S. WHEELER.

PAPER HOLDER.

APPLICATION FILED FEB. 24, 1909.

954,709. Patented Apr. 12, 1910.

Fig. 1,

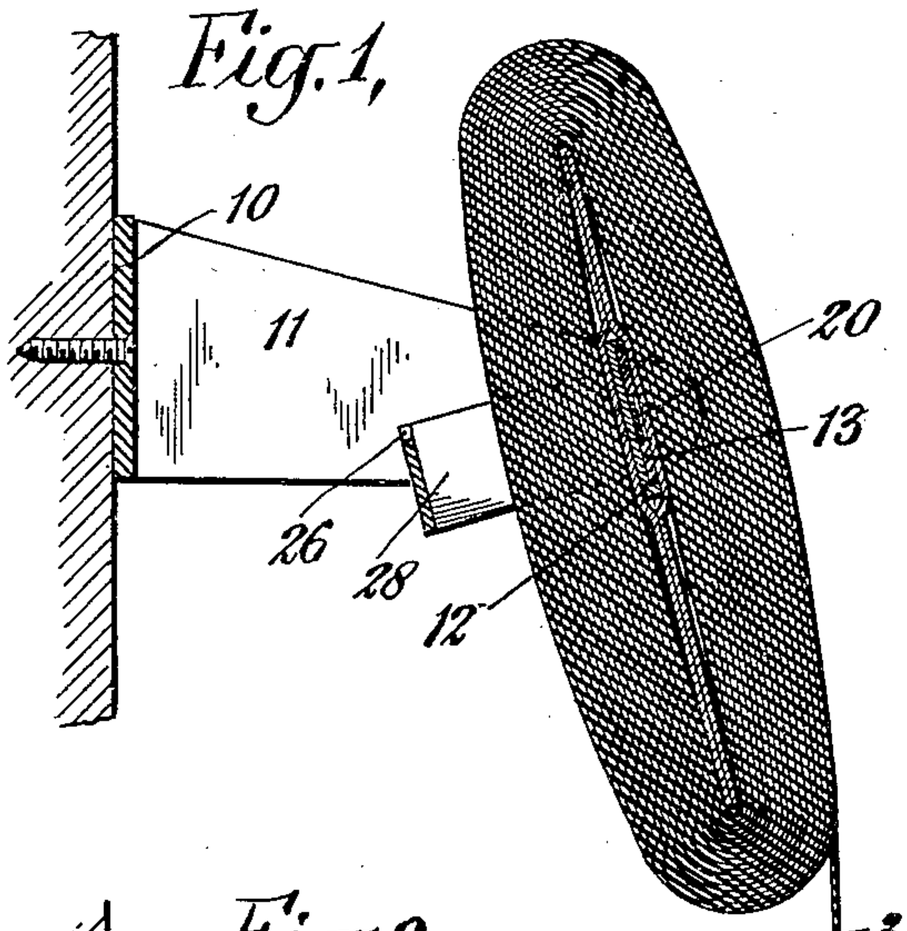


Fig. 4,

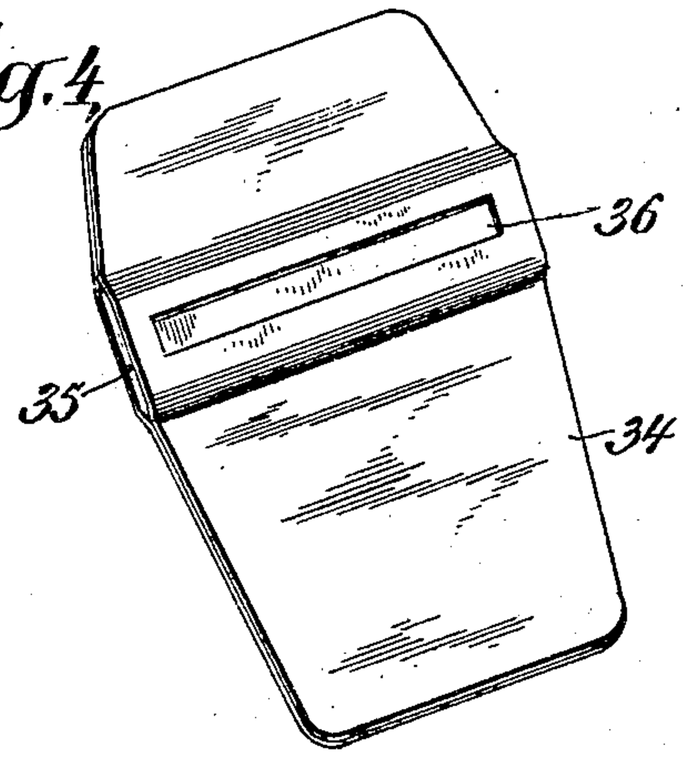


Fig. 2,

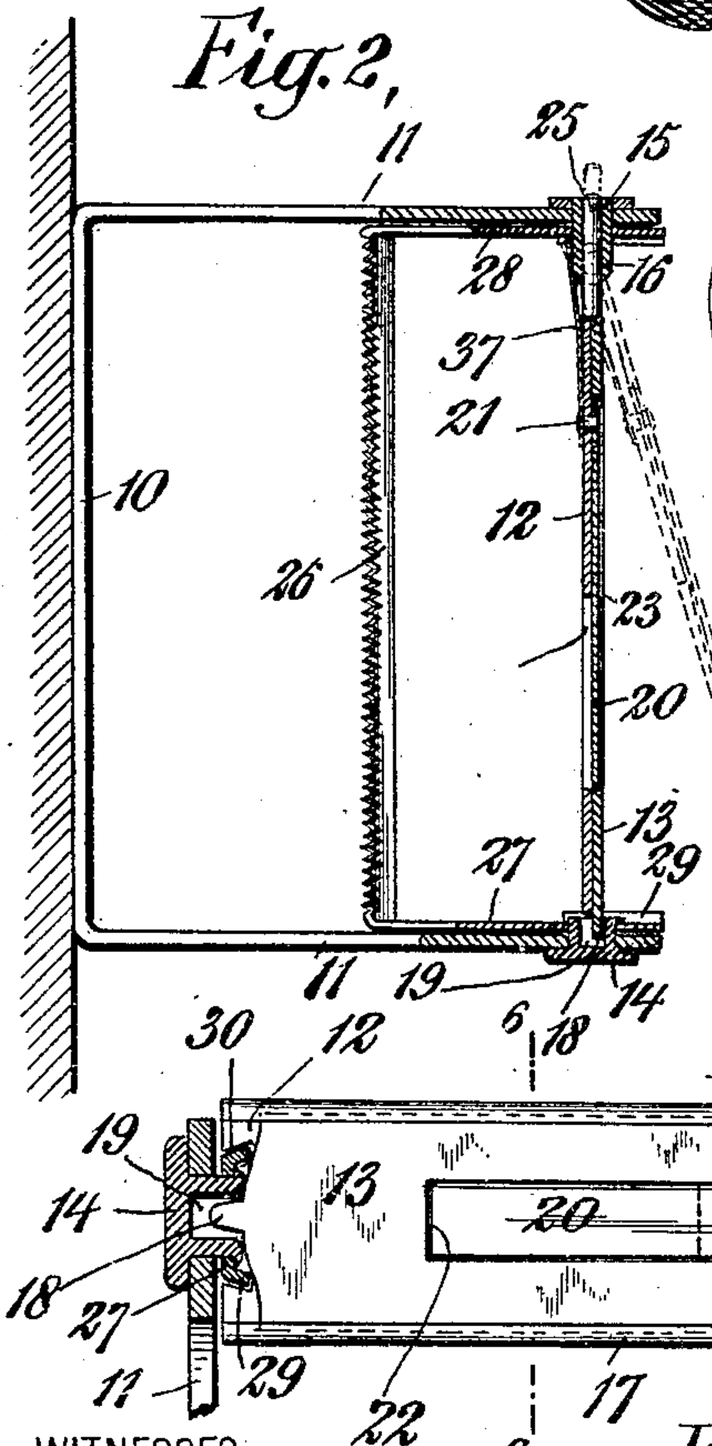


Fig. 3,

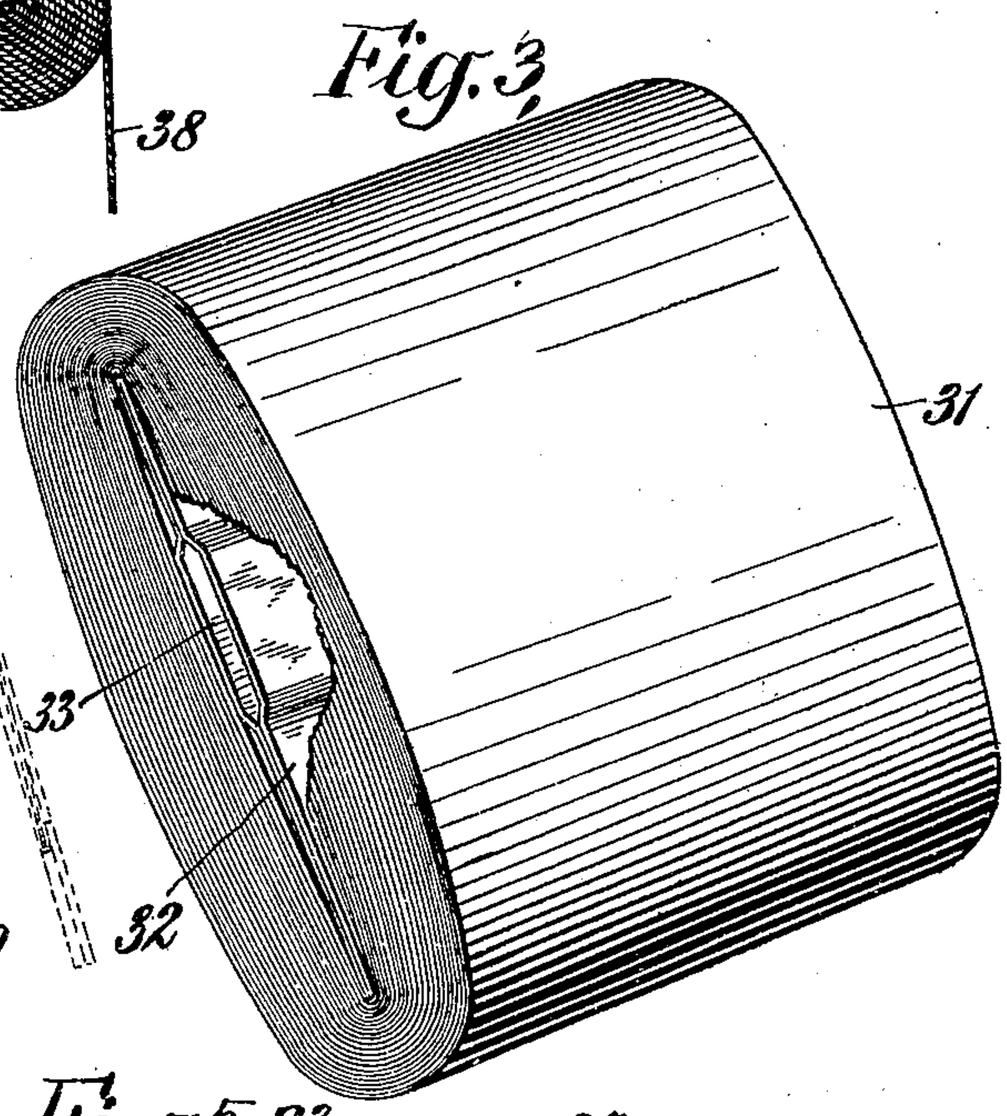


Fig. 5,

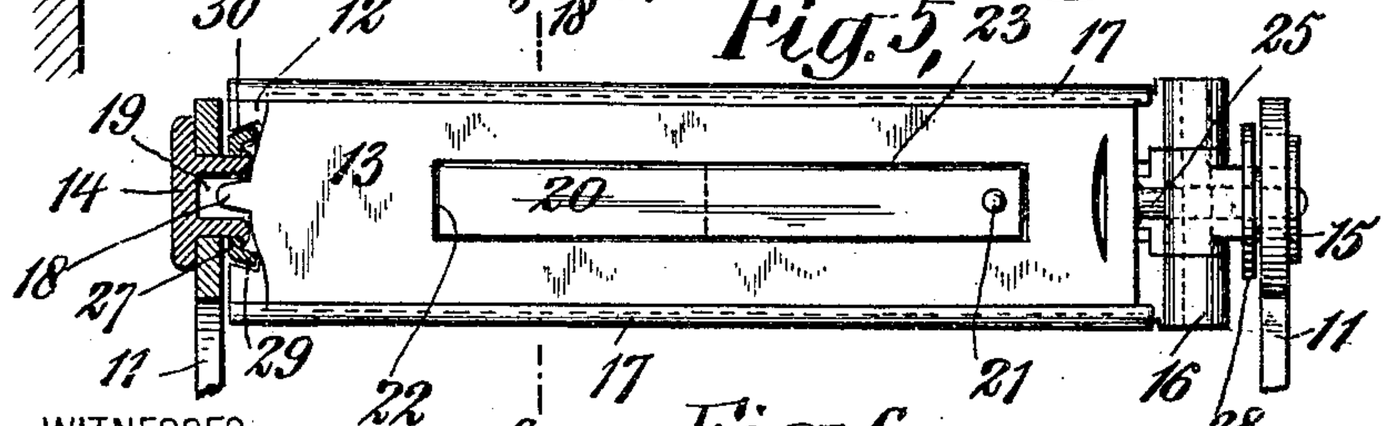
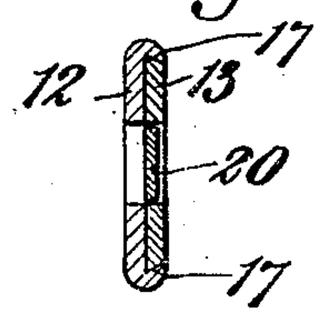


Fig. 6,



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PAPER-HOLDER.

954,709. Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed February 24, 1909. Serial No. 479,715.

To all whom it may concern:

Be it known that I, SETH WHEELER, a citizen of the United States of America, and a resident of Castleton, county of Rensselaer, and State of New York, have invented certain new and useful Improvements in Paper-Holders, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to improvements in paper holders, and particularly to fixtures for supporting an oval roll of paper in which provision is made for cutting off the strip into predetermined lengths as it is used.

My invention consists particularly in an improved form and construction of the pivoted support for the roll, and in the means by which it is mounted in the device, in a novel means for locking the support in its operative position, in a novel form of core to be employed in combination with said pivoted support, and in certain novel details of construction and combinations of parts as will be more fully pointed out hereinafter.

In order that my invention may be fully understood, I will now proceed to describe an embodiment thereof, having reference to the accompanying drawings illustrating the same, and then will point out the novel features in claims.

In the drawings: Figure 1 is a view in central transverse section through a paper holder embodying my invention showing a roll of paper mounted thereon in operative position. Fig. 2 is a view in horizontal section through the paper holder with the roll of paper and core removed. Fig. 3 is a perspective view of the roll and core, showing the same as removed from the holder. Fig. 4 is a detail perspective view of one form of core. Fig. 5 is a detail face view of the pivotal support for the roll and core and of parts of the supporting bracket, certain portions being broken away in section. Fig. 6 is a detail transverse sectional view through the said pivoted support.

In the present example of my invention the supporting bracket of the holder comprises a back plate 10 and two side arms 11 composed preferably of a single strip of sheet steel stamped or bent into proper form. The arms 11 are perforated at their outer ends to form bearings for the pivoted roll support and cutter member of the device. The pivoted roll support comprises a supporting plate 12, a locking plate 13, and trunnions 14 and 15, the said trunnions being journaled in the said perforations at the outer ends of the arms 11. The supporting plate is hinged at 16 upon the trunnion 15 in such a manner that it is carried by the said trunnion but may be swung into and out of line with the trunnion 14, as is shown in dotted outline in Fig. 2; the said trunnion 15, while mounted to rotate freely in the bracket arm 11, is held against longitudinal movement or displacement with respect thereto. The locking plate is carried by the said supporting plate 12 and is mounted to slide longitudinally therein in suitable guide-ways 17 formed at the longitudinal edges of the said stationary plate 12. The said locking plate 13 is provided at its end farthest from the trunnion 15 with a locking projection 18 which is adapted to enter a hollow portion 19 of the said trunnion 14 when the said locking plate is in its forward position, and to be freed from such engagement when the locking plate is withdrawn to its rearward position. When so withdrawn the supporting plate 12, together with the locking plate which it carries, is adapted to be swung upon its hinge 16, as aforesaid, but when the said plates are in their operative position in line with the trunnion 14 and the said locking plate is moved to its forward position with the projection 18 received within the recess 19 the plate 12 is locked against movement about its hinge 16, and at such time is free to partake only of a pivotal movement about the axis of the trunnions 14—15.

In order to prevent the locking plate 13 from being withdrawn while a roll is in position thereon, I have provided a locking detent in the form of a leaf spring 20, one end being riveted at 21 to the supporting plate 12 and the other or free end being permitted to engage a shoulder 22 formed in the locking plate 13. The shoulder 22 is here shown as forming an end wall of a slot 23 which is formed in the plate 13 to receive the said spring, the plate 12 being also provided with a slot 24 into which the free end of the spring may be forced by hand when the roll is removed and it is desired to disengage the locking detent from the plate 13 to permit its withdrawal. The normal tendency of the spring 20 is to assume the position shown in Fig. 2, wherein the end thereof engages the shouldered portion 22 of the plate 13, but as stated, it may be depressed

so as to permit the said shouldered portion to ride over the end thereof. When the plate 13 is again adjusted to its forward position the member 20 will immediately spring back to its normal position to lock the plate 13 in its said forward position.

In order to facilitate the adjusting of the locking plate 13 to its forward position after a roll has been mounted thereon, I have provided a pin 25 which extends through the trunnion 15 and engages the end of the said plate 13. When the plate 13 is in its rearmost position the end of the pin 25 will extend beyond the outer face of the trunnion 15 as is shown in dotted line in Fig. 2, so that when a roll has been mounted in position upon the supporting plate and the supporting plate has been properly adjusted to a position in line with the trunnion 14 the projecting end of the pin 25 may be pressed inward longitudinally by hand from the exterior of the device to force the locking plate 13 forward to its locked position, all as will be well understood by reference to the drawings. The trunnions 14 and 15 are connected together by a yoke which comprises a serrated cutter bar 26 and arms 27—28, the said arms being rigidly connected at their outer ends to the said trunnions 14 and 15 respectively. The arm 27 is further provided at its extremity with flanges 29 which engage and interlock with an under-cut recess 30 at the extremity of the plate 12. This engagement causes the plate 12 to be held against relative longitudinal movement with respect to the trunnion 14 and hence with respect to the arm 11 which carries it, when the parts are in their operative position so as to prevent displacement of the parts by any attempt to spring the arms 11 apart. The cutter arms being rigidly mounted upon the said trunnions the cutter will of course rotate about the axis thereof together with the supporting plate 12 and parts carried thereby, as will be well understood. In order that a roll of paper when mounted upon the said pivoted support may always come to rest at a predetermined position, I provide means whereby the said roll may be supported upon the plate 12 at a point eccentric of its center of gravity, and for this purpose I preferably provide a core which has a flat opening longitudinally therethrough at a point therein nearer one side thereof than the other. This core may be formed as a structure retained normally upon the plate 12, or each individual roll may be provided with such a core. In Fig. 3 I have shown a roll of paper 31 as provided with a core 33 longitudinally therethrough at a point nearer one side of the core than the other, the opening 33 being of a size suitable to receive the structure including the plate 12. When this core is formed as a part of the roll it may be conveniently constructed of cardboard or some inexpensive material. In Fig. 4 I have shown in detail such a core as is adapted to be more or less permanently carried upon the pivoted support, such core being designated by the reference character 34 and having an eccentric opening 35 longitudinally therethrough, one of the walls of the plate bounding the opening 35 having a slot 36 therethrough whereby to permit access to be had to the spring member 20 when the said core is in position upon the plate 12. This form of core may conveniently be a metallic structure. In either case the said core may be conveniently formed by the employment of two flat plates arranged face to face in contact throughout a portion of their faces, the remaining portion being bent to form the opening 35.

The appliance is employed as follows: To mount a roll in the holder the spring is depressed, the locking plate 13 withdrawn, and the structure including the plate 12 is swung about its hinge 16, as is shown in Fig. 2, so as to free the end thereof, opposite to the end having the hinge 16, from engagement with the trunnion 14. A fresh roll may be then slipped into position. If a permanent core is already in place on the supporting member the roll may be slipped over this core, while if a roll is employed having a core therein, as is shown in Fig. 3, the core previously employed will first be removed from the supporting structure and the said roll and core then slid into position upon the supporting member. The supporting member is then swung into position with the locking projection 18 in line with the recess 19 in the trunnion 14 and pressure applied to the pin 25 at the exterior of the device to force the said locking projection into the said recess and to permit the spring 20 to engage the shoulder 22. In order to limit the movement of the supporting structure in one direction so as to facilitate the alinement of the supporting structure with respect to the trunnion 14, a tongue 37 may be conveniently provided, the end of which will abut against the inner face of the arm 28 of the cutter structure at the moment the projection 18 is in a proper position to be received within the recess 19. After the roll has been thus mounted in position and the supporting structure locked in engagement with the trunnion 14 it will be impossible to remove the roll because there is no means by which access may be obtained to release the locking detent 20 whereby to permit the withdrawal of the locking plate 13 until the entire roll has been consumed. The roll being now mounted in position the device may be used in the ordinary way by a pull upon the free end 38 of the roll 31. This will cause the roll to be rotated about the axis of its trunnions carrying with it the cutter

structure including the serrated cutter bar 26. By reason of the eccentric position of the axis of rotation of the roller with respect to its center of gravity the said roller will be compelled to make one complete revolution and in so doing the serrated edge of the cutter bar will be caused to engage the strip of paper being pulled at the time, whereby to sever the same from the roll. This severance will take place during the rotation of the roll and before the completion thereof, by reason of which a fresh end will be left exposed ready to be handled in the next operation of the device.

What I claim is:

1. A roll holder comprising a supporting bracket, a pair of trunnions revolubly supported thereby, a yoke secured to the said trunnions and connecting them, a supporting plate hinged to one of the said trunnions and carried thereby, and means for connecting the opposite end of the said supporting plate with the other said trunnion.

2. A roll holder comprising a supporting bracket, a pair of trunnions revolubly supported thereby, a yoke comprising a cutter bar and two arms extending at right angles therefrom at its opposite ends, the said arms being secured at their outer ends to the said trunnions, respectively, whereby the said yoke connects the two said trunnions together, a supporting plate hinged to one of the said trunnions and carried thereby, and means for connecting the opposite end of the said supporting plate with the other said trunnion.

3. A roll holder comprising a supporting bracket, a pair of trunnions revolubly supported thereby, a yoke secured to the said trunnions and connecting them, a supporting plate hinged to one of the said trunnions and carried thereby, and means for connecting the opposite end of the said supporting plate in line with the other said trunnion, said trunnion having means interlocking with the free end of the said supporting plate when the same is in line therewith, to prevent relative longitudinal movement between them.

4. A roll holder comprising a supporting bracket, a pair of trunnions revolubly supported thereby, a yoke comprising a cutter bar and two arms extending at right angles therefrom at its opposite ends, the said arms being secured at their outer ends to the said trunnions, respectively, whereby the said yoke connects the two said trunnions together, a supporting plate hinged to one of the said trunnions and carried thereby, and means for connecting the opposite end of the said supporting plate in line with the other said trunnion, said trunnion having means interlocking with the free end of the said supporting plate when the same is in line therewith, to prevent relative longitudinal movement between them.

5. A roll holder comprising a supporting bracket, a pair of trunnions revolubly supported thereby, a yoke comprising a cutter bar and two arms at the ends thereof, the said arms being connected to the said trunnions, a supporting plate hinged to one of the said trunnions and carried thereby, and means for connecting the opposite end of the said supporting plate in line with the other said trunnion, the arm of the yoke which is secured to the latter said trunnion having flanges, and the said supporting plate having a complementary recess for engaging the said flanges when the supporting plate is in a line with the latter said trunnion, whereby to prevent relative longitudinal movement between the said trunnion and the supporting plate.

6. A roll holder comprising a supporting bracket, a pair of trunnions revolubly supported thereby, a supporting plate hinged to one of the said trunnions and carried thereby, means for connecting the opposite end of the said supporting plate with the other said trunnion, means operated from the exterior of the device for operating the said connecting means, and a locking device located intermediate the ends of the supporting plate for locking the connecting means when so operated, said locking means being inaccessible for the purpose of unlocking the same at any point other than intermediate the ends of the said supporting plate.

7. A roll holder comprising a supporting bracket, a pair of trunnions revolubly supported thereby, a supporting plate hinged to one of the said trunnions and carried thereby, means for connecting the opposite end of the said supporting plate with the other said trunnion, a pin extending through the trunnion to which the plate is hinged, for operating the said connecting means, and a locking device located intermediate the ends of the supporting plate for locking the connecting means when so operated, said locking means being inaccessible for the purpose of unlocking the same at any point other than intermediate the ends of the said supporting plate.

8. A roll holder comprising a supporting bracket, a pair of trunnions revolubly supported thereby, a supporting plate hinged to one of the said trunnions and carried thereby, and an element carried by the said plate and mounted to slide longitudinally with respect thereto, said element having a projection for engaging a recess in the other said trunnion.

9. A roll holder comprising a supporting bracket, a pair of trunnions revolubly supported thereby, a supporting plate hinged

to one of the said trunnions and carried thereby, an element carried by the said plate and mounted to slide longitudinally with respect thereto, said element having a projection for engaging a recess in the other said trunnion, and means accessible from the exterior of the bracket for operating the said longitudinally movable element to cause the projection thereof to engage the said trunnion recess.

10. A roll holder comprising a supporting bracket, a pair of trunnions revolubly supported thereby, a supporting plate hinged to one of the said trunnions and carried thereby, an element carried by the said plate and mounted to slide longitudinally with respect thereto, said element having a projection for engaging a recess in the other said trunnion, means accessible from the exterior of the bracket for operating the said longitudinal member to cause the projection thereof to engage the said trunnion recess, and a locking device for locking the said element in its operated position, said locking device being accessible for unlocking only at a point intermediate the ends of the said supporting plate.

11. A roll holder comprising a supporting bracket, a pair of trunnions revolubly supported thereby, a supporting plate hinged to one of the said trunnions and carried thereby, a sliding plate carried by the said supporting plate, said sliding plate mounted to move longitudinally with respect to said supporting plate and having a projection for engaging the other said trunnion, a pin arranged to extend through the trunnion to which the supporting plate is hinged, one end of the said pin engaging the said sliding plate, and a locking device between the ends of the supporting plate for locking the said sliding plate in its forward position.

12. A roll holder comprising a supporting bracket, a pair of trunnions revolubly supported thereby, a yoke secured to the said trunnions and connecting them, a supporting plate hinged to one of the said trunnions and carried thereby, a sliding member carried by the said supporting plate for engagement with the other said trunnion, means accessible from the exterior of the device for operating the said sliding member to cause such engagement, and locking means, inaccessible for unlocking purposes from the exterior of the device, for locking the said member in its adjusted position.

13. A roll holder comprising a supporting bracket, a pair of trunnions revolubly supported thereby, a yoke secured to the said trunnions and connecting them, a supporting plate hinged to one of the said trunnions and carried thereby, means for connecting the opposite end of the said supporting plate in line with the other said trunnion, the latter said trunnion also having means interlocking with the free end of the said supporting plate when the same is in line therewith to prevent relative longitudinal movement between them, and means accessible from the exterior of the device for operating the said connecting means in one direction only.

14. A roll holder comprising a supporting bracket, a pair of trunnions revolubly supported thereby, a supporting plate hinged to one of the said trunnions and carried thereby, means for connecting the opposite end of the said supporting plate with the other said trunnion, and a removable core for an oval roll carried by the said supporting plate.

15. A roll holder comprising a supporting bracket, a pair of trunnions revolubly supported thereby, a yoke secured to the said trunnions and connecting them, a supporting plate hinged to one of the said trunnions and carried thereby, means for connecting the opposite end of the said supporting plate with the other said trunnion, and a removable core for an oval roll carried by the said supporting plate.

16. A roll holder comprising a supporting bracket, a pair of trunnions revolubly supported thereby, a yoke comprising a cutter bar and two arms extending at right angles therefrom at its opposite ends, the said arms being secured at their outer ends to the said trunnions, respectively, whereby the said yoke connects the two said trunnions together, a supporting plate hinged to one of the said trunnions and carried thereby, means for connecting the opposite end of the said supporting plate with the other said trunnion, and a removable core for an oval roll carried by the said supporting plate.

17. A roll holder comprising a supporting bracket, a pair of trunnions supported thereby, a yoke secured to the said trunnions and connecting them, a flat supporting plate hinged to one of the said trunnions and carried thereby, means carried by the said supporting plate for connecting the same with the other said trunnion, and a core provided with a substantially flat opening longitudinally therethrough for receiving the said supporting plate, the said opening being disposed at a point eccentric with respect to the side edges of the said core.

SETH WHEELER.

Witnesses:
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WM. A. WHEELER.