Nov. 13, 1934. O. C. ROESEN 1,980,879

PAPER ROLL STAND

Filed Feb. 9, 1931 2 Sheets-Sheet 1

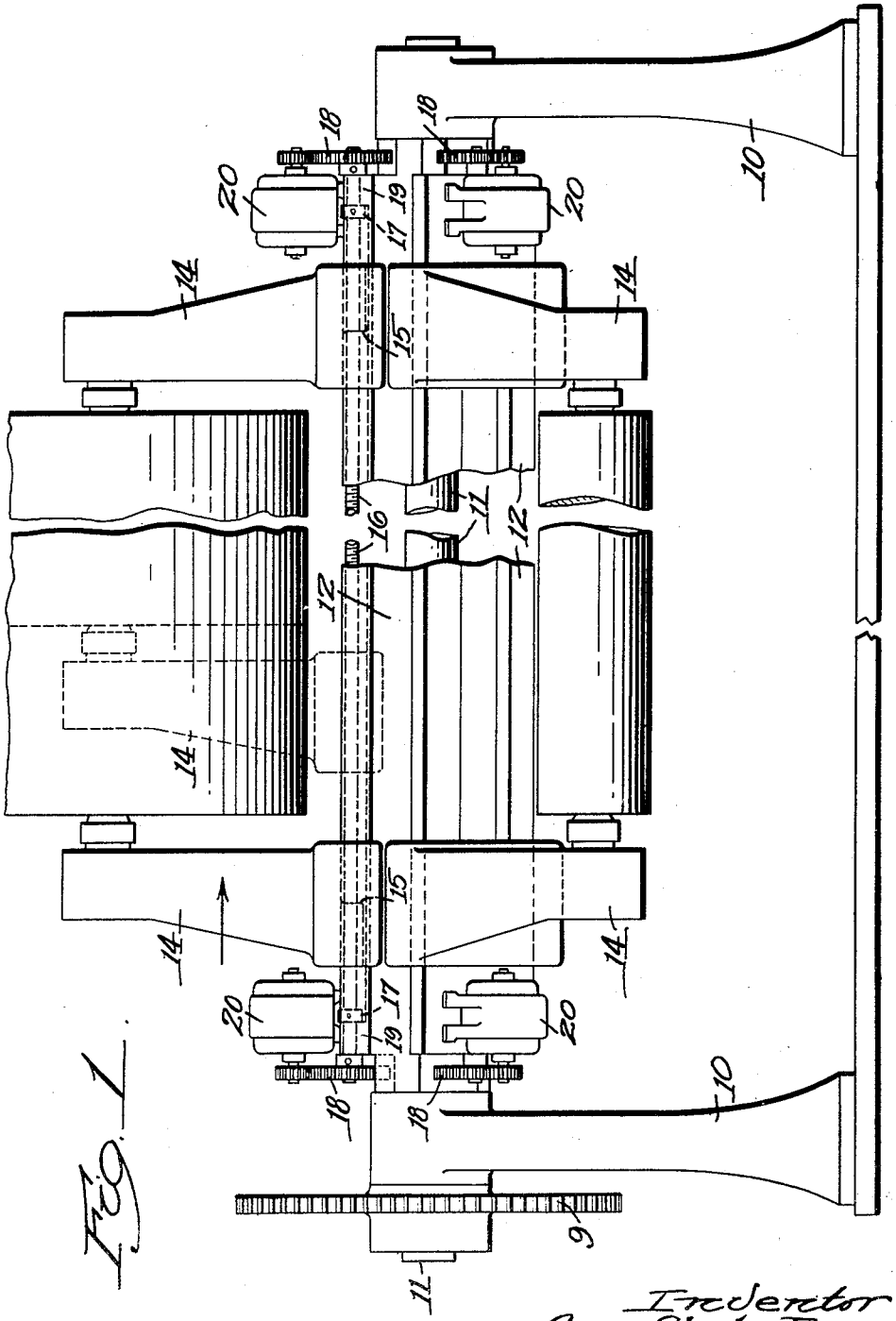


Fig. 1.

Inventor
Oscar Charles Roesen
By attorneys
Southgate Fay & Harley

C. F. Wesson.

Nov. 13, 1934. O. C. ROESEN 1,980,879

PAPER ROLL STAND

Filed Feb. 9, 1931 2 Sheets-Sheet 2

Fig. 2.

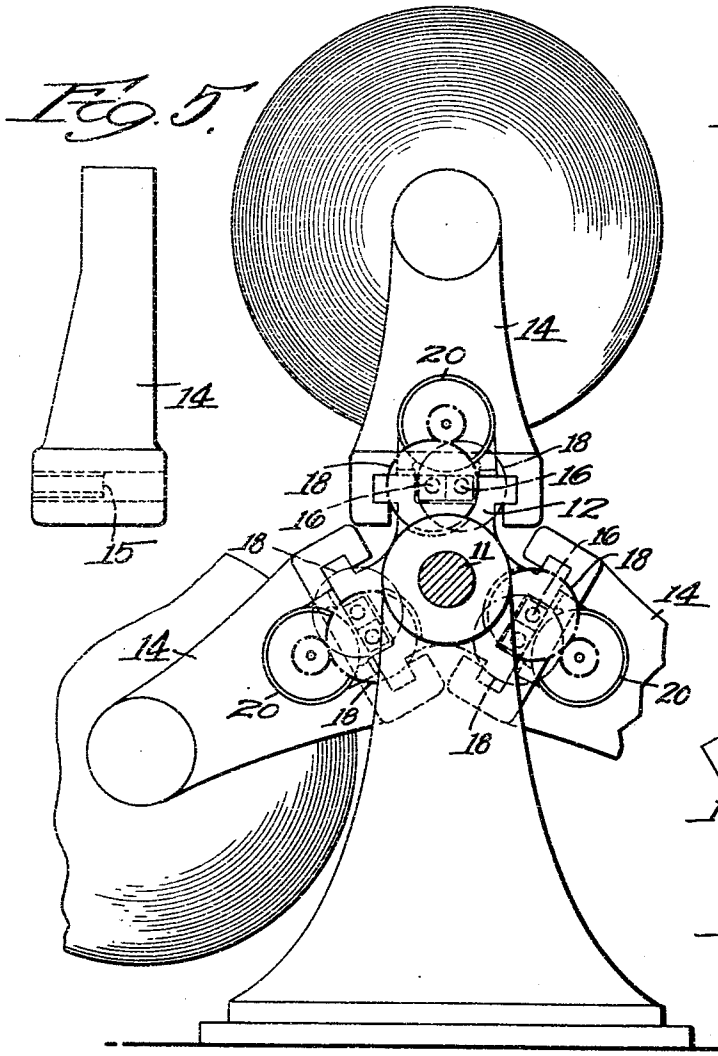
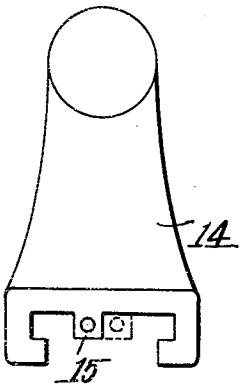


Fig. 5.

Fig. 4.



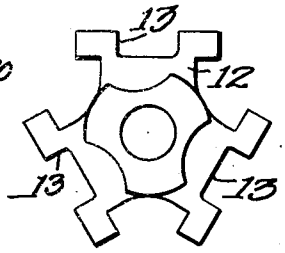


Fig. 3.

Inventor:
Oscar Charles Roesen
By attorneys
Southgate Fay & Hanley

Witness:
C. F. Wesson.

Patented Nov. 13, 1934 1,980,879

UNITED STATES PATENT OFFICE

1,980,879

PAPER ROLL STAND

Oscar Charles Roesen, Brooklyn, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia

Application February 9, 1931, Serial No. 514,522

7 Claims. (Cl. 242—64)

This invention relates to a paper roll stand or reel for supporting heavy rolls, such as are used to supply paper to printing presses.

The principal object of this invention is to provide individual paper roll supports or arms on the stand or reel separately movable sideways, in a very simple manner, to provide for supporting rolls of different lengths at the same time on a reel or the like.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings, in which

Fig. 1 is a side view of a reel having means for supporting a plurality of web rolls showing a preferred embodiment of this invention applied thereto;

Fig. 2 is an end view;

Fig. 3 is an end view of the central frame;

Fig. 4 is an end view of one of the arms or supports, and

Fig. 5 is a side view thereof.

In the printing of large newspapers it sometimes happens that the width of one paper roll on a particular reel must be changed between editions. This invention is designed to provide a reel with individually movable arms or supports so that some of the arms can be adjusted to accommodate a roll of different width from the others carried thereby. Also the same mechanism may be used for adjusting the roll for side register.

In the form shown, two pedestals 10 are mounted on the base plate and these pedestals may both be stationary. At the top they carry a shaft 11 which is rotated by power through a worm wheel 9 or the like fixed to it. The shaft has fixed upon it a central frame 12, shown in a form having three sides, each provided with longitudinal ways with a slot 13 between them. For supporting in this case three web rolls, three pairs of arms or supports 14 are provided. Each arm is movably mounted on these ways by a T-slot construction. Each arm carries an inwardly extending radial internally screw-threaded projection 15. Each projection is movable along one side of the slot 13.

These ways constitute means to hold the arms or supports 14 in fixed angular relation to each other and to the central frame. In this case two of the projections 15 on arms supporting the same roll extend into the shaft from one side and each projection occupies one half of the slot. They are perforated and screw-threaded to cooperate with a pair of lead screws 16 for each pair of arms, located in the central frame.

Each lead screw carries a spacing collar 17 and also a gear 18. These two elements are located on opposite sides of a bracket 19 which is attached to the central frame and prevents any end motion of this lead screw. A series of motors 20 are mounted on the central frame 12 and on each of the motor shafts is a pinion meshing with the gear 18 to drive that lead screw to which this gear is fixed. At the other end the same conditions exist, the second motor being used to drive the other lead screws. Thus, in the case illustrated, there are three of these motors on each end of the machine. Each individual arm 14 is movable along the frame independently of the others.

The operation of either one of these motors will rotate its lead screw which will cause one arm 14 at that end to move forward or back along the shaft as desired in accordance with the direction of rotation of the motor. The motors may be operated by push buttons first in one direction and then in another in any well known way.

From inspection of Fig. 1 it will be seen that, when it is desired to run one fractional width roll, any arm or support 14 on one end can be moved along the frame until the proper distance is secured between the two arms and the reel can be run with a single fractional width roll while the other rolls are of full width, if desired.

Another feature of this invention is to operate the two motors simultaneously to feed the two arms in the same direction to adjust the position of the paper roll for side register.

These two objects are accomplished by comparatively simple mechanism which requires no effort on the part of the operator and operates expeditiously so that very little time is absorbed in its manipulation.

The invention has been described as being employed in connection with the web rolls of a newspaper printing press but it can be used for supporting and adjusting heavy rolls for any other purpose.

Although I have illustrated and described one form of the invention I am aware of the fact that modifications can be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims. Therefore I do not wish to be limited in this respect but what I do claim is:—

1. In a paper roll stand, the combination of a rotary frame, pairs of arms for supporting a paper roll between them, said arms being supported by said frame and means mounted on said frame for moving said arms independently of each other.

2. In a paper roll stand, the combination of a

central frame, separate pairs of arms slidably mounted on said frame, each pair of arms being adapted to support a paper roll, and means mounted at opposite ends of said frame for moving said arms individually to change the space between them, whereby rolls of different lengths can be mounted on the same stand at the same time.

3. In a reel for supporting web rolls, the combination of a rotary central frame and a plurality of arms mounted on said frame but rotatable with it, said arms having means for supporting rolls between them, means for rotating the frame to shift the position of the rolls, a motor, a screw located along said frame and connected to be turned by the motor, and means connected with said screw for shifting one of said arms along the frame independently of the others, to enable the reel to carry rolls of different widths.

4. In a web roll reel, the combination with a pair of supports, a central frame rotatably supported thereby, means for rotating said frame, a plurality of pairs of arms, each slidably carried by said frame, said frame having a plurality of keyways extending therealong, each arm having a projection extending into one of said keyways, said projections being longitudinally threaded, a pair of screws, one extending into the frame from one end and the other from the other end in the same keyway and each in screw-threaded engagement with one of said projections, whereby the rotation of either screw will move its arms along the shaft and a plurality of motors each connected with one of said screws for turning it.

5. In a paper roll stand, the combination of a rotary frame, pairs of arms for supporting a paper roll between them, said arms being supported by said frame and a separate motor for moving each of said arms independently of the other.

6. In a paper roll stand, the combination of a central frame, separate pairs of arms slidably mounted on said frame, each pair of arms being adapted to support a paper roll, and individual power operated means for moving each arm along the stand independently of the others, thereby rolls of different lengths can be mounted on the same stand at the same time.

7. In a paper roll stand, the combination of a rotatable reel and end spiders made up of individually longitudinally movable arms carried by said reel and arranged in pairs, each pair of arms being adapted to support a paper roll and being movable to support a roll of different width from that carried by other pairs of arms without disturbing the setting of said other pairs of arms.

OSCAR CHARLES ROESEN.