

No. 3.716.

A. Gilman.
Printing Press.

Patented Aug. 23, 1844.

Fig. 1.

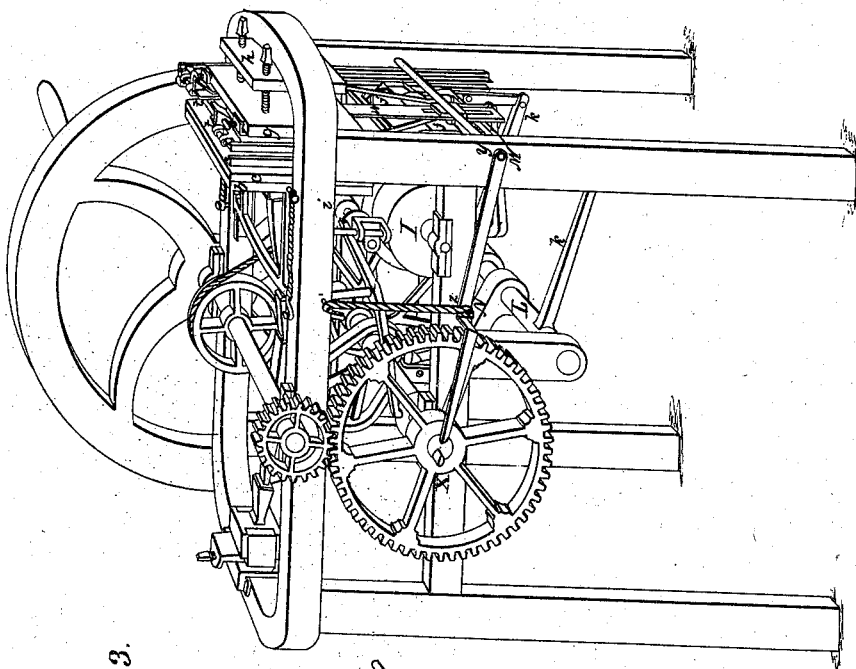


Fig. 3.

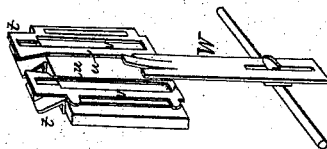
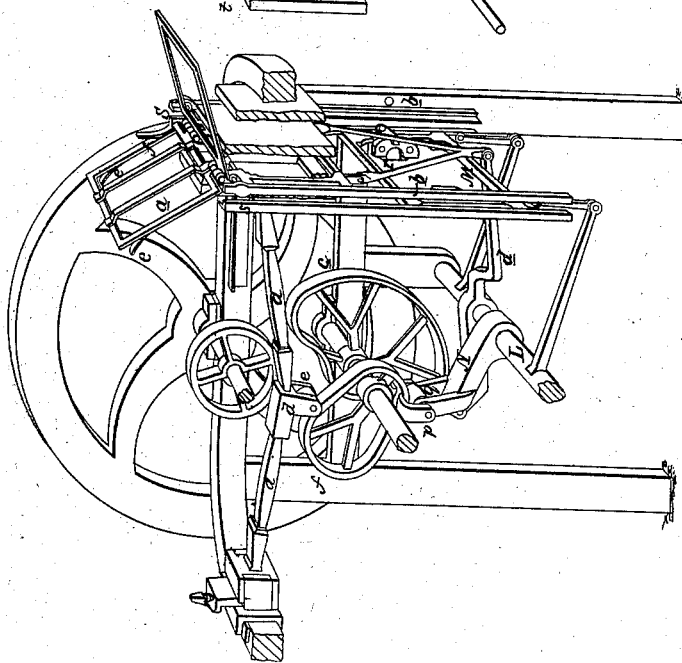


Fig. 2.



UNITED STATES PATENT OFFICE.

ALONZO GILMAN, OF TROY, NEW YORK.

IMPROVEMENT IN PRINTING-PRESSES.

Specification forming part of Letters Patent No. 3,716, dated August 23, 1844.

To all whom it may concern:

Be it known that I, ALONZO GILMAN, of the city of Troy, in the county of Rensselaer and State of New York, have invented new and useful Improvements in Printing-Presses; and I do hereby declare that the following is a full and exact description, reference being had to the annexed drawings, making part of this specification, in which drawings—

Figure 1 is a perspective side view of a printing-press.

At *a a* is a pair of toggles or bracing-levers employed to produce the impression required in printing.

b is the bed-plate to the chase *c* and the type when set and attached for printing.

At *d* the levers are united by a socket-joint.

e is a friction-roller for the bearing of the levers upon the cam *f*, by which they are operated.

g is a vertical plate, serving as the platen for giving the impression, and its inner surface is adjusted to face of the type by means of the screws shown in connection as passing through the fixed plate *h*.

At *I*, Fig. 1, is a cylinder for receiving, and at *i* a roller for equalizing upon its surface, the ink to be communicated to the inking-rollers. So far these are in common use; but the manner in which the inking-rollers *j j* are suspended in the frame to which they belong and are operated and applied to the purposes intended being considered as new, I will here add more specifically that *k k*, Figs. 1 and 2, are lever-arms extending from the shaft *L* to short sweeps connected with the lower cross-bar *B* of the working-frame *M* of these inking-rollers.

N is, in effect, the opposite arm of the same levers of which the shaft *L* serves as the fulcrum. This inner arm, *N*, as shown in the drawings, is so formed and supplied with appendages as to become connected with the cam *f* by means of a flange overlapping the inner surface of its rim from each side in such manner as to slide easily upon it as the cam revolves, and, by means of the pin-joint at *p*, conform to the various inclinations of surface thereby presented to it.

q is a friction-roller to receive the downward bearing of the cam upon this end of the lever. By these provisions it will be seen that the

working-frame *M*, with the inking-rollers, receives its up-and-down motion at every revolution of the cam, causing the rollers to pass over the face of the type as they, by the action of the same cam in operating the levers *a a*, are withdrawn from the platen.

In order to conform the surface of the inking-rollers to that of the cylinder *I* in receiving from it their required supply of ink, and also to the face of the type in imparting the same to them, I provide two half-circular appendages to the working-frame, one of which is shown at *r*, Fig. 2, into which the respective journals of the rollers are placed. They are attached to the sides of the frame on the inside by a central pin-joint, so as to adapt the line of surface of each to the curve of the cylinder and to the face of the type as they pass in contact with them; and, as a further provision for adjusting their respective surfaces to each other, a transverse tongue and groove is made between each appendage or block and the side of the working-frame, the same, where it is attached, being extended in width for that purpose, with an adjusting-screw, by means of which the rollers are moved out or in at discretion, and fixed in their position when adjusted, excepting the lateral circular motion, as above provided for, upon the pin-joint, which adapts the line of surface of each to the curve of the cylinder and face of the type as they are respectively brought in contact therewith.

S S are the ways between which the working-frame passes in its up-and-down motion.

For the purpose of applying the machine to the printing of paper in sheets as distinguished from cards, I provide a frisket, as represented at *a*, Fig. 2, attached by hinge-joints to the top of the working-frame provided for that purpose, and there shown in connection. This frame passes up and down between the ways *b b*, and receives its motion through the instrumentality of the cam *c* and the lever *d*, connected with each other in the same manner as that above described for operating the inking-rollers. This lever is made loose upon the shaft *L*, so as not to turn with it, and the form of the cam with which it is connected, as shown in the drawings, is such that in its revolution the frisket is kept elevated long enough to allow a sheet to be taken out and another put

in before it is again drawn down between the type and the platen for impressment.

Friction-rollers are provided at each side rim to give ease to its motion, as well as for closing the frisket in this operation. Springs also are provided on the outside of one of its wings, as shown at *e e*, to keep them sufficiently closed in passing, and a spring on the inside, at *f*, to separate them when brought again to the top of the machine.

What I claim, and desire to secure by Letters Patent, is—

1. The hanging of the inking-rollers, in the

manner above described, in the working-frame provided for them, by means of which they are made conformable, in passing, to the curve of the cylinder and the face of the type, and so as to be adjusted thereto at discretion.

2. The combination of a frisket with the said machine, in the manner and for the purposes above described.

ALONZO GILMAN.

Witnesses:

S. S. HUNT,
DANIEL WHITING.