Oct. 21, 1952 J. B. GABRIELSON 2,614,770

BUILDING CONSTRUCTION ROLL SUPPORTING REEL

Filed Dec. 30, 1948

Fig. 1.

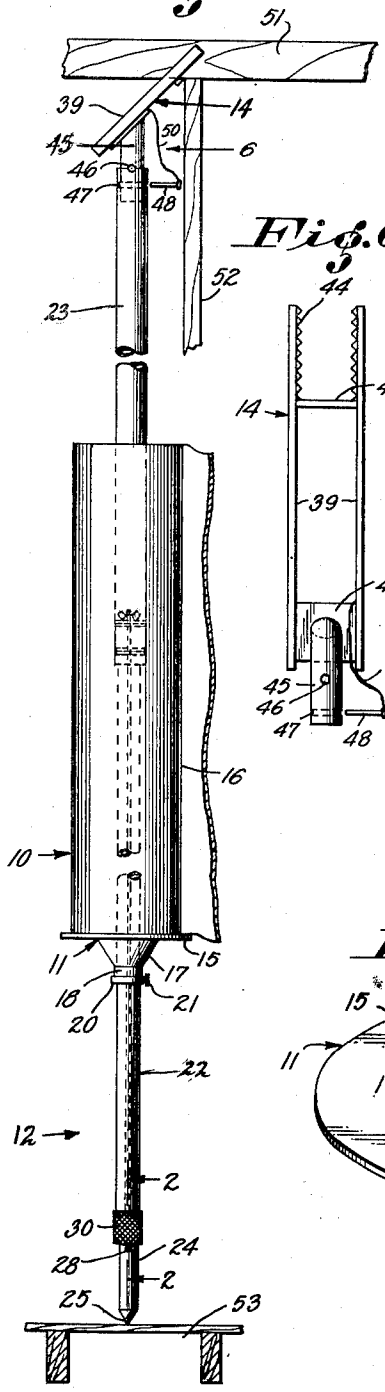


Fig. 6.

Fig. 2.

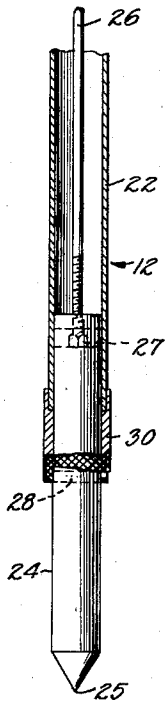
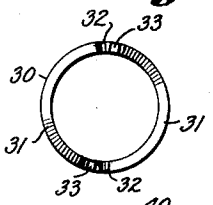


Fig. 3.



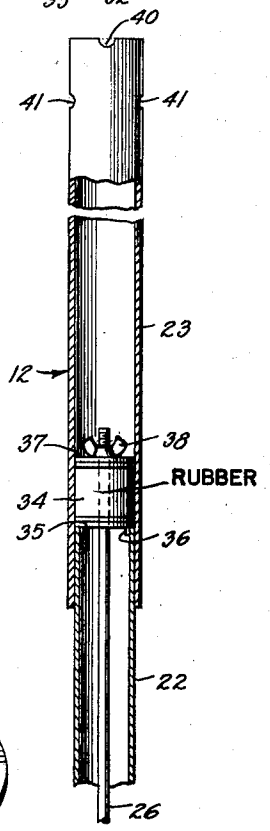


Fig. 5.

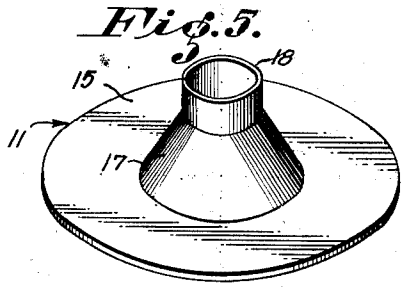


Fig. 4.

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Patented Oct. 21, 1952

2,614,770

UNITED STATES PATENT OFFICE

2,614,770

BUILDING CONSTRUCTION ROLL SUPPORTING REEL

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Application December 30, 1948, Serial No. 68,231

7 Claims. (Cl. 242—96)

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This invention relates to a building construction supporting roll and has for an object to provide an improved reel particularly useful in holding rolls of bulding paper or wire in building construction to make the paper or wire very convenient for use.

It is an object of this invention to provide a reel having a roll supporting plate that is adjustable according to the size of the roll of wire or of building paper that is to be mounted thereon, and also according to the height or level at which it is to be used.

A further object of this invention is to provide an adjustable reel for holding the wire or paper in a very convenient position for unreeling the same during construction of the building.

A further object of this invention is to provide a reel adapted to cooperate with a building in various stages of construction for holding the wire or paper in very convenient position for dispensing the wire or paper at the proper height as needed during construction. When a roll of wire is used in construction work, the wire is very apt to get tangled up both while waiting to be used and while being unrolled for further use, and also is apt to get dirty and messy, causing both loss of wire and loss of workingmen's time. If a roll of building paper is laid on the floor or ground while being used, it gets dirty and messy, and accidentally tears off the roll very easily, necessitating the services of a workingman to unreel the roll as it is being drawn out for use, and even so, is apt to be torn accidentally between the roll and the wall to which it is being applied.

With this invention, the roll is mounted on the reel, adjusted to the proper height and cooperates with the building according to the progress of the construction, and may be unreeled smoothly, without the services of a workingman at the roll, in substantially the same level that it is being applied, without danger of tearing due to being twisted between the roll and point of application.

A further object of this invention is to provide a wire or paper holding reel adapted to cooperate with the building construction for holding the reel in convenient dispensing position for use.

A further object of this invention is to provide a wire or paper dispensing reel that will cooperate with a vertical stud for holding the reel in sufficiently upright position for dispensing purposes, and likewise will cooperate with a horizontal beam or studding when the horizontal is close to a floor or ground support as well as when the horizontal is fairly high up, and away from the floor or ground.

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A further object of this invention is to provide a supporting reel that is telescopically adjustable in height, whereby it may be supported against a stud, rafter or joist at any suitable height in a building under construction so that the roll of building material may be held at the most suitable height.

A further object of this invention is to provide an improvement in the wire and paper reel shown in application Ser. No. 734,823, filed March 14, 1947, now Patent No. 2,480,461, issued August 30, 1949.

Other additional objects will more fully appear from the following description, and that the invention may be more fully understood, reference is had to the accompanying drawing forming a part of the present description and illustrating a preferred embodiment of the invention, in which:

Fig. 1 is a plan view of the reel of this invention, supported against a ceiling joist.

Fig. 2 is an enlarged detail view on line 2—2 of Fig. 1.

Fig. 3 is a bottom plan view of the joint operating sleeve.

Fig. 4 is an enlarged fragmentary sectional view of the telescopic joint between the two sleeves forming the reel pole.

Fig. 5 is a perspective bottom plan view of the roll supporting plate, and

Fig. 6 is a view looking in the direction of arrow 6 of Fig. 1 of the reel top supporting bifurcated arm.

There is shown at 10 the building construction roll supporting reel of this invention. This reel is intended to support a roll of building construction material, such as paper or wire, so as to hold the roll ready and convenient for use in paying out the paper or wire at any desired height and location during the construction of a building, that may be readily assembled and readily moved as desired as the construction work proceeds.

The reel 10 consists of three basic parts, a roll bottom supporting plate 11, a telescopic reel pole 12 and a bifurcated reel top supporting bifurcated arm 14.

The plate 11 consists of a centrally apertured disk 15, of a diameter at least as large as the diameter of a roll of building paper 16, or a roll of electric wire (not shown), and has a supporting cone frustrum 17 on the bottom thereof ending in a cylindrical neck 18 of a diameter slightly larger than the diameter of the pole 12. A clamping ring 20 having a knurled set screw 21 serves to adjustably support the plate 11 at any desirable point on the pole 12, the head of

knurled set screw being also provided with a screw driver slot.

The reel pole 12 is made entirely or principally of metal, preferably of lightweight metal, such as aluminum or magnesium or compounds thereof. The pole 12 includes two telescopic long cylinders, an inner lower cylinder 22 and an upper outer cylinder 23. Pole 12 also includes a somewhat sharpened toe 24 which fits into the bottom of cylinder 22 and has its point 25 at its bottom together with means for securing the toe 24 to the lower cylinder 22 and for adjustably securing the two cylinders together at any desired point so as to be able to vary the length of the pole 12 as desired.

This securing means includes a rod 26, which is slightly longer than the lower inner cylinder 22 and is threaded at both ends. The lower end of the rod 26 is threaded through an axial aperture in the top of toe 24 into a nut 27 which has been inserted through a diametrical aperture at the bottom of the axial aperture in the toe 24. The rod 26 can thus draw the toe 24 into the cylinder 22, but this movement is limited by a cross pin 28 extending transversely through the toe 24 about midway thereof. This cross pin 28 cooperates with a knurled counterbored operating sleeve 30 having two slightly less than semi-circular cammed edges 31 each ending at its low end in a slight curved recess 32 of a diameter to receive the ends of the cross pin 28, the recess of each being separated from the high point of the other cam by an abutment 33. The bore of the sleeve 30 is of a diameter to fit about the upper end of toe 24, while its counterbore is of a diameter to receive the lower end of the lower cylinder 22.

At its upper end, the rod 26 extends through an axially compressible and diametrically expandable rubber plug 34 having its normal diameter the same as that of the lower pole cylinder 22. An apertured metal washer 35 of this same diameter, which has a pair of down struck tongues 36 to just fit within the top end of the cylinder 22, serves as a floor for the plug 34, while another apertured washer 37 placed on the top of plug 34 is held thereagainst by the wing nut 38 on the top end of rod 36. The wing nut 37 is tightened just enough so that the plug 34 will just slide into the upper cylinder 23. As thus assembled, it is apparent that rotation of the operating sleeve 30 will both cause the rod 26 to expand the plug 34 into a tight fit within the upper cylinder 23 thus locking the two cylinders together at whatever relative position they have been adjusted to, and will simultaneously extend the overall length of the pole 12 by the depth of the cams of sleeve edges 31.

The upper edge of upper pole cylinder 23 is provided with a pair of diametrically opposed notches 40, and slightly therebelow, and preferably 90° therefrom is a pair of oppositely disposed locking pin receiving holes 41.

The third part 14 consists of a pair of flat straps or arms 39 secured together in spaced relation by a flat plate 42 near its lower end and a small bar 43 spaced somewhat from the other end. The straps or arms 39 are spaced apart a distance equal to the conventional thickness of the usual stud, joist and rafter, and the inner surfaces of the arms 39 are serrated as at 44 from the bar 43 to the end of the arms. Secured to the flat connecting plate 42, at about 45° thereto, is a stud 45 having a diameter to just fit in the upper end of upper pole cylinder 23. Extending diametrically through this stud 45 is a crosspin 46 whose ends will fit into and rest in the notches 40 of pole cylinder 23. Below this cross pin 46 is a pair of oppositely disposed holes 47, 90° displaced from the cross pin 46, so that when cross pin 46 is in notches 40, the holes 47 line up with the holes 41 to receive a locking pin 48 which is secured on the end of a flexible tether 50 secured to the plate 42.

In operation, the reel 10 is used for supporting a roll of building material in a position convenient for use in a building while under construction. This material may be building paper or a roll of wire, or any other material that comes in rolls and must be unreeled for use. Here, the roll is shown as being a roll of paper which is used in lining or insulating a wall surface. After the pole 12 has been assembled and adjusted to the desired size, the clamping ring 20 is secured to hold the roll supporting plate 11 at the desired height and the roll 16 is put in place over the upper end of the pole 12. Then the stud 45 of the top part is placed into the top of upper pole cylinder 23 and locked thereto by the locking pin 48. Then the serrated arms 39 are placed about a selected joist, upright stud or rafter, whichever may be most convenient. It is here shown as embracing a ceiling joist 51 adjacent an upright stud 52, while the point 25 of the toe 24 is placed on a floor board 53. The pole 12 may be adjusted to a snug and secure fit by then reversing the operating sleeve 30, pushing the upper cylinder 23 upwardly until it fits tightly against the upper part 39, then again rotating the sleeve 30 to expand the plug 34 and slightly lengthen the pole 12, pushing the point 25 into the floor 53.

The pole will thus remain firmly in position while the paper or other material may be unreeled as desired. By placing the reel at one corner of a room under construction it may be used to cover one entire wall, by starting with the roll in position near the top of the pole to provide an upper layer on the wall. Then the clamping ring 20 is released and lowered a distance to the width of the roll of paper 16 and tightened there to hold the plate 11 at the lower location, and support the roll while another layer is being unreeled. When one roll is finished, it may be easily moved to another wall. Obviously, the cylinders may be of any desired length according to the height of the building under construction. For homes, six foot lengths are most appropriate but for industrial buildings eight or ten foot lengths may be used. Also, the pole cylinders may be of unequal length, as desired.

While the invention has been illustrated and described, it must be understood that modifications falling within the scope of the following claims and within the spirit of the invention might be made without departing therefrom.

I claim:

1. A dispensing reel for building material construction rolls comprising a telescopically adjustable and extendable reel pole, a roll supporting plate concentrically and adjustably mounted on said pole arranged to support the roll about said reel pole as an axis, a reel supporting member removably secured to said pole arranged to cooperate with an upper portion of a building to support the reel in an axially upright position, said telescopically adjustable reel pole comprising a long inner cylinder, a long outer cylinder, means for lengthening said pole and simultaneously locking said cylinders together in any desired ad-

justed position, consisting of an axially contractable diametrically expandable cylindrical plug fitting within the outer cylinder and abutting one end of the inner cylinder, and means for axially contracting and diametrically expanding said plug at will, consisting of a rod having one end secured through said cylindrical plug, a toe extending into the other end of said inner cylinder, a rotatable cammed sleeve abutting between said toe and said other end of said inner sleeve, said other end of said rod being secured to said sleeve, whereby rotation of said cammed sleeve locks said cylinders together, lengthens said pole, and abuts said toe against a lower portion of the building.

2. A dispensing reel for building material construction rolls comprising a telescopically adjustable and extendable reel pole, a roll supporting plate concentrically and adjustably mounted on said pole arranged to support the roll about said reel pole as an axis, a reel supporting member removably secured to said pole arranged to cooperate with an upper portion of a building to support the reel in an axially upright position, said telescopically adjustable reel pole comprising a long inner cylinder, a long outer cylinder, means for lengthening said pole and simultaneously locking said cylinders together in any desired adjusted position, consisting of an axially contractable diametrically expandable cylindrical plug fitting within the outer cylinder and abutting one end of the inner cylinder, means for axially contracting and diametrically expanding said plug at will, consisting of a rod having one end secured through said cylindrical plug, a toe extending into the other end of said inner cylinder, a rotatable cammed sleeve abutting between said toe and said other end of said inner sleeve, the other end of said rod being secured to said sleeve, whereby rotation of said cammed sleeve locks said cylinders together, lengthens said pole, and abuts said toe against a lower portion of the building, said reel supporting member consisting of a stud fitting in an end of a reel pole cylinder, means for cooperatively locking said stud to said cylinder end, and a pair of spaced apart parallel arms mounted on said stud.

3. A dispensing reel for building material construction rolls comprising a telescopically adjustable and extendable reel pole, a roll supporting plate concentrically and adjustably mounted on said pole arranged to support the roll about said reel pole as an axis, a reel supporting member removably secured to said pole arranged to cooperate with an upper portion of a building to support the reel in an axially upright position, said telescopically adjustable reel pole comprising a long inner cylinder, a long outer cylinder, means for lengthening said pole and simultaneously locking said cylinders together in any desired adjusted position, consisting of an axially contractable diametrically expandable cylindrical plug fitting within the outer cylinder and abutting one end of the inner cylinder, means for axially contracting and diametrically expanding said plug at will, consisting of a rod having one end secured through said cylindrical plug, a toe extending into the other end of said inner cylinder, a rotatable cammed sleeve abutting between said toe and said other end of said inner sleeve, the other end of said rod being secured to said sleeve, whereby rotation of said cammed sleeve locks said cylinders together, lengthens said pole, and abuts said toe against a lower portion of the building, said reel supporting member consisting of a stud fitting in an end of a reel pole cylinder, means for cooperatively locking said stud to said cylinder end, and a pair of spaced apart parallel arms mounted on said stud, said arms being spaced apart a distance equal to the thickness of a building part, a part of the inner faces of said arms being serrated.

4. A dispensing reel for building material construction rolls comprising a telescopically adjustable and extendable reel pole, a roll supporting plate concentrically and adjustably mounted on said pole arranged to support the roll about said reel pole as an axis, a reel supporting member removably secured to said pole arranged to cooperate with an upper portion of a building to support the reel in an axially upright position, said telescopically adjustable reel pole comprising a long inner cylinder, a long outer cylinder, means for lengthening said pole and simultaneously locking said cylinders together in any desired adjusted position, consisting of an axially contractable diametrically expandable cylindrical plug fitting within the outer cylinder and abutting one end of the inner cylinder, means for axially contracting and diametrically expanding said plug at will, consisting of a rod having one end secured through said cylindrical plug, a toe extending into the other end of said inner cylinder, a rotatable cammed sleeve abutting between said toe and said other end of said inner sleeve, said other end of said rod being secured to said sleeve, whereby rotation of said cammed sleeve locks said cylinders together, lengthens said pole, and abuts said toe against a lower portion of the building, said reel supporting member consisting of a stud fitting in an end of a reel pole cylinder, means for cooperatively locking said stud to said cylinder end, a pair of spaced apart parallel arms mounted on said stud, said roll supporting plate comprising a centrally apertured disk, a cone frustrum secured on the bottom of said disk, and a cylindrical neck extending from the bottom of said cone frustrum.

5. A dispensing reel for building material construction rolls comprising a telescopically adjustable and extendable reel pole, a roll supporting plate concentrically and adjustably mounted on said pole arranged to support the roll about said reel pole as an axis, a reel supporting member removably secured to said pole arranged to cooperate with an upper portion of a building to support the reel in an axially upright position, said telescopically adjustable reel pole comprising a long inner cylinder, a long outer cylinder, means for lengthening said pole and simultaneously locking said cylinders together in any desired adjusted position, consisting of an axially contractable diametrically expandable cylindrical plug fitting within the outer cylinder and abutting one end of the inner cylinder, means for axially contracting and diametrically expanding said plug at will, consisting of a rod having one end secured through said cylindrical plug, a toe extending into the other end of said inner cylinder, a rotatable cammed sleeve abutting between said toe and said other end of said inner sleeve, said other end of said rod being secured to said sleeve, whereby rotation of said cammed sleeve locks said cylinders together, lengthens said pole, and abuts said toe against a lower portion of the building, said reel supporting member consisting of a stud fitting in an end of a reel pole cylinder, means for cooperatively locking said stud to said cylinder end, a pair of spaced apart parallel arms mounted on said stud, said roll supporting plate comprising a centrally apertured disk, a cone frustrum se-

cured on the bottom of said disk, a cylindrical neck extending from the bottom of said cone frustrum, and a clamping means for supporting said plate on said reel pole.

6. A dispensing reel for building material construction rolls comprising a telescopically adjustable and extendable reel pole, a roll supporting plate concentrically and adjustably mounted on said pole arranged to support the roll about said reel pole as an axis, a reel supporting member removably locked to the upper end of said pole arranged to cooperate with an upper portion of a building to support the reel in an axially upright position, said telescopically adjustable reel pole comprising a long inner cylinder, a long outer cylinder, manually operable means for lengthening said pole and simultaneously locking said cylinders together in any desired adjusted position, consisting of an axially contractable diametrically expandable cylindrical plug fitting within the outer cylinder and abutting one end of the inner cylinder, means for locking said plug to said outer cylinder, consisting of a rod having one end secured through said cylindrical plug, a toe extending into the other end of said inner cylinder, a rotatable cammed sleeve abutting between said toe and said other end of said inner sleeve, said other end of said rod being secured to said sleeve, whereby rotation of said cammed sleeve locks said cylinders together while simultaneously lengthening said reel pole somewhat and abutting said toe against a lower portion of the building, said roll supporting plate comprising a centrally apertured disk, a cone frustrum secured on the bottom of said disk, a cylindrical neck extending from the bottom of said cone frustrum, and a clamping means for supporting said plate on said reel pole.

7. A dispensing reel for building material construction rolls comprising a telescopically adjustable and extendable reel pole, a roll supporting plate concentrically and adjustably mounted on said pole arranged to support the roll about said reel pole as an axis, and a reel supporting member removably locked to the upper end of said pole arranged to cooperate with an upper portion of a

building to support the reel in an axially upright position, said telescopically adjustable reel pole comprising a long inner cylinder, a long outer cylinder, and means for lengthening said pole and simultaneously locking said cylinders together in any desired adjusted position, consisting of an axially contractable diametrically expandable cylindrical plug fitting within the outer cylinder and abutting one end of the inner cylinder and means for contracting said plug at will consisting of a rod having one end secured through said expandable plug, a toe extending into the other end of said inner cylinder, a rotatable cammed sleeve abutting between said toe and said other end of said inner sleeve, the other end of said rod being secured to said sleeve, whereby rotation of said cammed sleeve locks said cylinders together while simultaneously lengthening said reel pole somewhat, and abutting said toe against a lower portion of the building, said reel supporting member consisting of a stud fitting in an end of a reel pole cylinder, means for cooperatively locking said stud to said cylinder end, a pair of spaced apart parallel arms mounted on said stud at an angle, said arms being spaced apart a distance equal to the thickness of a building part, a part of the inner faces of said arms being serrated, said roll supporting plate comprising a centrally apertured disk, a cone frustrum secured on the bottom of said disk, a cylindrical flange extending from the bottom of said cone frustrum, and a clamping means for supporting said plate on said reel pole.

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