BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G97.580.1
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AT&T Co Standard

RS POWER REEL

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1. GENERAL

1.01 The RS power reel is used primarily to pull aerial cable into rings or other supports on the suspension strand where a small diameter wire rope is used as the pulling line. The spools are a convenient means for storing the wire rope and have a capacity of 1000 feet of 1/4-inch wire rope. The assembly is so designed that pulls of any desired length can be made by using the necessary number of spools.

1.02 The RS power reel is driven by the winch drum shaft and the limitations of Paragraph 4.08 should be observed.

2. SAFETY PRECAUTIONS

2.01 Before operating the RS power reel, make certain that it is properly assembled and properly mounted (Paragraph 3.01).

2.02 Stand clear of the reel and keep hands off the wire rope during the pulling operation. When it is necessary to guide the wire rope on to the spool the workman should use a digging bar or some similar device and he should stand at least three feet back from the spool.

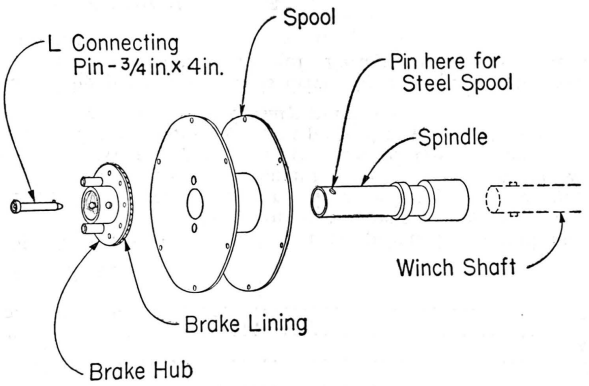
2.03 Do not overload the winch shaft (Paragraph 4.08). Be on the alert for troubles that might result in an overload of the winch shaft. In case of a trouble, stop pulling until it has been located and cleared.

2.04 Move the truck only short distances with the reel mounted.

2.05 The reel should be run at a reasonable speed which should be governed by the conditions of the pull.

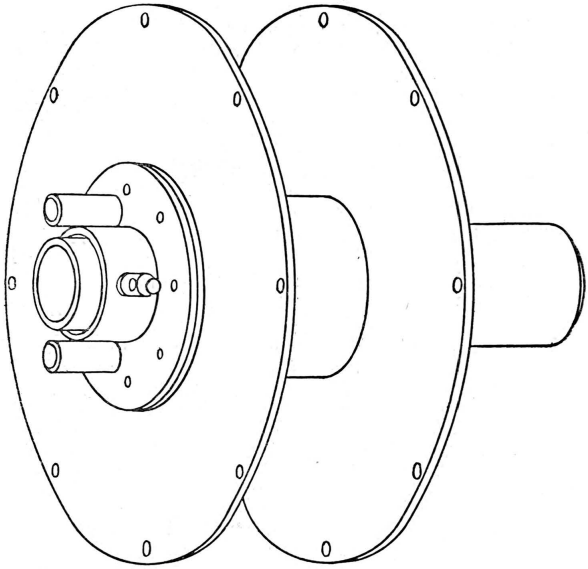
3. DESCRIPTION

3.01 The RS power reel consists of a driving spindle, a pole spindle and a spool which may be mounted on either the driving spindle or the pole spindle. The driving spindle and the pole spindle include a brake hub to control the spool. The driving spindle and a spool are illustrated below, showing how they would be assembled on the winch shaft.



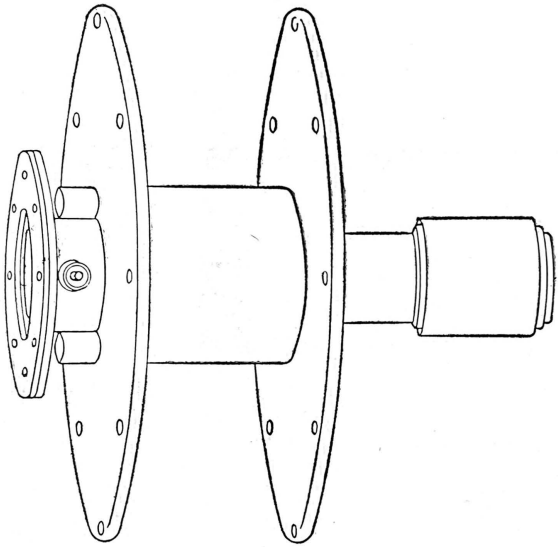
RS POWER REEL PARTS

3.02 When the RS power reel is assembled as shown below the spool will free wheel but may be braked by manually pressing the brake hub against the spool.



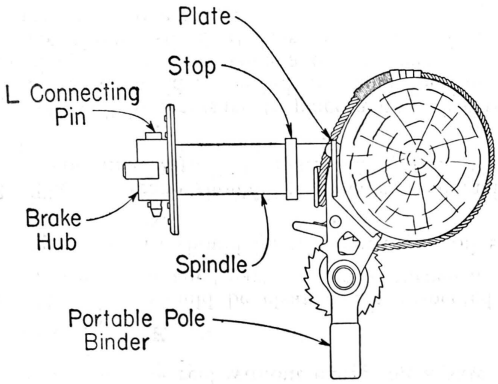
FREE WHEELING POSITION

3.03 When the brake hub is reversed and the RS power reel is assembled as shown below it may be driven by the winch drum shaft.



DRIVING POSITION

3.04 The wire rope may be payed out by mounting the spool on the pole spindle shown below in the same manner as it is mounted on the driving spindle. The pole spindle consists of a brake hub and a spindle welded to a plate which is in turn welded to a portable pole binder.



POLE SPINDLE

4. OPERATION

4.01 Before using the driving spindle wind all the winch rope on to the winch drum and secure it by means of the winch line fastener or by attaching the end to one of the holes in the flange of the drum. If the winch drum is equipped with a clutch, disengage it.

4.02 Wheels should be chocked and the brakes set before a pull is made. For additional information see Bell System Practices, Wheel Chocks—Use and Care.

4.03 When the wire rope is payed out from a spool mounted on the driving spindle, mount the spindle by sliding it over the winch drum shaft, push it as far as possible towards the truck, turn it counterclockwise as far as it will go and stop pushing. Check to see that the bayonet joint has engaged. When properly engaged the spindle can not be pulled off or rotated in either direction by hand without inward pressure. Slide the spool and then the brake hub on to the spindle and attach the brake hub by means of an L connecting pin as shown in the figure following Paragraph 3.02. The reel should be mounted in such a manner that the forward speeds of the truck will be used when the pull is made. This would mean that when the pull is from the back of the truck the wire rope should be payed out over the top of the spool and when the pull is from the front of the truck the wire rope should be payed out

under the bottom of the spool. If the reverse speed is used for pulling, the worm brake will deliver full braking effort causing unnecessary heating and wear.

4.04 When the brake hub is attached to the spindle in the position shown in the figure following Paragraph 3.02 the spool will free wheel but may be braked by pushing the hub against the spool.

4.05 If the pole spindle is to be used for the paying out operation attach it to a pole as shown in the figure following Paragraph 3.04 and then proceed as in Paragraph 4.03.

4.06 When making a pull the spool must be mounted on the driving spindle on the winch drum shaft. The brake hub should be reversed so the lugs engage the holes in the spool as shown in the figure following Paragraph 3.03 and the eye of the wire rope should be attached to the knob on the spool. The pull should be made using the forward speeds of the truck transmission.

4.07 When the spool becomes loaded, approximately 1000 feet of 1/4-inch wire rope have been reeled up, and if the pull is over 1000 feet a splice point in the pulling line will have been reached. Disconnect the two ropes; attach the end of the wire rope on the spool to one of the holes in the flange. Slip the drum off and replace it with an empty one and continue the pull.

4.08 The maximum pull on the spool should be limited to 4000 pounds in order to prevent bending the winch drum shaft. Unless there are severe corners, a 2000-foot length of aerial cable weighing approximately one pound per foot can be pulled by the reel without exceeding a safe limit.

5. MAINTENANCE

5.01 The spool should be cleaned and inspected regularly. Worn or damaged parts should be turned in for repair.

5.02 The spindles should be wiped with an oil soaked rag once a week.

5.03 The wire rope should be inspected and maintained in accordance with Bell System Practices, Wire Rope—General.

5.04 When it is necessary to place a new wire rope on the spool it should be reeled up under tension and should be guided by a workman using a digging bar or some similar device. He should stand at least three feet from the spool during the entire operation.