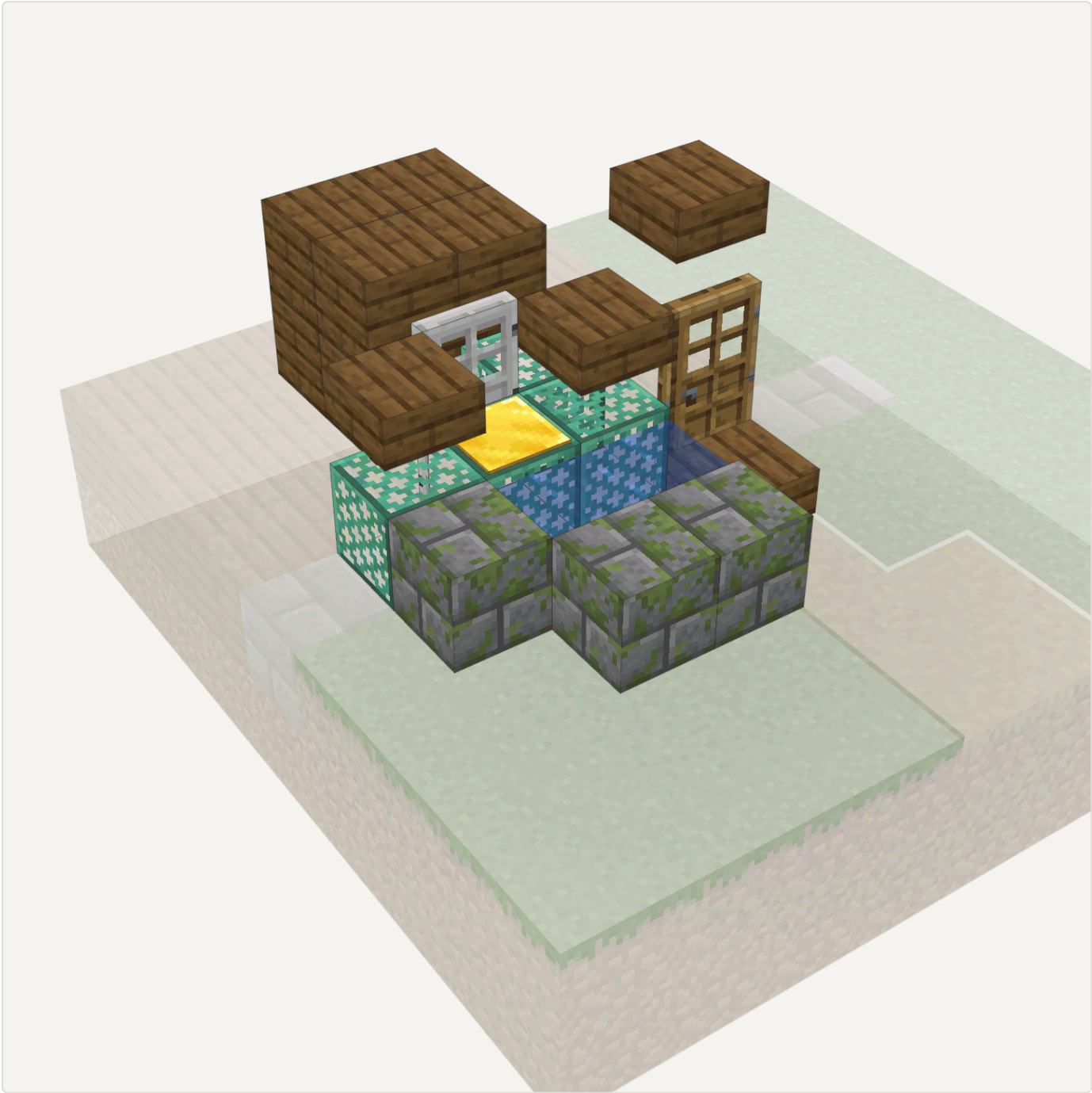


Airlock Door (Boat in a Copper Grate)

Minecraft Java 26.3 · Blocksworth Tests, Build #13



14 blocks + 1 water bucket 8 steps 8 different parts

							
4× Spruce Slab	3× Mossy Stone Bricks	3× Oxidized Copper Grate	1× Iron Door	1× Oak Door	1× Light Weighted Pressure Plate	1× Oak Boat	1× Water Bucket

Inventory

Everything you need: 14 blocks + 1 water bucket

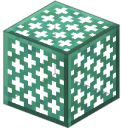
BLOCKS



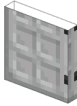
4×
Spruce Slab



3×
Mossy Stone Bricks



3×
Oxidized Copper Grate



1×
Iron Door



1×
Oak Door

REDSTONE



1×
Light Weighted Pressure Plate

ITEMS



1×
Oak Boat



1×
Water Bucket

1

New blocks are outlined

3x

Mossy Stone Bricks

2x

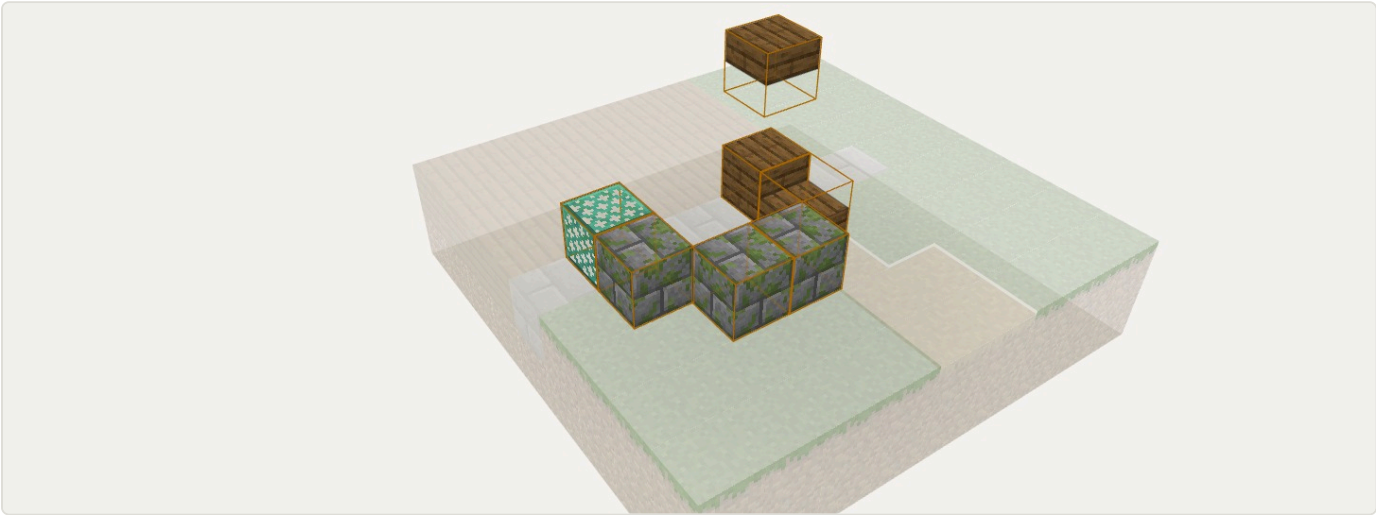
Spruce Slab

1x

Oxidized Copper Grate

Pond frame, 1 dry grate, slab doorstep and lintel

Next to your 1 - wide doorway, leave a 3 - wide gap in the wall. Outside it, frame a 1x2 pond with 3 blocks and a bottom slab (your doorstep). A copper grate, still dry, in the far end of the gap. Plug the doorway with any block for now, and put a top slab above the door instead of a full block (on the doorstep you stand half a block higher; a full block there stops you).



2

New blocks are outlined

2x

Oxidized Copper Grate

2 pistons, a dry grate in front of each

Inside, behind the 2 empty gap cells: a copper grate each (dry), and a piston behind each grate, facing out toward the gap.

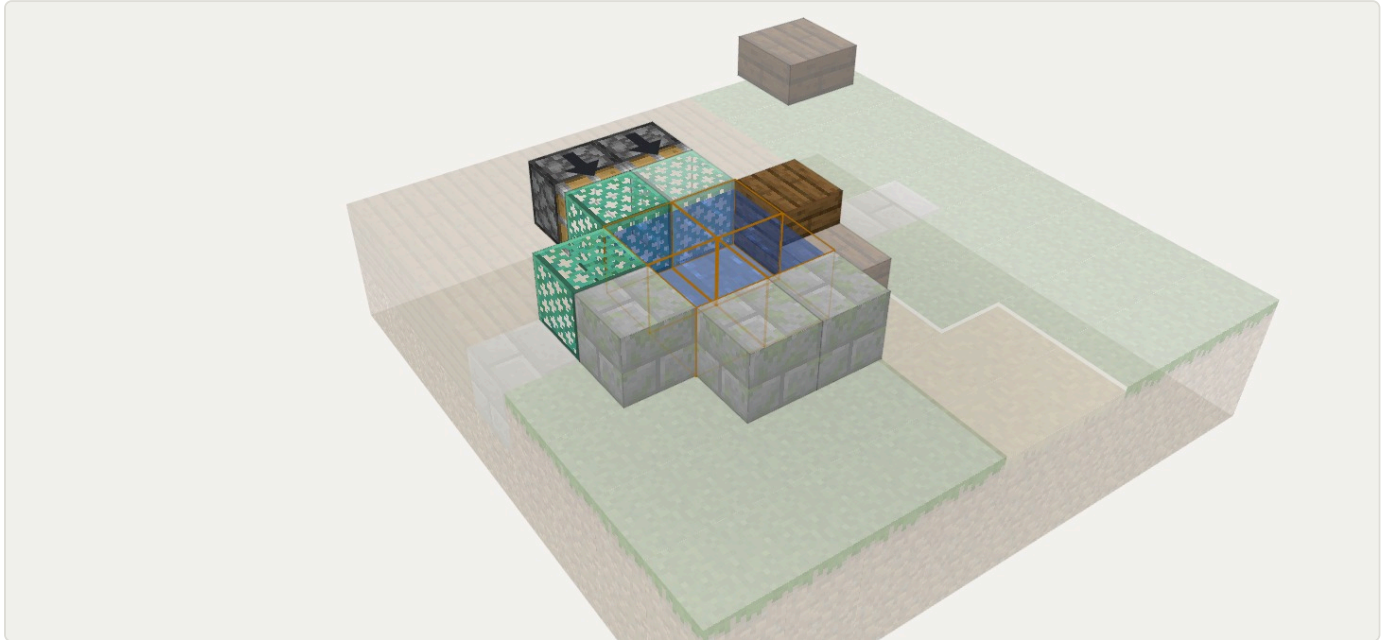


3

 New blocks are outlined**1×**
Water Bucket

Water in both gaps and the pond

Water in the 2 gap cells and the 2 pond cells.

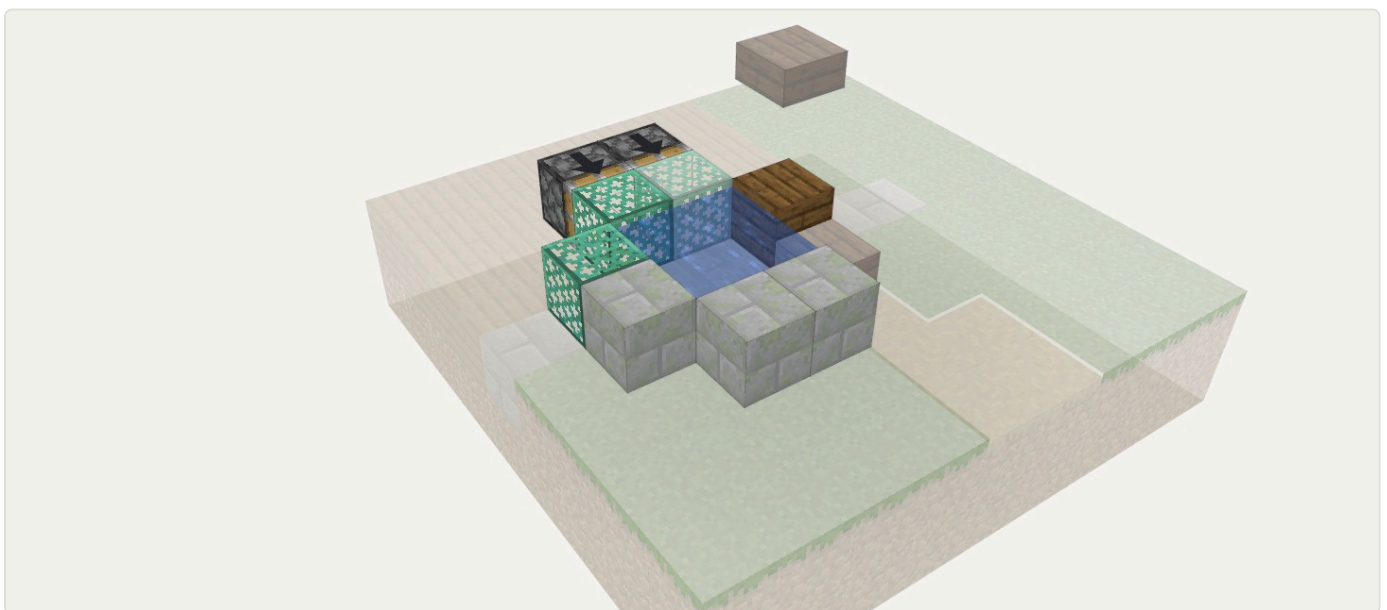


4

 New blocks are outlined**1×**
Oak Boat

A boat on the water

A boat on the water, between the two dry grates: that's your spy. Not shown in 3D here: a boat is an entity, not a block.

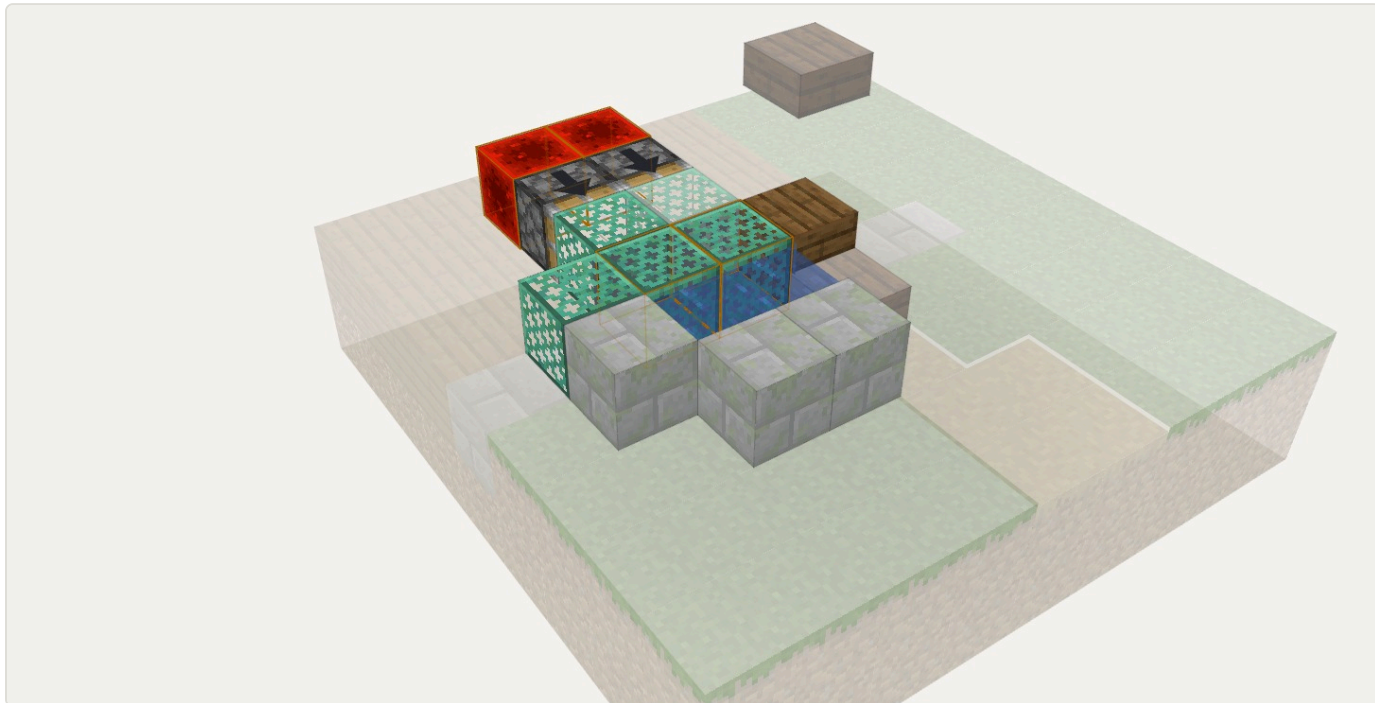


5

 New blocks are outlined

Power the pistons: the grates slide in around the boat

A block of redstone behind each piston (temporary): the grates slide into the gap around the boat, which stays inside them. You can't place a boat inside a grate, so this is the only way in.

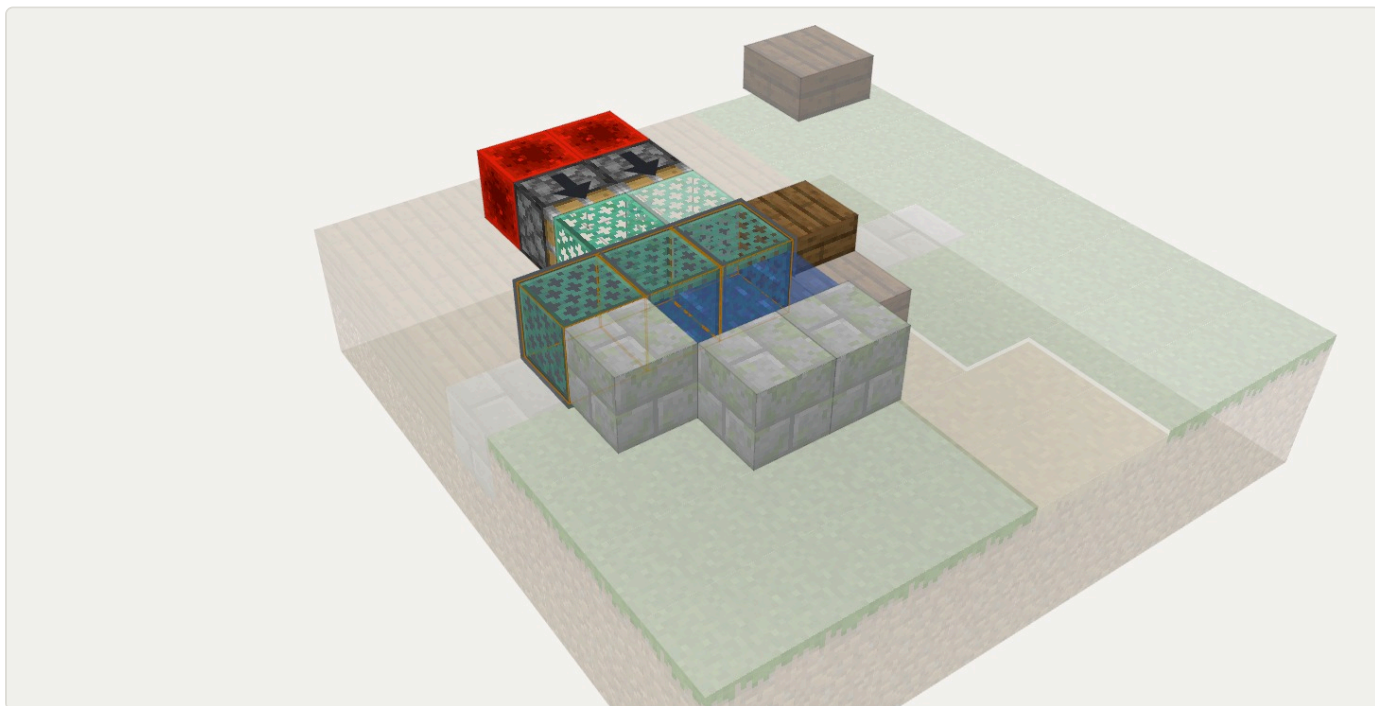


6

 New blocks are outlined

A water bucket into each of the 3 grates

Pistons don't move water, so the pushed grates arrive dry: pour a water bucket into each one, including the first grate from step 1.



7

□ New blocks and removals are outlined



1×
Dig out



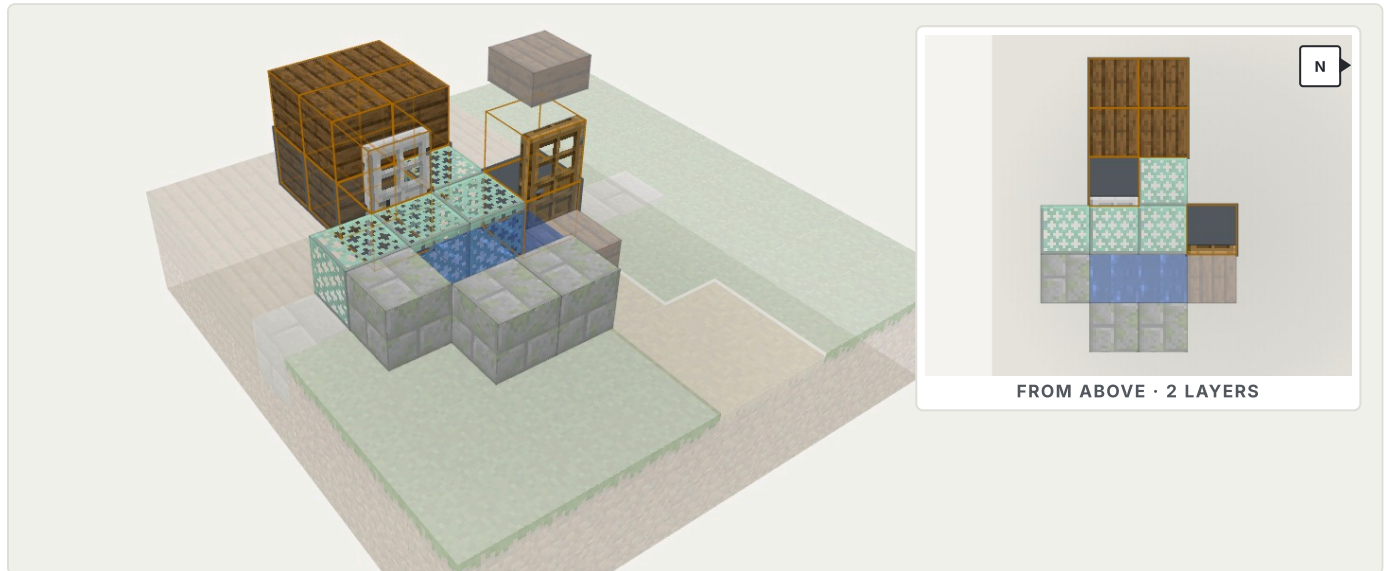
1×
Oak Door



1×
Iron Door

Pistons and redstone out, 2 doors in

Break the pistons and the redstone blocks, close the wall behind them, and take the plug out of the doorway. Oak door with its hinge away from the grates; iron door on the side of the entry, next to the middle grate, hinge on the side touching the middle grate.



8

□ New blocks are outlined



1×
Light Weighted
Pressure Plate



2×
Spruce Slab

Plate on the middle grate, slabs over the rest

A light weighted pressure plate on the middle grate, touching the iron door's top half: it powers the door directly, no redstone dust needed. Top slabs over the other two grates. Shut the front door and the iron door opens.



Finished!

Why it works



A boat floats inside the two grates next to the front door (you cannot place a boat inside a grate, so the pistons slide the grates in around it; pistons do not move water, so each grate gets a water bucket afterwards). Water in a copper grate counts as falling water. When the front door is open, its flat side becomes a solid wall next to the grate, the water flows downward and pulls the boat 0.13 blocks lower, so its top no longer reaches the weighted pressure plate. The plate touches the iron door and powers it directly: front door shut, boat up, plate on, iron door open; front door open, boat down, plate off, iron door shut. The two doors are never open at the same time. Rules: the front door's hinge on the side away from the grates, the iron door's hinge on the side touching the middle grate. Nothing solid may touch a grate on its sides or one block higher (water, air, another wet grate, slabs and panes are fine), or the boat stays down for good. Keep the plate clear: dropped items on it count too. The plate must not touch the front door. Tested in Java 26.3: 40 of 40 cycles in the lab, iron door shut 0.3 to 0.75 s after the front door opens, open 0.15 s after it closes.

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