



Monkhouse **JUMP**

Jack Up Mega Pole

Improved Version - 2010 Edition

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JUMP

The JUMP is a heavy duty telescoping pole system that can be raised by a Jack. It is mounted on a portable hole or installed in a ground implant.

The telescoping poles are made from Rigid Electrical Conduit available from Home Depot and Lowe's which come in joints of 10 feet and in diameters of 2", 1 1/2", 1 1/4", and 1". Other supporting parts are readily available at hardware and plumbing supply stores. The Jack can be purchased from Harbor Freight (see parts list).

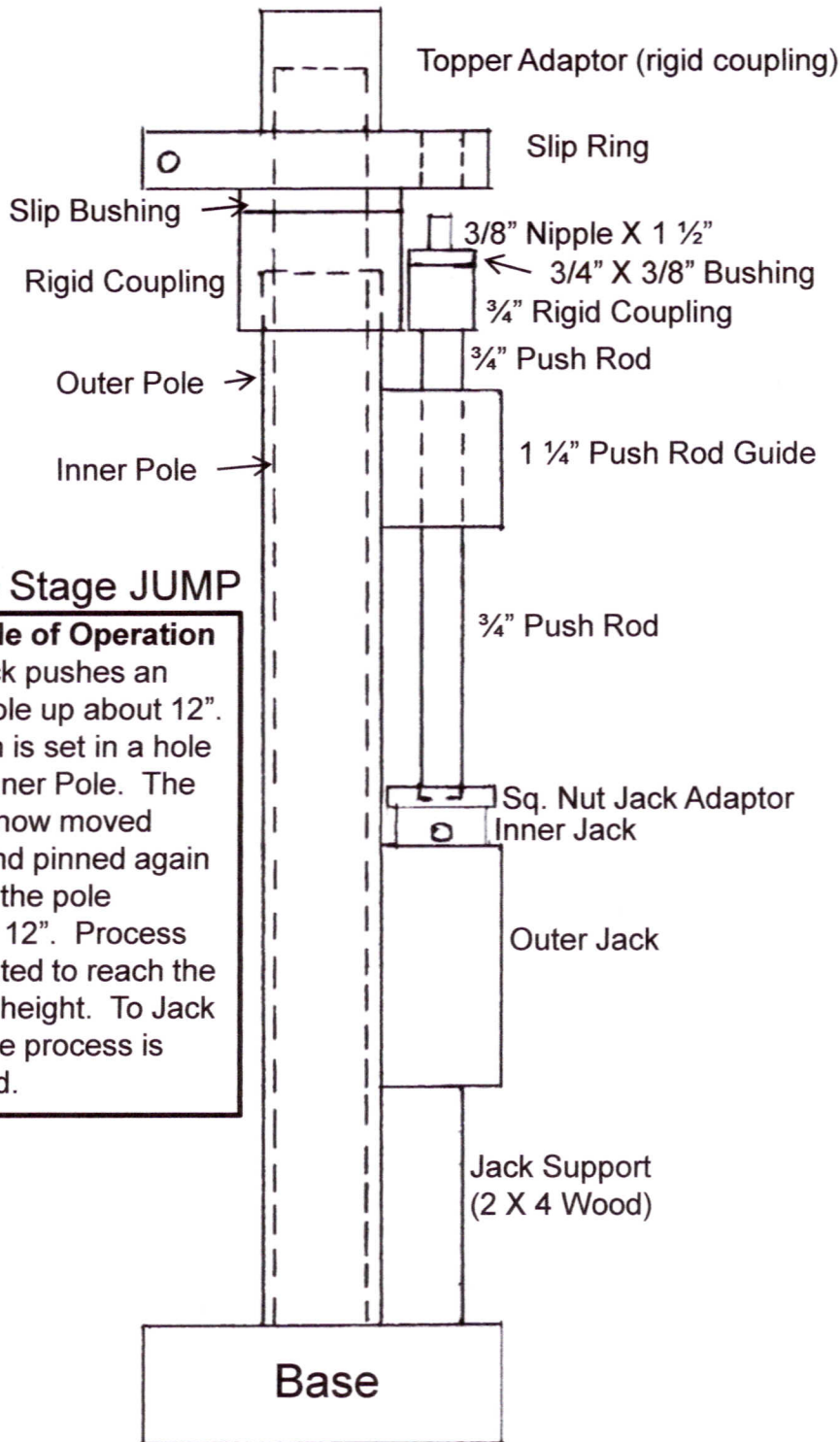
This document will be describing 14 combinations and configurations of how the telescoping poles can be put together.

Do not be confused by the bulk of all this material. Start by choosing how high you want your telescoping pole to go and decide if you want to raise your pole while standing on the ground or are you willing to stand on a ladder 4 to 5 feet high.

The 14 combinations are based on:

- * How high the pole goes
- * How the pole is operated

Improved JUMP-Single Stage-telescoping pole parts and jacking assembly

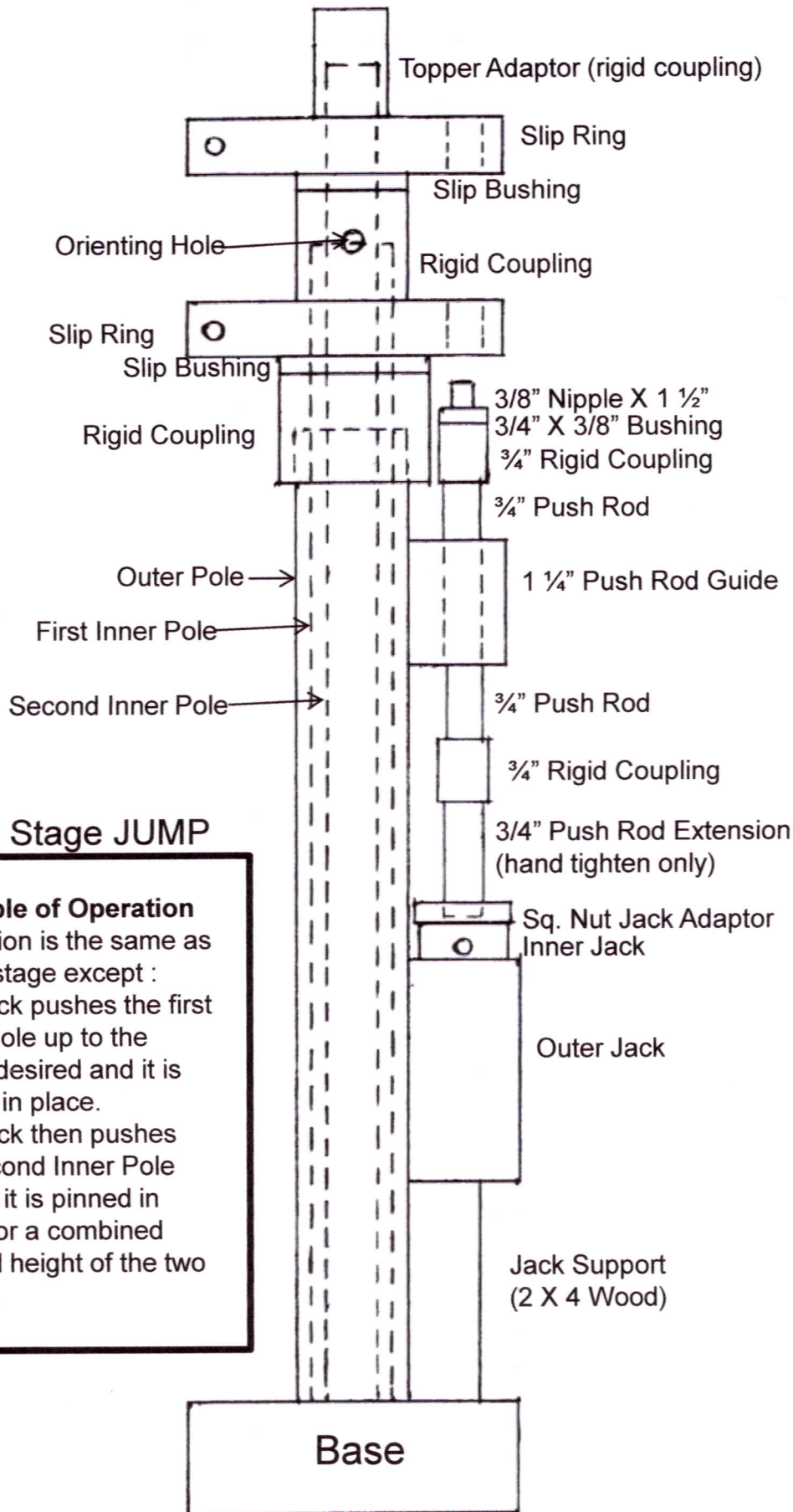


Single Stage JUMP

Principle of Operation

The Jack pushes an Inner Pole up about 12". A 1/4" pin is set in a hole in the Inner Pole. The Jack is now moved down and pinned again to raise the pole another 12". Process is repeated to reach the desired height. To Jack down the process is reversed.

Improved JUMP- Two Stage – telescoping pole parts and jacking assembly



Two Stage JUMP

Principle of Operation

Operation is the same as single stage except :
The Jack pushes the first Inner Pole up to the height desired and it is pinned in place.
The Jack then pushes the second Inner Pole up and it is pinned in place for a combined desired height of the two stages.

Height – Up to 12' High

Single Stage – operated at or about ground level
(See Drawing)

Pole Combinations

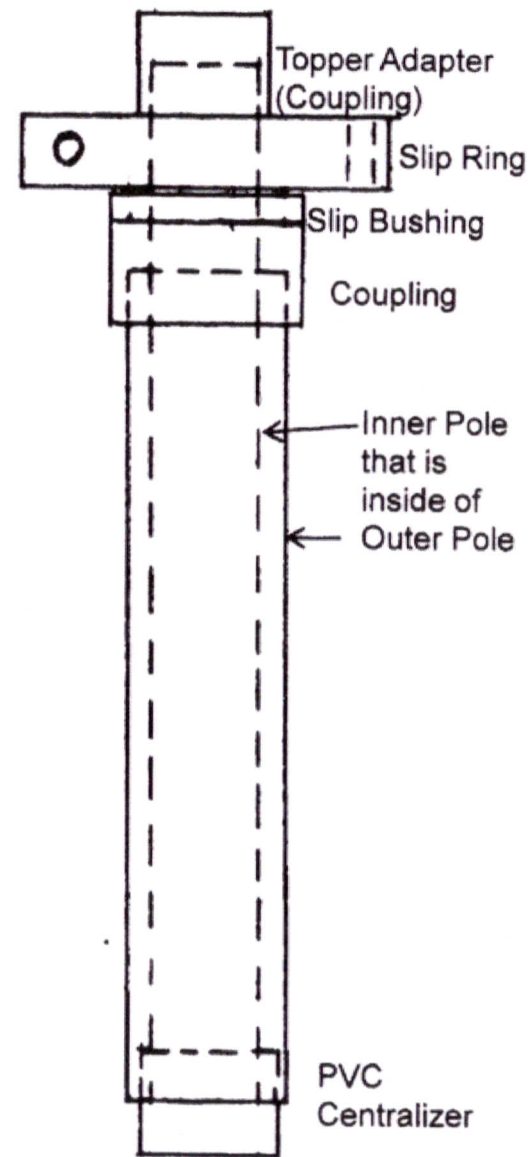
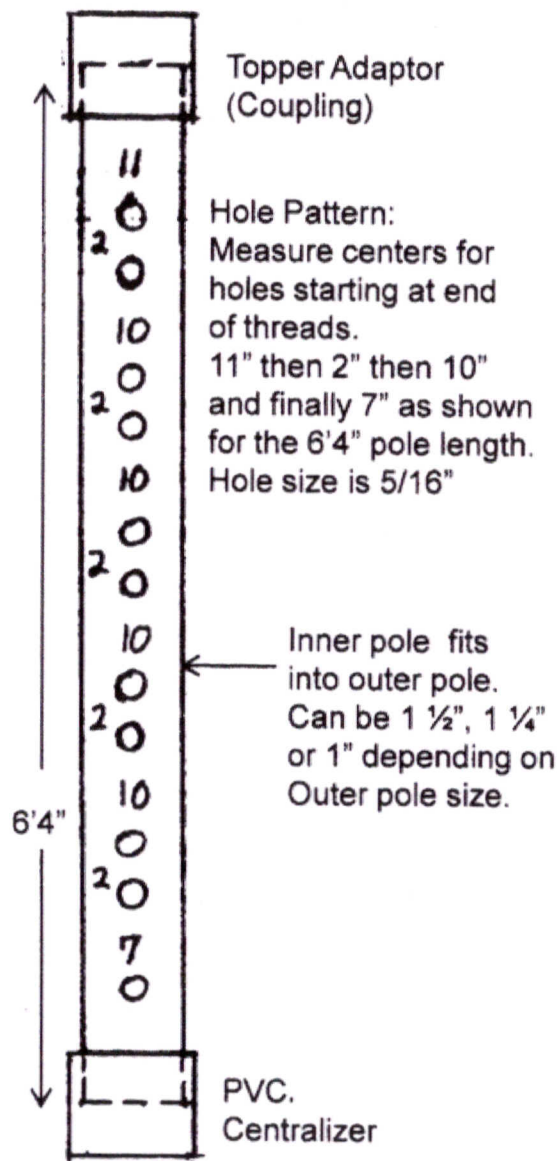
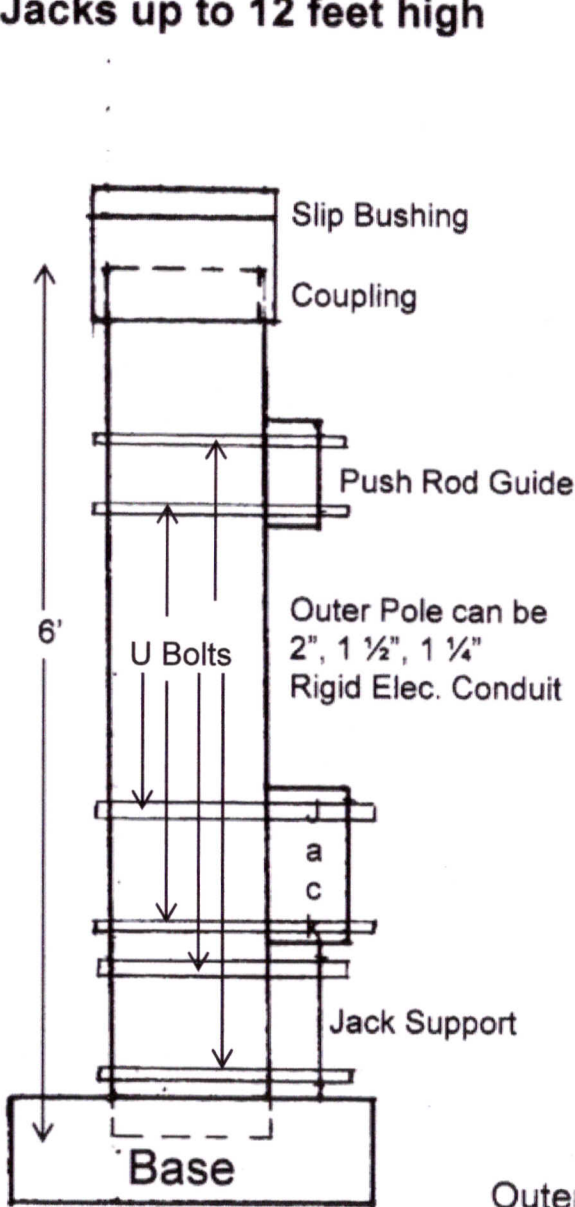
	<u>Inner Pole Weight</u>
2" Outer Pole, 1 ½" Inner Pole	16.6#
2" Outer Pole, 1 ¼" Inner Pole	13.8#
2" Outer Pole, 1" Inner Pole	10.0#
1 ½" Outer Pole, 1" Inner Pole	10.0#
1 ¼" Outer Pole, 1" Inner Pole	10.0#

Notes:

- Requires 1 Slip Ring, 1 Slip Bushing, 1 PVC Centralizer, 1 Rigid Coupling, 1 Topper Adaptor (Parts must be sized to pipe size used).
- Additional height (up to about 4') can be gained by using extensions or other means.
- Can be raised by hand.
- Hole pattern can be changed for lifting by hand.

Single Stage Telescoping Pole – operated at or near ground level

Jacks up to 12 feet high



Outer Pole length is 6' with 1" of threads on both ends.

Inner Pole length is 6'4" with 1" of threads on both ends.

Height – Up to 18' 6" High

Two Stage - operated at or near ground level
(See Drawing)

Pole Combinations

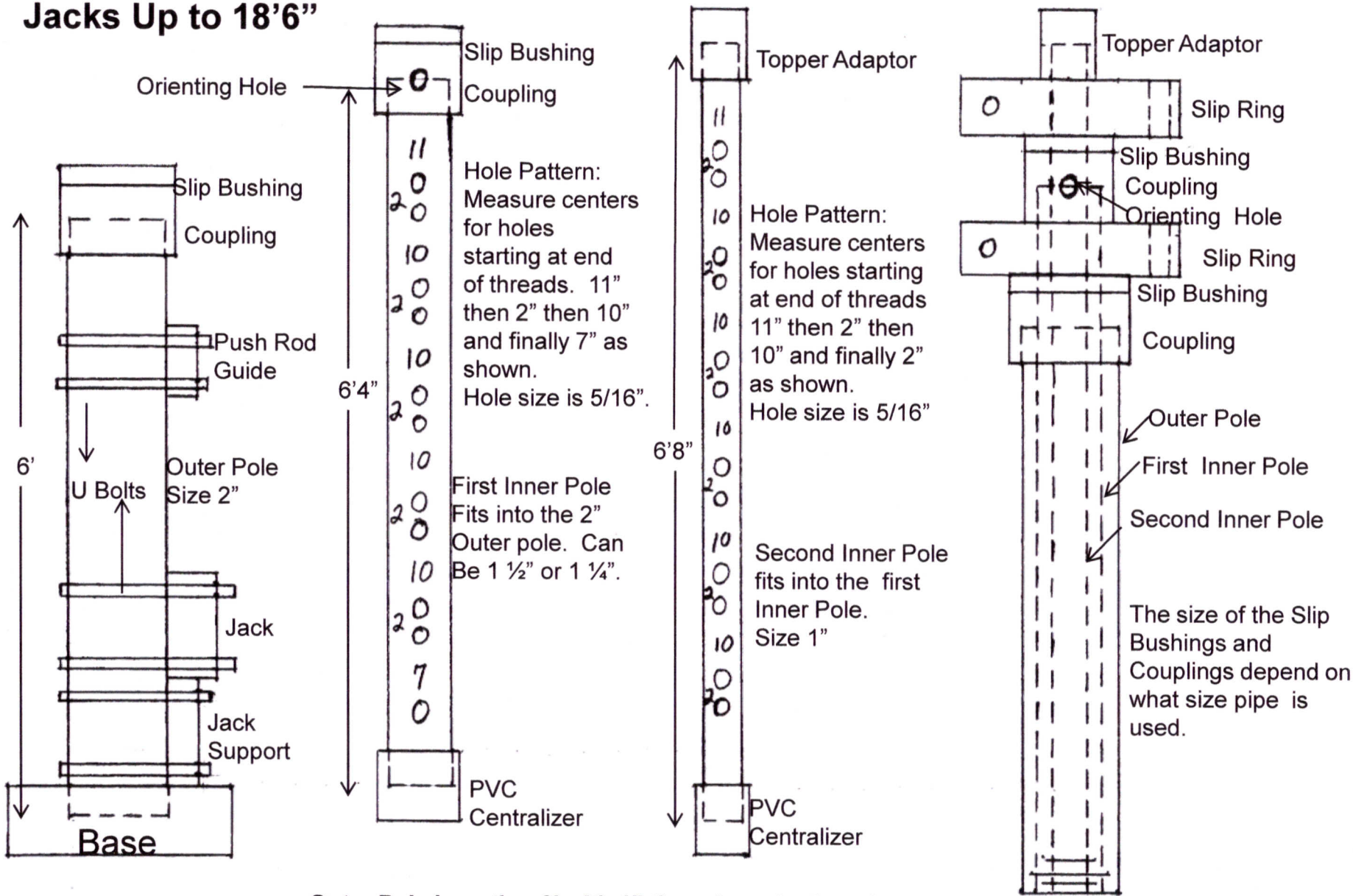
2" Outer Pole, 1 ½" Inner Pole and 1" Inner Pole
2" Outer Pole, 1 ¼" Inner Pole and 1" Inner Pole

Notes:

- Requires 2 Slip Rings, 2 Slip Bushings, 2 PVC Centralizers, 2 Rigid Couplings, 1 Topper Adaptor (Parts sized according to pipe size used)
- Additional height (up to about 4') can be gained by using extensions or other means.

Two Stage Telescoping Pole-operated at or near ground level

Jacks Up to 18'6"



Outer Pole Length – 6' with 1" threads on both ends
First Inner Pole Length – 6'4" with 1" threads on both ends
Second Inner Pole Length – 6'8" with 1" threads on both ends

Height – Up to 19'6" High

**Single Stage - Ladder required for operation
(See Drawing)**

Pole Combinations

2" Outer Pole, 1 ½" Inner Pole

2" Outer Pole, 1 ¼" Inner Pole

2" Outer Pole, 1" Inner Pole

1 ½" Outer Pole, 1" Inner Pole

1 ¼" Outer Pole, 1" Inner Pole

Notes:

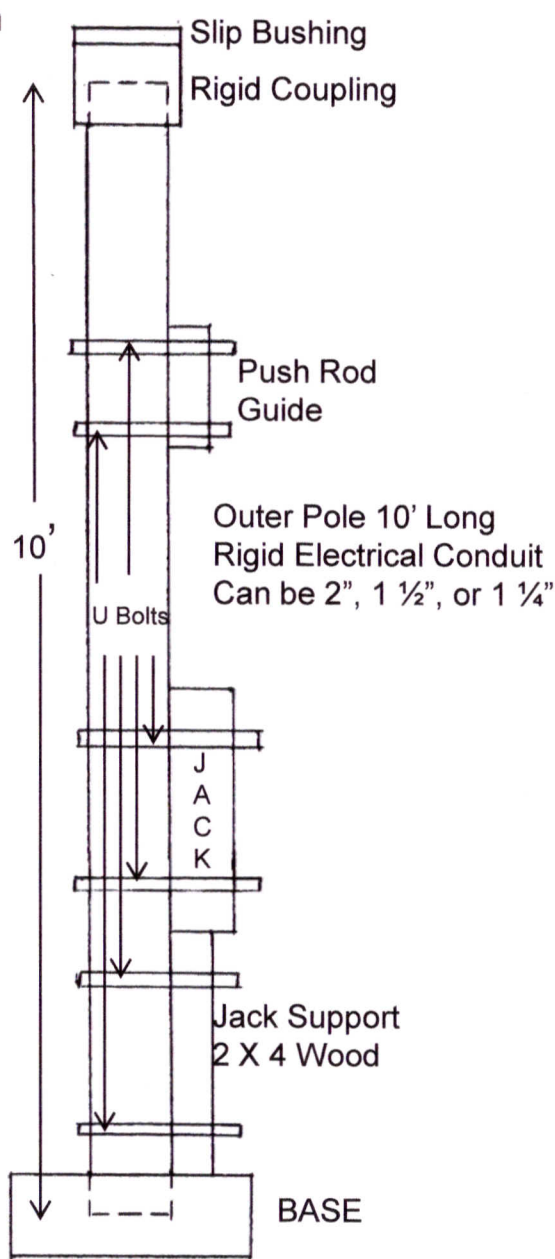
- Requires 1 Slip Ring, 1 Slip Bushing, 1 PVC Centralizer, 1 Rigid Coupling, 1 Topper Adaptor. (Parts are sized according to pipe size used.)
- Additional height (up to about 3') can be gained by using extensions.

Single Stage Telescoping Pole – Ladder Required For Operation

Jacks Up to 19'6" High

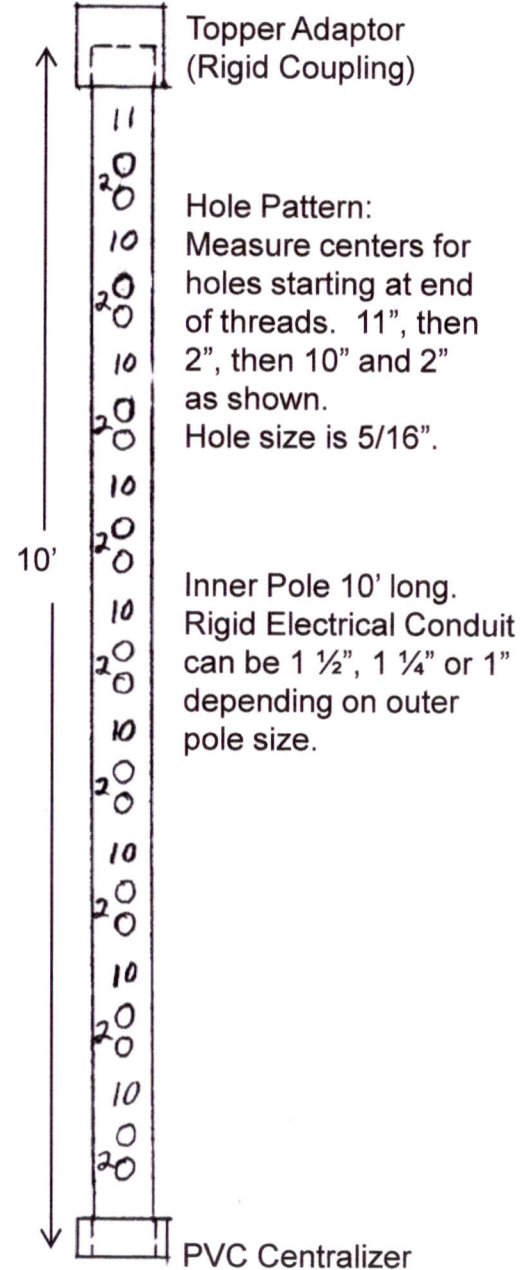
Note:

The size of the Slip Bushings and the Rigid Couplings depend on what size pipe is used.



Outer Pole is 10' long with threads.

Inner Pole is 10' long with threads.



Height – Up to 28'9"

Two Stage – Ladder required for operation
(See Drawing)

Pole Combinations

2" Outer Pole, 1 ½" Inner Pole, and 1" Inner Pole
2" Outer Pole, 1 ¼" Inner Pole, and 1" Inner Pole

Notes:

- Requires 2 Slip Rings, 2 Slip Bushings, 2 PVC Centralizers, 2 Rigid Couplings, and 1 Topper Adaptor.
(Parts are sized according to pipe size used.)
- Additional height (up to about 3') can be gained by using extensions.

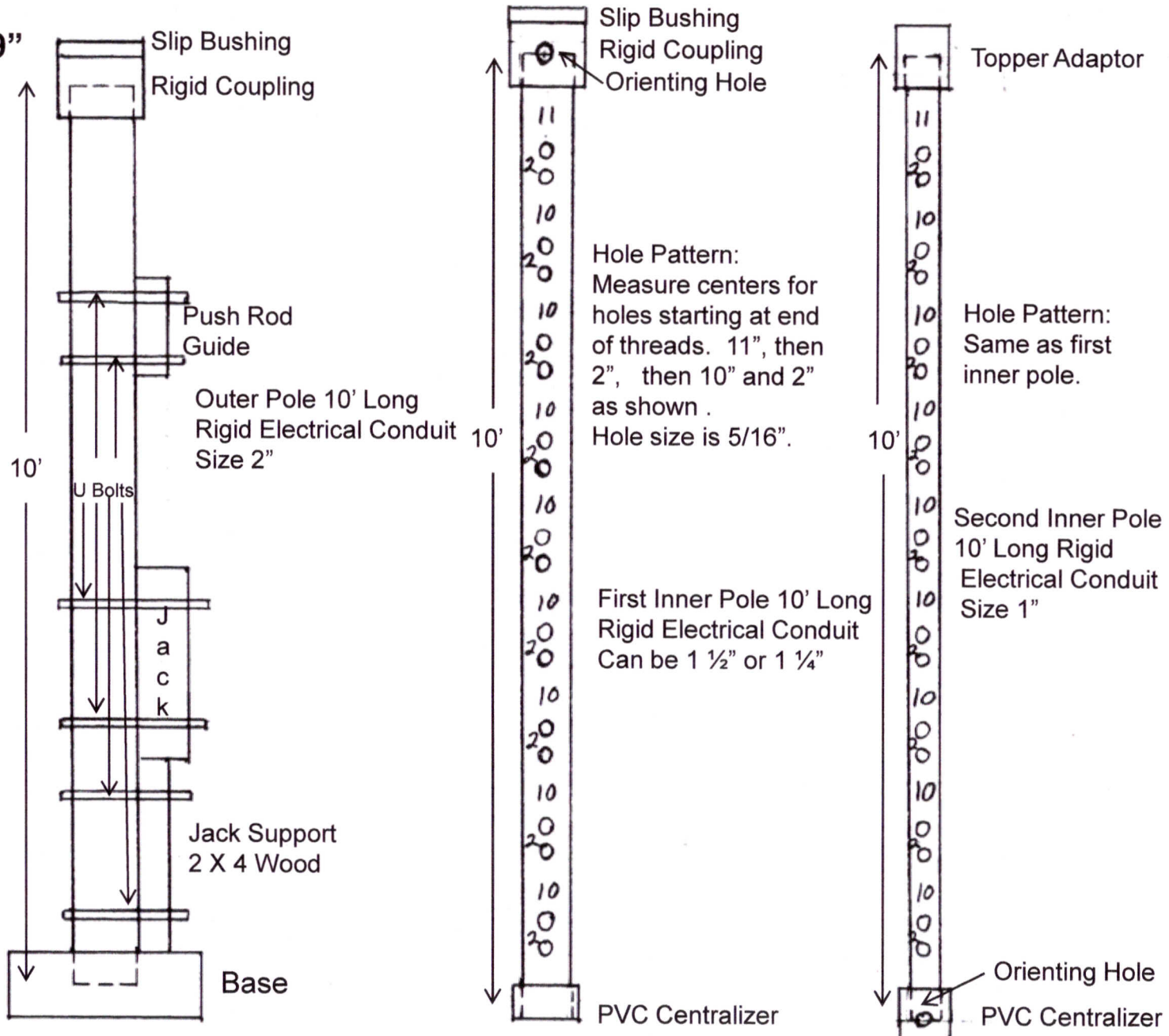
Two Stage Telescoping Pole - Ladder Required for Operation

Jacks Up to 28' 9"

Note:
The size of the Slip Bushings and the Rigid Couplings depend on what size pipe is used.

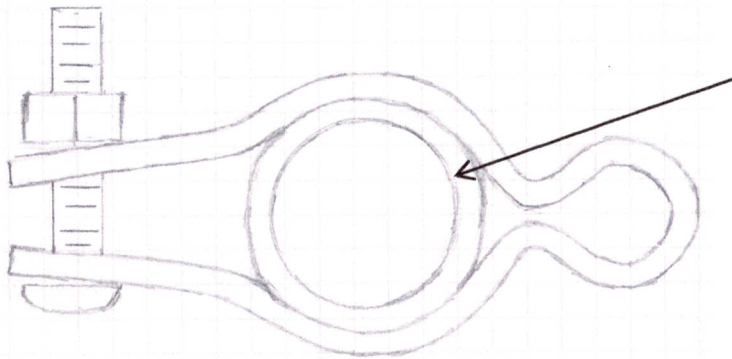
Outer Pole is 10' long with threads.

Inner Pole is 10' long with threads.



Slip Rings for the Telescoping Poles

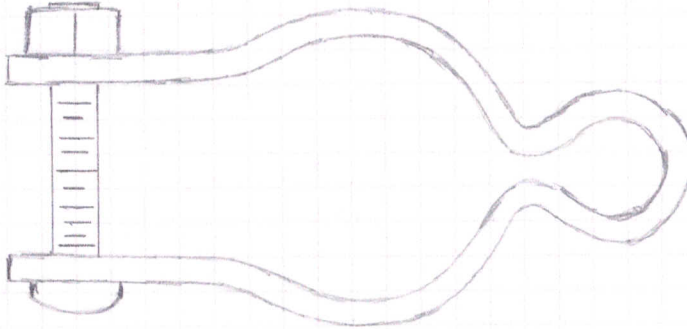
These are 2" Pipe Gate hinges available from Tractor Supply or fence companies.



Piece of 1 1/4" Pipe 1 1/2" long.

Slip Ring for 1" Pole

Cut a piece of 1 1/4" pipe 1 1/2" long and insert it into the gate hinge. Tighten the bolt until the hinge closes up around the 1 1/4" pipe and holds it in place.



Slip Ring for 1 1/2" and 1 1/4" Pole

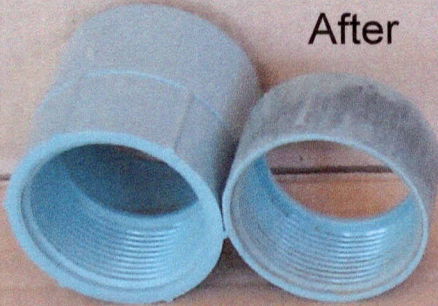
Tighten enough to allow smooth travel on the pole.

Improved JUMP Parts

Centralizer for Bottom of Pole

Before

After

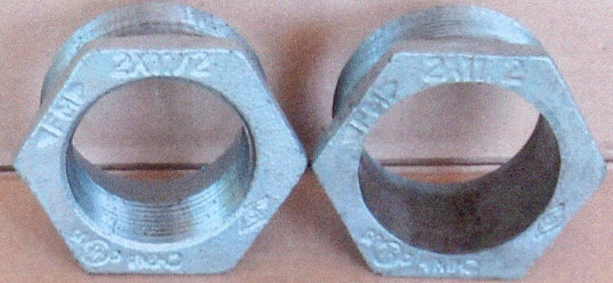


Made from Female Adaptor gray PVC. Use coarse file to remove outside material and hack saw off back end piece only on 1 1/2". The honed down piece should fit closely and slide smoothly in the pipe it goes in. Make a 1 1/2" Female Adaptor to fit into 2" pipe and a 1" Female Adaptor to fit into 1 1/2" pipe.

Slip Bushing for Top of Pole

Before

After



Made from a Steel Galvanized Bushing. Use a 3/4" X 1 1/4" Grinding Point available from Home Depot. Remove the threads plus a little more until it just slips over the pipe and slides smoothly.

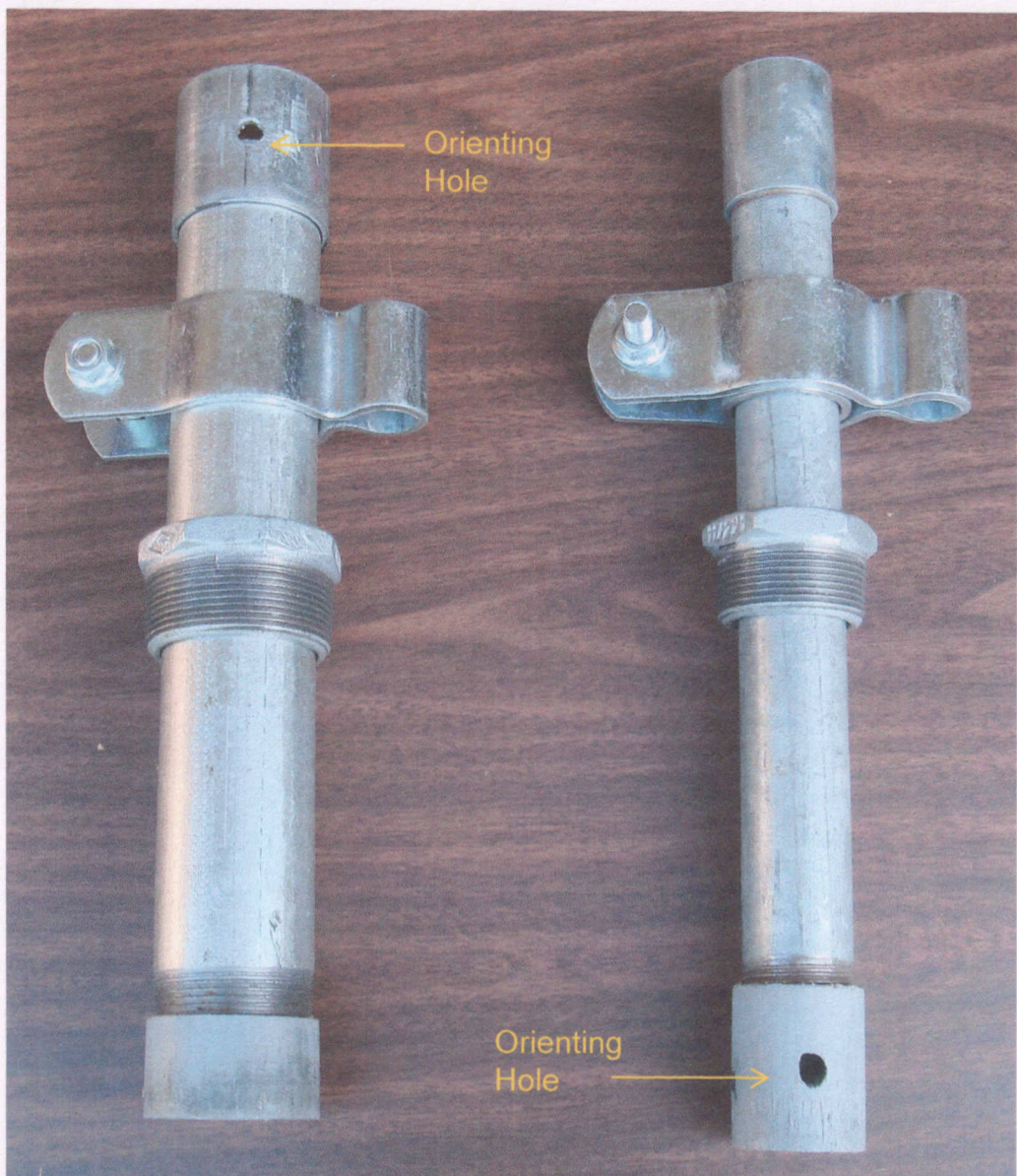
Inner Telescoping Poles

Rigid Coupling

Slip Ring

Slip Bushing

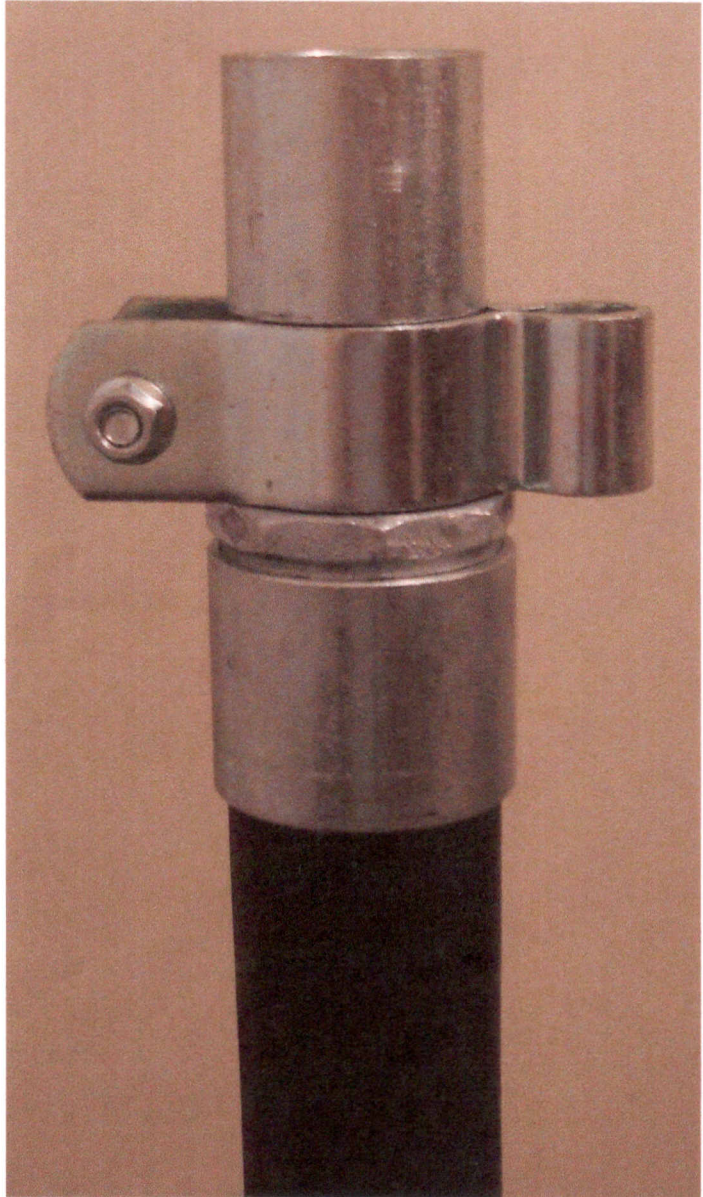
PVC Centralizer



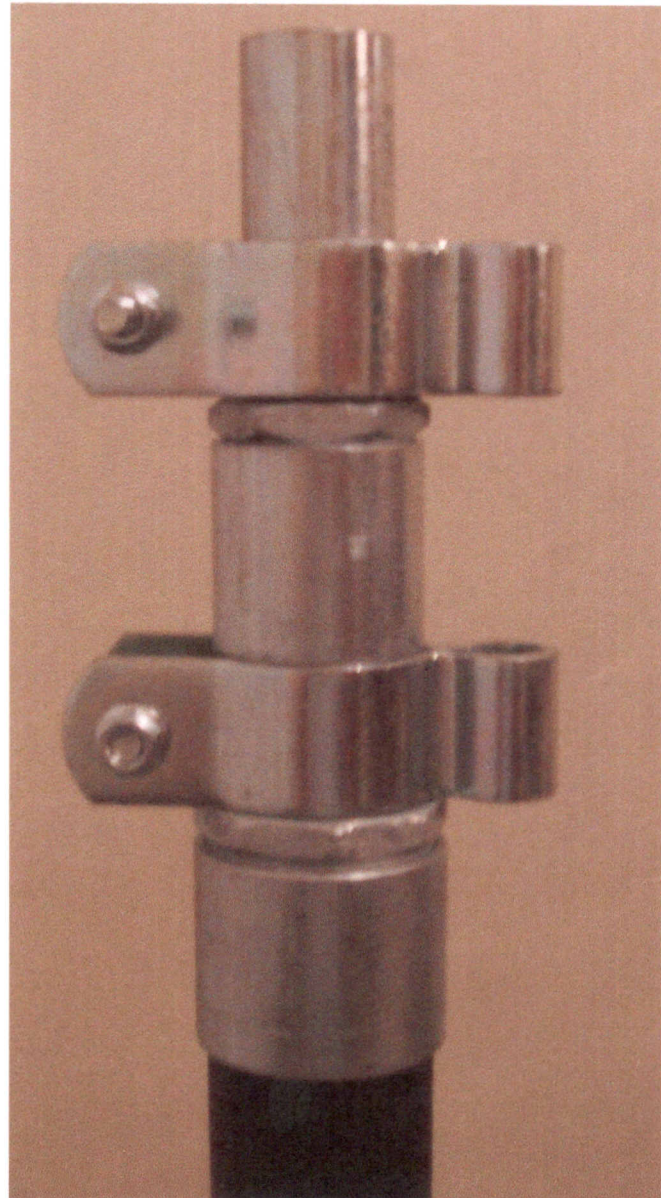
Orienting Hole

Orienting Hole

Slip Rings, Slip Bushings, Couplings Installed



Single Stage

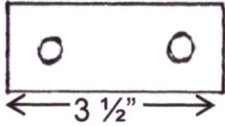


Two Stage

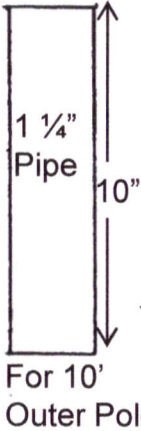
Parts for Improved JUMP

Heavy Duty Bracket For Jack U Bolt

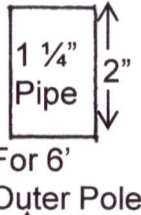
Hole Centers are 3/8" from edge of bracket



Brackets are made from 3/16" X 1" flat bar. 2 required



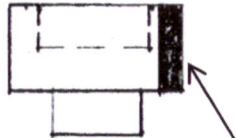
Push Rod Guides



For 10' Outer Pole

For 6' Outer Pole

2" Square Nut Plug

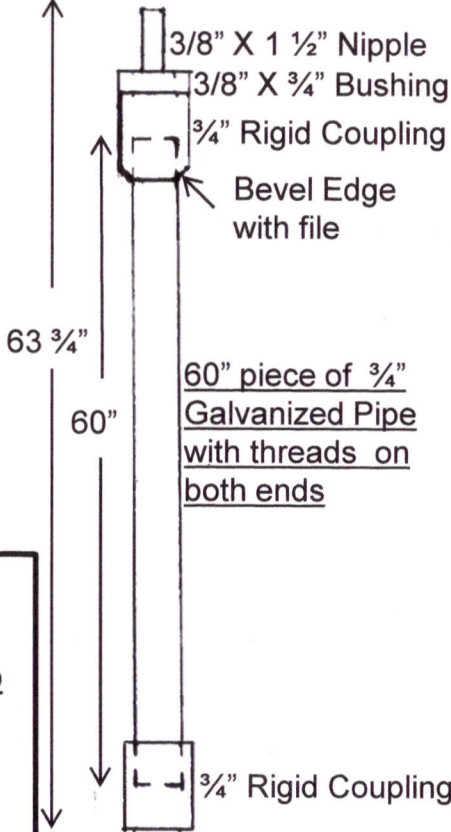


Hack saw this away

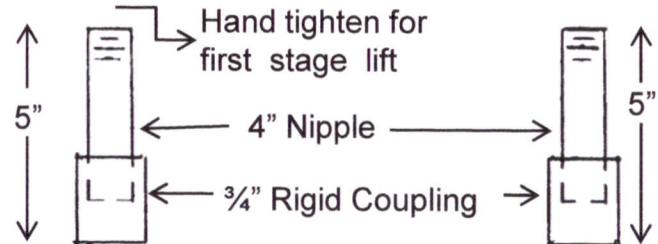
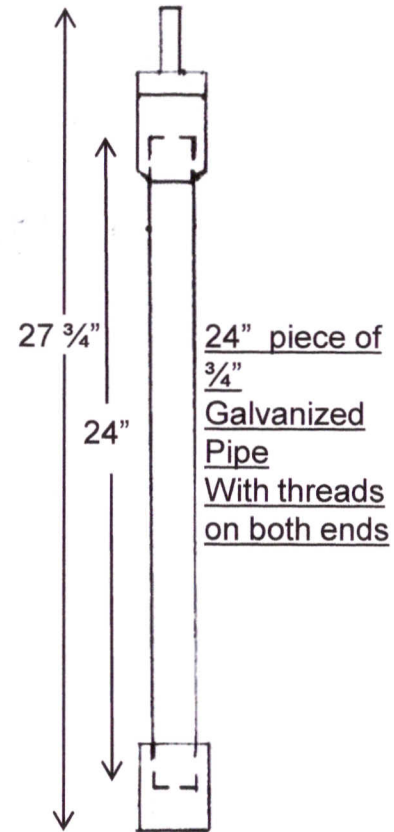


Push Rod Adaptor Fits Into Top of Jack

Push Rod For 10' Outer Pole



Push Rod For 6' Outer Pole



The Nipple and Rigid Coupling are not needed for Single Stage JUMP.

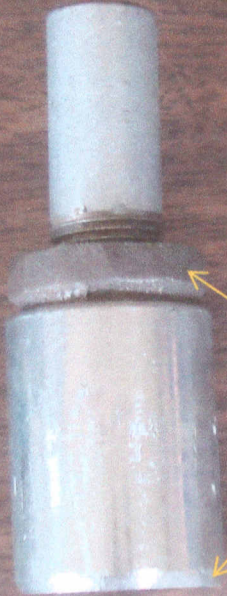
Push Rod Top Piece

Pins

Before



After

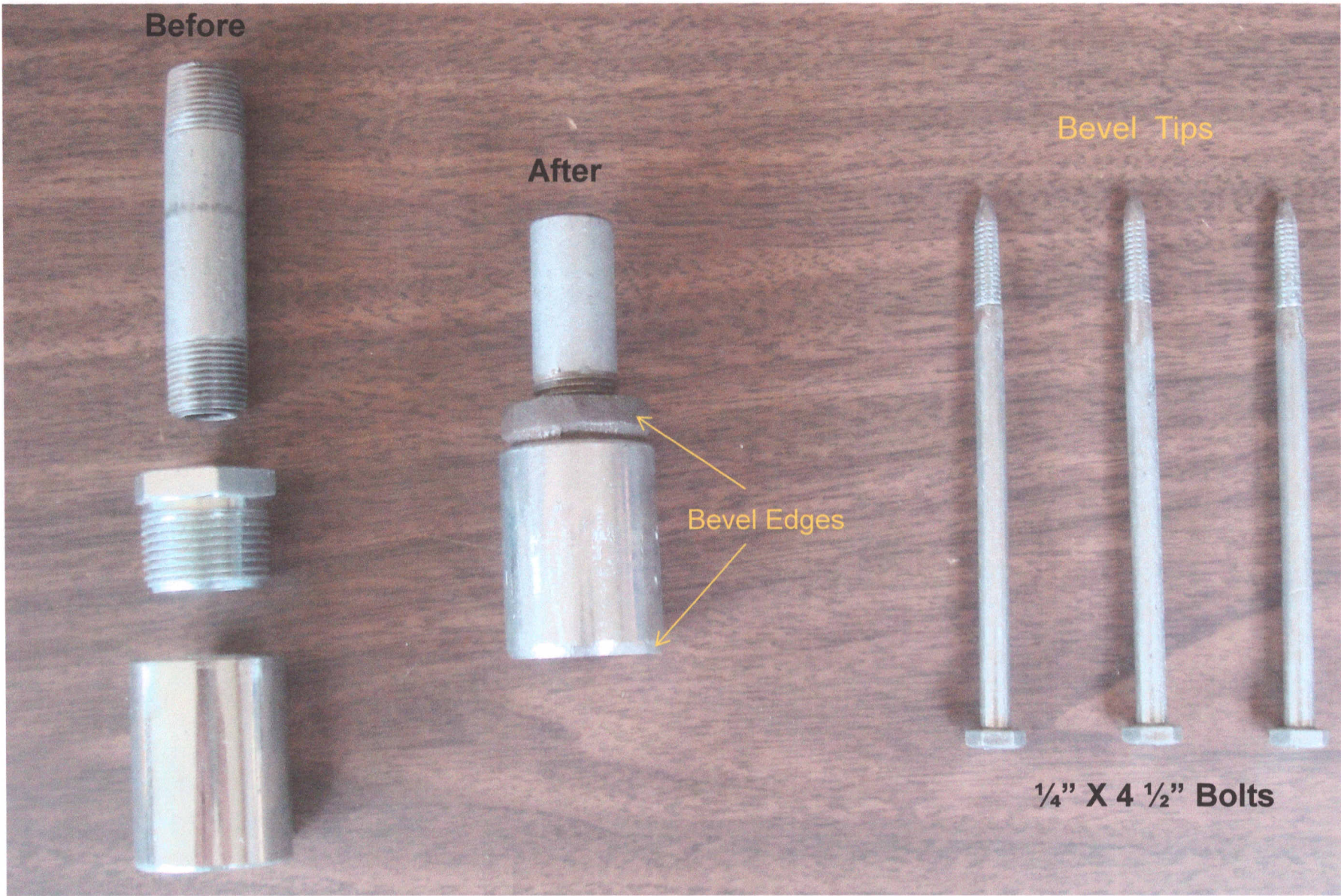


Bevel Edges

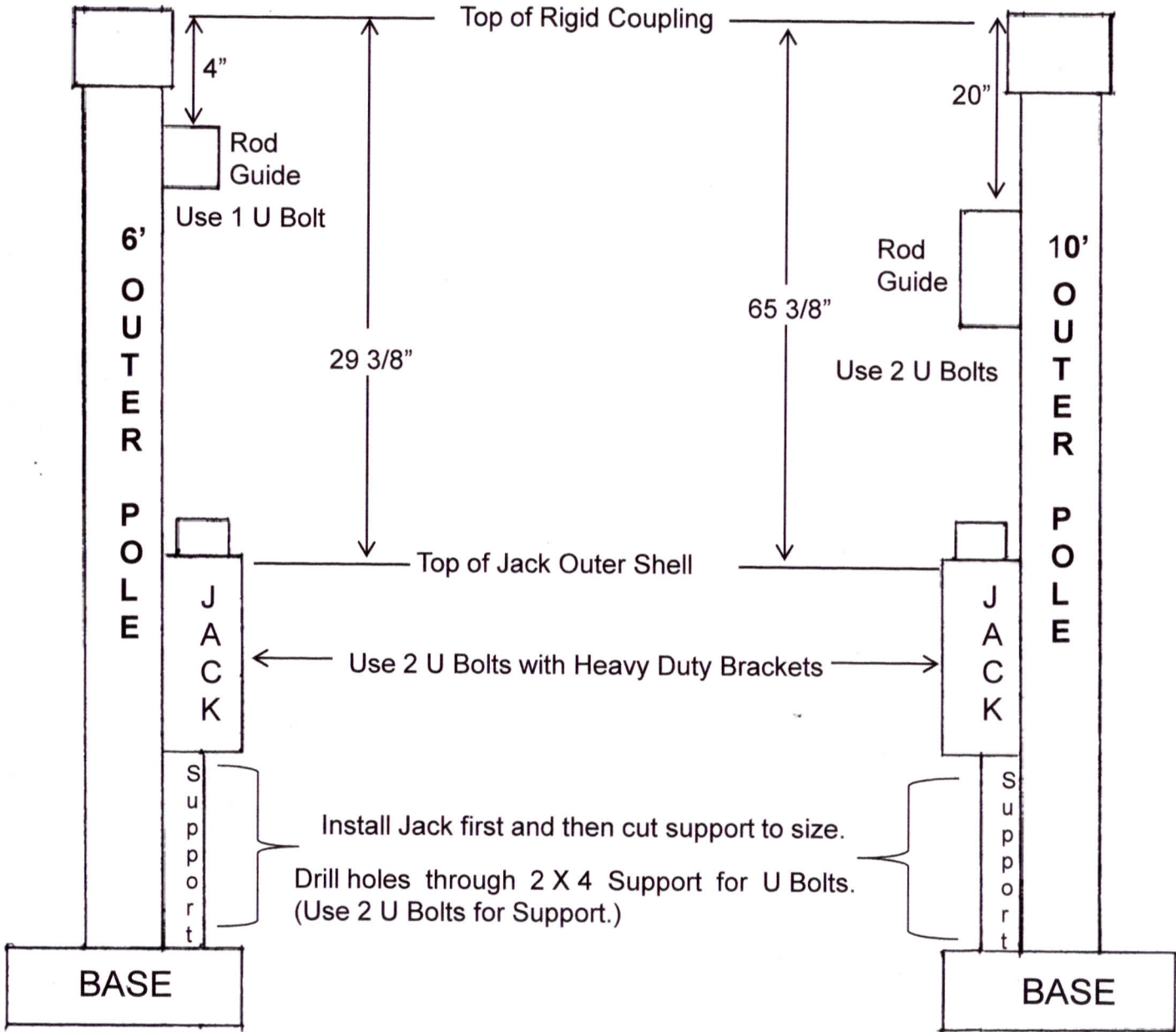
Bevel Tips



1/4" X 4 1/2" Bolts

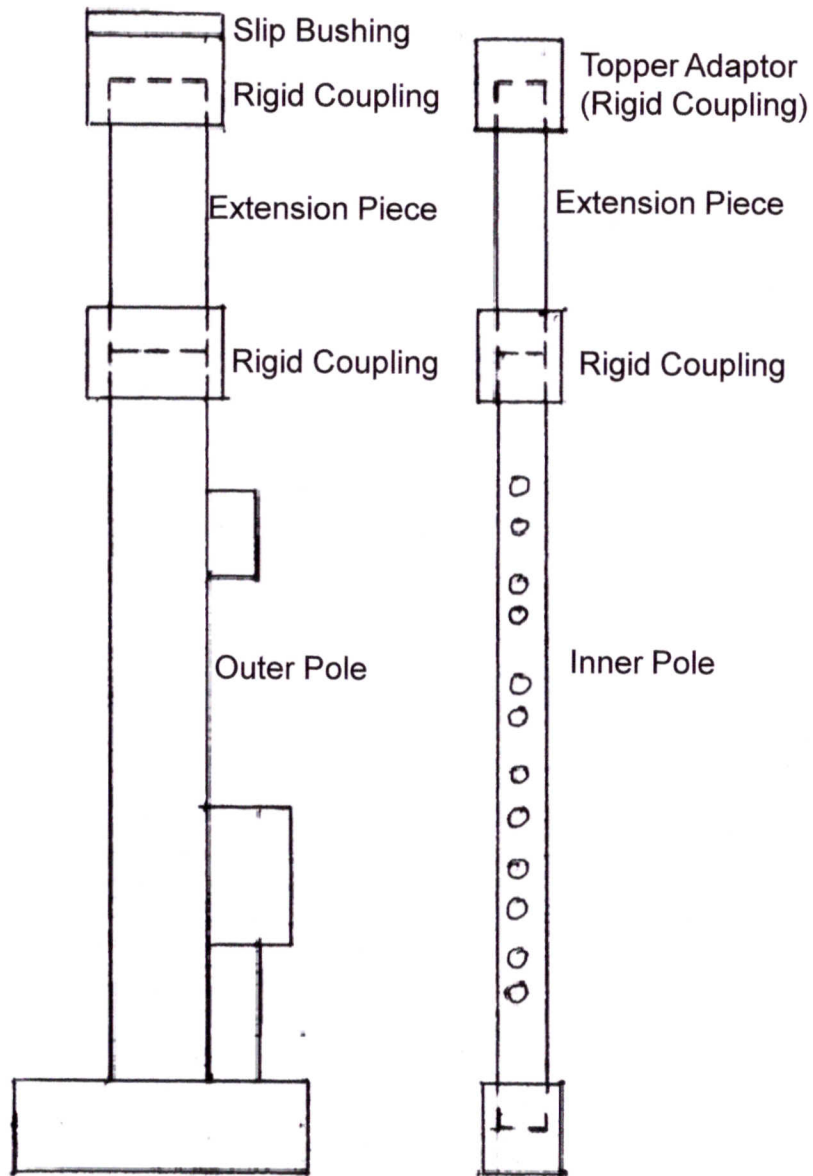


Mounting the Jack, Jack Support and Rod Guide



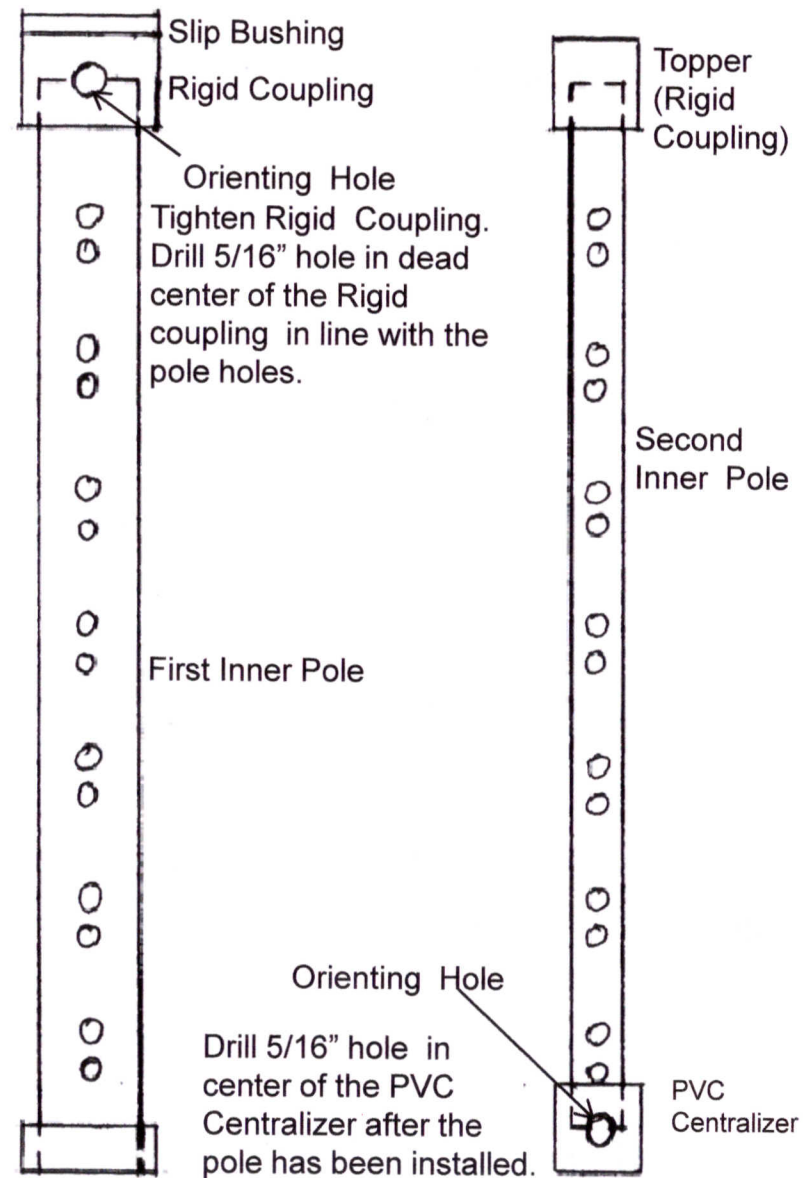
Extensions

This is an example of how extra pole sections can be added for more height. See explanation.



Orienting Holes

These holes are used to align the holes in the inner poles of a two stage system. See explanation.



Extensions

Extra height can be added to the telescoping pole system by installing extension pieces to the OUTER and/or INNERMOST poles. The Push Rod will have to be lengthened by the amount of height added to the OUTER pole. An extension added to the INNERMOST pole will not result in the Push Rod having to be lengthened. In any case adding an extension may result in having to operate higher up on a ladder. The extensions can be very helpful in adjusting a mega pole height to the length of light strings.

Orienting Hole

The Orienting Hole is used for Two Stage operation only. The 5/16" hole and a bolt allows the holes of the Inner Poles to be aligned. Putting a bolt through the hole locks the two Inner Poles together so they are both raised simultaneously. This gives the user the option to choose different combinations of height from each Inner Pole. Example: 2 feet of the Innermost Pole combined with 9' of the next Inner Pole for a total of 11'. Another advantage is that the Innermost Pole does not have to be jacked all the way up in order to jack up the next Inner Pole.

How to Drill the Holes in the Telescoping Poles

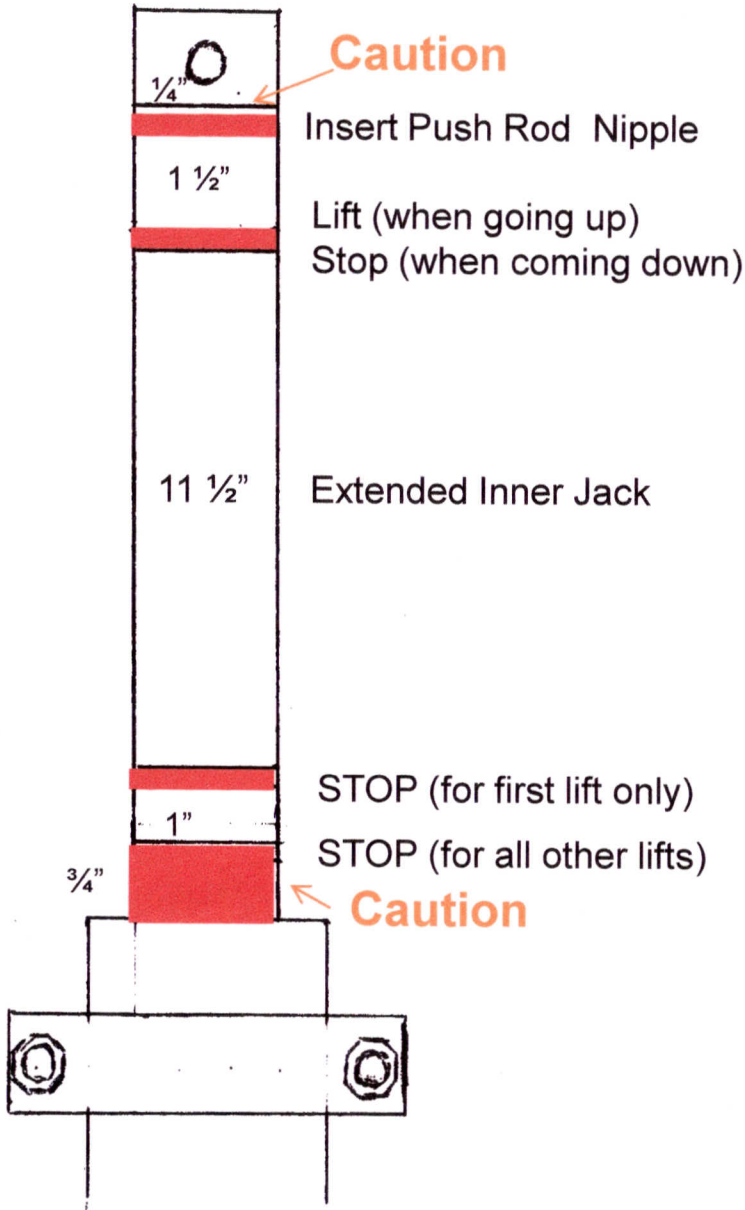
Do not attempt to hand drill the holes through both sides of the pipe. It's almost impossible to get the holes correct.

-----Use the 2 X 4 Hole Marker Method-----

1. Get a 2 X 4 X 10 foot piece of lumber.
2. Lay pipe on 2 X 4 and drive 2 nails on each side of the pipe at both ends.
3. Mark and drill small hole just below the pipe threads on both ends at TOP DEAD CENTER of the pipe.
4. Rotate pipe 180 degrees and do the same to that side of the pipe.
5. Drive 2 small nails into the small holes at each end.
6. Tie loops in the ends of a string and stretch from small nail to small nail. Be sure string is in center of small nail.
7. Use a tape measure to mark the hole centers along the string. Measurement starts at the end of the pipe threads.
8. Avoid using a short ruler. The width of the lines over a 10' distance can accumulate and throw your measurements off as much as ½" at the end.
9. Indent the hole markings with a hammer and punch.
10. Drill small pilot hole first then follow with a 5/16" bit.

Marking the Jack for Operation

All the dimensions are approximate and are for guidelines only.



---Caution---
If using a motorized Jack be very careful not to run the Jack into the upper or lower limits.

Parts

The parts for a JUMP cost about \$200.00. This parts price list covers everything needed for all 14 combinations. Not all listed parts are required for any one JUMP. Depending on the JUMP you are wanting to build you will need to pick the parts needed from this list. Prices listed here are approximate and may vary according to location.

Parts	Price Each
Jack(Harbor Freight #47267 or #3961)	\$38.00
2" Rigid Elec Conduit 10' (Pole)	38.00
1 1/2" Rigid Elec Conduit 10' (Pole)	33.00
1 1/4" Rigid Elec Conduit 10' (Pole)	30.00
1" Rigid Elec Conduit 10' (Pole)	20.00
3/4" X 60" Gal Pipe (Push Rod)	14.00
3/4" X 24" Gal Pipe (Push Rod)	8.00
1 1/4" X 10" Pipe (Rod Guide)	6.00
1 1/4" X 2" Pipe (Rod Guide)	2.00
1 1/4" X 1 1/2" Pipe (Slip Ring Filler)	2.00
3/8" X 3" Nipple (Push Rod Tip)	1.00
3/4" X 4" Nipple (Push Rod Ext)	2.00
2" X 1 1/2" Bushing (For Slip Bushing)	5.00
2" X 1 1/4" Bushing (For Slip Bushing)	8.00
2" X 1" Bushing (For Slip Bushing)	5.00
1 1/2" X 1" Bushing (For Slip Bushing)	6.00
1 1/4" X 1" Bushing (For Slip Bushing)	5.00
3/4" X 3/8" Bushing (Push Rod)	2.00
2" Rigid Coupling	4.00
1 1/2" Rigid Coupling	3.00
1 1/4" Rigid Coupling	2.00
1" Rigid Coupling	2.00
3/4" Rigid Coupling	2.00
1 1/2" Grey PVC Female Adaptor (Centralizer)	2.00
1 1/4" Grey PVC Female Adaptor (Centralizer)	1.00
1" Grey PVC Female Adaptor (Centralizer)	1.00
U Bolt 5/16" X 2.5 X 5.5 (2 Required)	3.00
U Bolt 5/16" X 2.5 X 5 (4 Required)	2.00
Bolts 1/4" X 4 1/2" (Pins-3 Required)	1.00
2" Square Head Plug (Jack Adaptor)	6.00
2" Pipe Gate Hinge (Slip Ring)	7.00
3/16" X 1" Steel Flat Bar (Heavy Duty Brackets)	4.00
2" X 4" Wood (Jack Support)	3.00