இலங்கைத் தேசிய பொறியியல் ஆராய்ச்சி மற்றும் அபிவிகுத்தி நிலையம்


## Foot operated water Tap

This document provides necessary details and instructions for making a Foot Operated Water Tap．The following materials are required to complete the unit．

List of material

1．Ball Cock Valve
2．Flexible connecting hoses
3．Valve sockets
4．Sink
5．U－bolts（ $1-1 / 2^{\prime \prime}$ ）
6．U－bolts（ $1^{\prime \prime}$ ）
7．Angled Iron $3 / 4^{\prime \prime} \times 3 / 4^{\prime \prime} \times 3 \mathrm{~mm}$
8． $1-1 / 2^{\prime \prime}$ PVC
9． $1 / 2^{\prime \prime}$ PVC pipe
10．Others
－ 1 No
－ 02 Nos．
－ 02 Nos．
－ 01 No．
－ 02 Nos．
－ 02 Nos
－1－1／2 lgths
－ 2 m
$-2 m$
－PVC joints，Sockets，Glue etc．

Step by step Instructions with this diagram would be more helpful to make a Foot operated Water Tap． Instructions for making of the foot Operated Water Tap are given bellow for easy understanding to the reader．
$3^{\prime \prime} / 4 \times 3 \prime / 4 \times 3 \mathrm{~mm}$ Angled Iron Stand with the height of 32＂．（Width and length would vary as per the Sink size）


Fig．1：Foot Operated Mechanism with the Angled Iron Stand

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## Instructions

1. Prepare the base of the stand as per the dimensions of the Sink to be used. Use $3 / 4 " \times 3 / 4 " \times 3 \mathrm{~mm}$ Angled Iron for making the base frame and the stand.
2. Fix the Foot Paddle ( 6 " $x 3^{\prime \prime} \mathrm{MS}$ plate of 3 mm thick) on the base frame using a butterfly hinge at the right front edge of the base as shown. (Make sure to drill a hole of 4 mm diameter at top right corner of the foot paddle.)
3. Take an angled Iron of $32^{\prime \prime}$ long and get a piece of angled iron [( $3 / 4^{\prime \prime} \times 3 / 4 \prime \times 3 \mathrm{~mm}$ ) $4^{\prime \prime}(100 \mathrm{~mm})$ long] welded perpendicularly, at a distance $20 "$ from one end of the angled Iron and get welded to the base frame perpendicularly, at distance of 7 " from the front right edge as shown. (Make sure to drill a hole at other end of the angled iron before welding.)
4. Fix the Ball Cock valve on the angled iron welded, using two U-bolts about $10^{\prime \prime}$ above from the base plate. (make sure to drill a hole of 4 mm diameter at the end of the Ball Cock valve lever.)
5. Fix the Coil spring in between the angled Iron and Valve lever as shown.
6. Connect lever end and the Foot Paddle using a connecting bar of 8 " long. (Make sure to prepare two hooks at both ends of the connecting bar in order to secure the connections. Therefore, take a rod of 10 " long including additional length for hooks)
7. Make the Stand using $3 / 4$ " $x 3 / 4$ " $\times 3 \mathrm{~mm}$ size Angled Iron with a height of $32^{\prime \prime}$. Make sure to get the Sink dimensions in deciding the length and width of the stand.
8. Fix the $1 / 2^{"}$ PVC pipe formed as a bend of $U$, on to the back side of the stand frame as shown.
9. Connect the flexible hose at upper side of the Ball Cock Valve to the PVC pipe using appropriate connectors.
10. Connect the flexible hose at lower side of the Ball Cock Valve to the water inlet using the appropriate method.
11. Fix the Sink on the Stand and connect the waste with the down pipe using appropriate bends and connectors depending upon the place.

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