June 10, 1952 B. E. PREVOST 2,599,720

BACKSTAND FOR ROLLS OF PAPER

Filed April 5, 1948 4 Sheets-Sheet 1

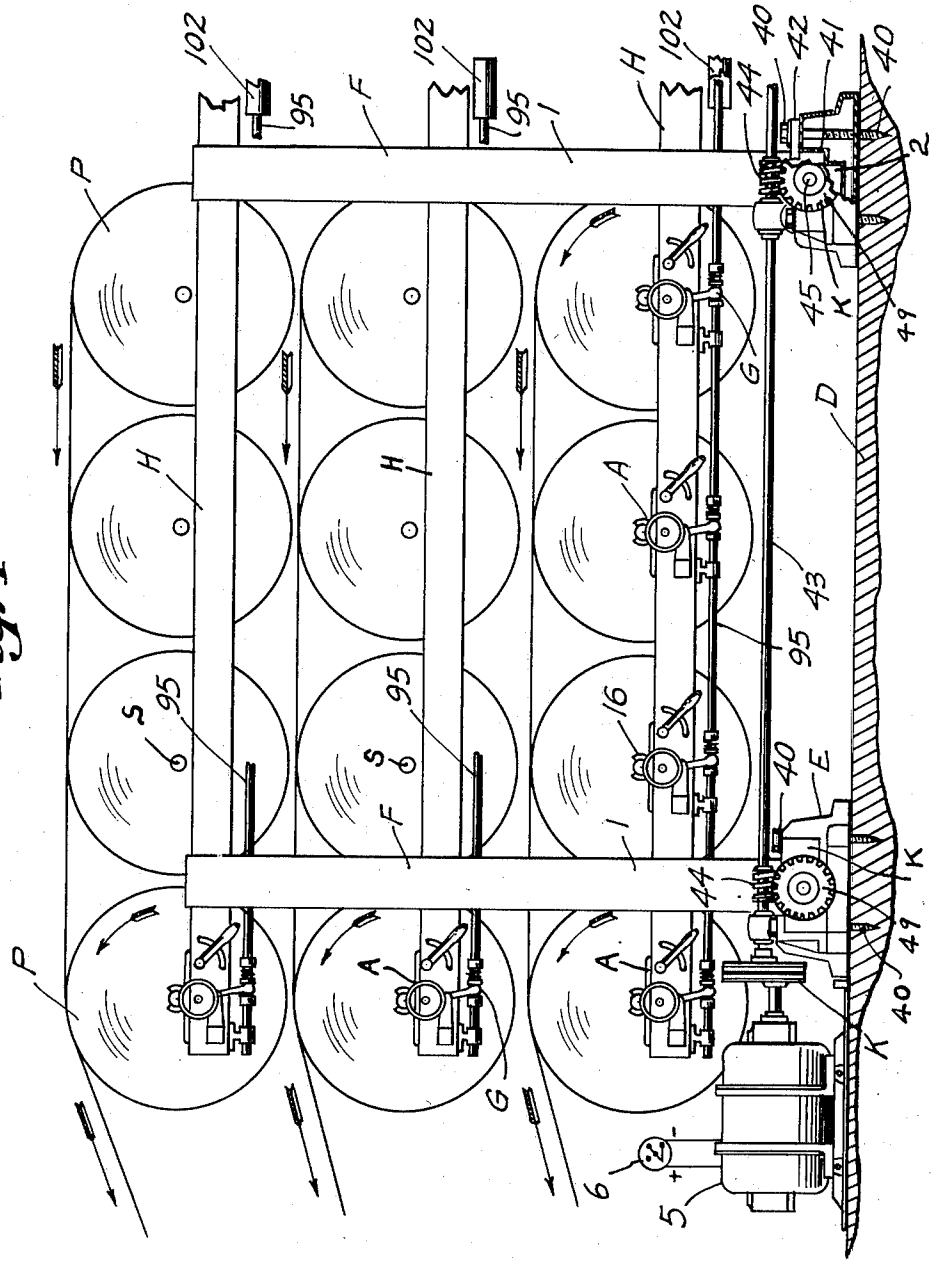

Fig. 1

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Fig. 3

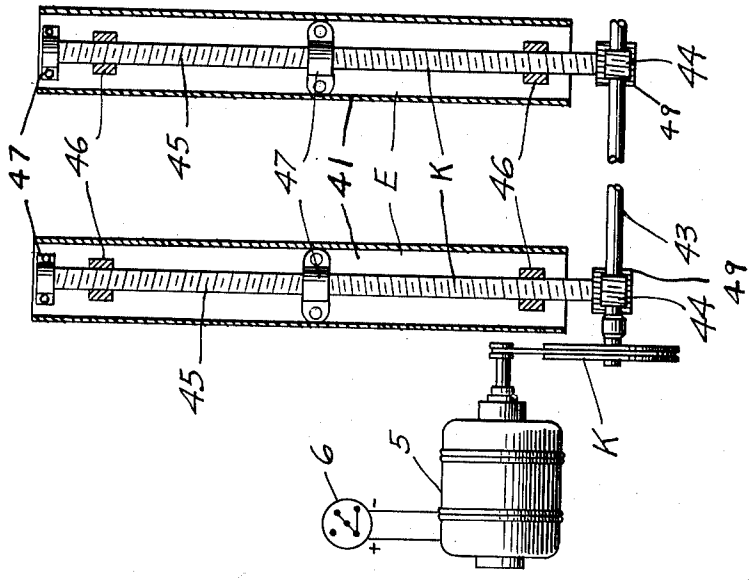
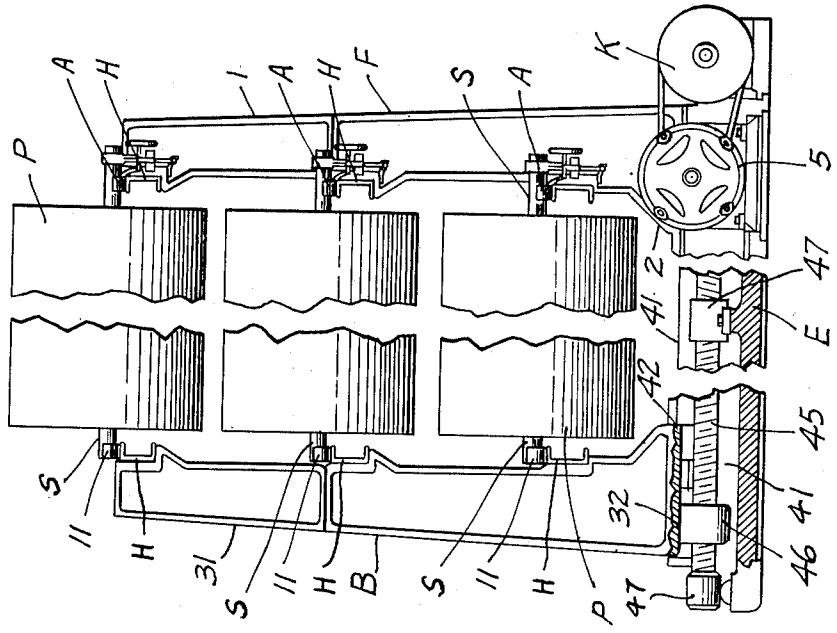


Fig. 2



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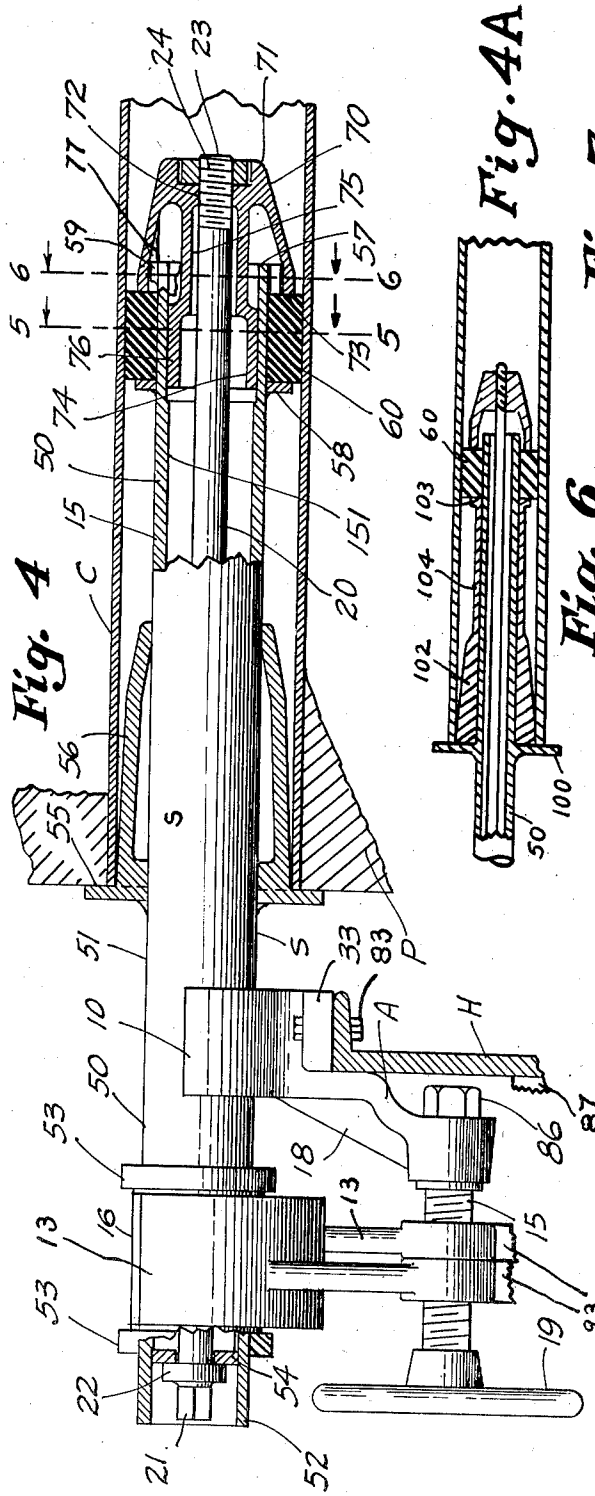

Fig. 4

Fig. 4A

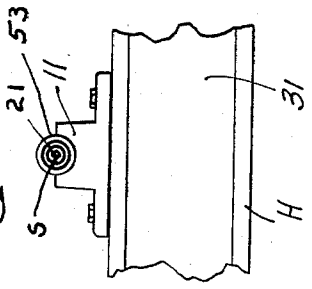

Fig. 7

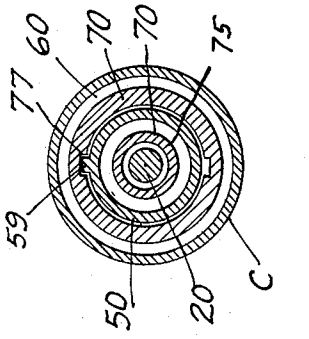

Fig. 6

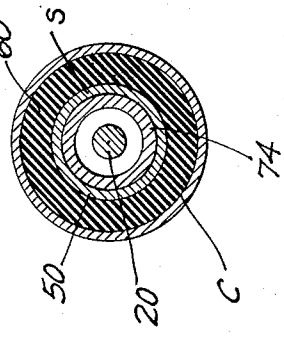

Fig. 5

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BACKSTAND FOR ROLLS OF PAPER

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Fig. 9

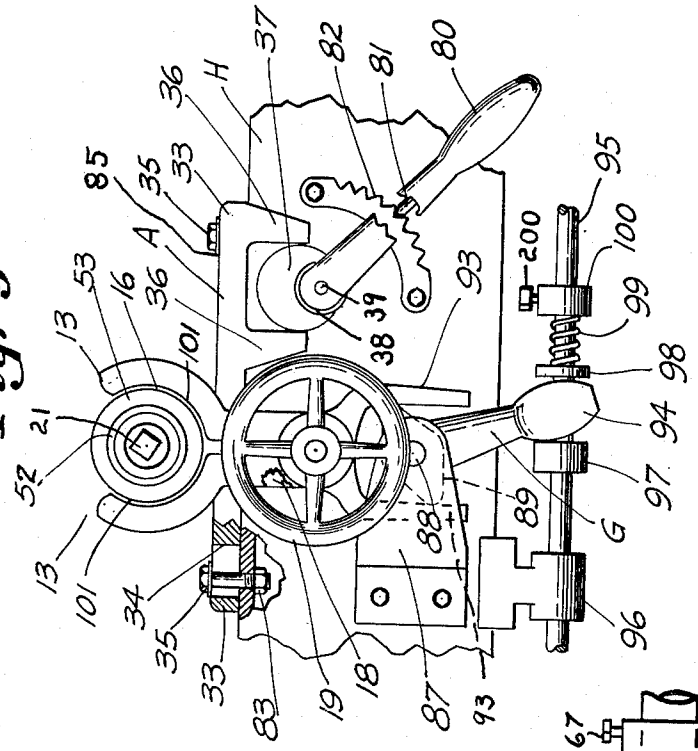


Fig. 8

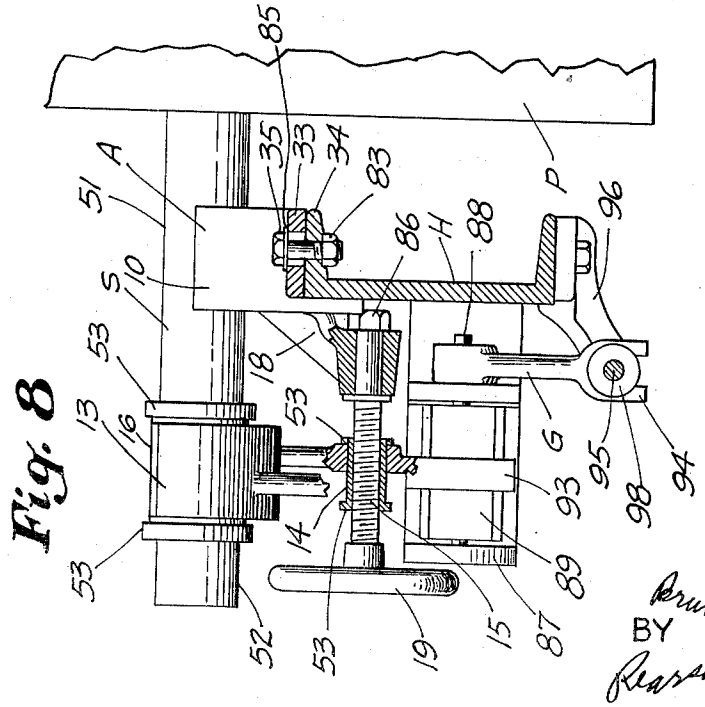
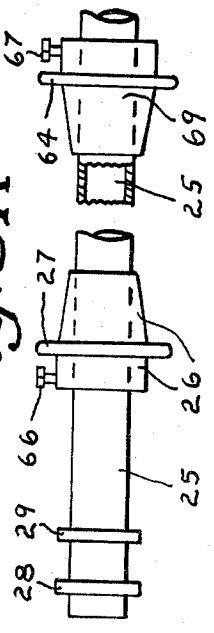


Fig. 8-A



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UNITED STATES PATENT OFFICE

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BACK STAND FOR ROLLS OF PAPER

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Application April 5, 1948, Serial No. 19,134

11 Claims. (Cl. 242—58)

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This invention relates to the handling of a plurality of rolls of paper of a well known type in which the paper is wound on a tubular core which is usualy made of strawboard, metal, plywood, plastic or some other suitable material.

In the finishing rooms of some paper mills and also in some converting plants, a plurality of such rolls, which may number up to twelve or more, are supported on what is known as a back stand associated with a paper cutter which has a knife and drag rolls to unwind the paper so that perhaps twelve webs can be unrolled at the same time by the pull of such unwinding rolls. The paper from all of such rolls then goes under a cutting knife which will cut them all together to form a stack of perhaps twelve, more or less, rectangular sheets. These stacks of sheets may be packaged individually or a number of them may be put together by other means to form a larger package such as a ream in a bundle for shipping.

In the same plant, there may be occasions when rolls of paper of different widths for diffrent widths of paper sheets, as between sixty inches and one hundred and sixty inches are to be cut on the same cutting machine and in many cases the cores of these rolls are of different diameters. Narrow paper from short rolls can be cut by a wide knife but wide paper cannot be cut by a narrower knife.

As now handled, a single long heavy solid shaft is pushed by two men through a core and as it is difficult, if not impossible, to push a metal shaft which is close fitting through a core or strawboard or similar material, the diameter of these shafts is less than that of the core of the roll of paper and usually there are two removable tapered thimbles of more or less tapered form, the large end of each thimble being made to fit inside an end of a paper roll core of a definite diameter.

One of these thimbles can sometimes be set and remain in one position but the other must be removed whenever the core left by an old paper roll is to be removed and a new roll of paper is to be installed. This process takes time and requires the services of two men as the long shafts are very heavy.

At times the thimble at each end must be moved.

A very serious problem is when a cutter is provided with a very long knife and it is desirable to cut the paper from rolls very much less in width, and to have the side edges of each web of paper register with the others in a stack.

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In such a situation, both thimbles must be carefully moved laterally along the long shaft, adjusted and fixed in place.

The reverse is true when shifting from cutting paper of sixty inch width on rolls of about that width to those of greater width.

Handling a long shaft requires two or even four men and my problem was to make it possible for one man to handle a roll of paper on a core and with a journal at each end. I do this by replacing the long single shaft by two short core shafts, one at each end. One man can remove the old and install two new shafts each with a journal or pivot part. As the bearing of the core part on the tapered thimble is relatively small, merely cutting off the inside part of a long shaft and substituting some sort of stub shafts with journals is not sufficient as such stub shafts would get out of alignment if there was a fit at only the outside on one of the tapered thimbles. The long shafts and thimbles are very heavy and it requires two men to handle one of them, while my short core shafts are much lighter and can easily be handled by one man.

My invention includes the use of a plurality of pairs of short core shafts each with a journal or pivot part and all of the same diameter, so that all the bearings in a back stand can be of the same diameter, and a tapered thimble fixed to such short core shaft. Preferably also at the large end is an annular core stop flange to stop the end of the core and preferably to limit the axial or lateral movement of a paper roll core and to some extent of the rolled paper itself. My short core shaft has also near its inner end an annular elastic expansion collar and means operable from the outer end of the shaft to expand the collar so as to hug the inside of each core thereby keeping the axis of the core end of the shaft identical and also to prevent the paper roll core from sliping around on the thimbles thus allowing the paper to run off its roll too freely.

Another present practice is to stack such rolls on the floor, each with a horizontal axis, by piling one on top of another. This necessitates not only heavy lifting but chocking the bottom rolls to hold the assembly in place.

With my device, I can fix a short core shaft at one end of each roll, then stack the rolls on their other ends and pile several assemblies one on top of another all with their axes vertical instead of horizontal. This makes each roll accessible without disturbing any others, permits

much easier handling, and allows more to be stored or stacked in a given space.

I find that with this arrangement of short core shafts or gudgeons, the projecting part of one short core shaft can be seized by suitable gripping means, the roll of paper can be lifted and carried along by a falls and tackle on a track of any kind, another short core shaft can be fixed in the other end, the roll with both shafts moved to a position in the cutting machine back stand and eased down into place by one man.

Of course the rolls may be stacked with a horizontal axis with no shafts and a shaft fixed in each end and can then be picked up by two men or picked up by other mechanical means and in any case lifted over to the back stand and, beginning at the bottom tier, dropped into place. This sequence can be repeated when the paper on the rolls has been run off and cut after removing the cores with their shafts. The short core shafts can be used over and over again repeatedly.

To use my expansible short core shaft to the best advantage in plants where it may be necessary to shift from sixty inch width rolls to those of greater width, it is desirable to use a stand which besides a fixed base includes sides in the form of frames one of which I will call the back frame which may be provided with stationary bearings of the same diameter as the journal part of the shafts but which preferably can be moved laterally towards and away from the other or front frame.

The other frame which I will call the front frame is movable towards and away from the back side frame and also supports a plurality of adjustable and movable bearings which are substantially opposite to those on the back frame, the axial line between them being substantially at right angles to the front and back side frames whereby the frames can be moved towards and away from each other without upsetting the parallel alignment of such axis.

The terms front side frame and back side frame or front frame and back frame are used for convenience and to distinguish from the ends, but either may be the front and the other the back.

By web is meant a long strip of paper as it is on a roll and by sheet, the substantially rectangular part which is cut off from its end.

Where possible the fixed tapered thimbles on a set of my short core shafts should each fit the end of a paper roll core so that its end would just engage the annular core stop flange, perhaps by exerting some pressure but the taper of the thimble allows a snug fit at the outer end even if the core does not reach the stop flange as the expansion collar holds everything in place.

However, I find it desirable to provide not only uniform bearings for the journals of each shaft but means whereby each core and roll with their short core shafts can be moved laterally of the stand, namely axially of each shaft and to provide at least on the front frame, that these journal bearings can also be moved longitudinally.

I accomplish these results by providing for each shaft on the front side frame, or it might be the back side frame, what I will call an adjustable carrier which supports a bearing and a combination brake and shaft mover having arms which go between the fixed flanges on the outer end of a shaft which serve not only as a brake to prevent the shaft and the paper from running away or unrolling too fast or too slowly but which are also so arranged, with reference to the adjustable carrier, that the arms can move each roll laterally or axially so as to have the ends of all the paper rolls on each side of the entire stand in a vertical plane. This is desirable because the side edges of the paper while unrolling and when unrolled, should exactly register.

While I find that the individual, longitudinal adjustment of each bearing and the individual lateral, adjustment of each shaft is desirable, I find it is preferable to have means to operate all of the brakes on one side at the same time, although, if desired, each one could be separately operable.

My short core shafts can be used on a back stand with side frames which are stationary especially if they are provided with longitudinally adjustable shaft bearing carriers on at least one of the side frames and with my combination brake and shaft movers to adjust the shafts laterally, to regulate the friction of the brakes on the shaft journals to prevent too free revolution and too much holding back. In other words, to coordinate the unwinding of the paper with the speed of the drag or unwinding rolls of the paper cutter.

In the drawings,

Fig. 1 is a front side elevational view of a back-stand of my construction, by "front side" meaning the side on which the adjusting elements are positioned.

Fig. 2 is a diagrammatic broken end elevational view as from the left of Fig. 1.

Fig. 3 is a detail plan view of the preferred mechanism for moving the front and back side frames towards and away from each other.

Fig. 4 is an elevational view, partly in section, showing the end of a web of paper roller on a core with one of my short core shafts in position in a bearing on the front side frame and with an adjustable carrier, combination brake and shaft mover and other parts.

Fig. 4A is a sectional view, similar to Fig. 4, but omitting the bearings, of a modified and preferred type of short core shaft.

Figs. 5 and 6 are sectional views as on the lines 5—5 and 6—6 respectively of Fig. 4.

Fig. 7 is a detail elevational view of a bearing on a back side frame.

Fig. 8 is a front elevational view, partly in section, of a shaft resting in a bearing on an adjusting member supported by an adjustable carrier, showing also details of the combination brake and shaft mover.

Fig. 8A is a broken elevational view of a single long shaft, preferably tubular, with adjustable thimbles and brake flanges which can be used in my back stand.

Fig. 9 is an elevational view as from the left of Fig. 8.

In the drawings my short core shaft is indicated generally by S and consists of a metal tube **50** part of which **51** serves as a journal to rest in a bearing such as **10** or **11** and part of which **151**, when in place, extends into a core C for carrying a paper roll P.

As shown, **52** is one end of tube **50** which I will call the outer end, near which are fixed the two annular brake flanges **53**, **53**, and an inside annular bearing **54** for an expanding rod **20**, which has an outside end **21** and is prevented from movement inward by an annular stop **22** which rests against the bearing **54**.

55 is an annular end core stop flange, fixed outside of tube **50**, which goes against the end of a

core and preferably laps over onto the paper roll P.

56 is a tapered thimble of a size to fit at its large end inside the end of a core C and 57 represents the inside end of tube 50 while 58 is an annular pressure collar, fixed outside tube 50, against which rests an annular elastic expansion collar 60 of a size when not expanded to slip easily inside of a core C.

23 is the inside end of expanding rod 20 and is threaded at 24 to engage suitable threads 72 in a nose 70, the outer end 71 of which tapers back to an annular end 73 which engages the other side of expansion collar 60 while outside pressure collar 58 engages its other side.

In nose 70 is a key way 77 which fits a key 59 which extends from tube 50 so that tube 50 and nose 70 will not turn on each other but will stay in place when the expansion rod 20 is turned from its squared end 21 causing the threaded part 24 to pull, through the thread 72, on the nose 70 causing its end part 73 to squeeze 60 against pressure collar 58.

Nose 70 slides axially on key 59 on tubular shaft 50 as nose 70 compresses and expands expansion collar 60.

The nose 70 is of skeleton form with a hollow inside at 74 and 75, the part at 76 being slidable on the inside 151 of the tubular shaft 50.

Forming part of my universal back stand, E represents a base attached by means of screws 40 to a flour D and comprising two or more transverse grooves 41 with gibs 42 which serve as tracks in which feet 2 of a front frame F and 32 of a back frame B can slide.

The front frame F includes uprights 1 and the back frame includes uprights 31 in each case the upright being longitudinally connected by a plurality of channel beams H which are the same at the front and at the back. Channel beams H of back frame B, as shown, support fixed bearings 11 but on the front frame serve as supports and tracks or guides for the adjustable carriers A which carry bearings 10 which in turn support the short shafts S, S, all of which have journals indicated by 51 which rest in such bearings indicated by 10 which are fixed to each adjustable carrier A, and a back frame bearing 11 fixed to the back frame B. There are thus two bearings one for the journal of each short shaft S which extends from each end of the paper core C of a roll of paper P.

As shown, there are three tiers of these rolls P each carried by two short shafts S each in a bearing on one of the channel beams H forming part of a back frame or of a front frame.

The bearings 11 carried by the beams H of the back frame B can conveniently be either fixed or left in one position or might be supported by adjustable carriers A such as those on the front frame but I find it satisfactory to have them fixed and without the combination brake and shaft movers for moving each roll axially with its shafts and for controlling its speed by the brake mechanism and without being adjustable longitudinally.

The means shown to move the frames F and B towards each other, indicated generally by K, comprises a power member indicated by an electric motor 5 which drives shaft 43 which extends lengthwise or longitudinally, along front frame F and is shown as at the front. This shaft 43 drives worms 44, 44 which drive the gears 49, 49 on two lateral or front to back shafts 45, 45, each of which is known as an acne screw with right and left hand threads and each of which

engages a nut 46 bolted to the bottom at each end of each frame. By means of a switch such as 6, the motor 5 can be stopped, started or reversed so as to move the stands towards or away from each other for different lengths of rolls. 47, 47 are bearings for shafts 45.

The adjustable carriers A each of which supports a bearing 10 for a shaft journal 51 are adjustable longitudinally each on a beam or track H through the medium of the wings 33 with slots 34 and bolts 35. These are individually adjustable so as to line up the axis of each shaft and roll with all of the others.

As shown this adjustment is by means of downwardly extending arms 36 and 36, between which is a cam 37 carried by a shaft 38 pivoted at 39 on a track H and operable by means of a handle 80 which has a pin 81 to engage the teeth of a segment 82 also attached to a beam H. To adjust the bolts 35, the nuts 83 are loosened and the adjustable carrier A is caused to move either one way or the other by moving handle 80 until the right position is found.

There is preferably a bushing or a washer 85 to prevent the bolts 35 from sticking on the arm or track H.

The brake and shaft carrier is made in two pieces 13, 13, each pivotally mounted on a bushing 14 through which is a screw 15, the brake parts 16 fitting with a fairly close fit between the flanges 53, 53, fixed on the short core shaft S. The laterally adjusting screw 15 also passes through a projecting arm 18 of the adjustable carrier A and has a hand wheel 19 for turning and a nut 86 for holding it in position.

By turning hand wheel 19, the brake members serve as lateral adjusting means for each shaft S with its core and roll.

The brake mechanism moves with the adjustable carrier A longitudinally but moves each paper roll P, core C and both short core shafts S, S laterally of carrier A.

Preferably I provide means indicated generally by G to operate all the brakes at the same time and to the same extent.

As shown, this comprises a supporting arm 87 attached to a beam or track H to carry a pivot 88 for a double cam 89 which extends between the two adjustment extensions 93 and 93 one for each brake member.

Cam 89 by engaging adjustment extensions or members 93, 93 of the brake and shaft mover assembly can open the brake jaws or members 16, 16 at the top to allow a short core shaft to be slipped or dropped down into them and into the open top bearings 10, in placing a roll in position. The cam and jaws should therefore be so proportioned that there is room for the journal part of the short core shaft to go between them and at the same time so arranged that the jaws can be tightened for friction braking.

This cam 89 is operable by a handle or member 94 through which passes an adjustment control rod 95 carried by bearings 96 and having one fixed collar 97, and a spring pressed collar 98 with a spring 99 between it and another collar 100, whereby by moving the control rod 95 as to the right in Fig. 9, the brake pressure and the friction on the brake bands 101 on the journal 51 is decreased or increased while by moving the rod in the other direction as to the left, as the spring is compressed, the brake tension is increased.

Each brake control rod 95 may be conveniently operated as by an hydraulic piston and cylinder

indicated by 102 in Fig. 1, all connected to a master piston, not shown.

Any manual or power means to move rods 95 together might be used for adjusting and to open and close brake pieces 13, 13, to allow journals 51 to be lifted in and out of them and from bearing 10. Each brake can be adjusted by collar 100 and set screw 200.

My combination of backstand with shafts and bearings is shown as principally useful with a type of short core shaft each of which shafts includes a journal, the journals and bearings being all of the same size so as to be interchangeable and each also having a tapered thimble with a stop flange at its outer end, the short core shaft having at its inner end an elastic expansion collar which can be expanded by means from the outside end when inside a core and also at or near the outer end having two annular brake flanges to cooperate with a combination brake and shaft mover and an adjustable carrier.

The use of a light, short tubular shaft at each end of a core with brake flanges, a thimble with an end flange and means to expand an annular collar at the inside of the core from the outside end is believed to be new.

As shown, the thimble fits snugly inside the end of a core and together with the stop flange at the end and the expansion collar on the inside of the core and outside of the shaft holds the core and paper roll in the right position so that the various shafts and rolls can be so adjusted longitudinally and laterally by the adjusting means as to be exactly parallel and in alignment and so that the brake members can all cooperate to regulate the speed of the rolls when unwinding.

The combination of adjustable carriers each adjustable longitudinally and carrying a shaft bearing and supporting a combination brake and shaft mover to engage a shaft journal between brake flanges and means to operate all the brakes together is believed to be new in a backstand with movable side frames or with stationary side frames and with any shaft having core holding thimbles, an end flange and brake flanges.

Therefore, as shown in Fig. 8A, I can use a single shaft 25 substantially of the ordinary type with movable tapered thimbles 26 and 69, each adjustable by means of a set screw 66 or 67 and each having at its end a core stop flange 27 or 64 and having at one end only the brake flanges 28 and 29.

As shown, the thimbles 26 and 69 are adjustable on the shaft 25 and these shafts can be used with my universal backstand by removing the thimble 69 from one end of a shaft 25, then inserting its end into and passing it through the core C of a roll of paper P, moving thimble 26 if necessary, putting back the thimble 69 and handling the shaft, core and roll in the usual way except that the shaft has the annular brake flanges 28 and 29 by which it and they can be accurately adjusted along their axis by use of the combination brake and shaft mover to be in perfect parallel alignment with all of the other shafts and to be controlled by the braking means with all the other shafts.

As shown in Fig. 4A, I may use a short core shaft which would be formed on a tube 50 and with the brake flanges such as 53, 53 or 28 and 29, not shown, but with an end of core flange 100 which is substantially like 55, being fixed to tube 50 but the thimble 102 which is substantially the same as 56 is carried by and fixed to a telescoping or jacketed tube 104 slidable on tube 50 and having at its inner end a flange 103 which serves the purpose of 58 when the expansion collar 60 is squeezed to be expanded.

The idea of this construction is that by removing the nose and other parts of the inside end of such a shaft, the telescoping or tubular collar 104 with its flange 103 and thimble 102 can be slipped off and another one slipped on with a larger or smaller thimble.

The purpose of this is to allow a close sliding fit for each thimble in the end of a core to help the expansion member at the inner end to support the weight of the roll by having two points of support instead of one.

There are other means shown and described in my application pending herewith Serial No. 47,570, September 3, 1948, for accomplising this purpose by means of a second expanding collar, the use of improved types of thimbles and of replaceable thimbles.

I claim:

1. For use with a plurality of rolls of paper, each rolled on a tubular fibre core; the combination of short shafts, one inserted in each end of each core, each shaft including a metal tube with a projecting journal part, the journal parts of all the shafts being of the same diameter, each shaft having fixed near the outer end of its journal part two annular brake flanges for cooperation with a brake member and forming part of lateral adjusting means for lateral adjustment of each roll on a back stand, with a back stand including a fixed base, front and back side frames, each frame being movable laterally towards and away from the other on the base, the back side frame supporting a plurality of bearings all of a size to receive a short core shaft journal, the front side frame supporting a plurality of adjustable carriers, each adjustable carrier being movable and adjustable longitudinally on the front side frame, and supporting a bearing for a short core shaft journal, the adjustable carrier also supporting a combination brake and shaft mover to engage the journal between the annular brake flanges on a shaft, each combination brake and shaft mover being adjustable laterally on its adjustable carrier, means to operate the brake member of each combination brake and shaft mover together radially against a short core shaft journal on one side of each of the rolls; and means to move the front and back side frames towards and away from each other.

2. For use with a plurality of rolls of paper, each rolled on a tubular fibre core; the combination of short shafts, one inserted in each end of each core, each shaft including a projecting journal part, the journal parts of all the shafts being of the same diameter, each shaft having fixed near the outer end of its journal part two annular brake flanges for cooperation with a brake member and forming part of lateral adjusting means for lateral adjustment of each roll on a back stand, with a back stand including a fixed base, front and back side frames the front side frame, supporting a plurality of adjustable carriers, each adjustable carrier being movable and adjustable longitudinally on the front side frame, and supporting a bearing for a short core shaft journal, the adjustable carrier also supporting a combination brake and shaft mover to engage the journal between the annular brake flanges on a shaft, each combination brake and shaft mover being adjustable laterally on its adjustable carrier, means to operate the brake

member of each combination brake and shaft mover together radially against a short core shaft journal on one side of each of the rolls.

3. For use with a plurality of rolls of paper, each rolled on a tubular core; the combination of a shaft including a journal part, each shaft having a thimble to fit inside a core and an end flange to engage the end of the thimble and of a roll and each having, outside its thimble, two annular brake flanges for cooperation with the brake member forming part of the lateral adjusting means for lateral adjustment of each roll on a backstand; with a backstand, including a fixed base, front and back side frames movable towards and away from each other, one frame supporting a plurality of adjustable carriers, each adjustable carrier being movable and adjustable longitudinally on one side frame, and each supporting a bearing for a shaft journal, the adjustable carrier also supporting a combination brake and shaft mover to engage the journal between the annular brake flanges on a shaft, each combination brake and shaft mover being adjustable laterally on its adjustable carrier, means to operate the brake members of all the combination brake and shaft movers together radially against a journal between its brake flanges on that side frame which supports the adjustable carriers and another frame supporting a plurality of shaft bearings.

4. For use with a plurality of rolls of paper, each rolled on a tubular fibre core; the combination of a shaft for each core, each shaft including a projecting journal part, the journal parts of all the shafts being of the same diameter, each shaft having fixed near the outer end of its journal part two annular brake flanges for cooperation with a brake member and forming part of lateral adjusting carrier means for lateral adjustment of each roll on a back stand, with a back stand including front and back side frames, the back side frame supporting a plurality of bearings all of a size to receive a shaft journal, the front side frame supporting a plurality of said adjustable carriers, each adjustable carrier being movable and adjustable longitudinally on the front side frame, and supporting a bearing for a shaft journal, the adjustable carrier also supporting a combination brake and shaft mover to engage the journal between the annular brake flanges on a shaft, each combination brake and shaft mover being adjustable laterally on its adjustable carrier, means to operate the brake member of each combination brake and shaft mover together radially againt a shaft journal on one side of each of the rolls.

5. For use with a plurality of rolls of paper, each rolled on a tubular fibre core; the combination of shafts one for each core, each shaft including a projecting journal part with two brake flanges, the journal parts of all the shafts being of the same diameter, with a back stand including a fixed base, front and back side frames, each frame supporting bearings all of a size to carry any of the journals of the shafts, one of the frames supporting a plurality of adjustable carriers, each adjustable carrier being movable and adjustable longitudinally on the front side frame, and supporting a bearing for a shaft journal, the adjustable carrier also supporting a combination brake and shaft mover to engage the journal between the annular brake flanges on a shaft, each combination brake and shaft mover being adjustable laterally on its adjustable carrier, means to operate the brake member of each combination brake and shaft mover together radially against a short core shaft journal on one side of each of the rolls.

6. For use with a plurality of rolls of paper, each rolled on a tubular core; the combination of a shaft including a journal part, each shaft having a thimble to fit inside a core and an end flange to engage the thimble and the end of a roll and each having two annular brake flanges outside its thimble with a backstand, including one frame supporting a plurality of adjustable carriers, each adjustable carrier being movable and adjustable longitudinally on one side frame, and each supporting a bearing for a shaft journal, the adjustable carrier also supporting a combination brake and shaft mover including arms pivoted medially to the adjustable carrier on a threaded bushing connected to the adjustable carrier by an adjusting screw, the top ends engaging the journal between the annular brake flanges on a shaft, each combination brake and shaft mover being adjustable laterally on its adjustable carrier by said screw, cam means including a handle operable by power to operate the brake members of all the combination brake and shaft movers together radially against a journal between its brake flanges on that side frame which supports the adjustable carriers and another frame supporting a plurality of shaft bearings.

7. For use with a plurality of rolls of paper, each rolled on a tubular core; the combination of a shaft including a journal part, a thimble to fit inside a core to engage the end of a roll and each having two annular brake flanges outside its thimble with a backstand, including side frames, one frame supporting a plurality of adjustable carriers, each adjustable carrier being slidable by cam means and adjustable longitudinally on its side frame, and each supporting a bearing for a shaft journal, the adjustable carrier also supporting a combination brake and shaft mover to engage the journal between the annular brake flanges on a shaft, each combination brake and shaft mover being adjustable laterally on its adjustable carrier by screw means, means to operate the brake members of all the combination brake and shaft movers together radially against a journal between its brake flanges on that side frame which supports the adjustable carriers and another frame supporting a plurality of shaft bearings.

8. In a backstand of the type having front and back side frames; the combination of shafts each including a journal part and a thimble to fit inside a core to engage the end of a roll and each having two annular brake flanges outside its thimble with a backstand, including side frames, one frame supporting a plurality of adjustable carriers, each adjustable carrier being slidable by cam means and adjustable longitudinally on its side frame, and each supporting a bearing for a shaft journal, the adjustable carrier also supporting a combination brake and shaft mover to engage the journal between the annular brake flanges on a shaft, each combination brake and shaft mover being adjustable laterally on its adjustable carrier by screw means; means to operate the brake members of all the combination brake and shaft movers together radially against a journal between its brake flanges on that side frame which supports the adjustable carriers and another frame supporting a plurality of shaft bearings.

9. For use with a plurality of rolls of paper, a short core shaft which is inserted in each roll

end, an adjustable carrier slidable and movable on one side frame and supporting a bearing for the short core shaft, the adjustable carrier also supporting a combination brake and shaft shifting mechanism which includes a bushing laterally movable with reference to the frame by means of a hand operable adjusting screw, a combination brake and shaft mover, formed of crossed members pivoted medially together on said bushing and having top pieces curved towards each other to cooperate with the brake flanges and bottom arms cam operable by power, whereby the combination brake and shaft shifting members can be opened to receive a short core shaft or tightened to act as a brake band.

10. A backstand for use with a plurality of rolls of paper and having two side frames each supporting a plurality of top bearings of the same size, each to receive a journal part of a short core shaft, each such short core shaft being inserted in an end of a roll of paper and having two annular brake flanges, an adjustable carrier slidable and movable on one side frame and each supporting a bearing for a short core shaft journal, the adjustable carrier also supporting a combination brake and shaft mover, including a bushing laterally movable with reference to the frame by means of a hand operable adjustable screw, to move the combination brake and shaft mover, which is formed of crossed members pivoted medially together and on said bushing and having top pieces curved towards each other to cooperate with the annular brake flanges and bottom arms cam operable by power, whereby the combination brake and shaft members can be opened to receive a short core shaft or tightened to act as a brake band.

11. In a backstand of the type having front and back side frames; an adjustable carrier, a shaft having a journal and two annular brake flanges for cooperation with a brake member forming part of the adjustable carrier which is slidable and movable on one side frame and supports a bearing for the shaft, said combination brake and shaft assembly also including a bushing laterally movable with reference to the frame by means of a hand operable adjusting screw, thus constituting a combination brake and shaft mover, formed of crossed members pivoted medially together and on said bushing and comprising curved top pieces open at the top to cooperate with the brake flanges and bottom arms cam operable by power, whereby the combination brake and shaft mover members can be opened to receive a shaft or tightened to act as a brake band.

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