

(No Model.)

C. POTTER.

WEB SUPPORTING DEVICE FOR PRINTING PRESSES.

No. 527,878.

Patented Oct. 23, 1894.

Fig. 1.

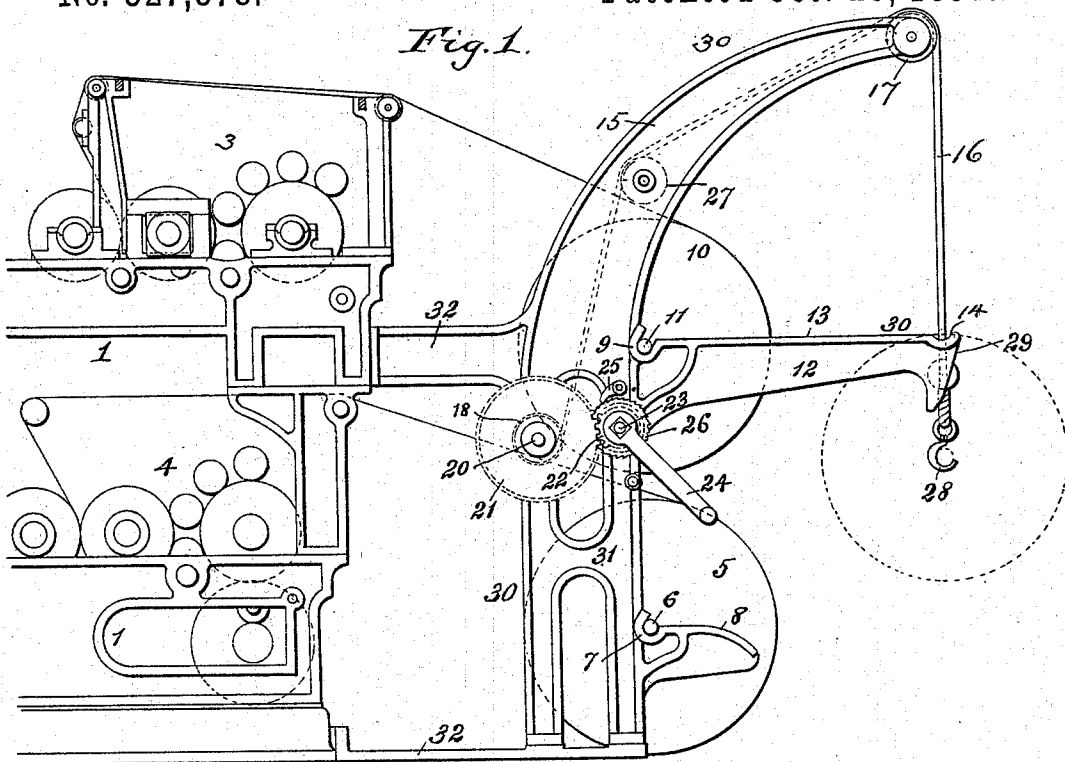
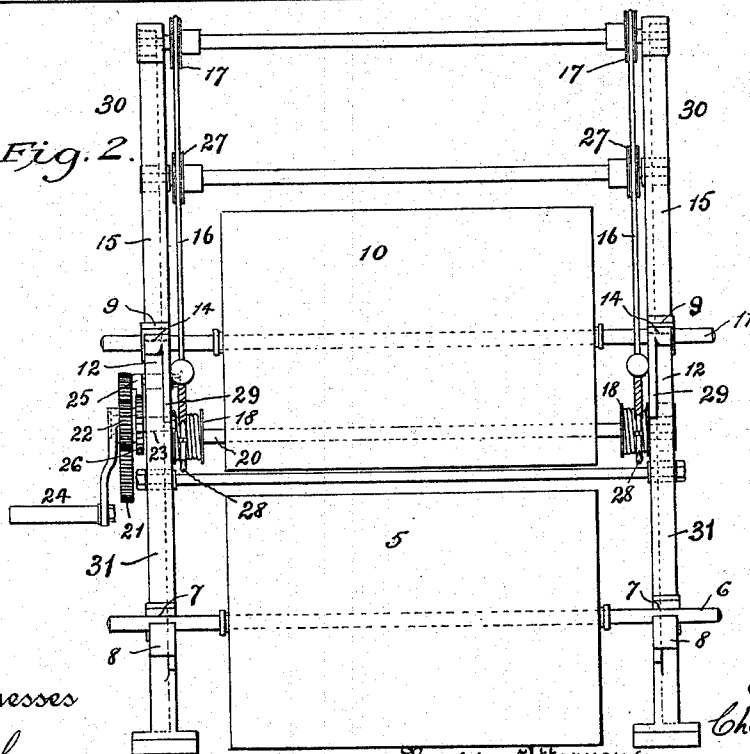


Fig. 2.



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UNITED STATES PATENT OFFICE.

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WEB-SUPPORTING DEVICE FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 527,878, dated October 23, 1894.

Application filed December 21, 1893. Serial No. 494,343. (No model.)

To all whom it may concern:

Be it known that I, CHARLES POTTER, a citizen of the United States of America, residing at Plainfield, Union county, State of New Jersey, have invented certain new and useful Improvements in Web-Supporting Devices for Printing-Presses, of which the following is a specification.

My invention is especially designed as an improvement in that class of printing presses in which a plurality of rolls or webs of paper are used. In such machines the bearings for the journals of the spindle of the lower web are ordinarily mounted on the press frame sufficiently near the floor that, by rolling the web toward and against the press frame, the said journals may be caused to enter the bearings designed to receive them. Where, however, the press is of the multi-web type much delay, annoyance and laborious exertion have been involved in first putting the upper web in place and in thereafter renewing it from time to time as it becomes consumed.

It is the object of my invention to provide a means for readily handling this upper web, and for insuring that, when one such web is consumed, it shall be quickly replaced by another with very little delay or interruption of the printing operation.

With such end in view my invention consists in the novel parts and combinations thereof hereinafter more particularly set forth.

In order to make my invention more clearly understood I have shown in the accompanying drawings means for carrying it into practical effect, without, however, limiting it in its useful applications to the particular construction which, for the sake of illustration, I have delineated.

In said drawings: Figure 1 is a side elevation of a portion of a multi-web printing press, embodying my invention, so much of the machine being shown as is necessary to an understanding of the improvements. Fig. 2 is an end view of the same.

Referring to the drawings 1, 1, indicate the

side frames of the machine connected by the necessary cross-bars, such as the rod 2. 50

At 3 and 4 respectively are shown the upper and lower printing devices of any suitable character.

The rolled web of paper to supply the lower printing devices is indicated at 5, mounted upon the usual spindle 6. The end journals of the latter rest in bearings 7, attached to or formed with the frames 1, into which bearings the journals may be rolled over ways 8, which are in the form of curved or inclined brackets terminating at their inner ends in the bearings 7. The outer ends of these ways are sufficiently low to engage beneath the journals of the lower web spindle when the roll of paper is resting on the floor, so as to enable the web to be slightly elevated and put in place by rolling it inward toward the press till its spindle journals encounter and pass over the said ways. 65

The bearings for the upper web spindle are shown at 9, and are also attached to or cast with the upper portions of the frames 9. An upper web 10 is shown in the drawings with the journals of its spindle 11 in place in the bearings 9. For the double purpose of facilitating the introduction of the spindle 11 into said bearings, and furnishing supports or rests for the next succeeding upper web whereby the latter may be held ready for immediate use whenever the preceding web shall have been consumed. For this purpose I have devised a support or supports, by which a web about to be used may be held in readiness, one form of which, and that which is the preferred embodiment, I will now describe. 85

12 indicates arms preferably attached to or formed with the frames 1. The upper sides of these arms constitute guides or ways 13 terminating at their inner ends in or near the bearings 9, and by which the journals of the upper web spindle may be conducted into place. 90

14 indicates a socket, recess or rest, preferably of slight depth in or on the upper faces of the ways 13 and near the outer ends of the arms 12. In these rests may be retained the 95

journals of one of the upper web-spindles ready for immediate use as already described.

Combined with the above described devices are arms or extensions 15 which overhang the ways 13 and are adapted to support suitable means for elevating the upper web. These overhanging arms are preferably cast in one piece with the side frames 1 as shown, constituting upward and outward extensions thereof.

The elevating means above referred to may take various forms. I prefer the mechanism illustrated, consisting of wire ropes or chains 16 passing over pulleys or guides 17 carried by the outer ends of the arms and down to drums 18 mounted on a transverse shaft 20. The latter is actuated to wind up the said ropes by a gear wheel 21, which in turn is driven by a pinion 22 on a stud shaft 23. The latter is turned by a hand crank 24, and is held in place to prevent unwinding of the ropes and to sustain the web by a pawl 25 mounted on the frame and engaging a ratchet wheel 26 fixed to the pinion or to its shaft 23. The ropes 16 are guided as may be found necessary by pulleys 27 mounted on any convenient fixed part of the machine. The free ends of the ropes are provided with means such as hooks 28, for engaging the spindle of the web-roll to be elevated. By the mechanism above described, such roll may be raised to a height where its journals are above the ways 13, and then lowered till said journals rest in the sockets 14. This may be done while the machine is in operation, and said roll kept ready for immediate use as already described.

29 indicates inclines formed on the outer end faces of the arms 12 and extending down therefrom. These inclines are so situated as to be in the same transverse vertical planes as are the ropes 16, and in the paths of the spindle journals as the latter are elevated. These inclines serve to throw outward said journals when the latter encounter them. As soon as the journals are raised above said inclines the web-roll swings inward bringing the journals over the ends of the arms, and it is in said ends in the vertical transverse plane of the ropes 16 that I prefer to locate the sockets 14, as shown in Fig. 1. It is only necessary, therefore, to slack off the ropes 16 in order to bring the journals of the web spindle to rest in said sockets.

While I form the parts 12 and 15 integral with the main portion of the side frame 1 of the machine, I prefer to provide a frame or frame section 30 separate from said main portion and comprising the parts 12 and 15 as well as a vertical post 31, and one or more inward extensions 32 adapted to be connected

with the main portion of the side frame making therewith a rigid structure.

I claim—

1. In a printing press, the combination with the frame having lower bearings for the spindle of a rolled web, and also having upper bearings for the spindle of another rolled web, of elevating mechanism for elevating the web to the upper bearings, and overhanging extensions of the frame providing guides for the elevating mechanism and projecting a distance beyond the position occupied by the lower web when in position in its lower bearings, whereby the web for the upper bearings is elevated wholly clear of said lower web, as set forth.

2. In a printing press the combination of a frame having upper and lower bearings for the spindles of two rolled webs, guides or ways extending outwardly substantially horizontal from the upper bearings and on which the spindle of the upper web may roll into said upper bearings, an elevating mechanism for the upper rolled web, and outwardly projecting extensions of the frame providing guides for the elevating mechanism above and vertically in line with the extremities of said guides or ways, substantially as set forth.

3. In a printing press, the combination of a frame having upper and lower bearings for the spindles of two rolled webs, guides or ways extending outwardly substantially horizontal from the upper bearings and on which the spindle of the upper web may roll into said upper bearings, said guides terminating in inward inclines, an elevating mechanism for the upper rolled web, and outwardly projecting extensions of the frame providing guides for the elevating mechanism above and vertically in line with the inclines on the extremities of said guides, as set forth.

4. In a printing press, the combination of a frame having upper and lower bearings for the spindles of two rolled webs, guides or ways extending outwardly horizontally from the upper bearings and on which the spindle of the upper web may roll into said upper bearings, an elevating mechanism for the upper rolled web comprising a lowdown winch supported by said frame, and outwardly projecting extensions of the frame providing elevated guides for the elevating rope of the winch positioned above and vertically in line with the extremities of said guides, as set forth.

In witness whereof I have hereunto signed my name in the presence of two witnesses.

CHARLES POTTER.

Witnesses:

C. H. DUNHAM,

A. J. SPICER.