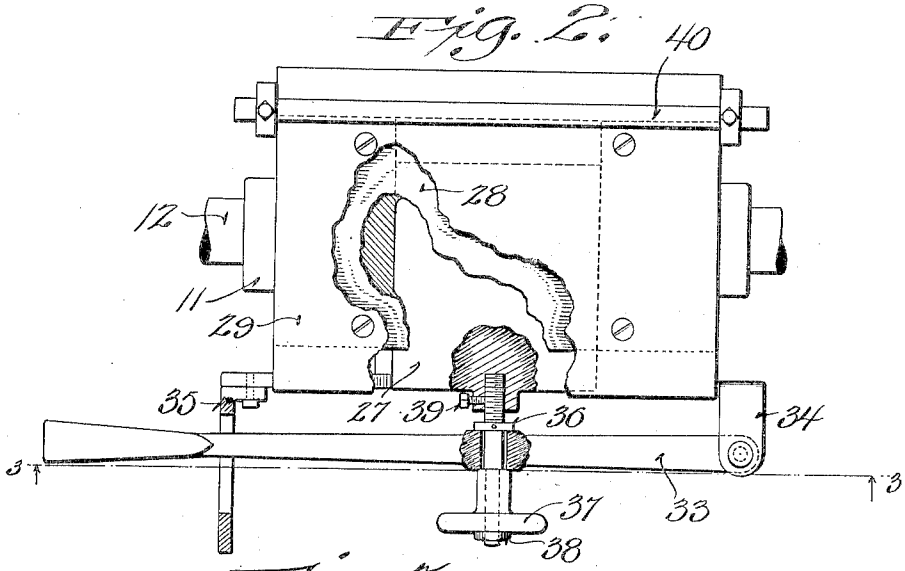


Fig. 3.

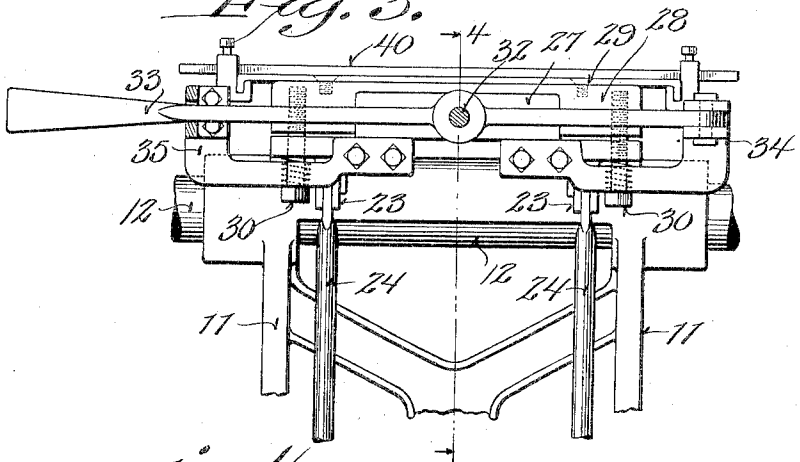
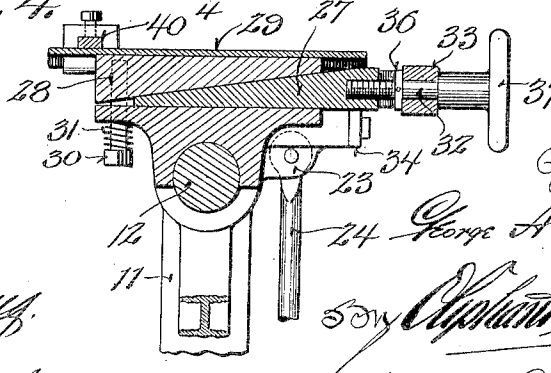


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE A. KITZ, OF OSHKOSH, WISCONSIN.

PRINTING-PRESS.

1,068,063. Specification of Letters Patent. Patented July 22, 1913.

Application filed September 28, 1912. Serial No. 722,922.

To all whom it may concern:

Be it known that I, GEORGE A. KITZ, a citizen of the United States, and resident of Oshkosh, in the county of Winnebago and State of Wisconsin, have invented certain new and useful Improvements in Printing-Presses; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in what is herein particularly set forth with reference to the accompanying drawings and pointed out in the claims of this specification, its object being to provide simple, economical and efficient printing-presses of the well known job-press type especially designed for making impression on wood employed in the manufacture of cigar boxes.

Figure 1 of the drawings represents a side elevation of one of my improved printing-presses partly broken away; Fig. 2, a plan view of a fragment of the press partly in horizontal section; Fig. 3, a front elevation of the same partly in section on the plane indicated by line 3—3 in Fig. 2, and Fig. 4, a sectional view indicated by line 4—4 in Fig. 3.

Referring by numerals to the drawings, 5 indicates a belt-pulley on a drive-shaft 6 for which standards 7 of the stationary main frame of the press are provided with bearings, and said shaft is in spur-gear connection with a countershaft 8 having wrist-wheels fast thereon, one of said wheels 9 being shown. Each frame standard 7 is provided with a guide 10 for a side bar 11 of a reciprocative frame, and fast in the upper end of this frame to thereby constitute part of the same is a spindle 12, each end of the spindle serving as a bearing for a toggle-link 13 and a pitman 14. Fast in the frame-standards 7 is a lower spindle 15 and each end of the same serves as a bearing for a toggle link 16 coupled by a pin 17 to a similar link 13, and to a pitman 18 in connection with the wrist-wheel 9 aforesaid. An upper spindle 19 is also fast in the frame-standards, and constitutes a pivot for the carrier 20 of the inking-rollers of the press, said carrier being connected to the pitman 14 of said press that turns on the spindle 12 thereof. To impart rigidity to the press, the ends of the spindles 15 and 19 are connected by brace-rods 21 that extend through the same and have nuts 22 run on their ends, one of said rods being shown in Fig. 1, partly broken away.

Coupled to arms 23 of the upper end of the reciprocative frame aforesaid are rods 24, guided in eyes of brackets 25 with which the standards above specified are provided, and engaged by the rods, between collars 24′ of the same and said brackets, are spiral-springs 26, these springs being employed to compensate for some of the weight of said reciprocative frame.

A portion of the upper end of the reciprocative frame is a plane, and slidable on the same is a wedge 27, the inclined face of which opposes a similar face of a recess in a stiff back block 28 to which the platen 29 of the press is fastened by screws or otherwise, the wedge being slidable on said frame and in the recess of said block. Extending through apertures of the plane head of the reciprocative frame into the platen-block 28 are screws 30, and arranged on said screws between their heads and said frame-head are spiral tension-springs 31.

Engaging the wedge 27, centrally of its front is the screw-threaded end of a shouldered rod 32, that engages an eye of a lever 33 fulcrumed at one end in a bracket 34 attached to the head of the reciprocative frame, and the lever has play in a slot of another bracket 35 also attached to said frame-head. The lever is held on the rod between a collar 36 and the hub of a hand-wheel 37, a nut 38 being run on said rod against said wheel. By holding the lever and manipulating the rod, the wedge 27 is adjusted to vary the elevation of the platen and said wedge is secured in adjusted position by a set-screw 39 therewith impinging said rod. The friction between the opposing faces of the wedge 27 and the block 28, due to the expansive force of the springs 31, is sufficient to prevent automatic displacement of said wedge and the lever therewith from adjusted position. By manipulation of the lever the wedge may be drawn out from any adjusted position thereof to permit automatic retraction of the platen (by expansion of the springs 31) sufficient to prevent an impression on the stock fed to the press when the reciprocative frame is on throw toward a form locked in the chase of said press, said chase being supported in connec-

tion with the standards aforesaid, and said platen provided with an adjustable gage-bar 40.

The wrist-wheel 9 being in rotation, in the direction of the arrow shown, the toggle-links of the press are in motion from the point of their greatest flexion, the power increasing and the rate of speed diminishing as the pairs of connected toggle-links straighten out, whereby the reciprocative frame is elevated to effect an impression of the previously inked form in the chase on the stock upon the platen with said frame, a good impression being insured, because of the leverage of the toggle-joints.

Incidental to the movement of the reciprocating frame, the carrier 20 is actuated to move the inking rollers therewith across the face of the form in the chase of the press and also on the ink-distributing disk 41 of said press, said rollers being journaled in spring-controlled hangers as is common practice.

I claim:

1. A printing-press of the type specified comprising a stationary main frame, a reciprocative frame guided on the main one, a platen having a recessed back-block rigid therewith in spring-controlled yielding connection with the reciprocative frame, a wedge slidable on said reciprocative frame in matching engagement with the recess of the block, means for fine adjustment of the wedge, and means for quick retraction of said wedge from adjusted position.

2. A printing-press of the type specified comprising a stationary main frame, a reciprocative frame guided on the main one, a platen in spring-controlled yielding connection with the reciprocative frame, a wedge interposed between said reciprocative frame and the platen, means for fine adjustment of the wedge, and means for quick retraction of said wedge.

3. A printing-press of the type specified comprising a reciprocative frame, a platen having a recessed back-block rigid therewith in yielding connection with the frame, a wedge slidable on said frame in matching engagement with the recess of said block, a lever fulcrumed in connection with the aforesaid frame, and a wedge-engaging screw-rod held in engagement with the lever against longitudinal movement.

4. A printing-press of the type specified comprising a reciprocative frame, a platen having a recessed back-block rigid therewith in yielding connection with the frame, a wedge slidable on said frame in matching engagement with the recess of said block, a lever fulcrumed in connection with the aforesaid frame, means limiting movement of the lever in either direction on its fulcrum, and a wedge-engaging screw-rod held in engagement with the lever against longitudinal movement.

In testimony that I claim the foregoing I have hereunto set my hand at Oshkosh in the county of Winnebago and State of Wisconsin in the presence of two witnesses.

GEORGE A. KITZ.

Witnesses:
H. A. HENKEL,
M. H. KITZ.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."