(No Model.)

H. BREUER.

PRINTING PRESS.

No. 457,251. Patented Aug. 4, 1891.

Fig. 1.

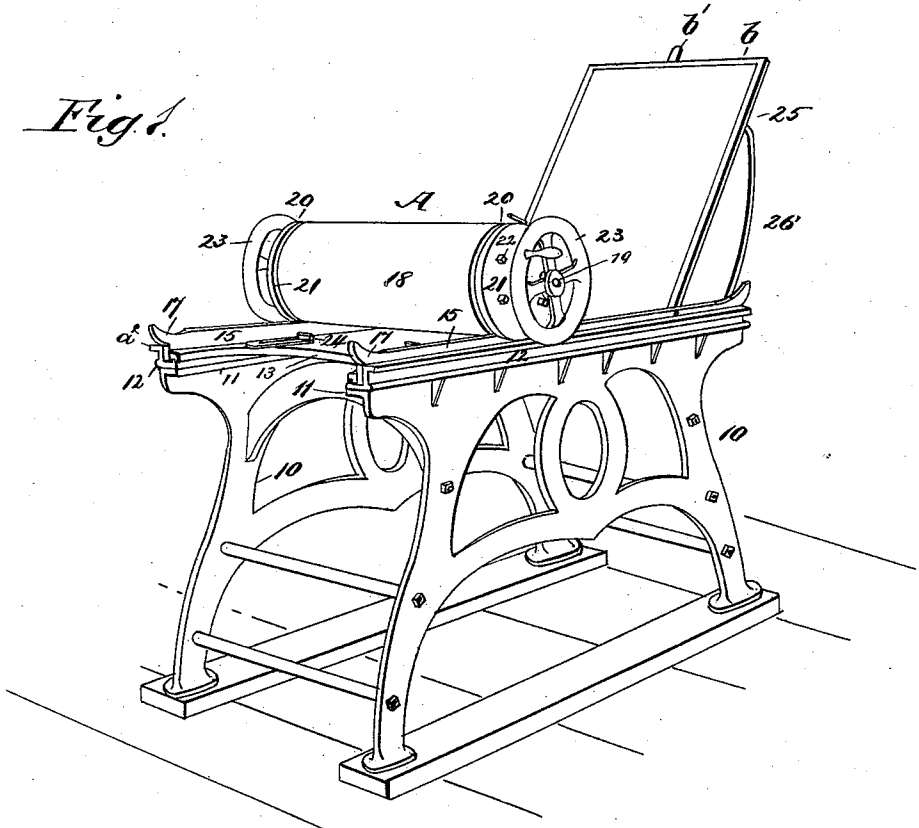


Fig. 2.

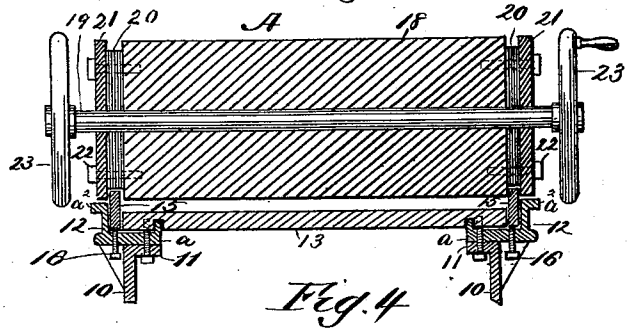


Fig. 3.

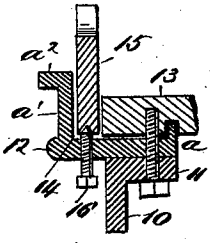


Fig. 4.

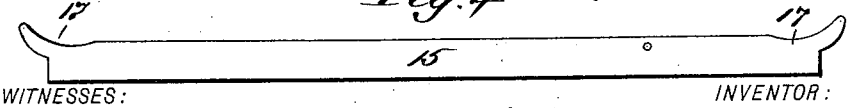


Fig. 5.



WITNESSES:

F. McArdle

C. Sedgwick

INVENTOR:

H. Breuer

BY Munn & Co

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HYNEK BREUER, OF NEW PRAGUE, MINNESOTA, ASSIGNOR OF ONE-HALF TO WILL H. TAYLOR, OF SAME PLACE.

PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 457,251, dated August 4, 1891.

Application filed February 6, 1891. Serial No. 380,478. (No model.)

To all whom it may concern:

Be it known that I, HYNEK BREUER, of New Prague, in the county of Scott and State of Minnesota, have invented a new and useful Improvement in Printing-Presses, of which the following is a full, clear, and exact description.

My invention relates to an improvement in printing-presses, especially hand-presses, and has for its object to provide a simple, powerful, and perfect working press, durably constructed and at a minimum of cost; and a further object of the invention is to provide a means whereby a light or a heavy impression may be taken at will.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the press. Fig. 2 is a transverse vertical section through the upper portion of the press-frame and the bed and a longitudinal section through the impression-roller. Fig. 3 is an enlarged vertical section through one side of the frame and bed. Fig. 4 is a side elevation of one of the adjustable trucks or rails for the impression-roller, and Fig. 5 is a perspective view of a locking device adapted to hold the device stationary.

The base of the press consists of two side pieces 10, having legs formed integral therewith, which side pieces are provided at their upper ends with longitudinal inwardly-extending flanges 11, and upon the flange of each side piece the horizontal member a of an angled bar 12 is securely bolted. The horizontal members of the bars extend some distance beyond the outer faces of the side pieces and the vertical members a' of said bars have preferably formed integral with their upper edges outwardly-extending horizontal flanges a^2.

The bed 13 of the press rests upon and is bolted to the horizontal members a of the angle-bars 12, which are provided at their inner edges with lips or ribs adapted to enter grooves produced in the under face of the bed. Thus the said members a of the angle-bars are firmly maintained parallel with the bed. The bed 13 is preferably straight and smooth upon its upper surface, and is of less width than the space intervening the vertical members of the angled bars, whereby side spaces 14 are formed between the said vertical members and the contiguous edges of the bed, as illustrated in Figs. 2 and 3.

In each of the spaces 14 a rail or track 15 is located, the said rail or track being vertically adjustable through the medium of a series of set-screws 16, which are passed through the horizontal members of the angle-bars, and the upper ends of the set-screws, which are pointed, are made to enter recesses in the bottom of the rails. The rails 15 at each end are formed with cavities 17, which constitute pockets, for a purpose to be hereinafter described.

The impression-roller A consists of a body-section 18, which is formed integral with or is attached to a central spindle 19, which spindle extends beyond the ends of the body. The body-section of the roller is of a length corresponding to the width of the impression-table, and at each end of the body of the roller disks 20, of compressed paper or other hard elastic substance, are secured, the said disks being of less diameter than the diameter of the body 18. The disks, when the roller is in position upon the press, are adapted to engage with the upper edges of the rails or tracks 15, and the disks are preferably held in position upon the body by circular plates 21, which engage with the outer faces of the disk and bolts 22 or their equivalents, which are passed through the plates and the disks into the ends of the roller. The plates 21 are preferably made of the same diameter as the body-section of the roller, and the said plates, when the rollers are in position, extend downward at the outer sides of the rails 15, as best shown in Fig. 2, and sometimes rest upon the flanges a^2 of the angle side bars 12. Upon the outer ends of the spindle 19 hand-wheels 23 or their equivalents are secured, the said

hand-wheels being employed to move the roller over the bed.

The form is held upon the bed, preferably, by means of angled slotted clamping-plates 24, the said plates being adjustably attached to the bed by means of set-screws or equivalent fastening devices.

At the rear of the frame of the press between the rails 15, a tympan 25 is pivoted, consisting, preferably, of a frame *b*, provided with a handle *b'* at its upper edge, which frame is provided with a felt blanket or tympan-sheet. When the frame is lifted up, it is maintained in a rearwardly-inclined position by engagement with brackets 26, secured to the rear of the base. The pockets 17 in the rails are adapted to receive the impression-roll when it reaches the ends of the rails, and when the roll is in the pockets it is maintained in a stationary position. The roll is readily moved to and fro by means of the hand-wheels 23.

It will be observed that the body-section of the roll passes evenly over the entire surface of the bed and that the roll may be raised or lowered to produce a light or a heavy impression by manipulating the set-screws 16, which is conveniently and expeditiously accomplished. It will be further observed that the roll is effectually prevented from moving diagonally and is forced to move straight across the table by reason of the channels at the ends receiving the rails 15 and produced by making the disks 20 of less diameter than the body.

It is obvious that a press constructed as above described is exceedingly durable, readily manipulated, and capable of being produced at a minimum of cost.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a printing-press, the combination, with a bed, two separate and independent vertically-adjustable rails, vertical set-screws located at the sides of the bed and supporting said rails, of an impression-roller held to travel over the bed and upon the rails, as and for the purpose specified.

2. In a printing-press, the combination, with a base, angle-bars secured to the base, and a bed attached to the horizontal members of the angle-bars in such manner that a space intervenes between the contiguous surface of the bed and the vertical members of the angle-bars, of rails located in the said spaces, and adjusting mechanism connected with the rails, as and for the purpose specified.

3. In a printing-press, the combination, with a base, angle-bars secured to the base, and a bed attached to the horizontal members of the angle-bars in such manner that a space intervenes between the contiguous surface of the bed and the vertical members of the angle-bars, of rails located in the said spaces provided with pockets near their ends, and adjusting devices connected with the said rails, whereby they may be elevated or depressed, substantially as and for the purpose specified.

4. In a printing-press, the combination, with a bed and rails located at the sides thereof, of an impression-roll provided with a body-section of equal width with the bed, and reduced end sections formed of disks of hard elastic substance adapted for engagement with the rails, as and for the purpose set forth.

5. In a printing-press, the combination, with the bed and rails located at the sides thereof, of an impression-roll comprising a body-section of a length equal to the width of the bed, disk-sections formed of disks of hard elastic substance attached to the ends of the body-sections, of less diameter than the diameter of the roll and adapted to engage with the rails, plate-sections secured to the disk-sections of substantially equal diameter to the body, and hand-wheels connected with the ends of the roll, as and for the purpose set forth.

HYNEK BREUER.

Witnesses:
JOS. BATLIK,
JOSEPH H. STEFAN.