No. 692,508. Patented Feb. 4, 1902.

E. FISCHER.

PRINTING PRESS.

(Application filed Feb. 27, 1901.)

(No Model.)

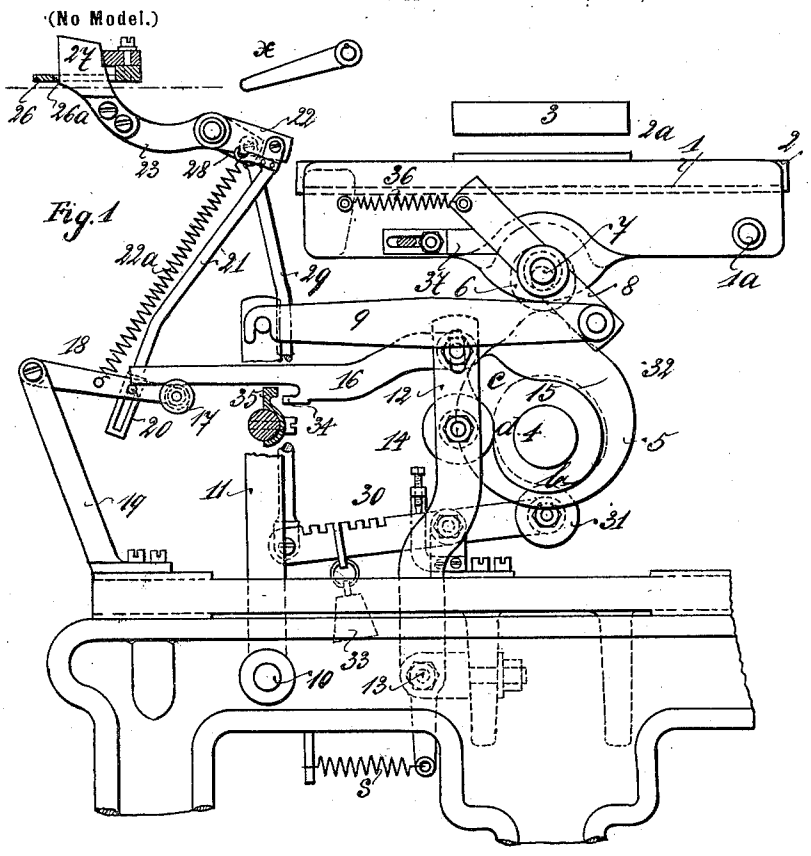


Fig. 1

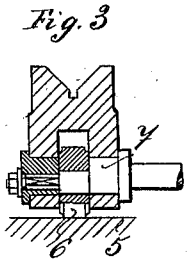


Fig. 3

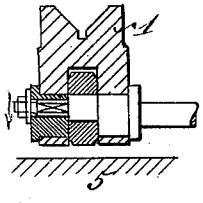


Fig. 4

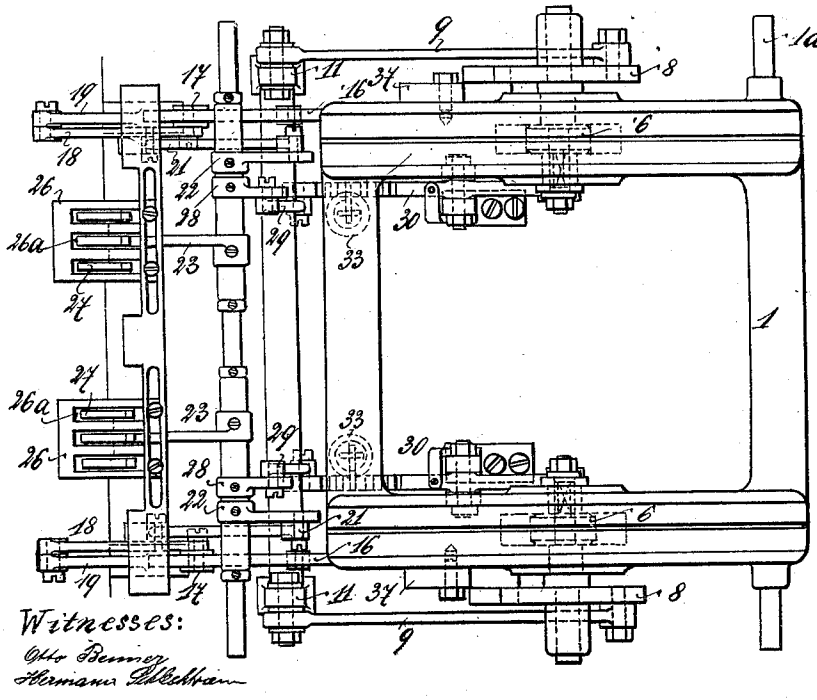


Fig. 2

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UNITED STATES PATENT OFFICE.

ERNST FISCHER, OF BARMEN, GERMANY.

PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 692,508, dated February 4, 1902.

Application filed February 27, 1901. Serial No. 49,147. (No model.)

To all whom it may concern:

Be it known that I, ERNST FISCHER, a subject of the Emperor of Germany, residing at Wertherhofstrasse 3, in the city of Barmen, Rhenish Prussia, Germany, have invented a new and useful Improvement in Printing-Presses, of which the following is a specification.

The object of this invention is to provide an examining device and a mechanism operating the same for printing-machines which will permit of control whether a blank, envelop, or the like is fed to the printing-types or not, and it further provides an arrangement by which the printing-form is removed or brought out of action if a blank has not been fed to the types, so as to avoid soiling of the press-supporter and of the back face of the blank.

The invention will first be described in detail and then particularly set forth in the claim.

In the accompanying drawings, Figure 1 is a side elevation of a printing-machine; Fig. 2, a top view thereof. Figs. 3 and 4 are cross-sections through the frame and carriage.

My invention is not limited to a special kind of printing-machines. It can be applied to any machine where the effect described above is desired to be obtained. In the present specification I have shown a platen printing-machine which is fitted out with my invention.

In suitable standards is located a horizontal frame 1, which is turnable around a bolt 1^a and bearing the reciprocating carriage 2, upon which is fixed the type-box. Above said box is arranged the platen 3, against which the frame 1 is pressed, for which purpose on the main shaft 4 of the machine is keyed an eccentric disk 5, which by means of a roller 6, which is pivotally secured to the frame 1, raises and lowers the latter and producing thus the printing action.

The blanks are fed to the carriage and type-box in any convenient manner by means of grippers x of any known construction. Now it may happen that a blank or the like fails to be fed. Then the type-box would soil the platen, and the following sheet would be also soiled on the back face. In order to avoid this, I lower the frame 1 automatically in case a blank is not fed, so that the type-box is unable to touch the platen and soil it. This is carried out by the following means: The roller 5 is secured on a bolt 7, which is eccentrically journaled in the frame, so that when being turned the roller 6 is more inserted into the frame, which is sunk on the eccentric 5, and the box brought out of reach with the platen. The turning of said roller 6 for the named purpose is accomplished without stopping of the machine by the following means: On bolt 7 of the roller 5 is keyed an arm 8, having connection by a rod 9 with a vertical lever 11, sitting on a fulcrum 10. In front of shaft 4 is arranged a lever-arm 12, turnable on a bolt 13, which is provided with a friction-roller 14. Cam 15, keyed to shaft 4, acts on said roller and oscillates lever 12, which is drawn against the cam by a spring s. To the arm 12 is linked a rod 16, the free end of which rests upon a roller 17 of an arm 18, fulcrumed to a standard 19. Said arm 18 is fitted with a pin 20, which is engaged by the slotted end of a rod 21, that is coupled to an arm 22, forming part of a rocking lever 23. Above said sleeve is arranged a controlling device for the sheets passing along to the type-box. This device consists of a horizontal plate 26, being provided with slots 26^a, through which blades 27 may project, forming also part of lever 23. The rocking movement of lever 23 is accomplished by a rod 29, connecting an arm 28 of said sleeve with a lever 30, fulcrumed to the standards and having a friction-roller 31, upon which acts a cam 32, fixed on shaft 4. By means of this cam and the lever-and-rod connection the blades 27 are moved down, their upward movement being obtained by an adjustable weight 33. As stated before, the blank sheets pass on their way to the box 2^a, the examiner being carried by suitable means below the plate and being lightly touched by the oscillating blades 27. If, however, a blank is missed, the following takes place: The blades 27, finding no resistance, project through slots 26^a by the action of weight 33. Arm 22 goes down and lowers, by means of rod 21 and pin 20, arm 18, which supports rod 16, that is also lowered. Rod 16 is provided with a tooth 34, and arm 11 is

fitted with a nose 35. According to the movement of lever 12 and surface *b* of cam 15 nose 35 is engaged by tooth 34 and lever 11 and rod 16 are hooked together. Now surface *c* of cam 15 comes in action and pushes both levers 11 12 forward, the effect being that arm 8 is turned with the roller 6, Fig. 4, and the frame made to go down, as described above. As soon as surface *c* has passed roller 14 a coiled spring 36 draws arm 8 back in its former position, its movement being limited by a stopper 37. Levers 11 and 12 are also returned in their former position, but are allowed to move a little more, according to the recess *d* of cam 15, so that rod 16 and arm 11 are unhooked and spring 22^a can raise arm 18 with rod 16, bringing the latter thus out of engagement with nose 34.

Having thus fully described my said invention, I claim—

In a printing-machine the combination of a printing-frame means to rock said frame and means to lower and raise it consisting of an eccentrically-located roller a lever fitted to said roller and having connection with a lever-arm, of a second lever-arm being oscillated by a cam and bearing a pushing-rod, said rod being supported by an arm having connection with the sheet-examiner, said rod being provided with a hook in order to be hooked with said lever-arm for the purpose described and set forth.

ERNST FISCHER.

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