No. 894,206. PATENTED JULY 28, 1908.

H. P. HUSBY.

ROLL HOLDER FOR PRINTING PRESSES.

APPLICATION FILED MAR. 29, 1907.

2 SHEETS—SHEET 1.

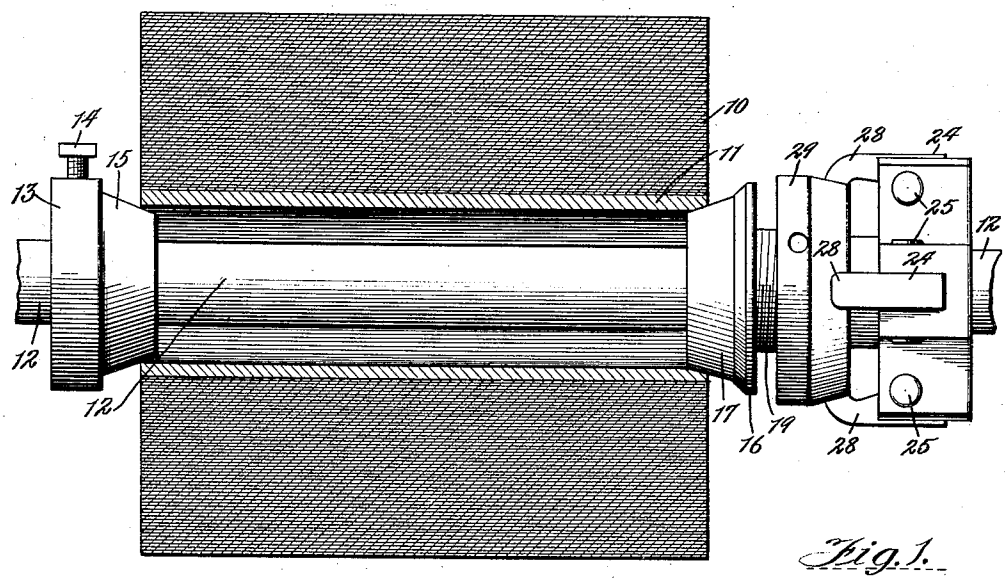


Fig. 1.

Fig. 2.

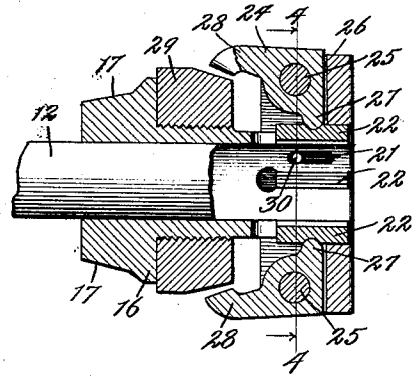
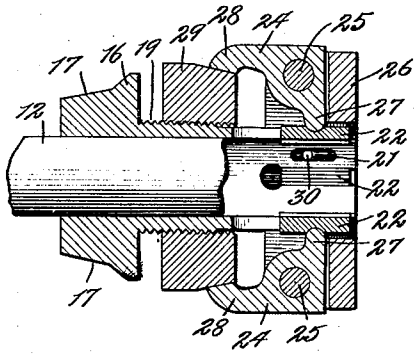


Fig. 3.



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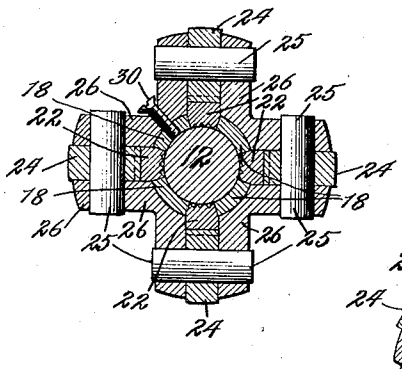


Fig. 4.

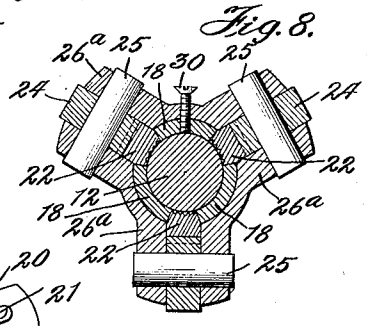


Fig. 8.

Fig. 5.

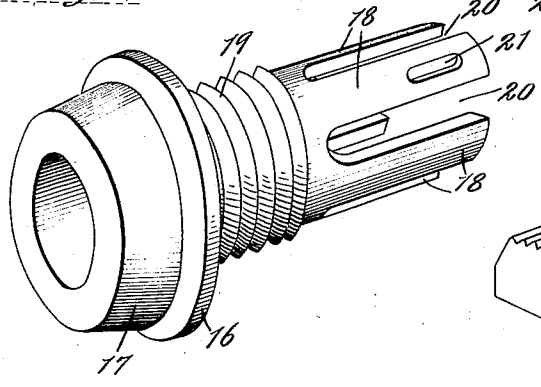
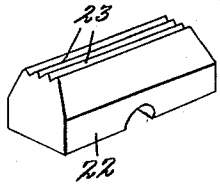


Fig. 6.



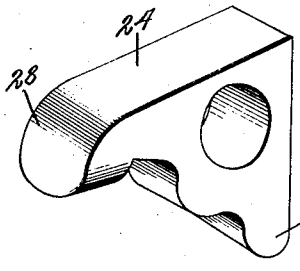


Fig. 7.

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UNITED STATES PATENT OFFICE.

HANS P. HUSBY, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE GOSS PRINTING PRESS COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

ROLL-HOLDER FOR PRINTING-PRESSES.

No. 894,206. Specification of Letters Patent. Patented July 28, 1908.

Application filed March 29, 1907. Serial No. 365,305.

To all whom it may concern:

Be it known that I, HANS P. HUSBY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Roll-Holders for Printing-Presses, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to roll-holders for holding a roll or web of paper as commonly used in perfecting presses, and it has for its object to provide a new and improved roll-holder by which the roll may be quickly and firmly secured upon the shaft or mandrel by which it is supported while on the press; also to provide a construction by which the roll-holder may readily accommodate itself to rolls of varying widths or to tubes of different diameters. I accomplish these objects as illustrated in the drawings and as hereinafter described.

That which I believe to be new is set forth in the claims.

In the accompanying drawings,—Figure 1 is a sectional view of a roll, showing my improved roll-holder; Fig. 2 is a partial longitudinal section of the roll-holder; Fig. 3 is a similar view, showing the parts in locking position; Fig. 4 is a cross-section on line 4—4 of Fig. 2; Fig. 5 is a perspective view of a part of the clamping mechanism; Fig. 6 is a perspective view of one of the blocks by which the shaft is clamped; Fig. 7 is a perspective view of one of the rocking levers which engage the clamping blocks; and Fig. 8 is a sectional view, showing a modification.

As is well understood in the art, and as illustrated in Fig. 1, a web of paper is usually wound in a roll upon a hollow tube or core,—10 indicating the web and 11 the core.

12 indicates the usual shaft or mandrel, which in practice is passed through the tube 11 and is fitted in suitable bearings on the press so that the web may unwind freely as the paper is consumed.

13 indicates a normally stationary head, which is secured upon one end portion of the shaft 12, preferably by a set-screw 14, so that it may be adjusted longitudinally thereof. Said block is provided with a conical portion 15 at one side, which is adapted to fit into and engage the tube 11, as shown in Fig. 1. 16 indicates a normally movable, coöperating clamping head also having a conical portion 17, which is arranged upon the shaft 12 near the opposite end portion thereof,—the conical portion 17 being on the side toward the conical portion 15 of the head 13,—the arrangement being such that by moving the head 16 toward the head 13 the roll tube 11 may be wedged tightly between said blocks. The head 16 is provided with a sleeve 18, the inner portion of which is externally screw-threaded, as shown at 19 in Figs. 3 and 5,—the outer-end portion being provided with longitudinal slots or recesses 20 at suitable intervals, as shown in Fig. 5. Said slots are open at their outer ends to permit of the parts being assembled.

It will be understood that the sleeve 18 fits loosely upon the shaft 12 so that it may be rotated or moved longitudinally thereupon. Said sleeve is also provided with a shorter slot 21 closed at its ends for a purpose which will hereinafter appear.

22 indicates a series of clamping blocks or keys, the inner faces of which are corrugated, as shown at 23 in Fig. 6, and which are adapted to fit in the slots 20 in the sleeve 18. By pressing the blocks 22 inward against the shaft 12 they may be caused to bite the same with sufficient force to prevent the rotation or longitudinal movement of the sleeve 18 upon the shaft. For actuating the clamping blocks 22 rocking levers 24 are provided which are mounted on pivots 25 carried by a frame or support 26 which fits upon the sleeve 18, as shown in Figs. 2, 3, and 4. In the principal figures I have shown the support 26 as being arranged to support four levers 24,—the sleeve in this case being provided with four slots 20, with a corresponding number of clamping blocks 22. In Fig. 8 I have shown a corresponding frame 26^a designed to accommodate three of said levers 24, the parts being in other respects the same. Obviously, any desired number of levers and clamping blocks may be employed.

The levers 24 are bell-crank levers, each having an inwardly-projecting arm 27 which fits in a suitable recess in the adjacent clamping block 22, as shown in Fig. 3,—thus not only insuring the proper engagement between said arm and the clamping block but also providing for moving the clamping blocks longitudinally of the shaft 12 with

said levers when desired. The levers 24 are also provided with horizontally-extending arms 28, which project over a wedge-block 29 mounted upon the screw-threaded portion of the sleeve 18, as shown in Figs. 2 and 3. It will be observed that the wedge-block 29 lies between the head 16 and the levers 24, so that by rotating said wedge-block upon the sleeve 18 it may be moved toward or from the levers 24; and that when it engages the arms 28 of the levers 24 it acts to move said arms outward, thereby forcing the arms 27 inward, causing the clamping blocks 22 to engage the shaft 12. When the parts are so engaged further rotation of the wedge-block 29 in the same direction will force the head 16 away from said wedge-block, causing it to more firmly engage the tube 11. The tube 11 is thus clamped tightly between the heads 13—16, and as said heads are locked to the shaft 12 the roll is also secured to said shaft. By rotating the wedge-block 29 in the opposite direction, the shaft 12 is released and the clamping mechanism may be readily moved longitudinally thereof to at once release the roll. To prevent excessive movement of the frame 26 upon the sleeve 18 I provide a set-screw 30 which passes through said frame and into the slot 21 in said sleeve, as shown in Figs. 3 and 4. The screw 30 is removed when the parts are to be taken apart. I have thus provided a clamp which is readily adjustable to engage or disengage the roll, and which may accommodate itself to roll tubes of different lengths or diameters; also one which may readily be removed from the shaft without being disassembled, and which may be locked to the shaft at any point that may be necessary to accommodate the roll mounted thereon.

While I have described in detail the embodiment of my invention illustrated in the accompanying drawings, I wish it to be understood that my invention is not restricted to the details of the construction described, except in so far as they are specifically claimed, but includes generically the subject-matter of the broader claims.

That which I claim as my invention, and desire to secure by Letters Patent, is,—

1. A roll holder for printing presses, comprising a shaft and heads carried thereby, one of said heads being movable longitudinally of said shaft, a clamp having means adapted to be actuated to engage said shaft, said clamp being non-rotatably connected with the latter head, and means for moving said movable head away from said clamp.

2. A roll holder for printing presses, comprising a shaft and heads carried thereby, one of said heads being movable longitudinally of said shaft, a clamp having means adapted to be actuated to engage said shaft, said clamp being non-rotatably connected with the latter head, and means for actuating said clamp to cause it to engage the shaft and for forcing said movable head away from said clamp.

3. A roll holder for printing presses, comprising a shaft and heads carried thereby, one of said heads being movable longitudinally of said shaft, a clamp having means adapted to be actuated to engage said shaft, and means for actuating said clamp to cause it to engage the shaft and for forcing said movable head away from said clamp.

4. A roll holder for printing presses, comprising a shaft and heads carried thereby, one of said heads being movable longitudinally of said shaft, a clamp having means adapted to be actuated to engage said shaft, and means between said clamp and said movable head for actuating said clamping devices and for moving said movable head away from said clamp.

5. A clamping device for roll-holders, comprising a head adapted to be mounted upon a shaft, a sleeve connected therewith, a wedge-block screw-threaded upon said sleeve, and clamping devices actuated by the rotation of said wedge-block to engage the shaft.

6. A clamping device for roll-holders, comprising a head adapted to be mounted upon a shaft, a sleeve connected therewith, a wedge-block screw-threaded upon said sleeve, clamping devices adapted to engage the shaft, and levers operated by said wedge-block for actuating said clamping devices.

7. A clamping device for roll-holders, comprising a head adapted to be mounted upon a shaft, a sleeve connected therewith, a wedge-block screw-threaded upon said sleeve, a frame adjacent to said wedge-block, a plurality of levers carried by said frame and operated by said wedge-block, and clamping devices actuated by said levers for clamping the shaft.

8. A clamping device for roll-holders, comprising a head adapted to be mounted upon a shaft, a sleeve connected therewith, a wedge-block screw-threaded upon said sleeve, and bell-crank clamping levers operated by said wedge-block for clamping the shaft.

9. A clamping device for roll-holders, comprising a head adapted to be mounted upon a shaft, a sleeve connected therewith, a wedge-block screw-threaded upon said sleeve, bell-crank clamping levers operated by said wedge-block for clamping the shaft, and clamp blocks actuated by said levers to engage the shaft.

10. A clamping device for roll-holders, comprising a head adapted to be mounted upon a shaft, a sleeve having longitudinal slots, a wedge-block screw-threaded upon said sleeve, a frame mounted on said sleeve and having a plurality of clamp levers arranged to be operated by said wedge-block, and clamping means in said slots actuated by said levers for engaging the shaft.

11. In a clamping device for roll-holders, the combination of a shaft, a head movable longitudinally thereof, a clamp frame adjacent to said head, clamping devices carried by said frame, and means between said head and said clamp frame for actuating said clamping devices to cause them to engage the shaft and for forcing said head into engagement with the roll.

12. A clamping device for roll holders, comprising a head adapted to be mounted on a shaft, a clamp adjacent to said head and having means adapted to be actuated to engage said shaft, said clamp being non-rotatably connected with said head, and means for forcing said clamp and head apart.

13. A clamping device for roll holders, comprising a head adapted to be mounted on a shaft, a clamp adjacent to said head and having means adapted to be actuated to engage said shaft, said clamp being non-rotatably connected with said head, and means between said clamp and head for forcing them apart.

14. A clamping device for roll holders, comprising a head adapted to be mounted on a shaft, a clamp having means adapted to engage the shaft, and means for actuating said clamping means and for forcing said clamp and head apart.

15. A clamping device for roll holders, comprising a head adapted to be mounted on a shaft, a clamp non-rotatably connected with said head, and means between said clamp and head and operating to actuate said clamping means and to force said head away from said clamp.

16. A clamping device for roll holders, comprising a head adapted to be mounted on a shaft, a clamp having means adapted to engage the shaft, a screw-threaded sleeve non-rotatably connected with said clamp, and means mounted on said sleeve for forcing said head away from said clamp.

17. A clamping device for roller holders, comprising a head adapted to be mounted on a shaft, a clamp having means adapted to engage the shaft, a screw-threaded sleeve non-rotatably connected with said clamp, and means mounted on said sleeve for actuating said clamping means and for moving said head away from said clamp.

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Witnesses:
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