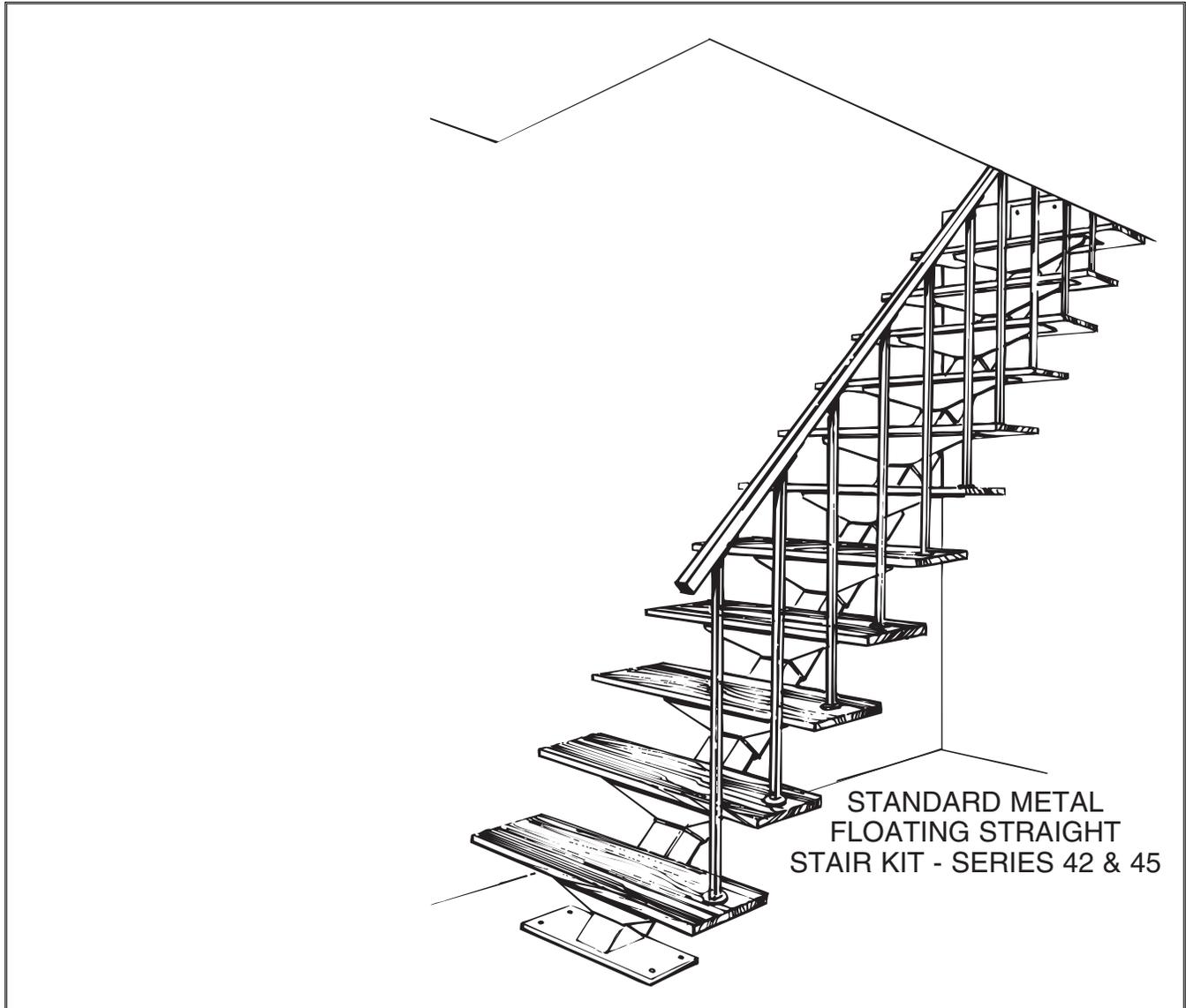


# FLOATING STAIR KIT INSTALLATION MANUAL

Effective January 1, 2014



If you have any questions, please call the location that your Stair Kit was purchased from:

Broomall, Pennsylvania 1-800-523-7427

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## GUARANTEE & SAFETY

### GUARANTEE

The Iron Shop guarantees the Metal Floating Straight Stair Kit against defective material and workmanship for a period of one year from the date of purchase. We will replace any part returned to us during that period at no cost. This guarantee is invalid if the installation was not completed in accordance with our assembly procedures, or if the Stair Kit was abused or not maintained by the customer.

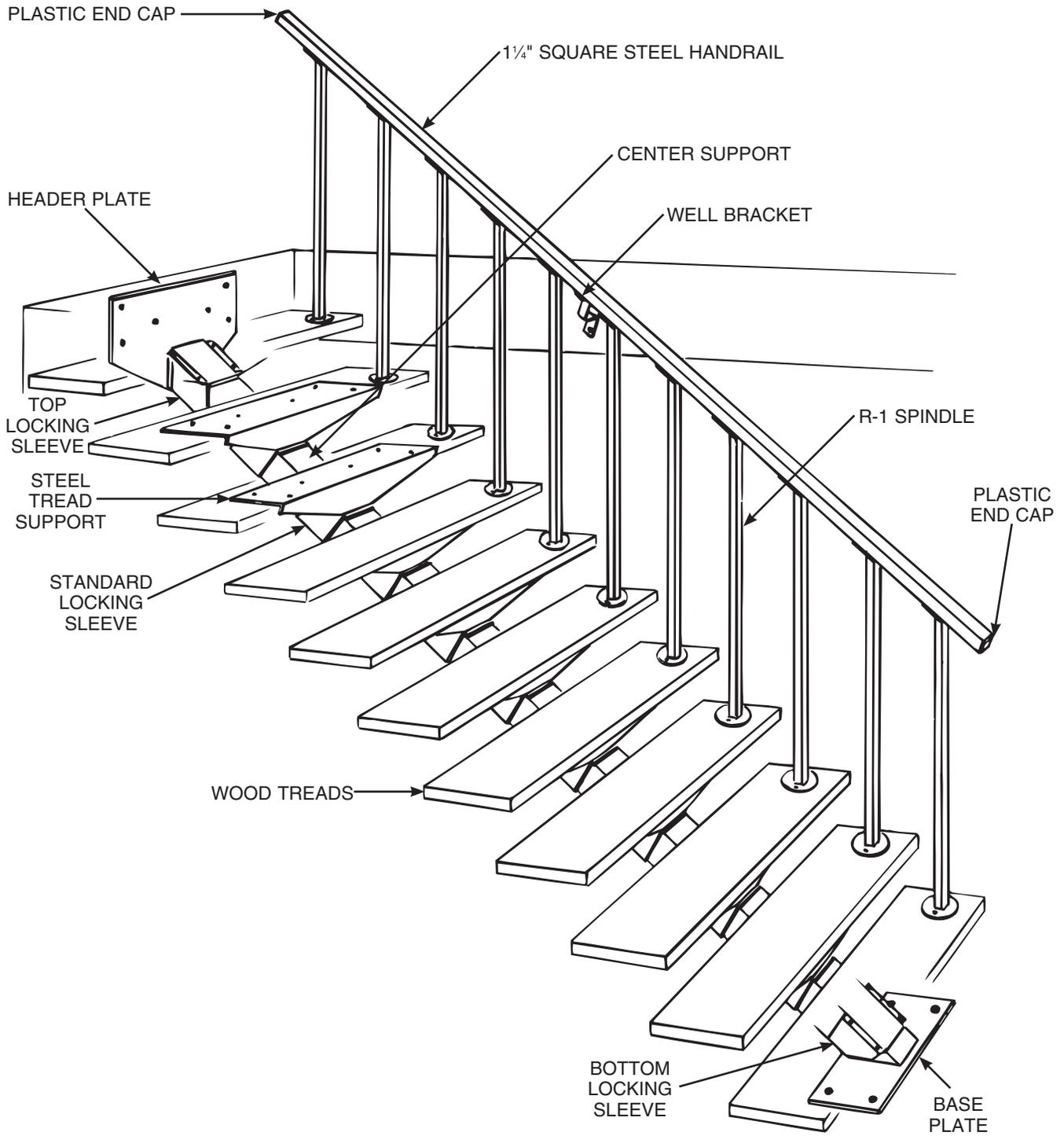
- It is the customer's responsibility to advise us of any and all building codes or special requirements for your Stair Kit from The Iron Shop. As manufacturers of quality stairs since 1931, we can design a stair to meet almost any requirements.
- **WARNING: NEVER RUN CARPET UNDER WOODEN TREADS. WOOD TREADS MUST BE ATTACHED DIRECTLY TO METAL SUB-TREADS.**
- Read the instructions through thoroughly before starting the installation. Wear safety goggles and gloves during assembly.
- Prohibit use and access of the stair from the top and the bottom until the entire installation is complete. Protect all open sides of the well opening, or edge of the balcony or loft, with railings or partition walls to prevent anyone from falling into the stairwell. Do not stand or walk on the stair until the entire installation of the stair has been completed.
- Some hardware may vary slightly from description due to manufacturing variations. This will not affect assembly.
- If you have installed the Alternate Tread Design Metal Floating Stair Kit without any tread coverings, you can coat the tread surface with a mixture of paint and a little sand. This should be done after the entire stair kit has been repainted. This will provide the stair with an inexpensive non-slip tread surface.
- Stairs with a hot dipped galvanized finish are highly recommended for salt water environments.
- If your stair was supplied with a primer finish, it should be painted with an oil-based enamel, not latex, upon completion of installation. If the stair will be used outdoors an oil-based enamel with a rust inhibitive additive should be used.

Following these guidelines will provide you with many years of use and enjoyment of your Metal Floating Straight Stair Kit. Failure to do so will void your guarantee. If you have any questions please do not hesitate to call us. See the front cover for our toll-free phone numbers.

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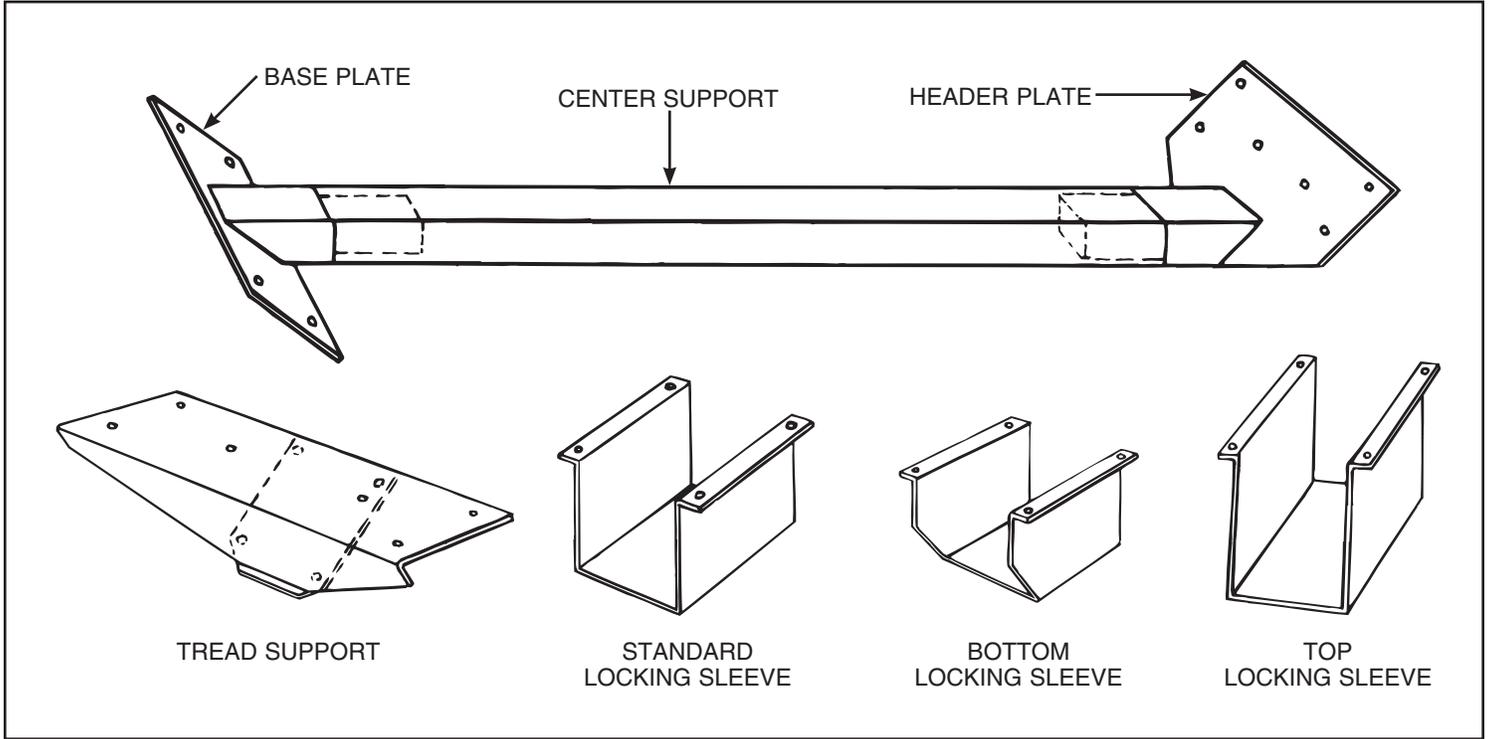
# STANDARD FLOATING STAIR COMPONENTS



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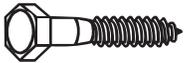
# STANDARD FLOATING STAIR COMPONENTS



6 - 5/16" x 3" LAG BOLTS  
(FASTENS HEADER PLATE)



1 - WELL BRACKET INCLUDING  
HARDWARE  
(FASTENS HANDRAIL TO  
WELL FRAMING)



4 - 5/16" x 1 1/2" LAG BOLTS  
(FASTENS BASE PLATE)



2 - 1/2" WRENCHES



4 - LEAD CORE "RAWL" PLUGS &  
3/8" MASONRY DRILL BIT  
(NEEDED FOR CONCRETE FLOORS)



5/16" x 5/8" HEX HEAD BOLTS, LOCK  
WASHERS, NUTS AND SNUBBERS  
(FASTENS LOCKING SLEEVE TO  
TREAD SUPPORT)



#10 x 3/4" PAN HEAD SCREWS  
(FASTENS WOOD TREADS)



#10 x 1" FLAT HEAD SCREWS  
(FASTENS SPINDLES)



#12 x 3/4" HEX HEAD SLOTTED SELF  
TAPPING SCREWS  
(FASTENS POSTS AND SPINDLES  
TO METAL HANDRAIL)

## TOOLS NEEDED FOR ASSEMBLY:

- TAPE MEASURE
- LEVEL
- SCREW DRIVER
- LADDER
- HAMMER
- HACKSAW
- ADJUSTABLE WRENCH
- ELECTRIC DRILL (3/8")
- 5/32" DRILL BIT
- 7/32" DRILL BIT

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# STANDARD FLOATING STAIR ASSEMBLY PROCEDURE

## STANDARD FLOATING STAIR ASSEMBLY PROCEDURE

**Note:** The following instructions are for Standard Floating Stair Kits only. Special order and non-standard stairs may require alterations. Call the location where the stair was purchased with any questions regarding your installation.

### STEP #1 - Center Support Tube:

(A.) Insert base plate and top header plate into the ends of the center support tube, making sure they are facing the correct direction as per the illustration on page 3. Mark the centerline of your well opening at the top. Then measure 9" to each side of the centerline and draw a plumb line. Measure down from the finished floor 1" and draw a level line. Raise the rear of the structural center support and bolt the top header plate to the well opening, keeping the top of the plate 1" down from the finished floor, drill  $\frac{7}{32}$ " pilot holes and secure with the six  $\frac{5}{16}$ " x 3" lag bolts supplied. **SEE DIAGRAM 1**

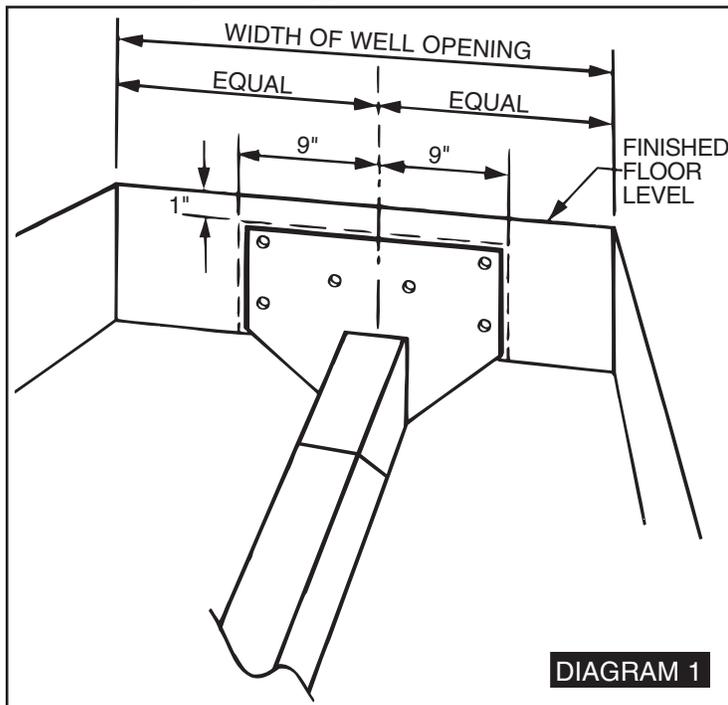


DIAGRAM 1

**Note:** It is important to hold the base plate down to the floor while positioning the header plate to prevent it from falling. We recommend that one person holds the base plate, while two people lift the center support into position.

(B.) Align the center support so it is parallel to the well opening or adjacent wall. Bolt the base plate to the floor by drilling  $\frac{7}{32}$ " pilot holes and securing with four  $\frac{5}{16}$ " x  $1\frac{1}{2}$ " lag bolts supplied.

**Concrete Floors:** When fastening the base plate to concrete, drill holes into the concrete with a  $\frac{3}{8}$ " masonry drill bit. Set lead core "rawl" plug into the holes then bolt the base plate down to the floor with the four  $\frac{5}{16}$ " x  $1\frac{1}{2}$ " lag bolts supplied.

FLOOR-TO-FLOOR HEIGHT	RISER CHART		STAIR PROJECTION	
	RISERS	RISER HEIGHT	SERIES 42	SERIES 45
7'6"	12	7 $\frac{1}{2}$ "	7'10"	7'1"
7'7"	12	7 $\frac{9}{16}$ "	7'11 $\frac{1}{8}$ "	7'2"
7'8"	12	7'1 $\frac{1}{16}$ "	8'0 $\frac{1}{4}$ "	7'3"
7'9"	12	7 $\frac{3}{4}$ "	8'1 $\frac{3}{8}$ "	7'4"
7'10"	12	7 $\frac{13}{16}$ "	8'2 $\frac{1}{2}$ "	7'5"
7'11"	12	7 $\frac{15}{16}$ "	8'3 $\frac{5}{8}$ "	7'6"
8'0"	12	8"	8'4 $\frac{3}{4}$ "	7'7"
8'1"	12	8 $\frac{1}{16}$ "	8'5 $\frac{7}{8}$ "	7'8"
8'2"	12	8 $\frac{3}{16}$ "	8'7"	7'9"
8'3"	12	8 $\frac{1}{4}$ "	8'8 $\frac{1}{8}$ "	7'10"
8'4"	12	8 $\frac{5}{16}$ "	8'9 $\frac{1}{4}$ "	7'11"
8'5"	13	7 $\frac{3}{4}$ "	8'10 $\frac{3}{8}$ "	8'0"
8'6"	13	7 $\frac{7}{8}$ "	8'11 $\frac{1}{2}$ "	8'1"
8'7"	13	7 $\frac{15}{16}$ "	9'0 $\frac{5}{8}$ "	8'2"
8'8"	13	8"	9'1 $\frac{3}{4}$ "	8'3"
8'9"	13	8 $\frac{1}{16}$ "	9'2 $\frac{7}{8}$ "	8'4"
8'10"	13	8 $\frac{1}{8}$ "	9'4"	8'5"
8'11"	13	8 $\frac{1}{4}$ "	9'5 $\frac{1}{8}$ "	8'6"
9'0"	13	8 $\frac{5}{16}$ "	9'6 $\frac{1}{4}$ "	8'7"
9'1"	14	7 $\frac{3}{4}$ "	9'7 $\frac{5}{8}$ "	8'8"
9'2"	14	7 $\frac{13}{16}$ "	9'8 $\frac{1}{2}$ "	8'9"
9'3"	14	7 $\frac{15}{16}$ "	9'9 $\frac{5}{8}$ "	8'10"
9'4"	14	8"	9'10 $\frac{3}{4}$ "	8'11"
9'5"	14	8 $\frac{1}{16}$ "	9'11 $\frac{7}{8}$ "	9'0"
9'6"	14	8 $\frac{1}{8}$ "	10'1"	9'1"
9'7"	14	8 $\frac{3}{16}$ "	10'2 $\frac{1}{8}$ "	9'2"
9'8"	14	8 $\frac{1}{4}$ "	10'3 $\frac{1}{4}$ "	9'3"

### STEP #2 - Riser Height & Bottom Tread:

(A.) Using your floor-to-floor height refer to the RISER CHART to obtain your riser height. If your riser height is not shown on the chart, simply take your floor-to-floor height and divide it by your number of risers (treads + 1).

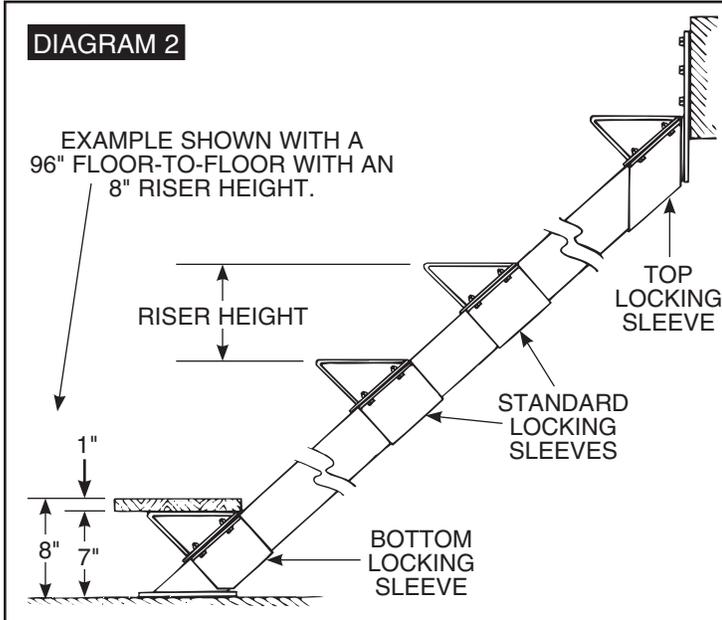
(B.) Set the bottom locking sleeve (the one with the notched bottom) and tread support at your pre-determined riser height minus 1", allowing for the thickness of the wood tread covering. **SEE DIAGRAM 2**



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# STANDARD FLOATING STAIR ASSEMBLY PROCEDURE

DIAGRAM 2

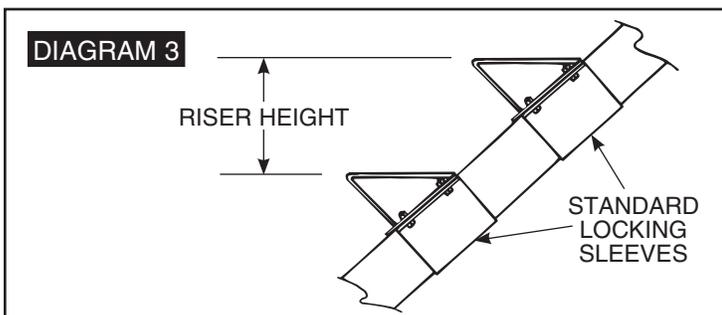


## STEP #3 - Tread Supports:

Using the following procedure, attach the remaining steel tread supports with the standard locking sleeves, at your pre-determined riser height. *SEE DIAGRAM 3*

- (A.) Slide the locking sleeve up from the underside of the center support.
- (B.) Place the steel tread support on top and align the holes.
- (C.) From below insert four  $\frac{5}{16}$ " x  $\frac{5}{8}$ " hex head steel bolts.
- (D.) Place a lock washer and hex nut over the bolt, then finger tighten.
- (E.) Set your exact riser height.
- (F.) Using the two supplied wrenches, tighten the two top bolts first, then tighten the two lower bolts.
- (G.) Work with a level to keep the tread supports aligned and level.

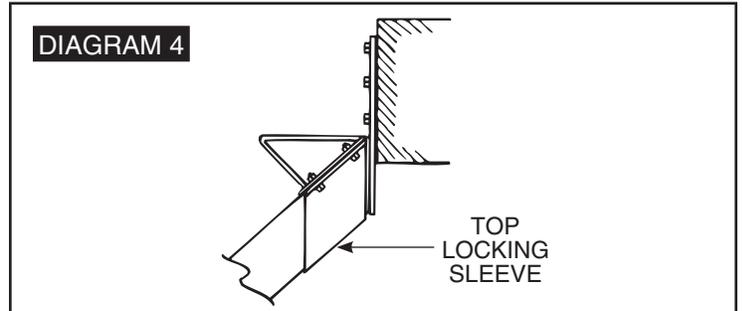
DIAGRAM 3



## STEP #4 - Top Tread Support:

Attach the top steel tread support at your riser height, less the thickness of the wood, using the top locking sleeve. *SEE DIAGRAM 4*

DIAGRAM 4



## STEP #5 - Wood Treads:

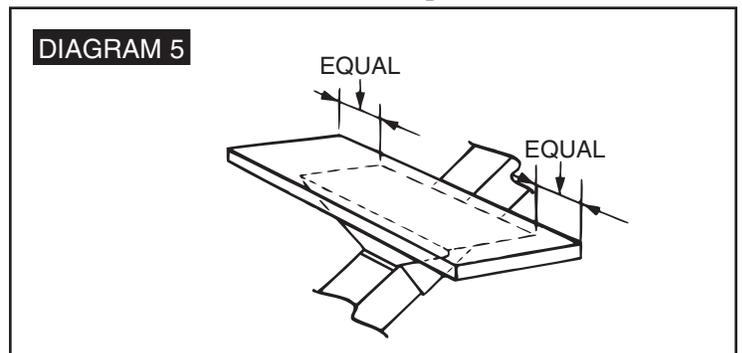
(A.) Position the required wood treads so that the bottom back edge touches the center support. Center the width so there is an equal overhang on each side of the steel tread support. *SEE DIAGRAM 5*

(B.) Fasten the wood in place with six  $\frac{3}{4}$ " pan head screws from below by marking and drilling six  $\frac{5}{32}$ " pilot holes approximately  $\frac{3}{4}$ " deep into the wood.

*Hint: If you will be staining or sealing the treads this should be done before their installation.*

**WARNING: Never place carpet between the wood and metal surfaces.** To prevent warping and cracking of our oak tread coverings they must be finished within 30 days of receipt with at least two complete coats of polyurethane. The oak treads should be finished prior to installation.

DIAGRAM 5



## STEP #6 - Optional Railing:

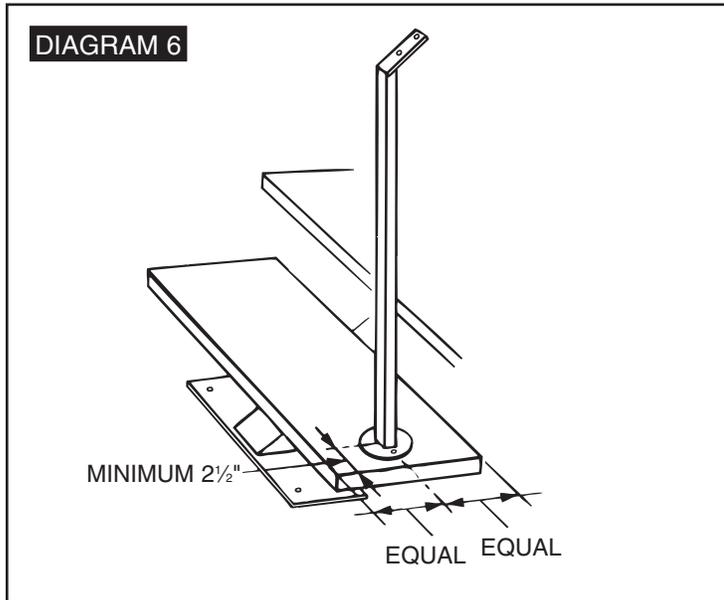
(A.) Set the top and bottom 1" square steel spindle a minimum of  $2\frac{1}{2}$ " in from the side of the step and center on the tread depth. Drill  $\frac{5}{32}$ " pilot holes  $\frac{3}{4}$ " deep into the

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# STANDARD FLOATING STAIR ASSEMBLY PROCEDURE

wood treads and secure with #10 x 1" flat head wood screws. Make sure the top handrail clips face up the stair and are parallel to the center support. Shim if necessary to make the spindles plumb. **SEE DIAGRAM 6**



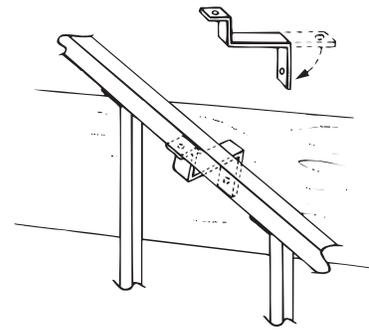
**(B.)** Place the handrail on top of the top and bottom spindles so that the top end is at least 4" past the top spindle. Allowing approximately 4" of overhang beyond the bottom spindle, mark the handrail and make a perpendicular cut with a hacksaw. Plug the ends of the handrail with the two 1/4" square black plastic end caps provided.

**(C.)** Bolt the handrail to the top and bottom spindles using the #12 x 3/4" hex head slotted self-tapping screws. Drill holes into the steel handrail with a 5/32" drill bit. A socket wrench will ease the installation of the screws.

**(D.)** Position all of the spindles so that their base plates are centered 2 1/2" in from the ends and their top plates touch the underside of the handrail. Secure the tops and bottoms making sure the spindles are plumb.

**(E.)** To make the railing even more stable install the well bracket to the underside of the handrail and against the side of the adjacent well opening. Bend to the desired length and fasten with one #12 x 3/4" hex head slotted self tapping screw into the steel handrail and one 5/16" x 1 1/2" lag bolt into the wood of the well framing. **SEE DIAGRAM 7**

DIAGRAM 7



## STEP #7 - Finishing:

**(A.)** Touch up the stair with an oil based primer, then repaint the stair in your desired color using an oil based enamel paint. **DO NOT USE A LATEX WATER BASED PAINT.**

**(B.)** The stair's nuts and bolts should be inspected annually for tightness. Tighten if necessary.

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Notes:

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Since 1931, The Iron Shop has enjoyed a reputation for outstanding design and fabrication of custom built spiral, curved, and floating stairs. With the introduction of our Spiral Stair Kits in 1972, The Iron Shop's quality and value became available for the first time on a national basis. Today, we utilize computer-aided technology throughout our production process to guarantee that each stair meets exacting standards—successfully mixing state-of-the-art manufacturing with old-world quality.

Offering the largest selection, highest quality, and lowest prices in spiral stairs—we make sure that you get the right spiral to meet your needs. This has made The Iron Shop the leading manufacturer of spiral stair kits, with over one hundred thousand satisfied customers worldwide. And our stairs are still made with pride in the U.S.A.

## **Main Plant & Showroom**

**Pennsylvania**  
P.O. Box 547  
400 Reed Road  
Broomall, PA 19008  
Tel: (610) 544-7100  
Fax: (610) 544-7297  
1-800-523-7427

## **Other Showroom/Warehouse Locations**

**California**  
Ontario Pacific Bus. Ctr.  
P.O. Box 3008  
3949 Guasti Rd. Unit D  
Ontario, CA 91761  
Tel: (909) 605-1000  
Fax: (909) 605-8899  
1-800-382-IRON (4766)

**Florida**  
Sarasota Business Center  
752 Commerce Dr., Ste. 1  
Venice, FL 34292  
Tel: (941) 484-7577  
Fax: (941) 484-7115  
1-800-648-6990

## **Regional Sales Office**

**Texas**  
Tel: (713) 789-0648  
Fax: (713) 789-0720  
1-800-438-IRON (4766)

## **The Stairway Shop Locations**

**Louisiana**  
5717 Salmen Street  
New Orleans, LA 70123  
Tel: (504) 734-1315  
Fax: (504) 733-0379

**Ohio**  
262 Business Center Dr.  
Blacklick, OH 43004  
Tel: (614) 575-9640  
Fax: (614) 575-9644

[www.TheIronShop.com](http://www.TheIronShop.com) • e-mail: [info@TheIronShop.com](mailto:info@TheIronShop.com)

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