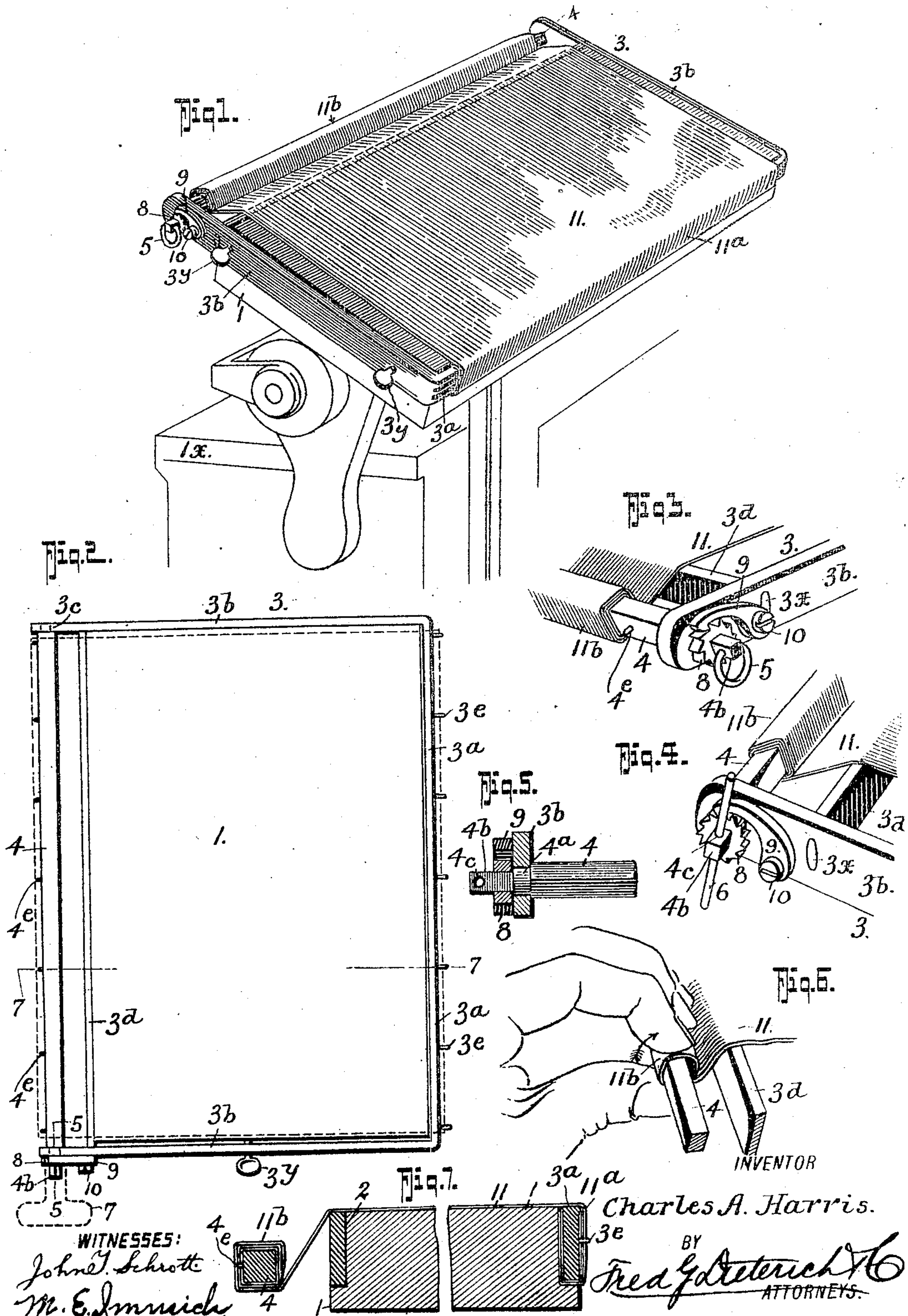


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ADJUSTABLE TYMPAN FRAME.
APPLICATION FILED JUNE 22, 1909.

935,203.

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UNITED STATES PATENT OFFICE.

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ADJUSTABLE TYMPAN-FRAME.

935,203.

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To all whom it may concern:

Be it known that I, CHARLES A. HARRIS, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Adjustable Tympan-Frames, of which the following is a specification.

My invention relates to certain new and useful improvements in tympan plates or frames whereby when the "make-ready" is being prepared the press can still be put into operation.

The tympan is the layer of sheets placed on the platen of the press, furnishing a "packing" on which the "make-ready" work is done. The method now in common use in the art requires the holding of the press while the pressman is making ready, since, if the "make-ready" is removed it loses its relative position with respect to the type form, and thus renders it difficult to get the tympan back into position for printing.

My invention is designed to hold the tympan sheets, and is so constructed as to be adjustable to the platen of a press of the type now in common use, in such manner that after an impression of a form has been taken on the blank sheets of the tympan, preparatory to making ready, the tympan may be removed and while the pressman is making ready, another form, which has been previously made ready with the use of my invention, may be placed on the press, and the feeder may start the press to work, with the loss of not more than three or four minutes in making the change from one form to another.

My invention also seeks to provide another advantageous construction in that when it is necessary to "lift" a form from a press before the run has been completed (which often occurs) the work done on the "make-ready" is not lost as the adjustable tympan frame is simply lifted from its position on the platen of the press, another tympan frame is placed in position for the new form. When the form which has been "lifted" is required again, it is all ready to go back on the press.

My invention is designed to be especially useful in cases where it may be necessary to "lift" forms in order to take "press proofs"

as a form can be "lifted" from any press carrying the desired color of ink without loss of time.

I am aware that prior to my invention attempts have been made to accomplish the same general object for which my invention is designed, but none of such attempts have ever come into practical use, so far as I have been able to ascertain, owing to the necessity of providing specially constructed platens to accommodate such devices. With my invention the ordinary platens now in common use are employed and my device is simply placed on such ordinary platen without the necessity of any changes in the platen whatever.

Generically my invention embodies a frame formed of a metal strip bent into substantially U-shape, the arms of which are joined by a strip that is riveted to such arms to form a closed rectangular frame to fit on the platen of the press and be secured thereon by one or more set screws, the arms of such U-shaped section projecting beyond the connecting strip and provided with bearings in which a rotatable rod is mounted and ratchet and pawl devices cooperate with such rod to hold it in its various adjusted positions, one side of the frame being adapted to receive the tympan sheet which is wound around such side of the frame and held by pins or otherwise, while the other end of the sheet or sheets is wound around such rotatable rod whereby upon rotation of the rod the desired tension may be applied to the sheet to stretch it tightly in position.

My invention also embodies those novel details of construction, combination and arrangement of parts all of which will be first described in detail, then be specifically pointed out in the appended claims, and illustrated in the accompanying drawings, in which:

Figure 1, is a view of a part of a printing press and its platen illustrating the application of my invention. Fig. 2, is a top plan view of a platen with my tympan frame applied, the tympan sheets being indicated in dotted lines. Fig. 3, is a detail perspective view of a part of my invention. Fig. 4, is a similar view looking in a different direction. Fig. 5, is a detail section on the line 5—5 of

Fig. 2. Fig. 6, is a detail view showing the manner of starting the tympan sheet on the rotatable rod. Fig. 7, is a cross section on the line 7—7 of Fig 2.

Referring now to the accompanying drawings in which like letters and numerals of reference indicate like parts in all of the figures, 1 represents the platen of an ordinary printing press 1^x to which my invention may be applied. The platen 1 of ordinary presses is usually provided with an offset forming a peripheral groove 2 into which my tympan frame 3 seats, or in the absence of such groove on a platen 1, the tympan frame may nevertheless be secured in position in the manner shown in the drawings.

My invention embodies a frame 3 formed of a metal strip bent into a rectangular U-form with the side portions 3^b—3^b forming the arms of the U and the connecting portion 3^a, is indicated. The arms of the U are joined by a rod 3^a which is riveted at 3^x to said side arms 3^b to form a closed rectangular frame. The portions 3^b of the frame have projecting ends apertured as at 3^c to form bearings for the bearing portions 4^a of a rotatable rod or take-up 4. The rod 4 has a projecting end 4^b that is square in cross section and provided with an aperture 4^c to receive a ring 5 (see Figs. 1 and 3) or a rod (see Fig. 4) through the medium of which the rod 4 may be turned, or in lieu of the ring 5 and rod 6 an ordinary key of the clock key type 7 may be employed (see Fig. 2).

Secured on the outside of the frame 3 to the square projecting part 4^b of the rod 4 in any desired manner, is a ratchet 8 with which a pawl 9 that is pivoted at 10 to the frame 3, coöperates to hold the rod in its adjusted positions. The frame 3 has one side 3^a provided with short sharp pins 3^e which are adapted to penetrate the tympan sheets 11 to prevent their slipping on the frame, and if found desirable in practice the rod 4 may be likewise provided with pins 4^e to prevent slipping of the paper.

In use the tympan sheets 11 are first given a few turns around the side 3^a of the tympan frame 3 as at 11^a, and are then passed between the bar 3^a and rod 4 and wound upon such rod 4 as at 11^b, as shown in Figs. 3, 4, 6 and 7, the rod 4 being turned through the medium of the keys 5, 6, or 7, as the case may be, until the desired tension has been applied to the tympan sheet 11, it being understood that the ratchet 8 and pawl 9 hold the rod 4 in its various positions. One or more set screws 3^y may be used to hold the frame on the platen.

From the foregoing description taken in connection with the accompanying drawings it is thought the complete construction, operation and advantages of my invention will

be readily understood by those skilled in the art to which the invention appertains, and I desire to call attention to the fact that slight changes in the details of construction and design of parts may be readily made without departing from the spirit of the invention, or the scope of the appended claims. For example, if desired the pins 3^e—4^e may be of less number than shown in the drawings, or either set or both sets of such pins may be omitted without rendering the device inoperative.

What I claim is:

1. In a device of the character described, a closed rectangular tympan frame having projecting portions provided with bearing apertures, a rod having bearing portions rotatable in said apertures, and means preventing rotation of said rod in one direction.

2. An apparatus of the character stated, a closed rectangular tympan frame having projecting apertured portions, a rod having bearings rotatable in said apertured portions, said rod having a key receiving end and pawl and ratchet devices for preventing rotation of said rod in one direction.

3. In a device of the character described, a closed rectangular frame having projecting portions provided with bearing apertures, a rod having bearing portions rotatable in said apertures, means preventing rotation of said rod in one direction, and means for securing said frame to the platen of a printing press.

4. An apparatus of the character stated, a closed rectangular frame having projecting apertured portions, a rod having bearings rotatable in said apertured portions, said rod having a key receiving end, pawl and ratchet devices for preventing rotation of said rod in one direction, and means for securing said frame to the platen of a printing press.

5. A device of the character stated comprising a closed rectangular frame and means for removably securing said frame to the platen of a printing press, a tympan sheet having one end wrapped around a part of said frame, and means carried by said frame for stretching said tympan sheet over the frame.

6. A device of the character stated comprising a closed rectangular frame and means for removably securing said frame to the platen of a printing press, a tympan sheet having one end wrapped around a part of said frame, means carried by said frame for stretching said tympan sheet over the frame, said last named means comprising a rotatable rod mounted in bearings in said frame, and means in virtue of which said rod may be rotated.

7. A device of the character stated comprising a closed rectangular frame and

means for removably securing said frame to the platen of a printing press, a tympan sheet having one end wrapped around a part of said frame, means carried by said frame
5 for stretching said tympan sheet over the frame, said last named means comprising a rotatable rod mounted in bearings in said frame, and means in virtue of which said rod may be rotated together with means for limiting the direction of rotation of said rod. 10

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Witnesses:

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