Dec. 31, 1935. A. J. HORTON 2,026,173

WEB ROLL SUPPORT FOR PRINTING MACHINES

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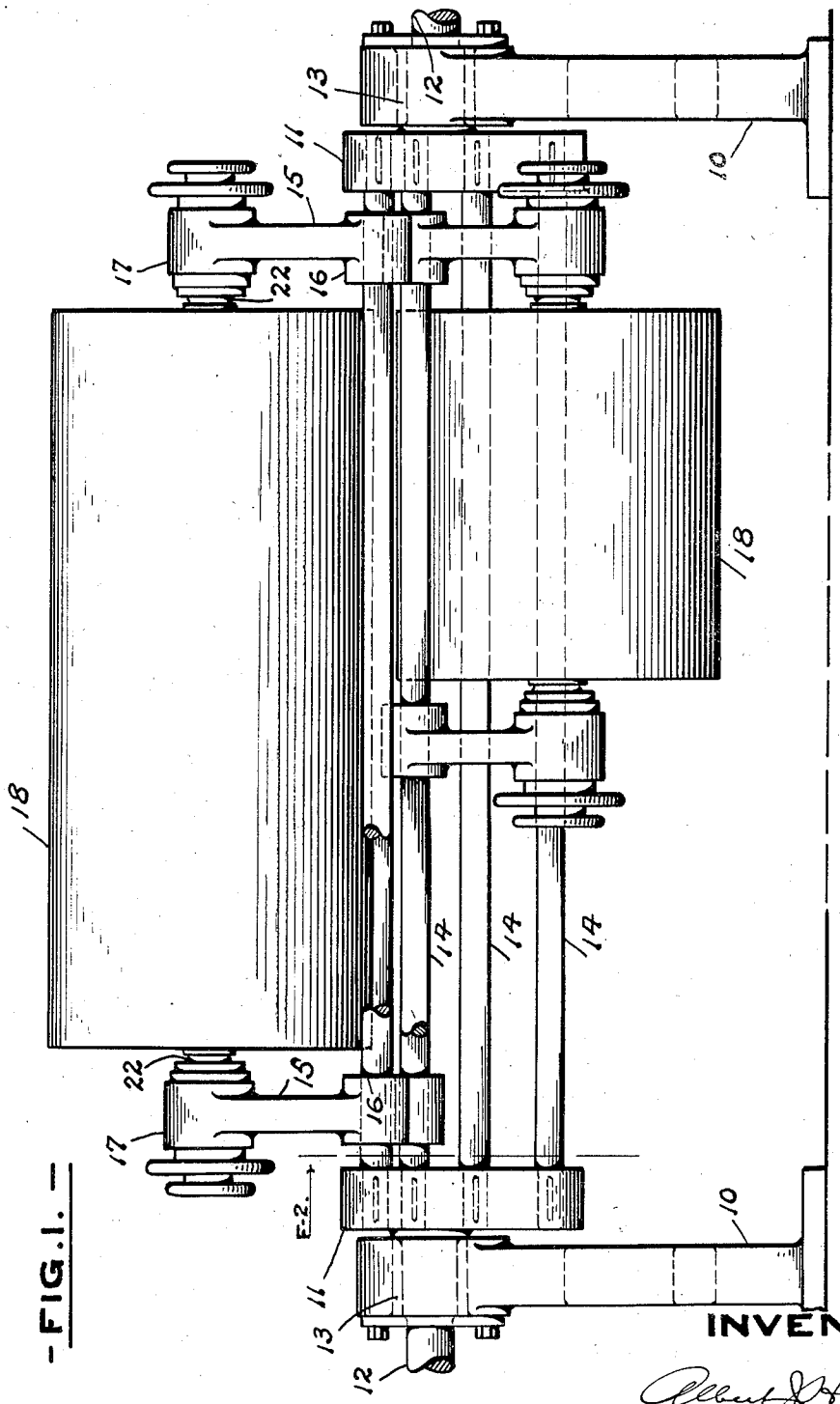


FIG. 1.

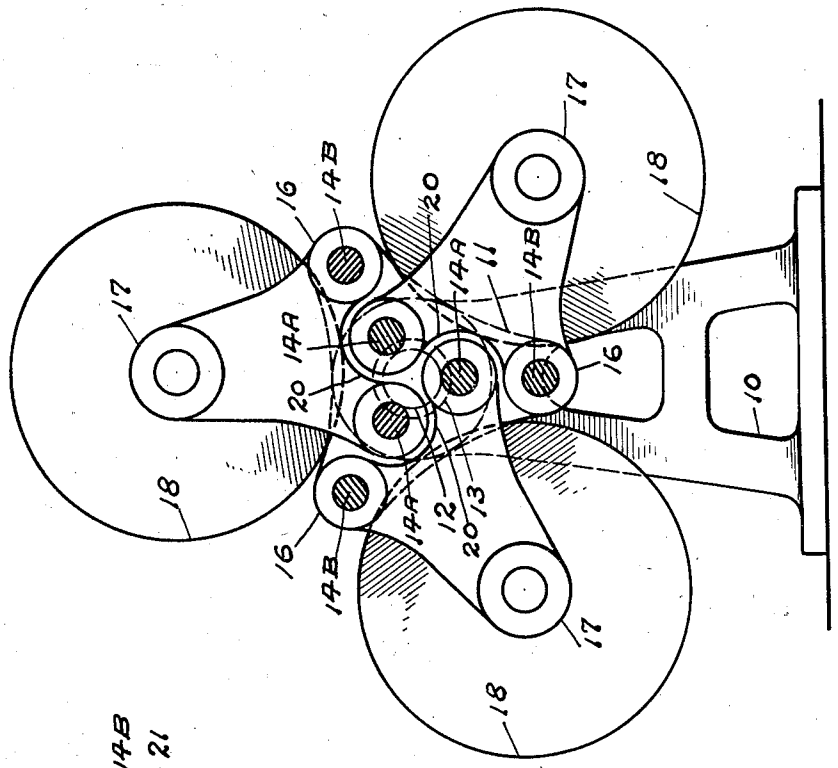
INVENTOR.

Albert J. Horton

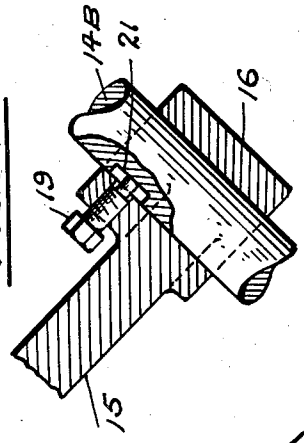
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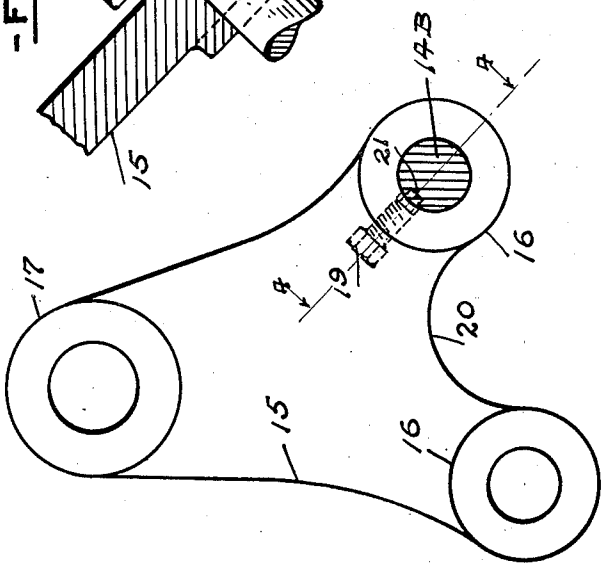
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-FIG.2.-



-FIG.4.-



-FIG.3.-

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Patented Dec. 31, 1935 2,026,173

UNITED STATES PATENT OFFICE

2,026,173

WEB ROLL SUPPORT FOR PRINTING MACHINES

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Application June 22, 1934, Serial No. 731,854

8 Claims. (Cl. 242—64)

This invention relates to a rotatable support for use with a printing machine on which a plurality of web rolls of varying length are adapted to be supported.

It is one object of the invention to provide a rotatable support with individually adjustable arms, in a manner which will permit a plurality of web rolls of varying length to be carried by the rotatable support.

Another object is to provide a rotatable support with ways or members on which a plurality of individual web roll supporting arms are adapted to be mounted in slidable relation, to permit said arms to be individually adjusted along said ways and thereby adapt the support to hold a number of rolls of varying length at one time.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts, and in the details of construction hereinafter described.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein:

Figure 1 is a front elevational view showing a rotatable web roll support with a plurality of web rolls mounted thereon, said rolls being of different lengths;

Figure 2 is a part end elevational view and part sectional view taken on the line indicated by the arrow F—2 of Figure 1;

Figure 3 is an enlarged detail view showing a front elevation of an adjustable web roll supporting arm; and

Figure 4 is a sectional detail view taken on the line 4—4 of Figure 3 showing a set screw locking means to secure the arm in an adjusted position.

Referring to Figures 1 and 2, the reference characters 10—10 designate two standards which may be supported on the floor, machine base or in any other desired manner.

A frame structure is rotatably mounted between said standards which comprises two heads 11—11, each having journals 12 extending from one side thereof, each journal being rotatably mounted in a suitable bearing 13 in the upper ends of the standards. Cross bars or slideways 14 have their outer ends secured within the heads 11—11 to provide a rigid frame structure and to also provide ways on which a number of arms 15 may be adjustably mounted. One of said arms 15 is shown clearly in Figure 3 and is provided with two inner bar engaging portions 16 and an outer spindle bearing portion 17, which are joined by means of a central web.

When mounting the arms 15 on the bars 14, they are arranged in pairs with each arm engaging two bars. In the structure shown, the supporting frame is provided with three pairs of bars, with each pair supporting one pair of arms and each pair of arms supporting one web roll indicated at 18.

As viewed in Figure 3, said bars are arranged so as to have three of them form an inner group as designated at 14A, each being spaced an equal distance apart and an equal distance from the axis of head 11 within which they are secured. The other three bars form an outer group as designated at 14B and are positioned in radial alignment with the inner bars. Each arm, when assembled on a pair of said bars has one bearing portion 16 in engagement with an inner bar 14A, and the other bearing portion in engagement with an outer bar 14B. The said arms do not have their bearing portions 16—16 in engagement with an inner and an outer bar in the same radial line however, but instead have same in engagement with one inner and one outer bar which are in adjacent radial alignment, there being a recessed portion 20 provided in the web of each arm 15 to clear a rail bearing 16 of an adjacent arm on one of the inner bars 14A. This method of mounting the arms 15 provides a substantial supporting base for same and also permits said arms to be adjusted longitudinally along their supporting bars to accommodate web rolls of varying length.

In newspaper printing machines, which are the particular type of printing machines for which this form of rotatable web roll support is especially adapted, the lengths of the web rolls are usually divided into four sizes, namely, one-quarter one-half, three-quarter and full length rolls. When an adjustment is made to accommodate rolls of these particular lengths, provision is made to secure the arms in a set position at locations which agree with said standard lengths. Said provision is shown in Figure 4 which consists in arranging a set screw 19 in one bar engaging portion 16 of each arm 15 and providing a number of grooves 21 in the outer bars 14A at the particular locations which would correctly position the arms with respect to the various lengths of the rolls. When the arms are adjusted to the desired positions the set screws 19 are screwed inward to engage the said grooves 21.

Any desirable form of adjustable spindle chuck 22, may be provided for the spindle bearing por-

tions 17 of the arms 15 which will enter the core of the web roll at each end thereof and rotatably support same.

In the operation of a newspaper printing machine, successive editions of a paper may require the use of web rolls of different lengths in order to produce the required number of pages. With the invention herein disclosed, it is possible to so arrange the roll support that rolls of the size required for more than one edition may always be placed in the support and made ready to run in advance. Furthermore, while the machine is running the arms may be shifted to accommodate a different size roll for the next edition. With web roll supports as heretofore made, it is necessary to wait until an edition is finished and any remaining rolls removed from the support before the arms can be moved to accommodate rolls of a different length. The saving in time and the added convenience derived from this invention are obvious.

It will be understood that the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, reference being had to the claims rather than to the foregoing description to indicate the scope of the invention.

What I claim is:

1. In a device for supporting rolls from which a web is fed to a machine, a rotatable frame structure including a pair of heads, a plurality of pairs of cross bars connecting said heads, one cross bar of each pair being positioned between the cross bars of another pair, and arm members each movable on a pair of cross bars and having means to rotatably support web rolls.

2. In a device for supporting rolls from which a web is fed to a machine, a frame structure including a pair of heads rotatable on a common axis, a plurality of pairs of cross bars connecting said heads, one cross bar of each pair being substantially in alignment with one cross bar of another pair and with the said common axis, and arm members each movable on a pair of cross bars and having means to rotatably support web rolls.

3. In a device for supporting rolls from which a web is fed to a machine, a rotatable frame structure including a pair of heads, a plurality of pairs of cross bars connecting said heads, one cross bar of each pair being positioned between the cross bars of another pair, and a plurality of individual roll supporting members independently movable on said cross bars, certain of said roll supporting members being adapted to move past one another when adjusting same.

4. In a device for supporting rolls from which a web is fed to a machine, a frame structure including a pair of heads rotatable on a common axis, a plurality of pairs of cross bars connecting said heads, one cross bar of each pair being substantially in alignment with one cross bar of another pair and with the said common axis, and roll supporting members adjustably mounted on said cross bars and adapted to simultaneously hold rolls of varying length, certain of said members being adjustable in pairs and adapted to move past other pairs of said members when an adjustment is made.

5. In a device for supporting rolls from which a web is fed to a machine, a rotatable frame structure including a pair of members arranged in spaced and opposed relation, a plurality of cross bars connected to and between said members, a plurality of pairs of arms having bearing members, said bearing members being arranged to slidably support said arms on said cross bars, and chuck means arranged on said arms for rotatably supporting a plurality of web rolls, said bars and arms being so arranged as to provide a space not greater than the width of a bearing member between each pair of said rolls.

6. In a device for supporting web rolls from which a web is fed to a machine, a rotatable frame structure including a pair of head members, a plurality of pairs of cross bars connecting the said head members, one cross bar of each pair being positioned between the cross bars of another pair, and a plurality of pairs of arm members, each pair of said arm members being movable on a pair of cross bars and having means to rotatably support a web roll.

7. In a device for supporting web rolls from which a web is fed to a machine, a frame structure connecting a pair of head members rotatable on a common axis, a plurality of pairs of cross bars connecting said head members, one cross bar of each pair being substantially in alignment with one cross bar of another pair and with the said common axis, and a plurality of pairs of arm members, each pair of said arm members being movable on one of the pairs of cross bars and having means to rotatably support a web roll.

8. In a device for supporting web rolls from which a web is fed to a machine, a rotatable frame structure including a pair of head members, a plurality of pairs of cross bars connecting said head members, one cross bar of each pair being positioned between the cross bars of another pair, and a plurality of pairs of roll supporting members, each pair being arranged on a pair of said cross bars and independently movable longitudinally thereof past a roll supporting member on another pair of the cross bars.

ALBERT J. HORTON.