

1/35 60t Russian low sided railcar



contains 1 highly detailed and accurate model

222 resin parts

152 PE parts

+ plastic parts and wires needed for assembly

decals for three wagons

glue and paints not included

suitable only for advanced modellers

keep safety rules for work with resin

instructions and references on CD



Keep safety rules when working with resin.

For safety reasons, and due to the complexity of construction, this kit is recommended only for advanced modellers.

The kit contains small parts, keep it out of the reach of children.

Glue and paints not included

Contains 222 resin parts, 152 PE parts and plastic parts and wires needed for assembly

One of first type of Russian heavy flat wagon, built about 1930. It had welded side beams construction, these beams were made from rolled sections later on. There were many manufacturers in Russia, to name a couple, Ural Car Plant, Krukov carriage factory or Ust-Katav Wagon building Works named after L.M. Kaganovich, who produced in 1934 the wagon pictured. Until 1935 only the well known common screw couplings and buffers were in use in Russia, but they were not well suited to the cold climate and other requirements. In 1928, an UIC appointed Working Group (founded in 1922) began working on the development of automatic coupler. Since the work never got off the drawing board to define the basic requirements, The Soviet Union decided to use the concept of the robust U.S. Willison Coupling.

A coupler was constructed in 1932 by team of Moscow engineers responsible for the repair of wagons. After the 1933 introduction of the concept, automatic couplers was adopted, and implementation began in 1935. World War II however interrupted work, so the transition to the automatic coupler was not completed until 1953. During WWII these cars were used widely in military service by Russian Army and captured ones later by Germans. The Wermacht, on their progress East, changed the Russian gauge 1520mm for their own (and usual in most Europe countries) 1435mm. Captured cars got narrower bogies to be used on new rails, and later on, when Germans were withdrawing, the Russians used these changed cars as well.

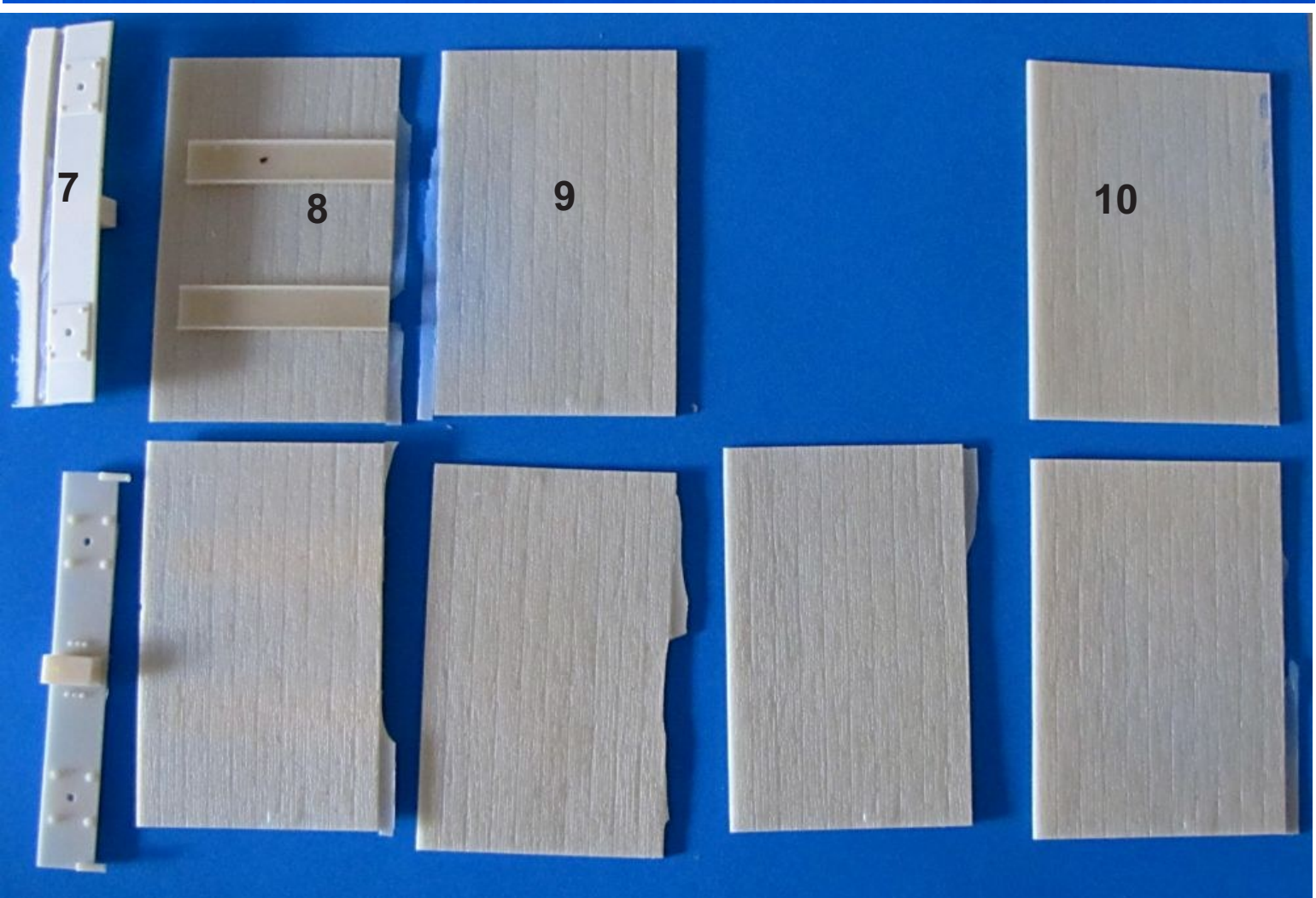
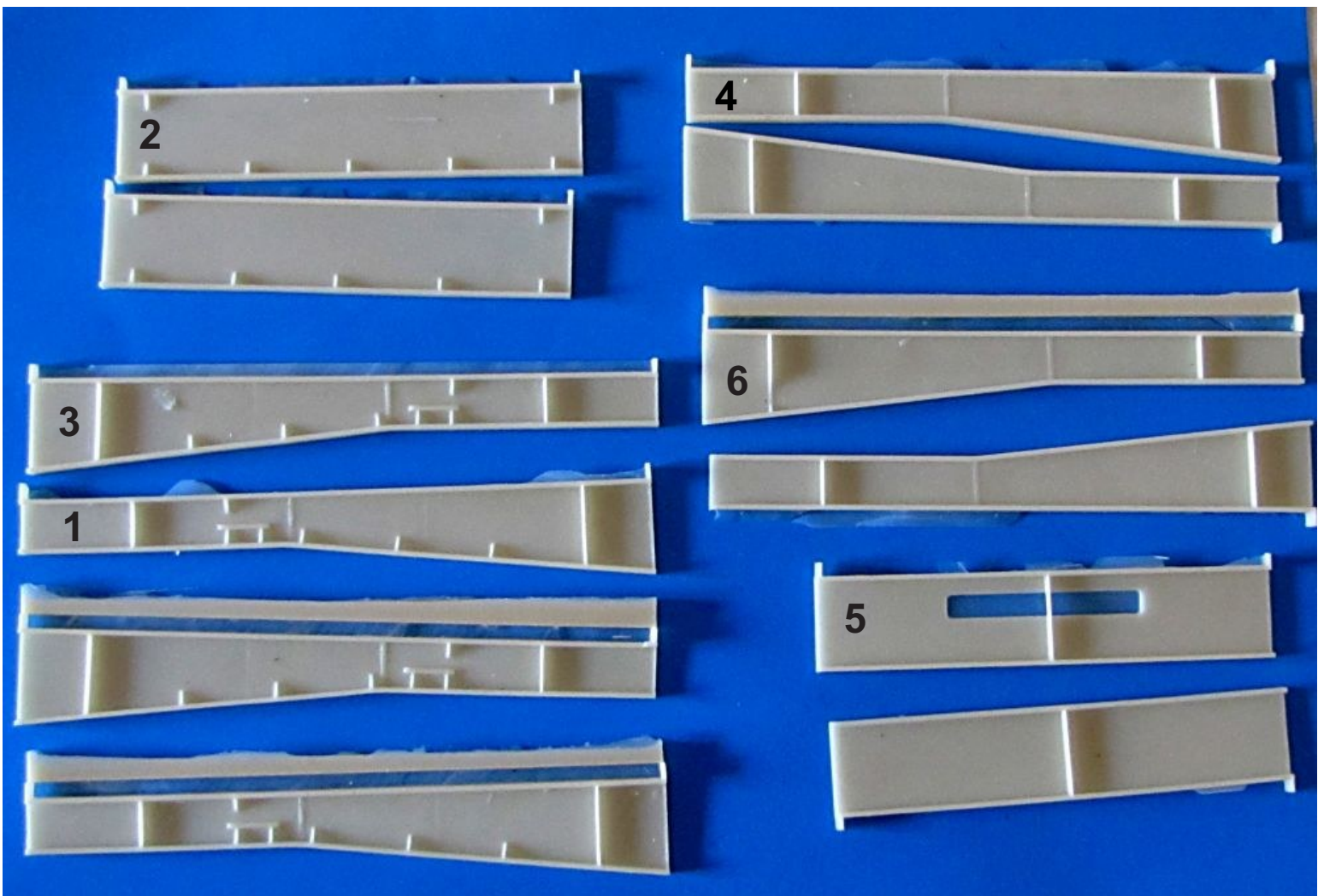


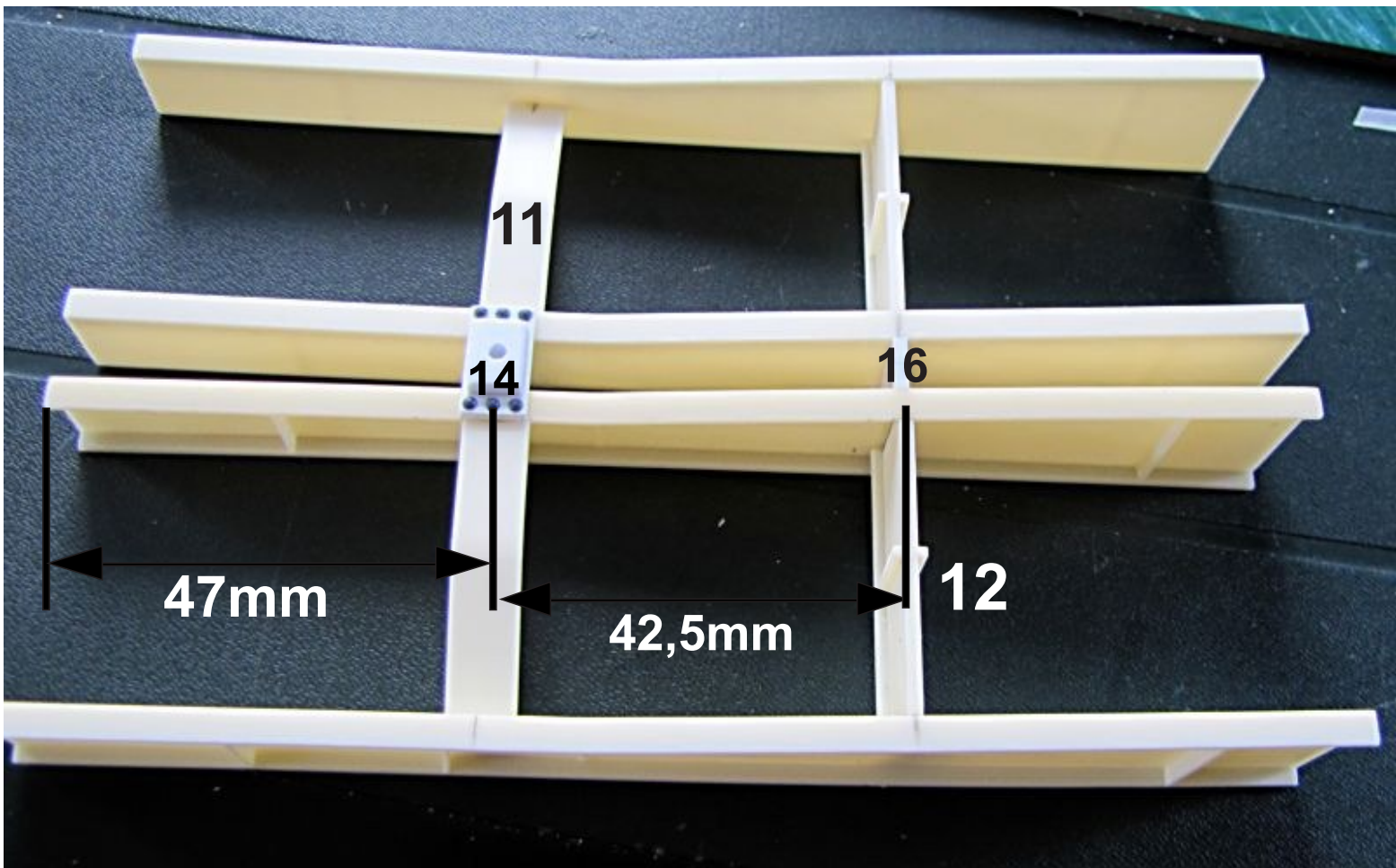
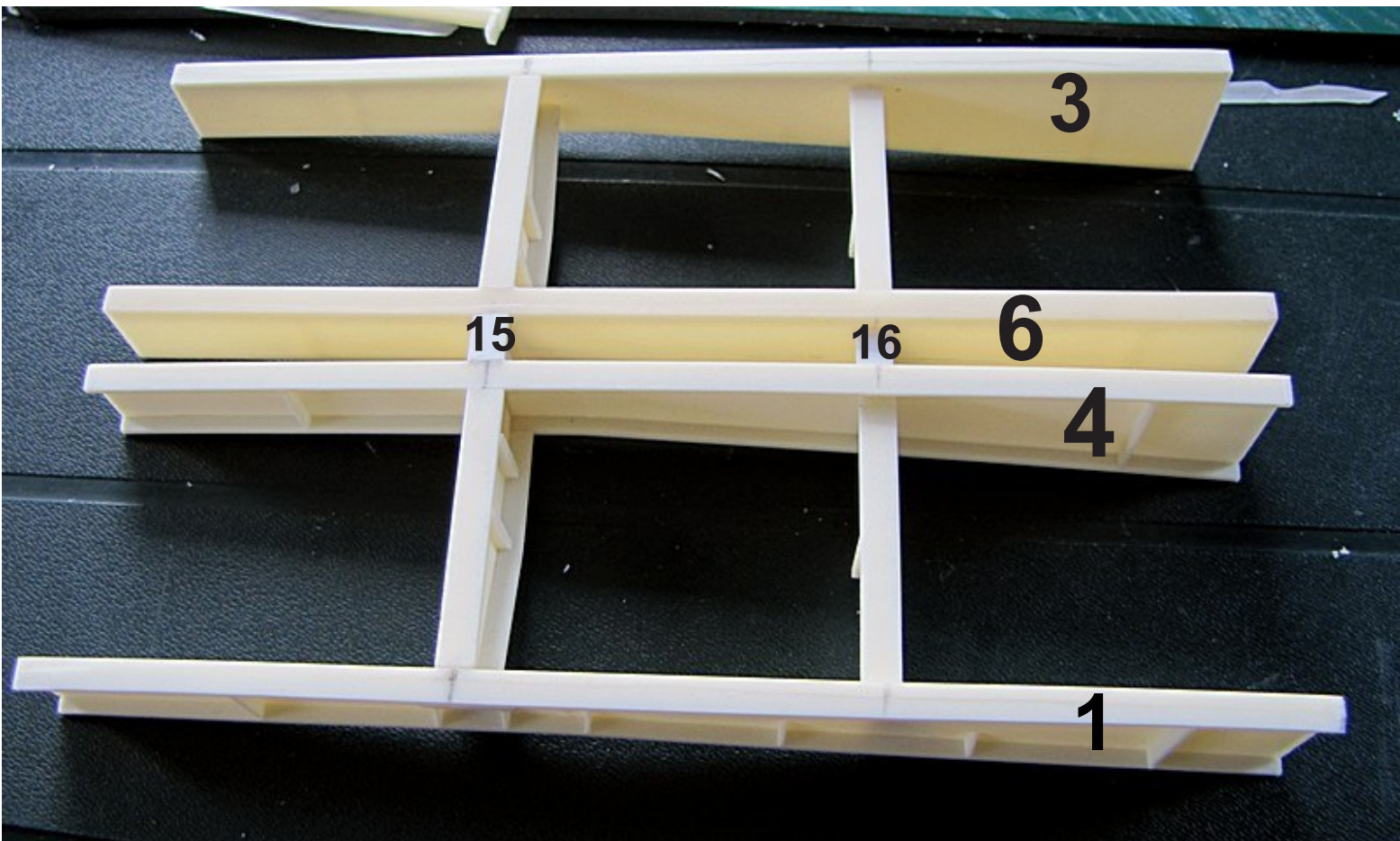
Frame

I started assembly of the frame in sections, but I would recommend to build full length beams first, add buffer beams - and then continue with all the crossbeams. Assembly is simple, the only thing to be minded all the time - right angle between any beams. Very flat working surface is a need to avoid any issue with fitting later.

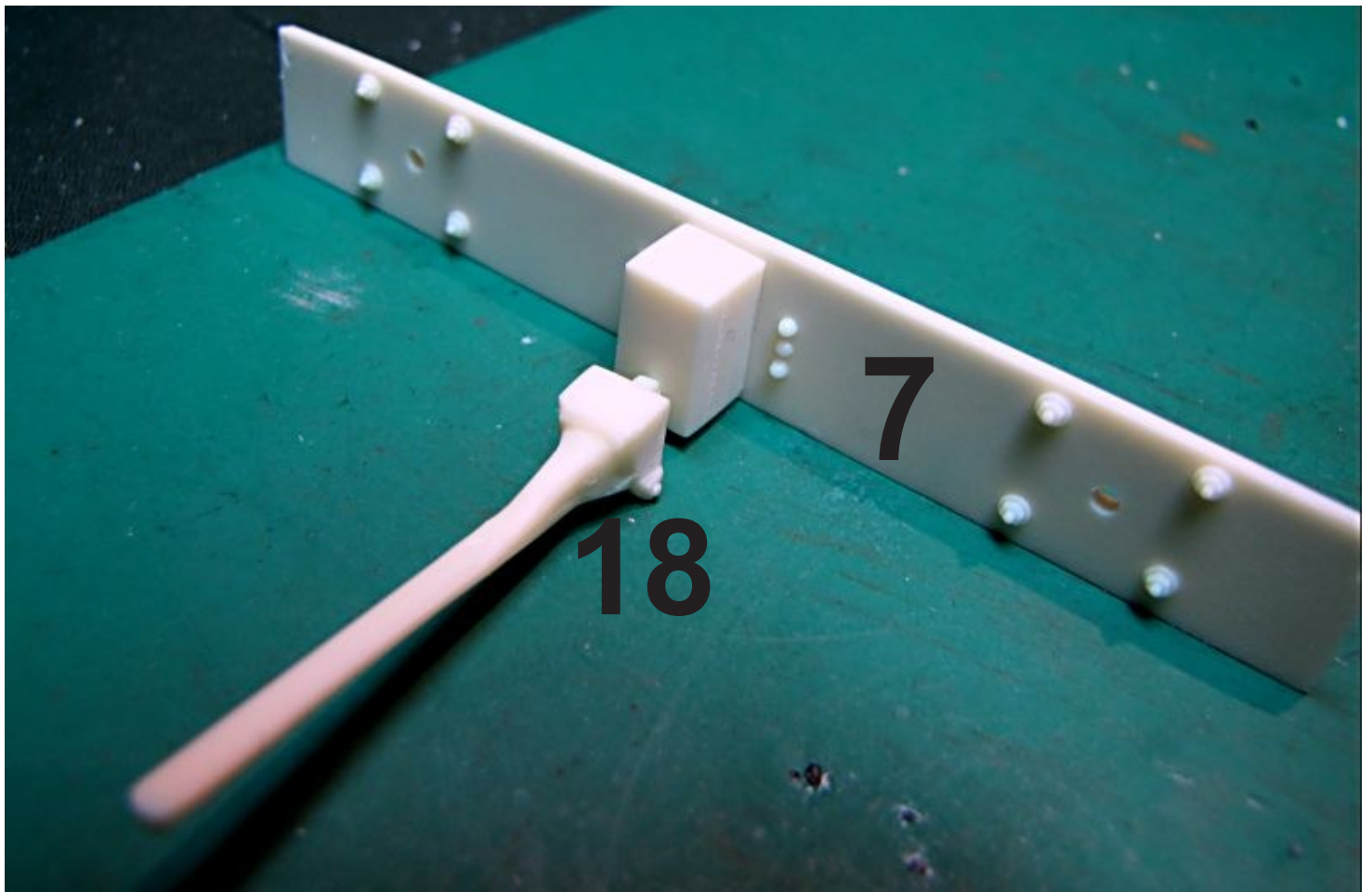
outside beams

inside beams

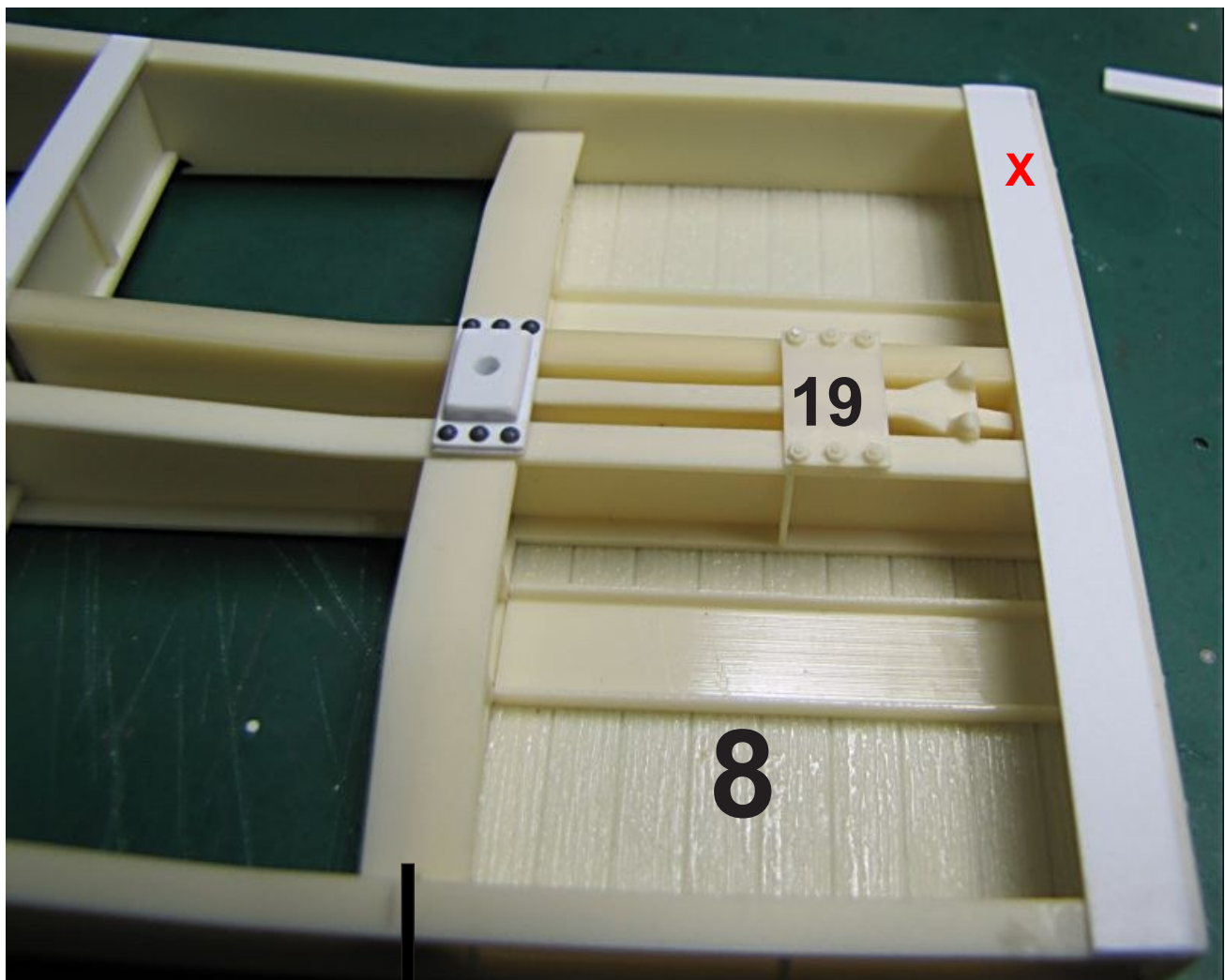


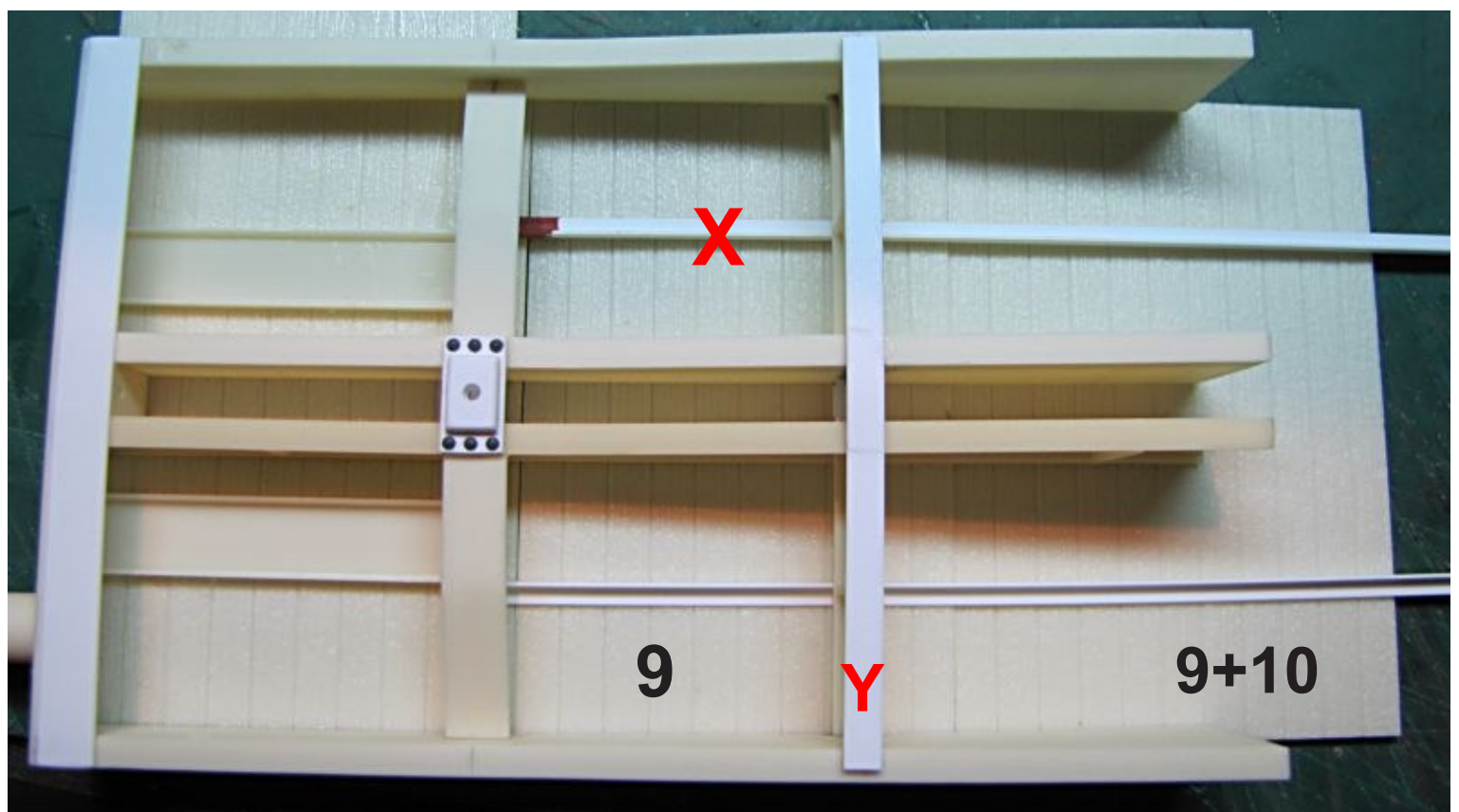
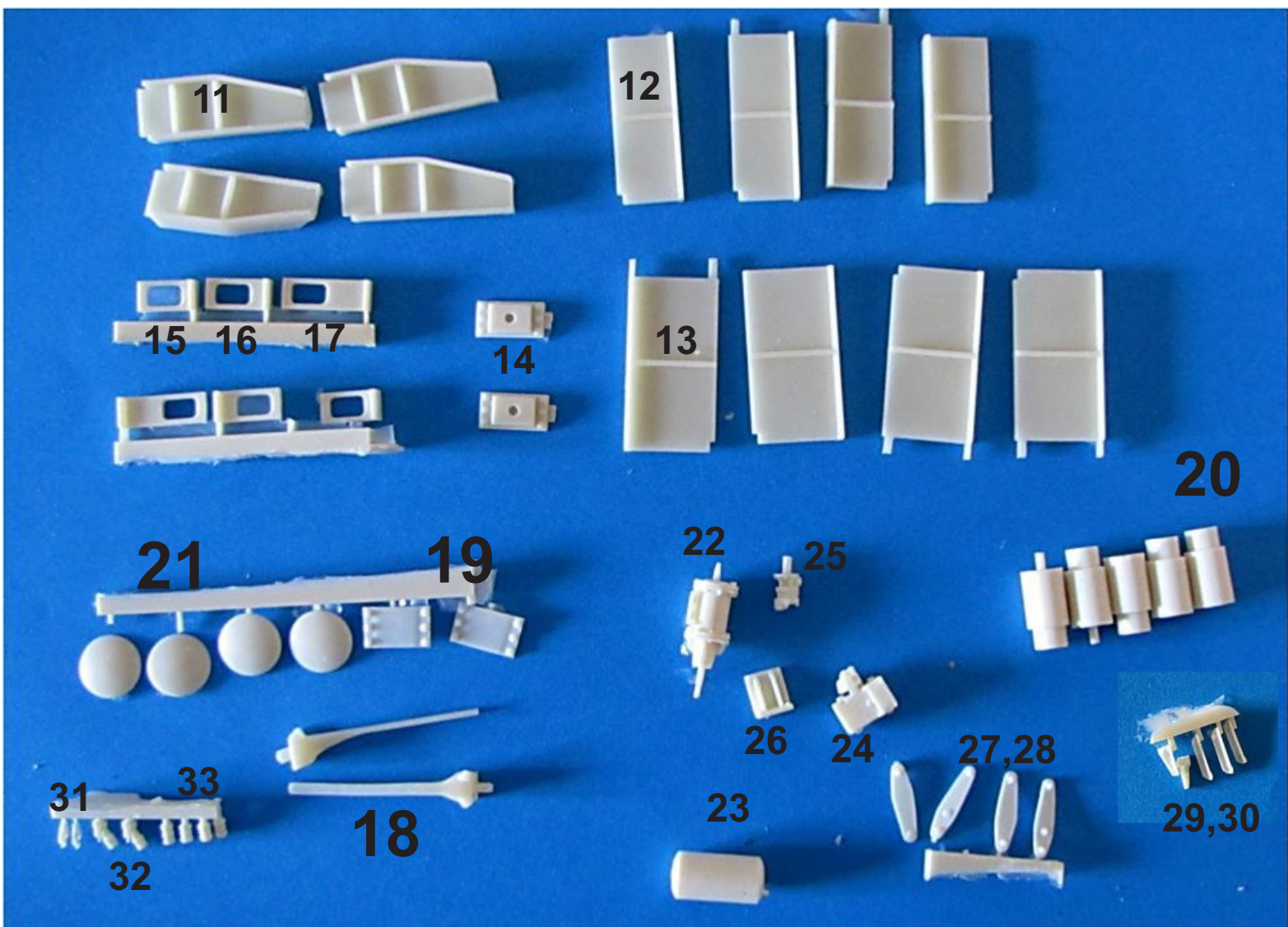


47mm from beam end to centre of No.11
 42,5mm between No. 11 and 12 centre



X - 0,5x6,3 styrene strip in length of No.7

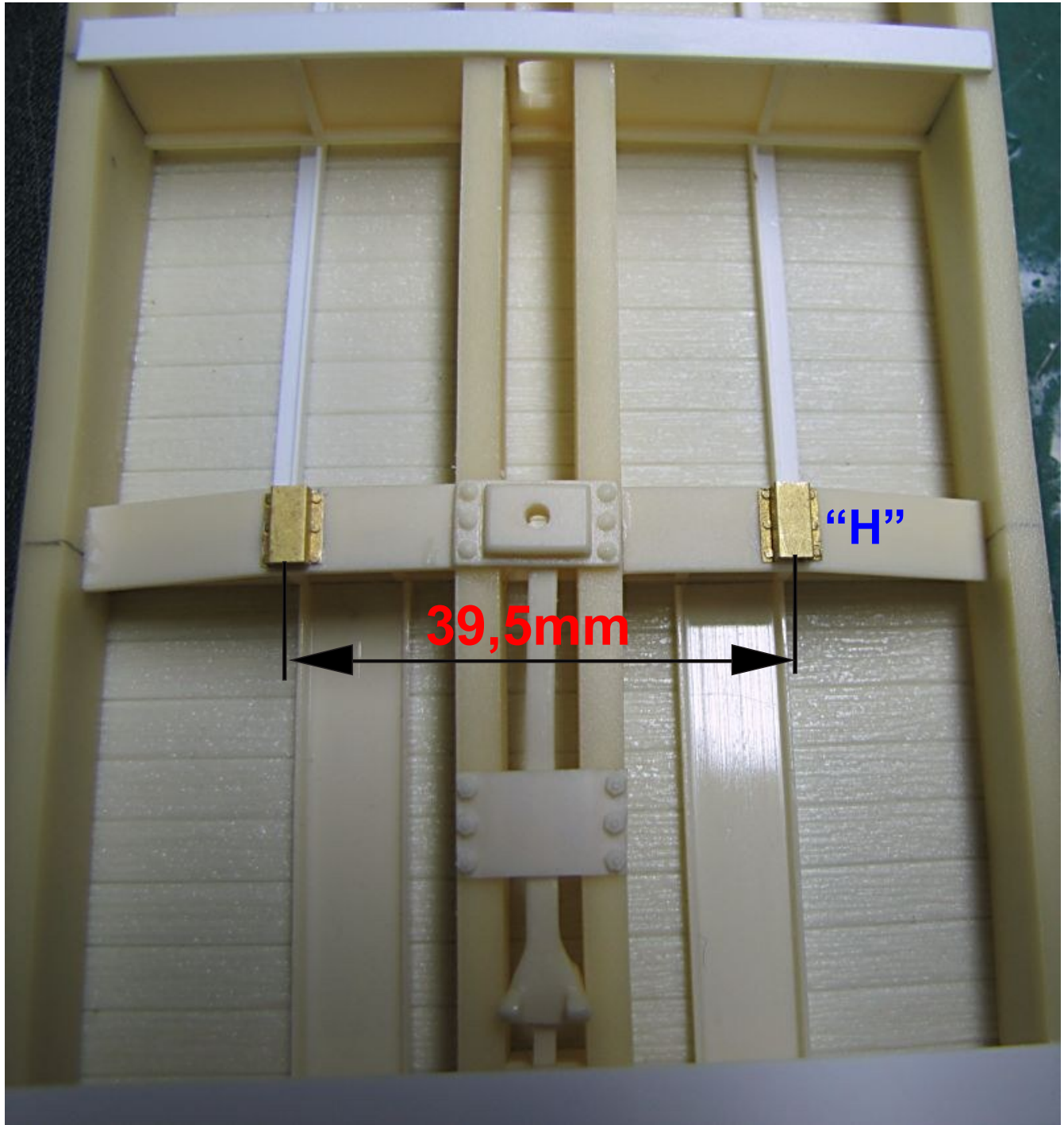


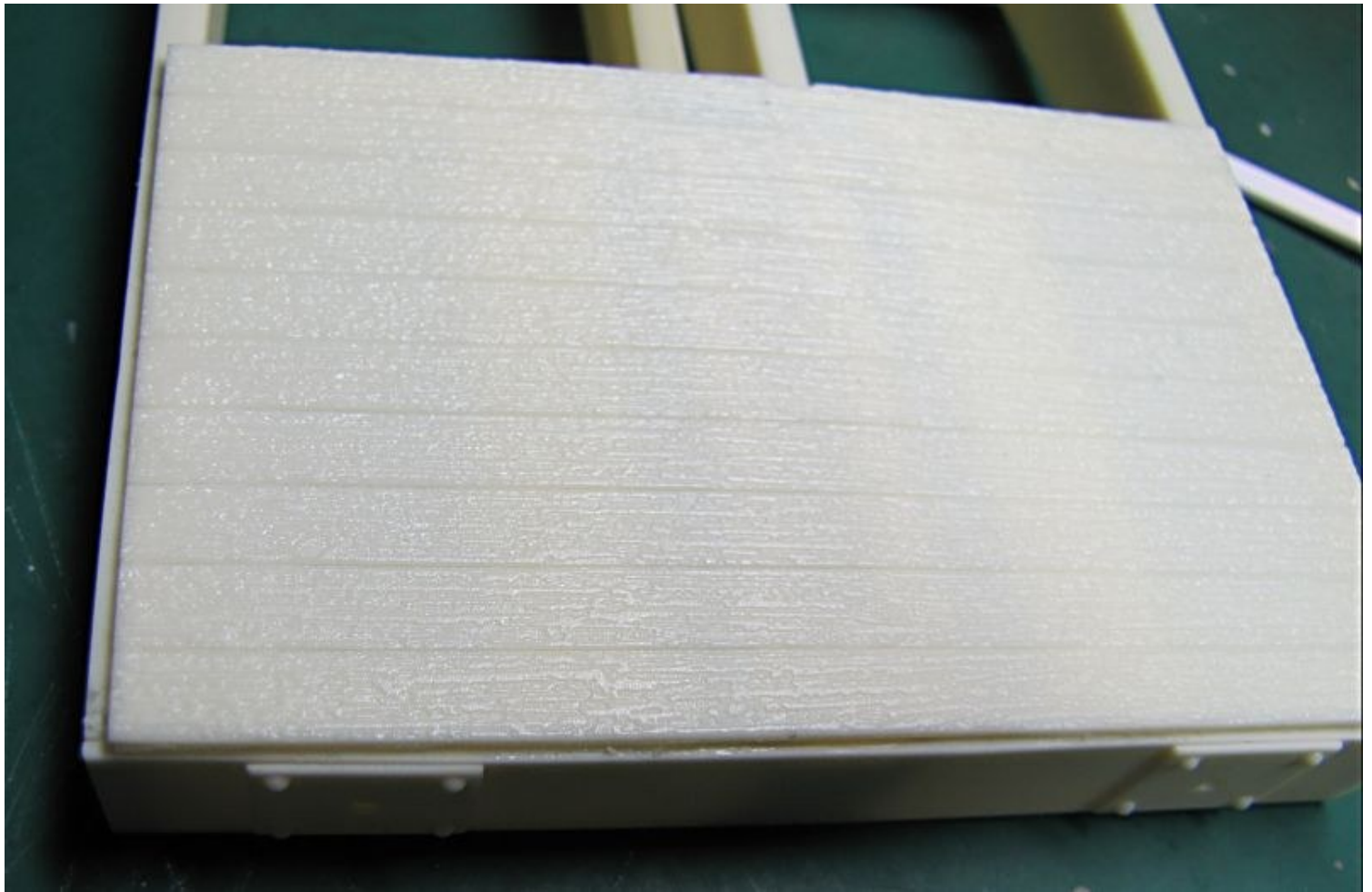


X - 2,5mm angle strip

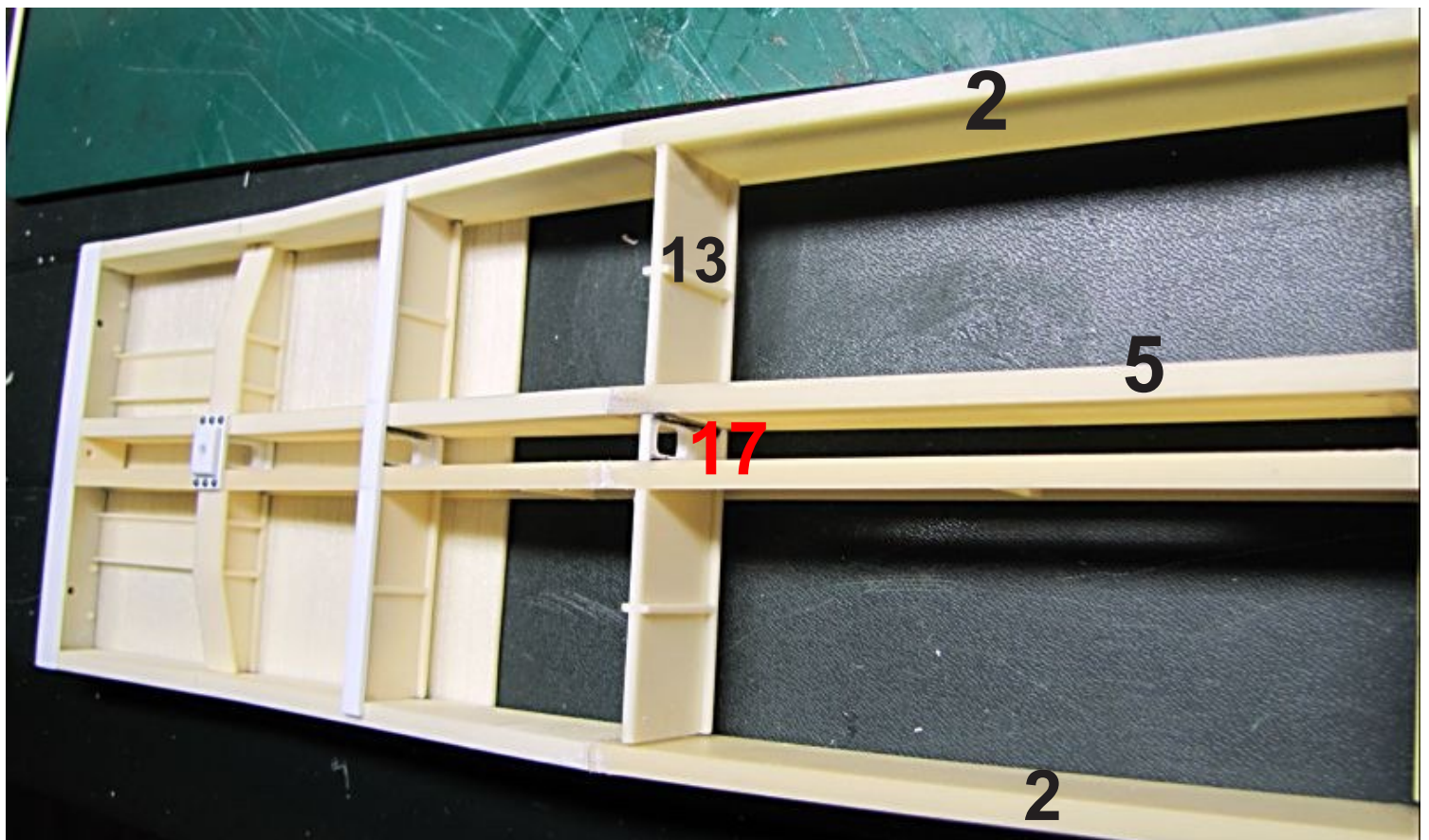
Y - 4x1mm strip - assembled like in the picture

When assembling last section of the floor, small sanding might be needed to get right length and exact fit - It is recommended to start with sections from Buffer beams **No.7** and finish with any of them in the middle. Two floor sections are a bit longer than the rest of them, can be placed in any order - only two sections **No.8** have to be placed at the ends of the car

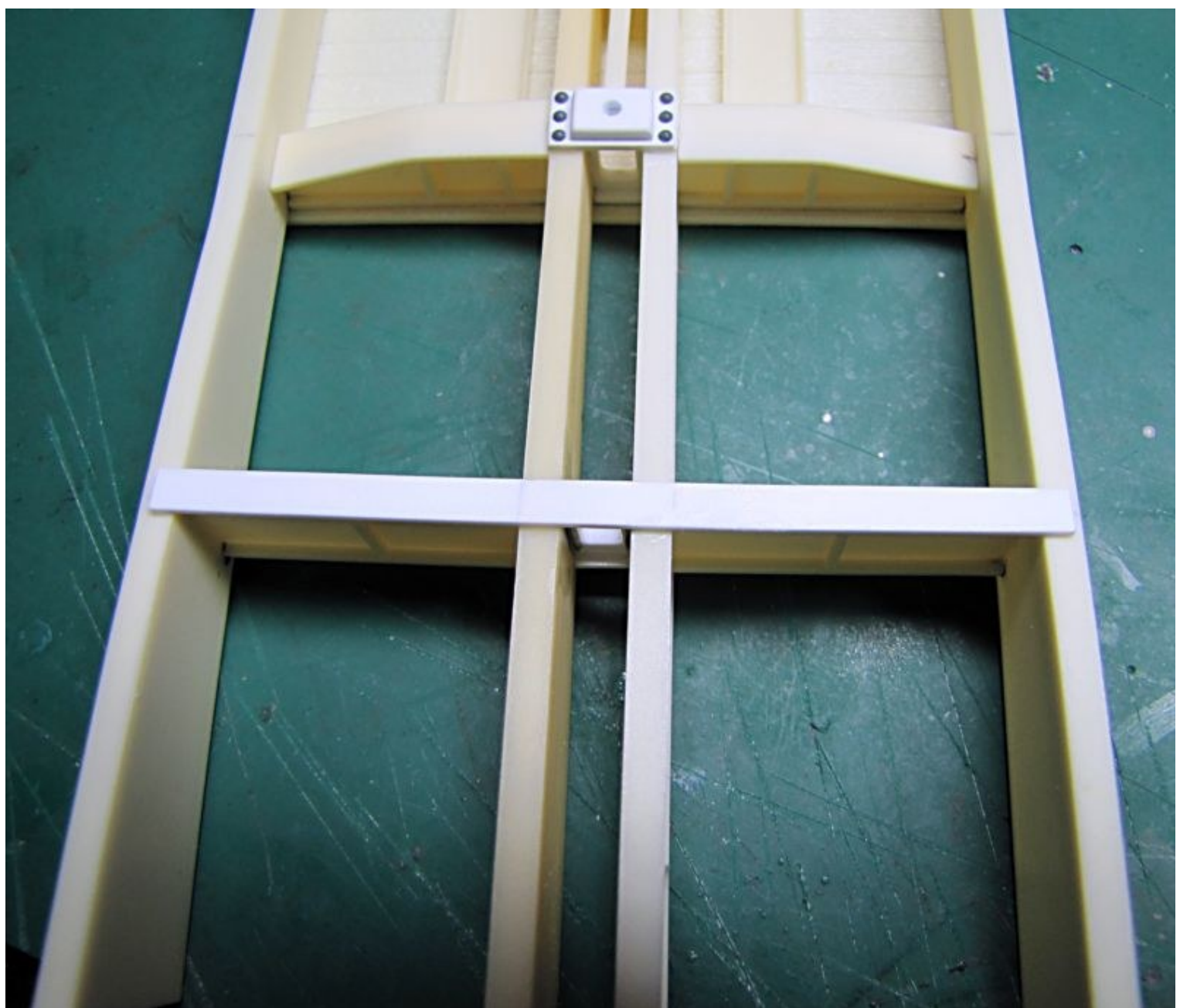


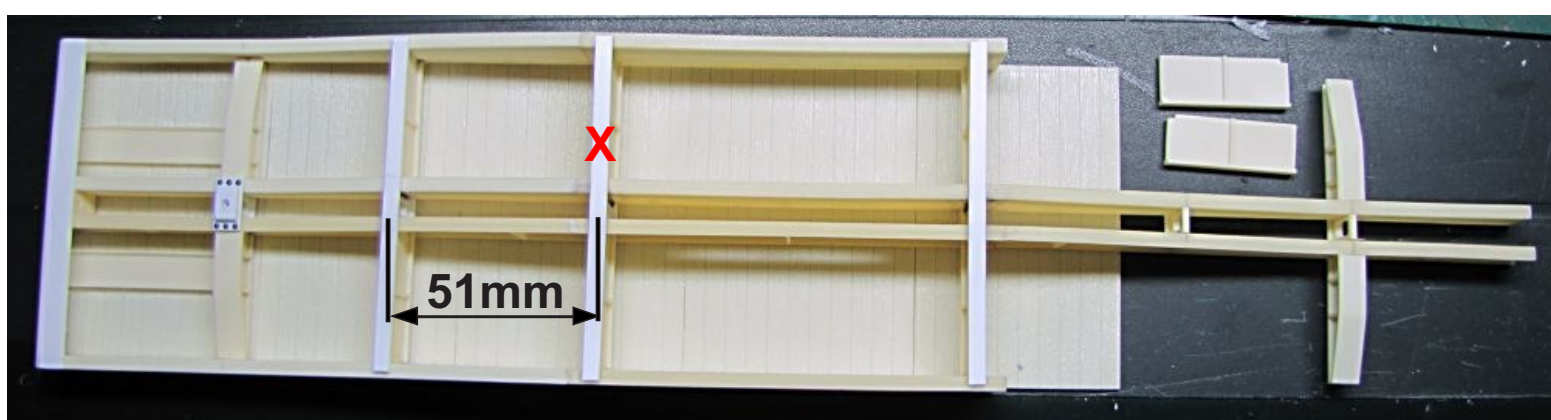


From top the floor is assembled like this. Whole platform will be later “framed” by 1,1x1,7 mm styrene strip



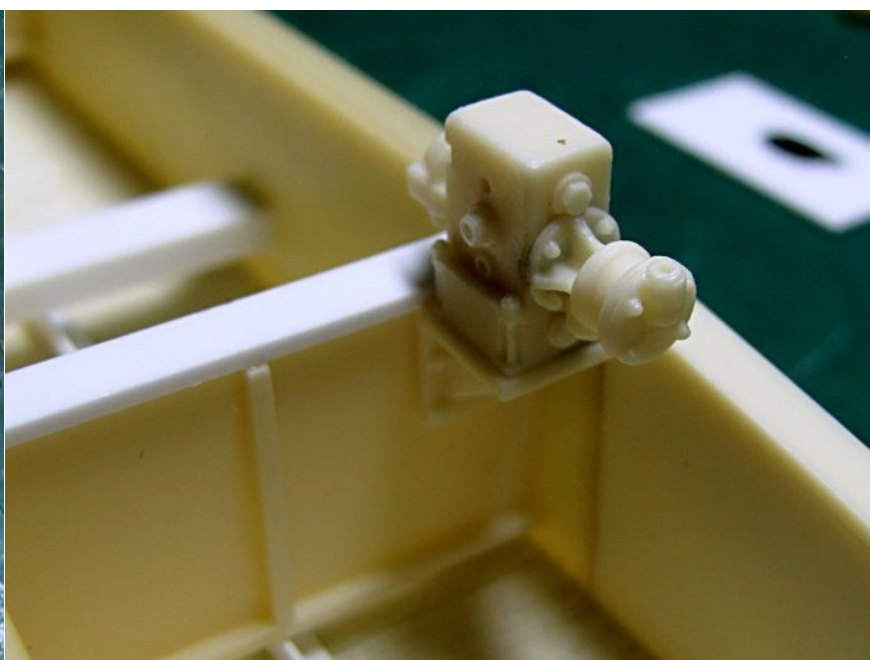
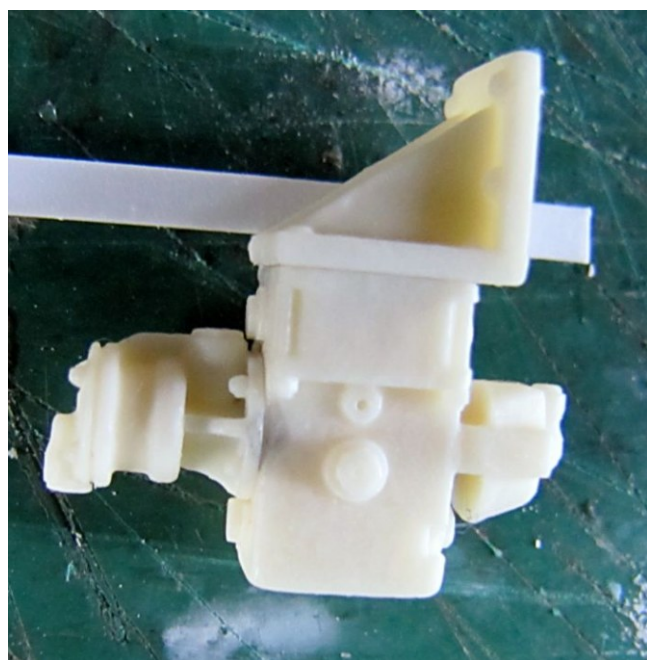
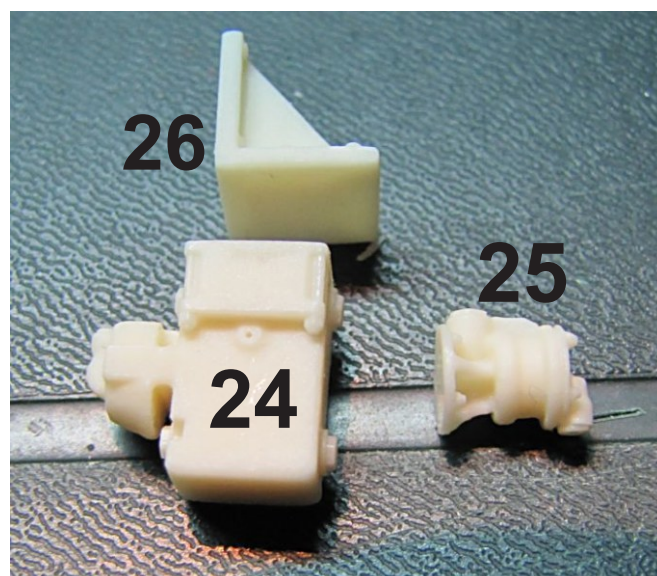
One of parts No.5 has a slot for brake arms, mind its direction



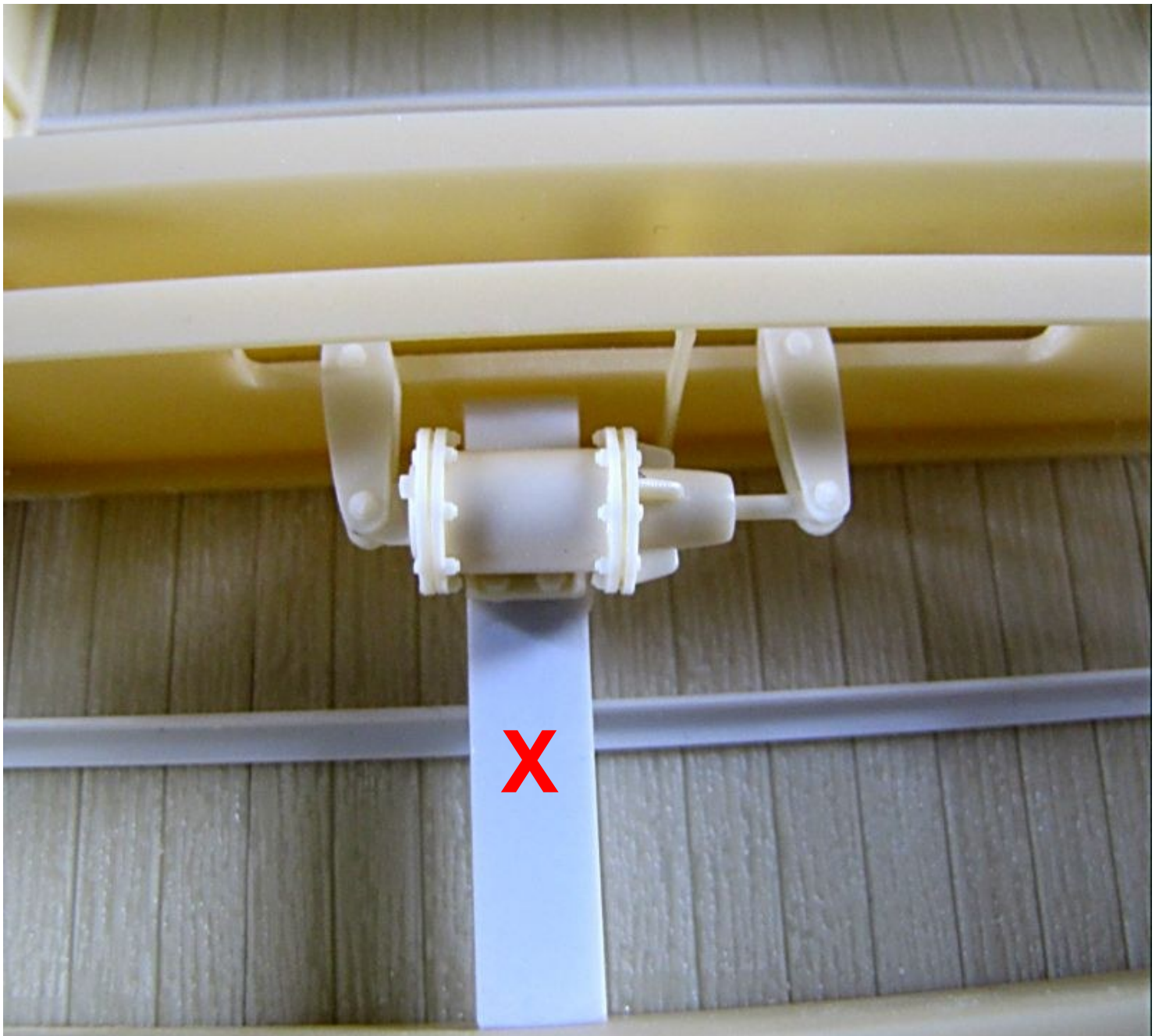


51 mm between No. 12 and 13 centre

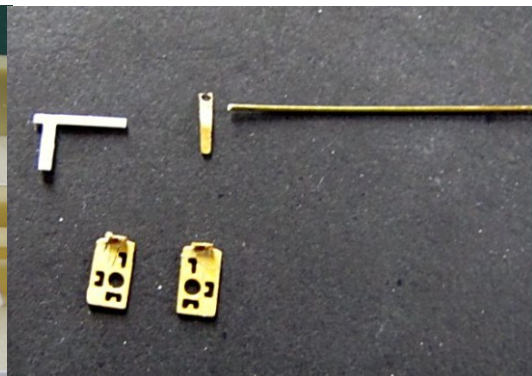
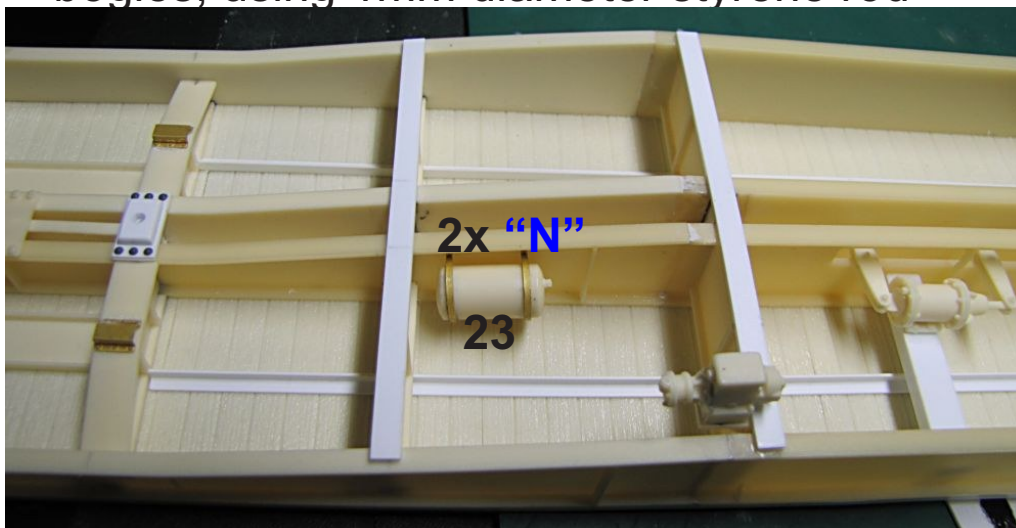
X - 4x1mm strip assembled like in the picture

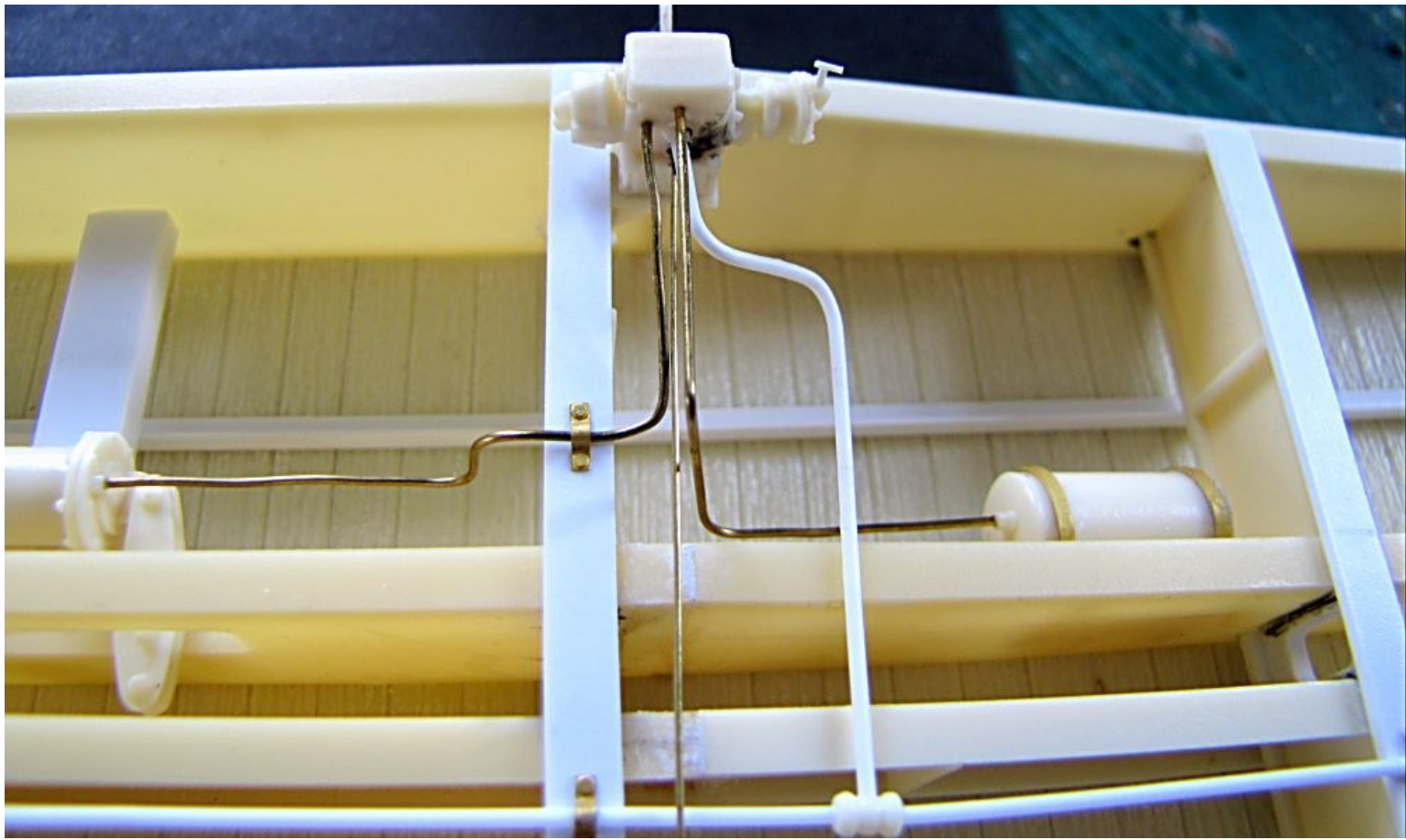


Brake assembly



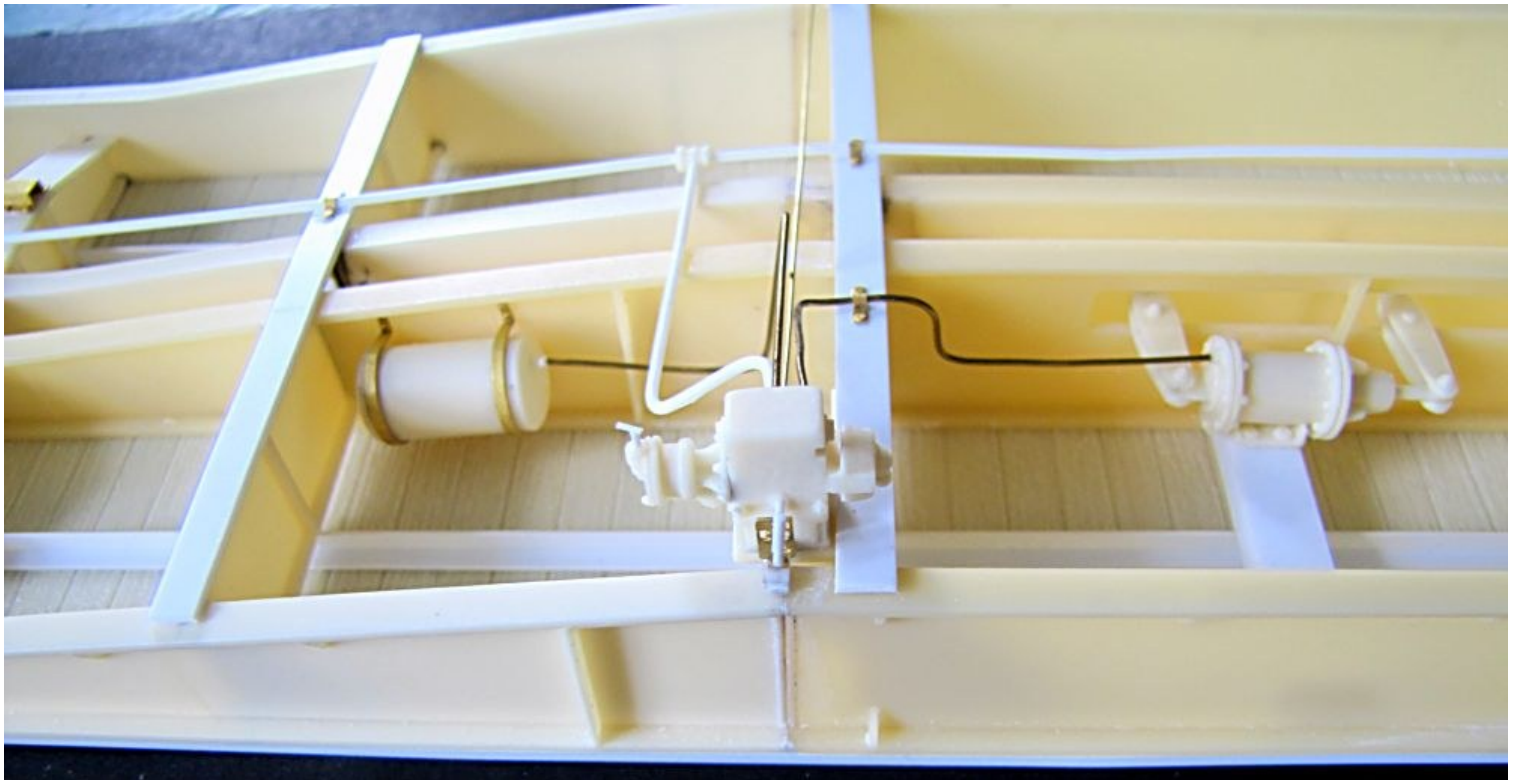
X - 6,3x3,2 strip - assembly the brake cylinder with arms first, then its holding beam, arms are glued straight on slot edge, longer side out and shorter in - they will be connected to brake arms on bogies, using 1mm diameter styrene rod

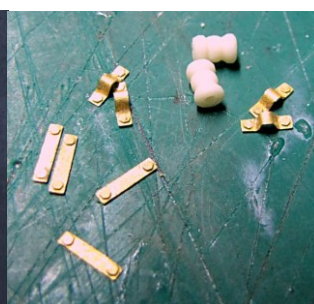
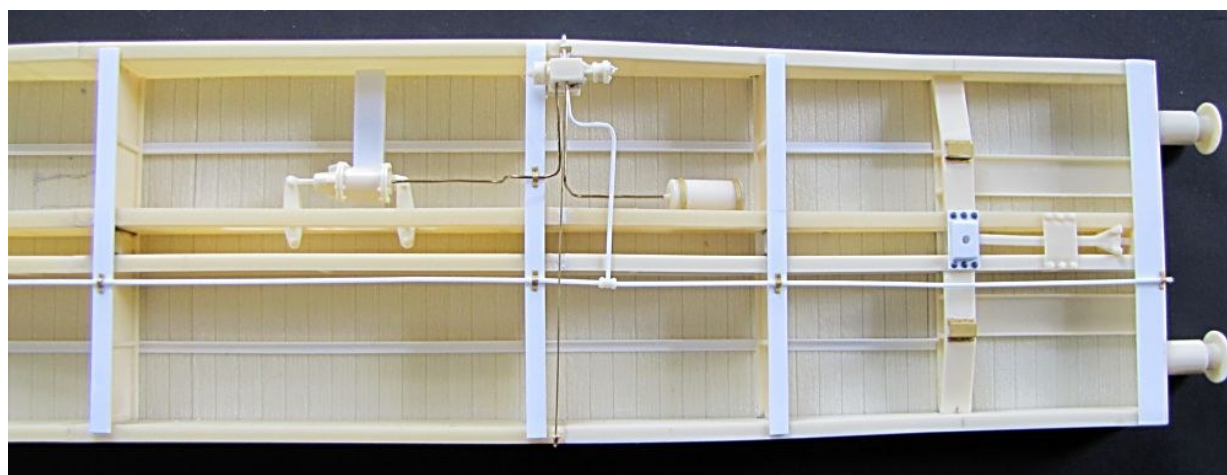
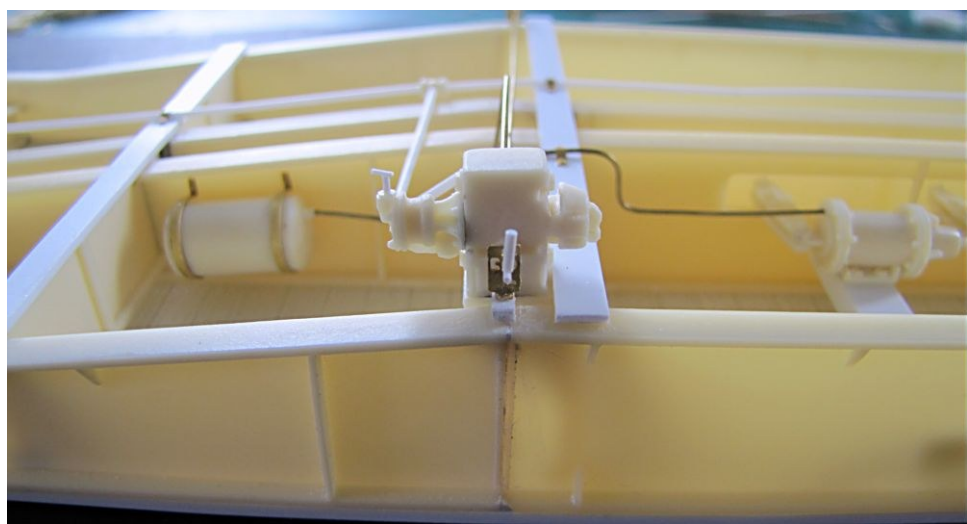
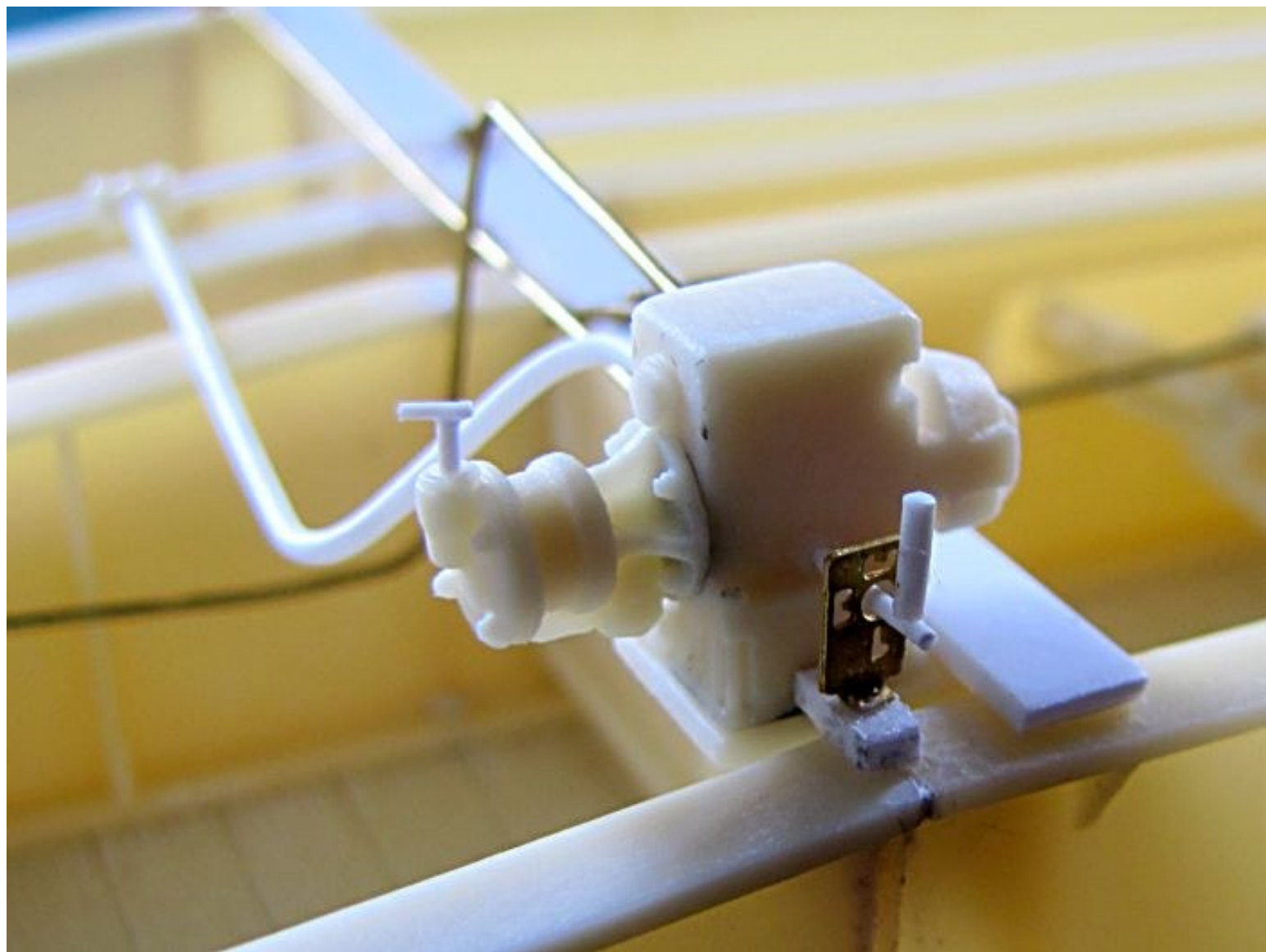


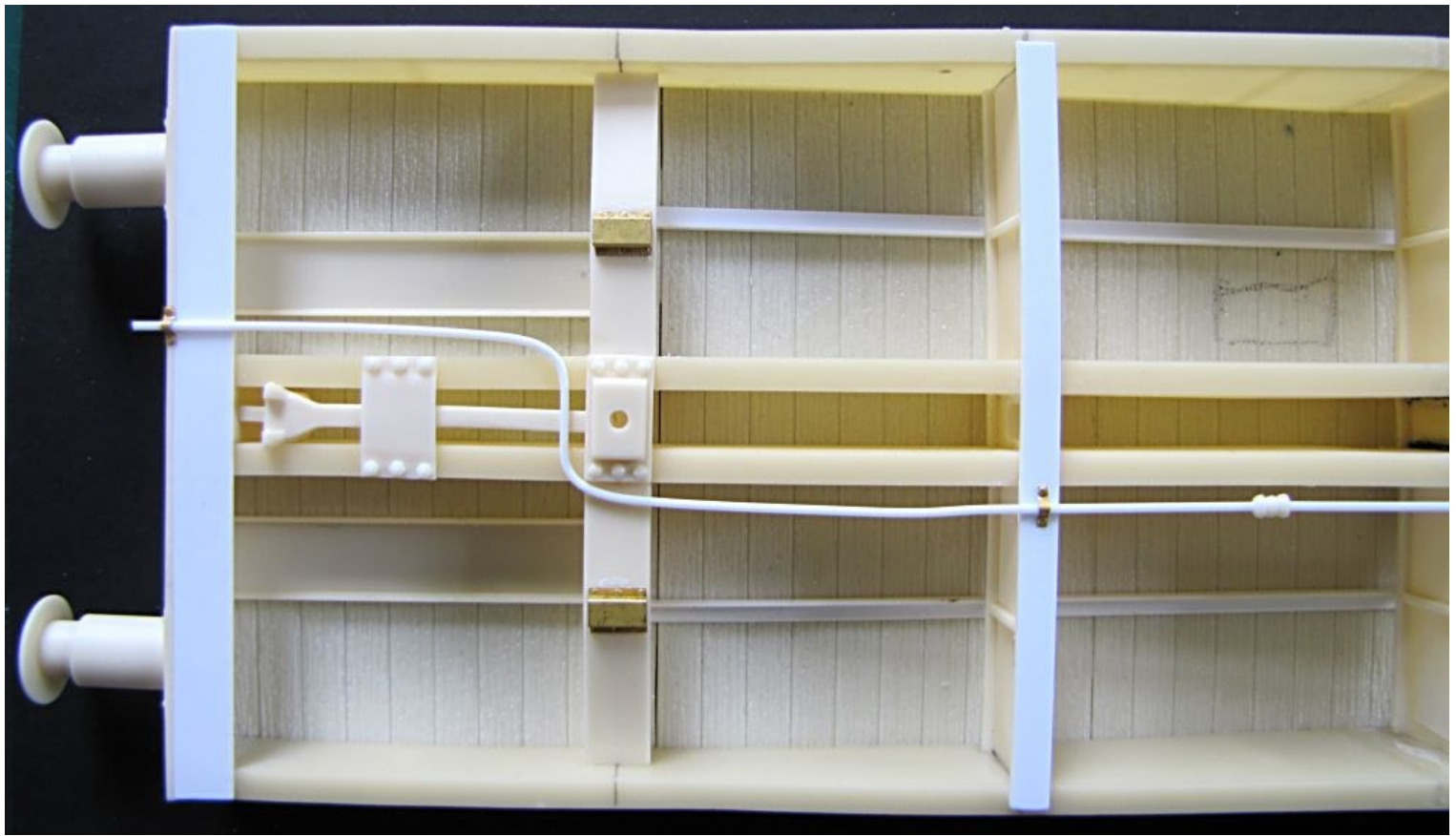


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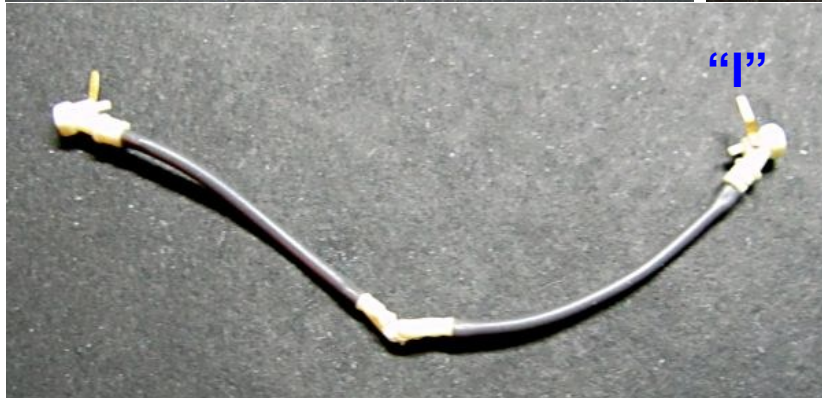
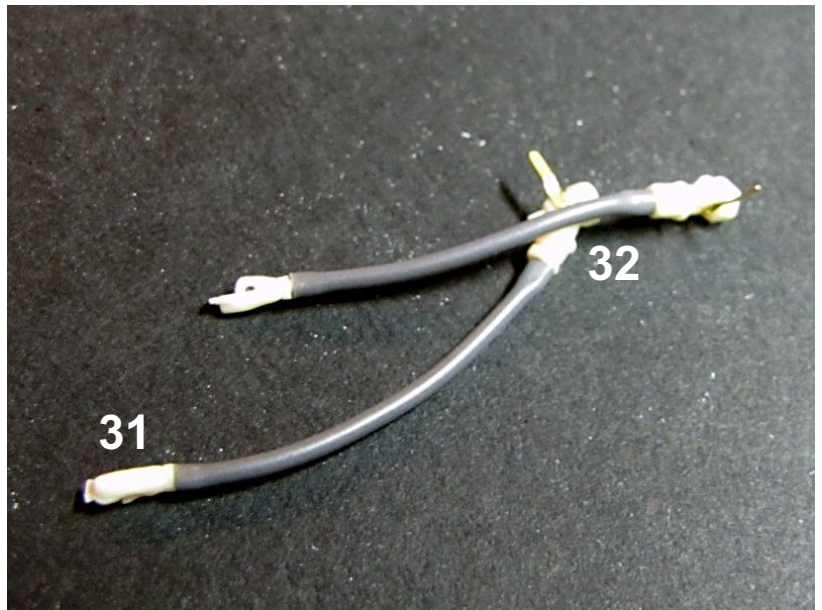
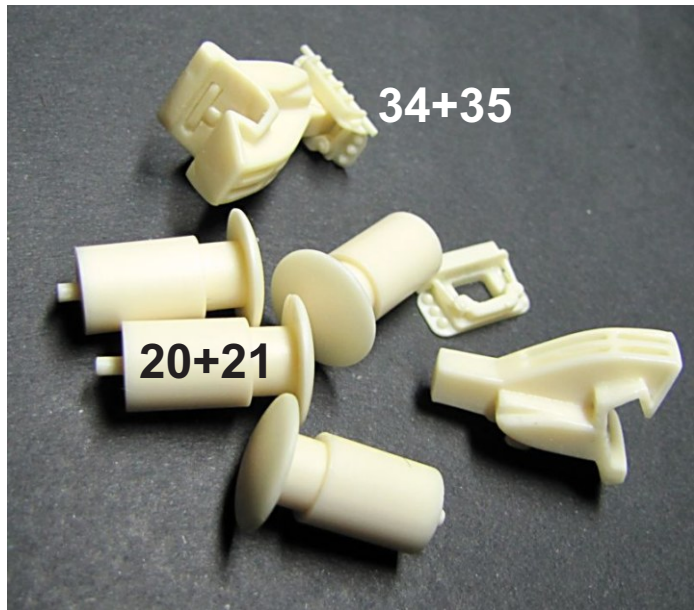
1mm diameter rod used for main air line, 0,6mm diameter wire for other pipes, 0,4mm diameter wire for rod to manipulate the brake power switch. Its lever can be made from thin styrene rod or PE "G" from brake sheet can be used. There are also PE "H" - pipe clamps, and "L+M" markings



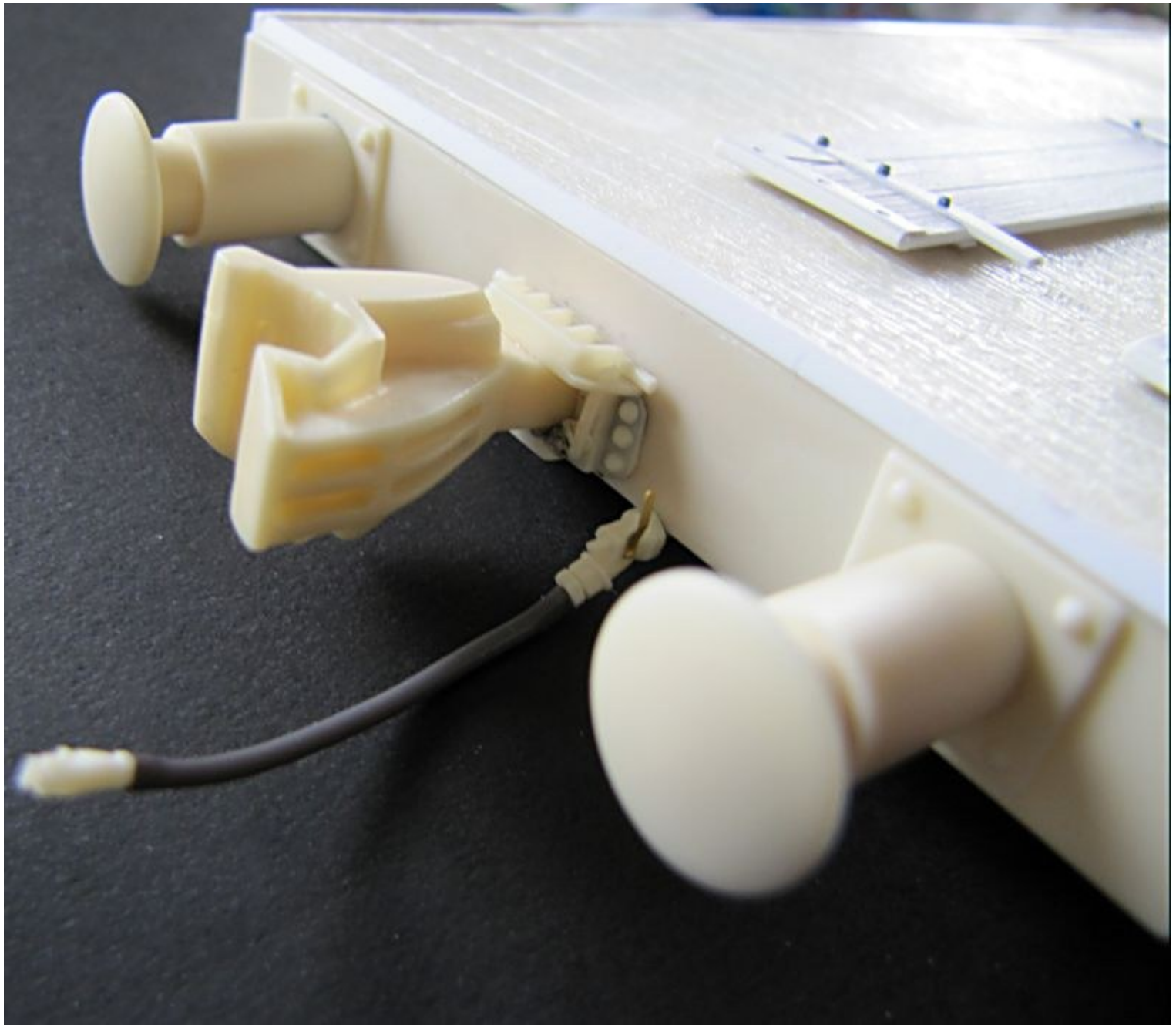




Air pipe should end on the left at both sides

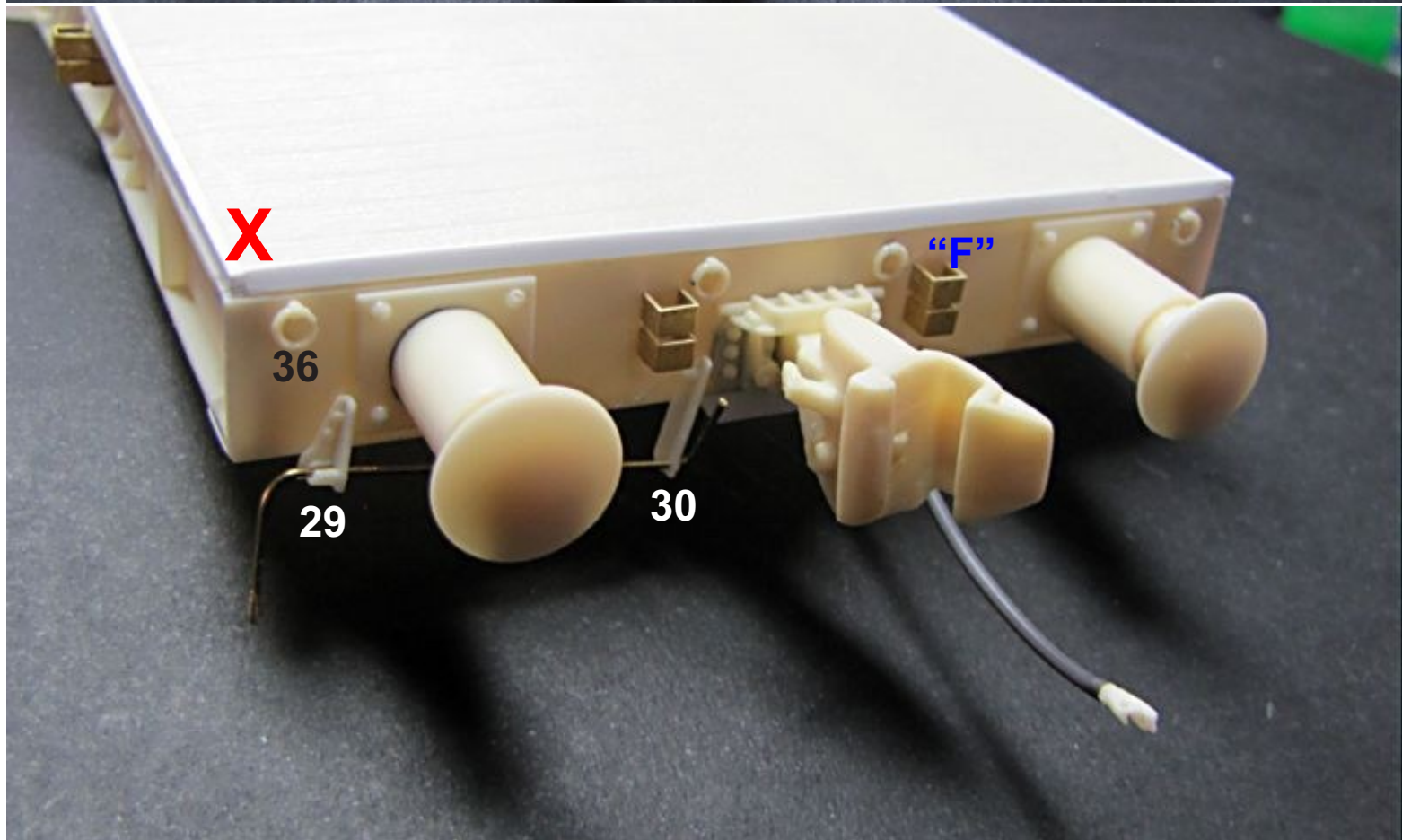
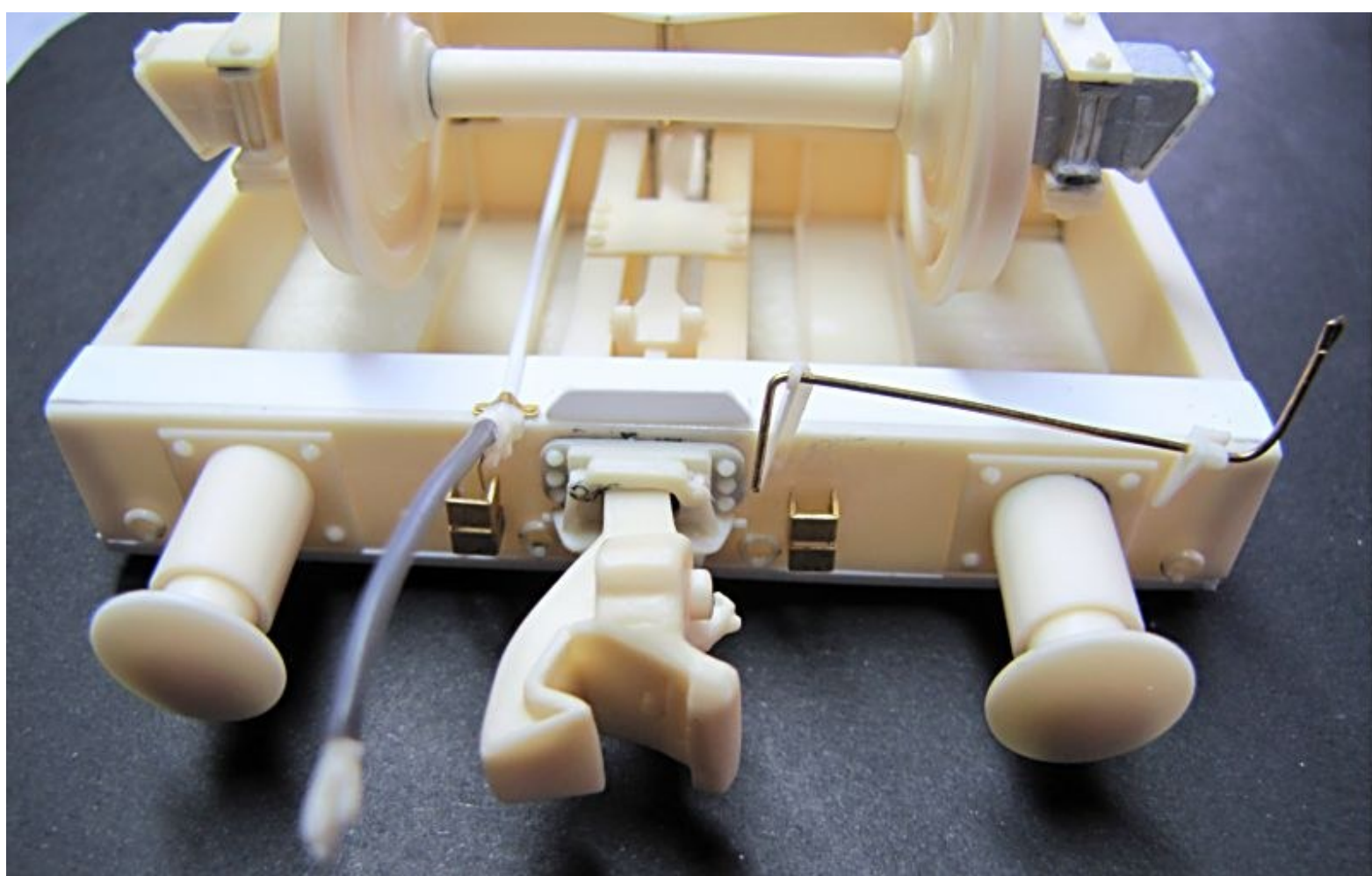


For hose can be used isolation from suitable tiny cable - to get "flexible hose"

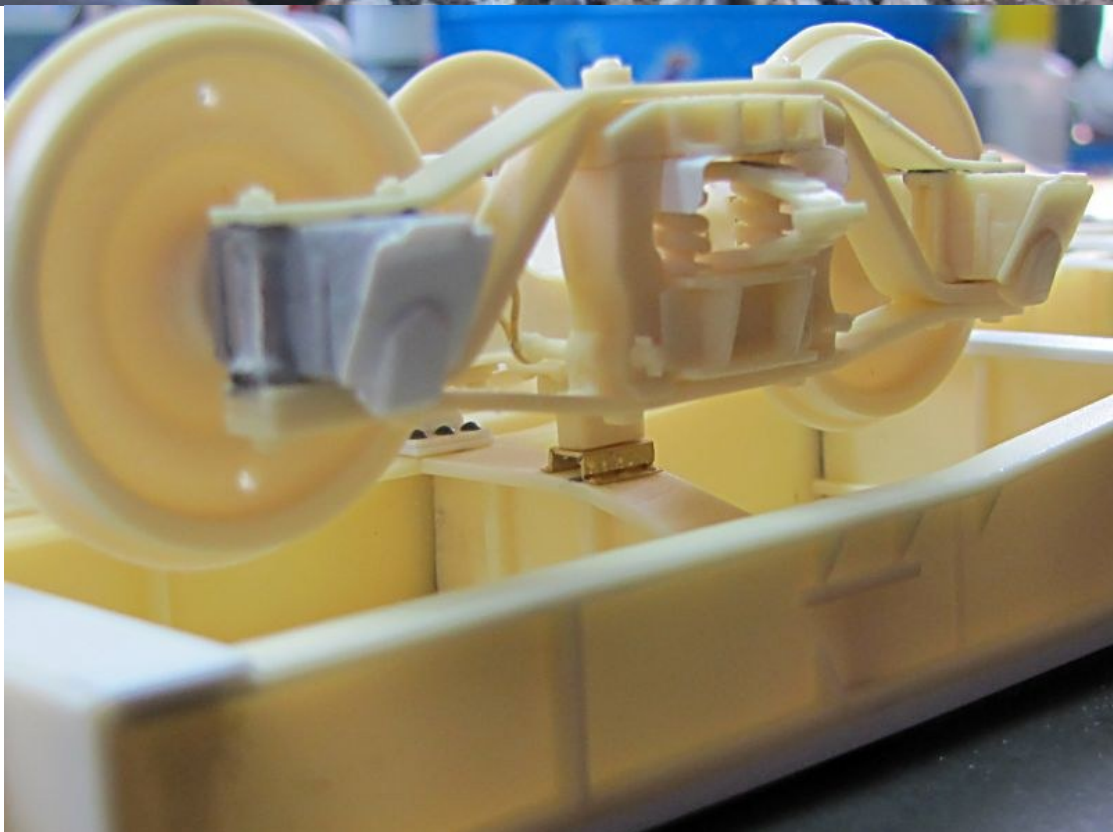
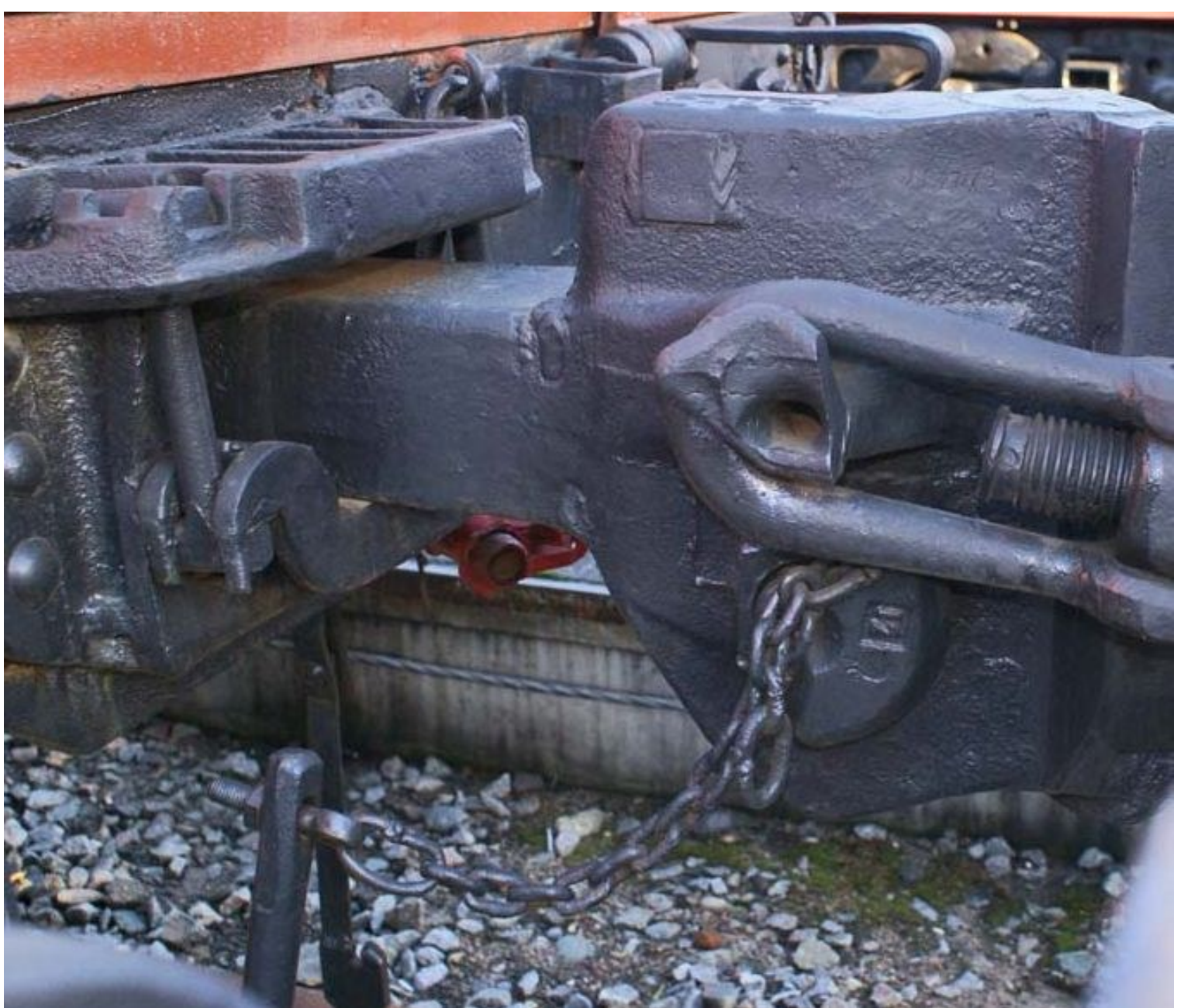


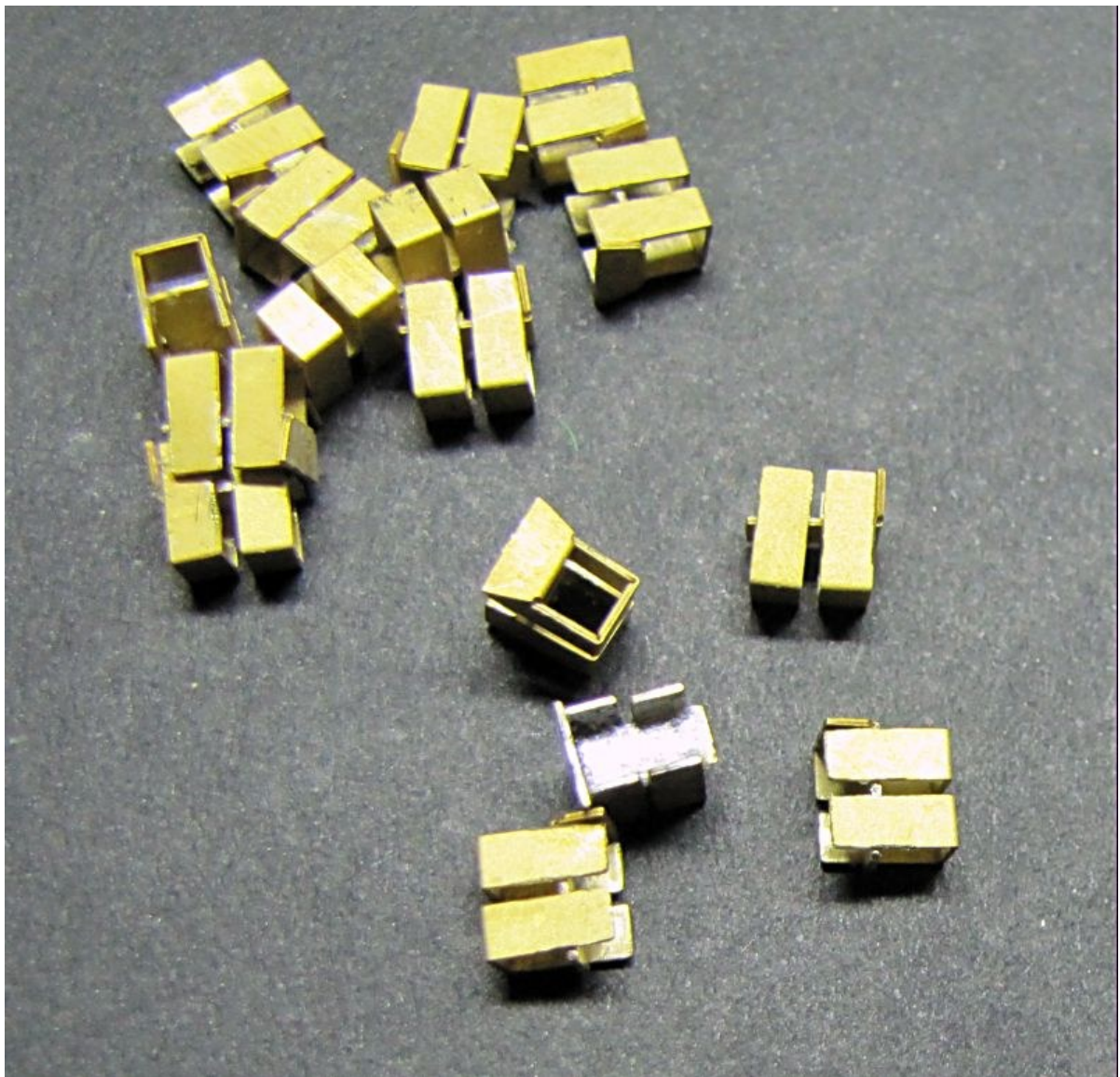
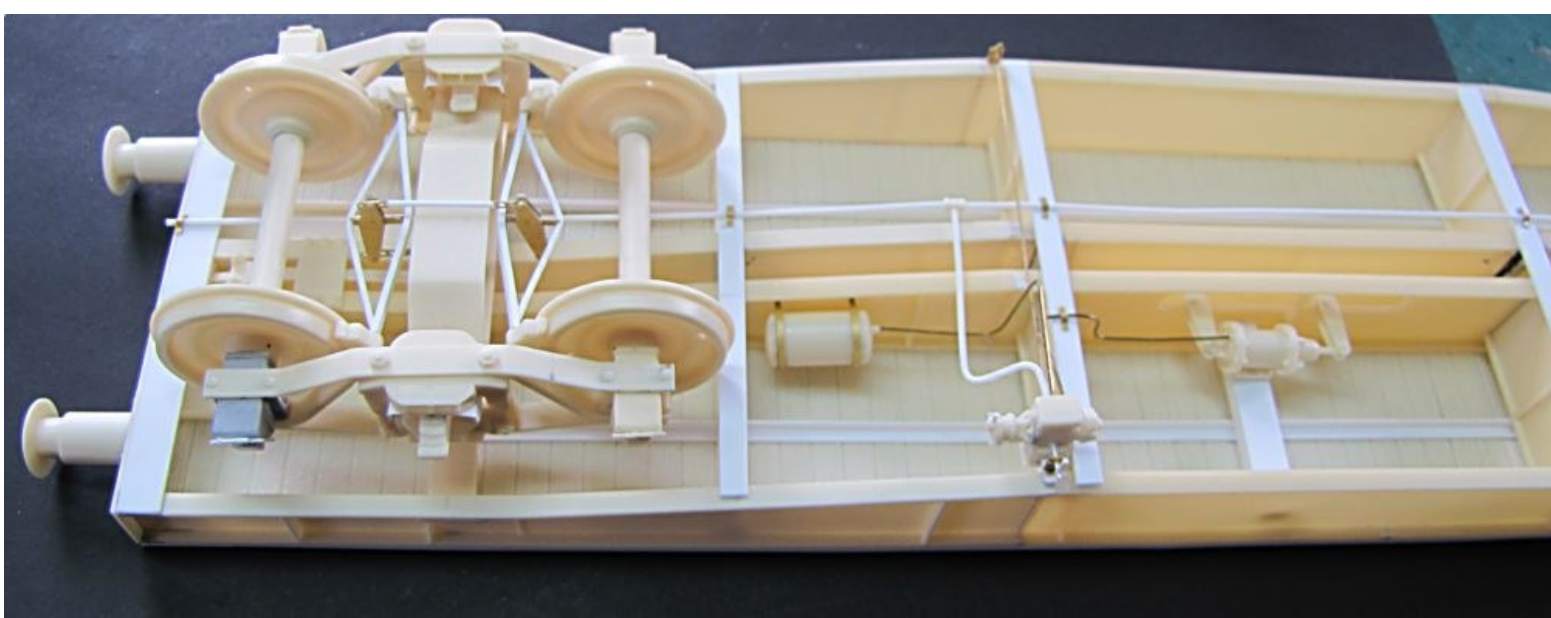
PE hangers “G” to be glued next to the air valves - to hold hose connector in fixed position



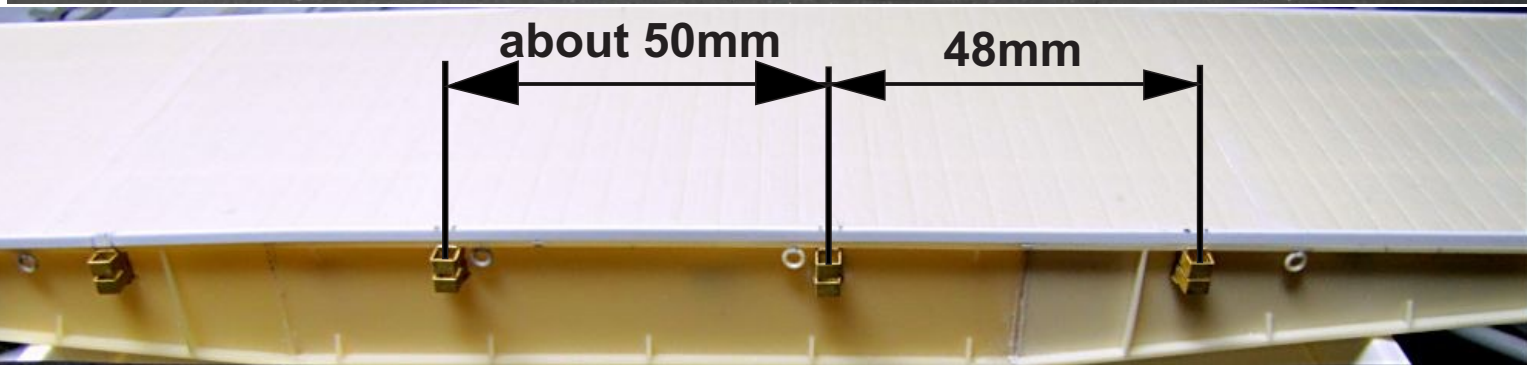
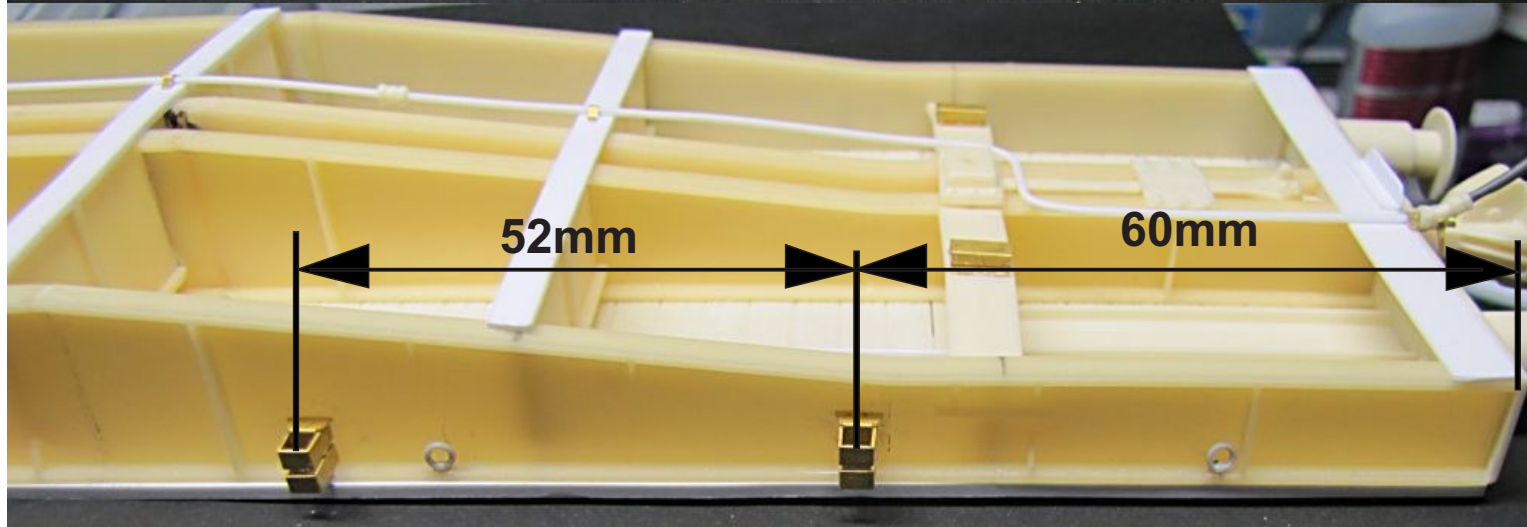
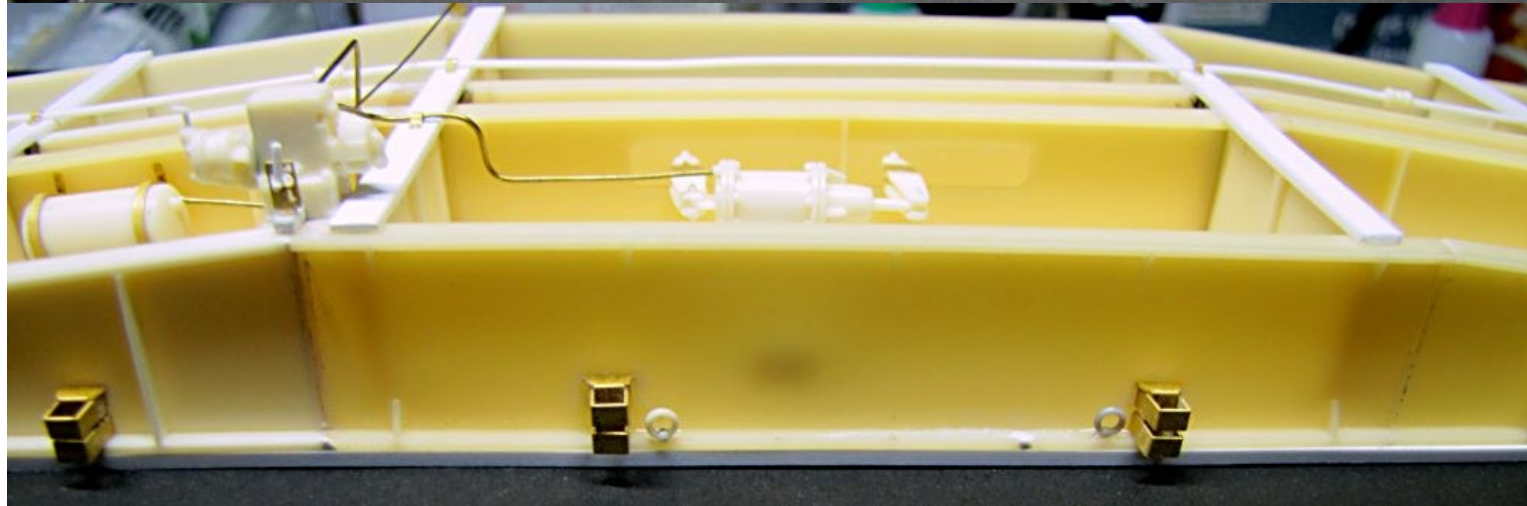


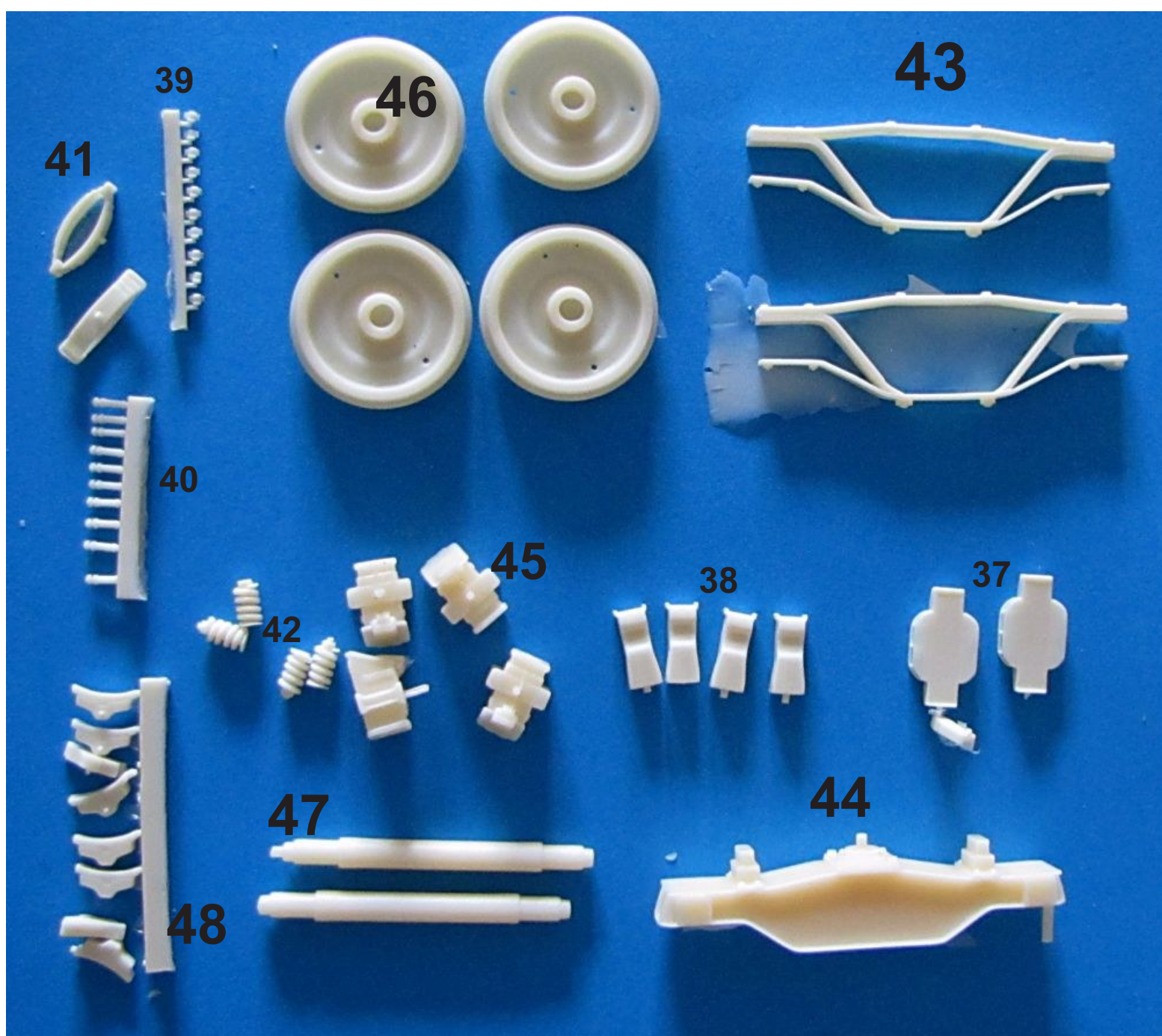
X - 1,1x1,7mm styrene strip frames whole floor all around. 0,4mm wire used for a rod to manipulate the coupler. Tiny chain could be added to connect its end with coupler switch (not included in kit)





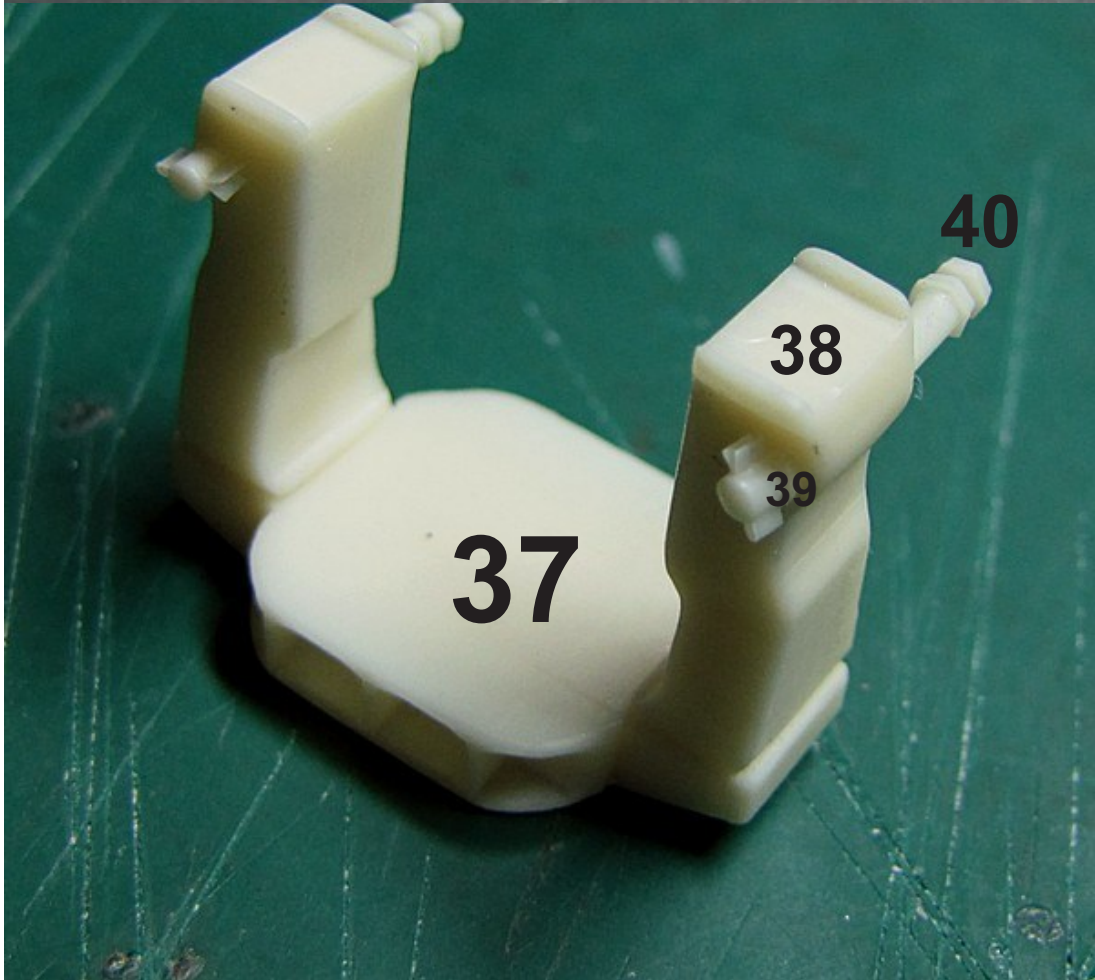
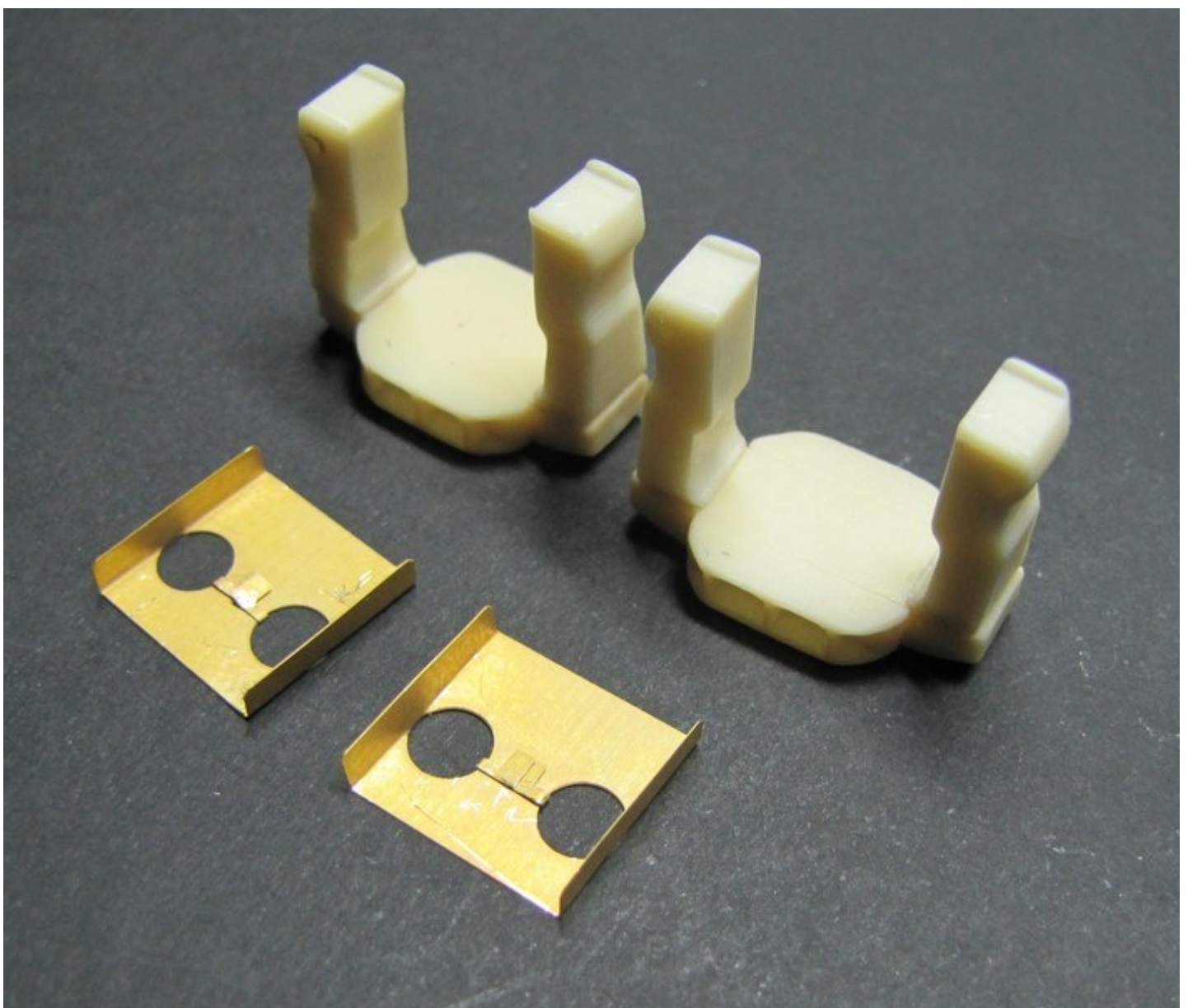
PE “D+E” glued or welded together

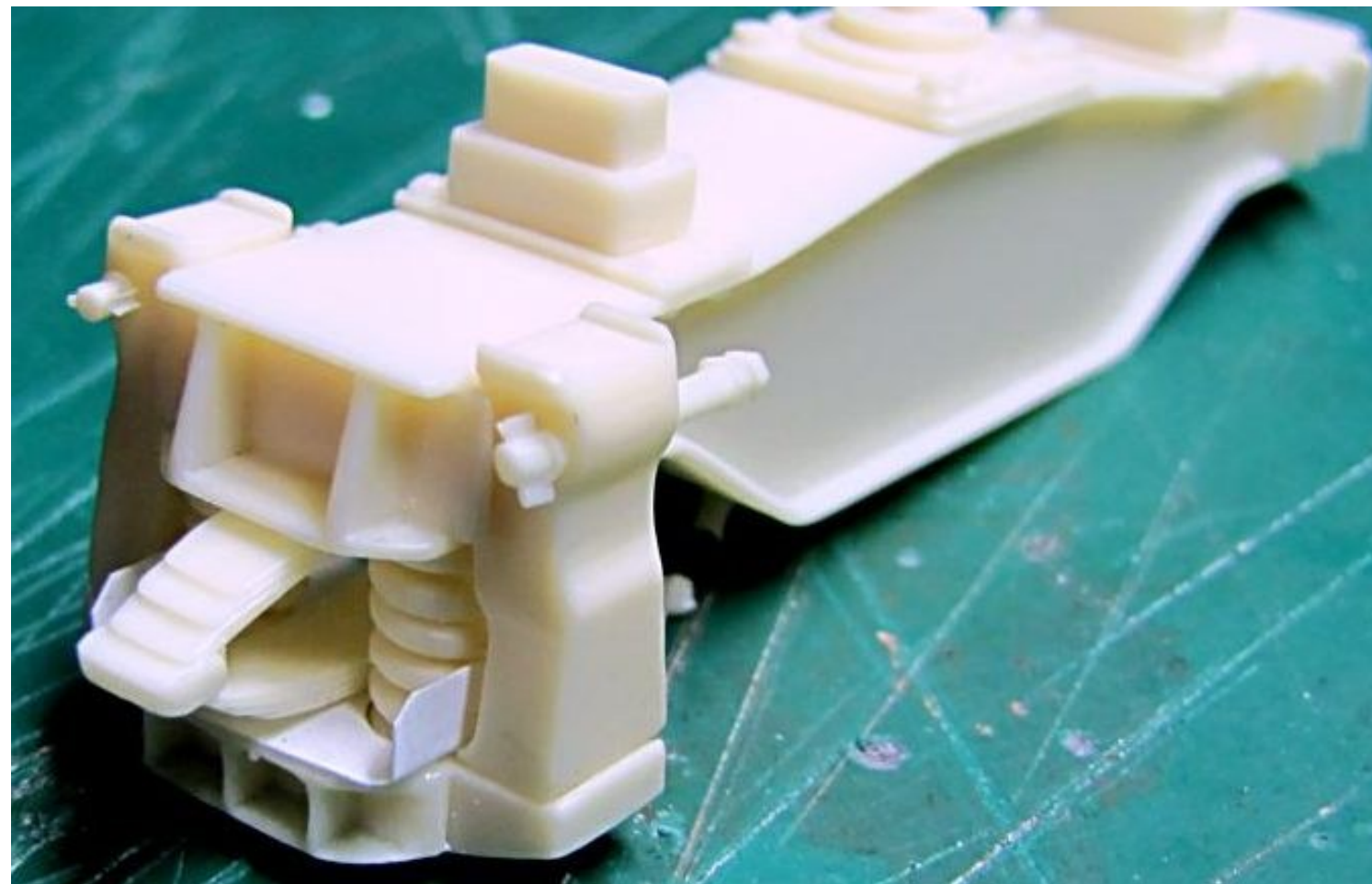
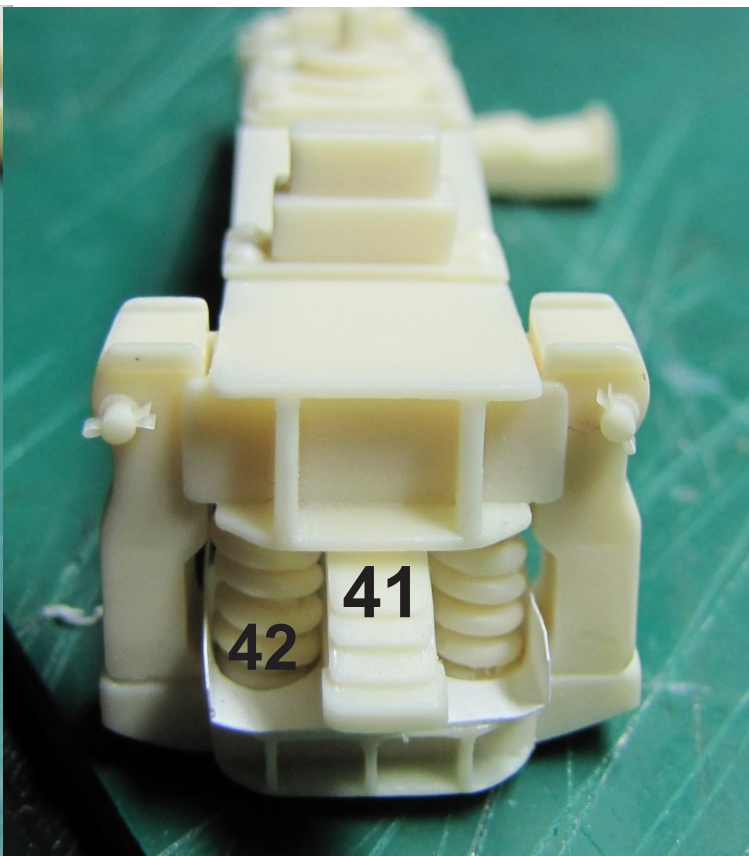
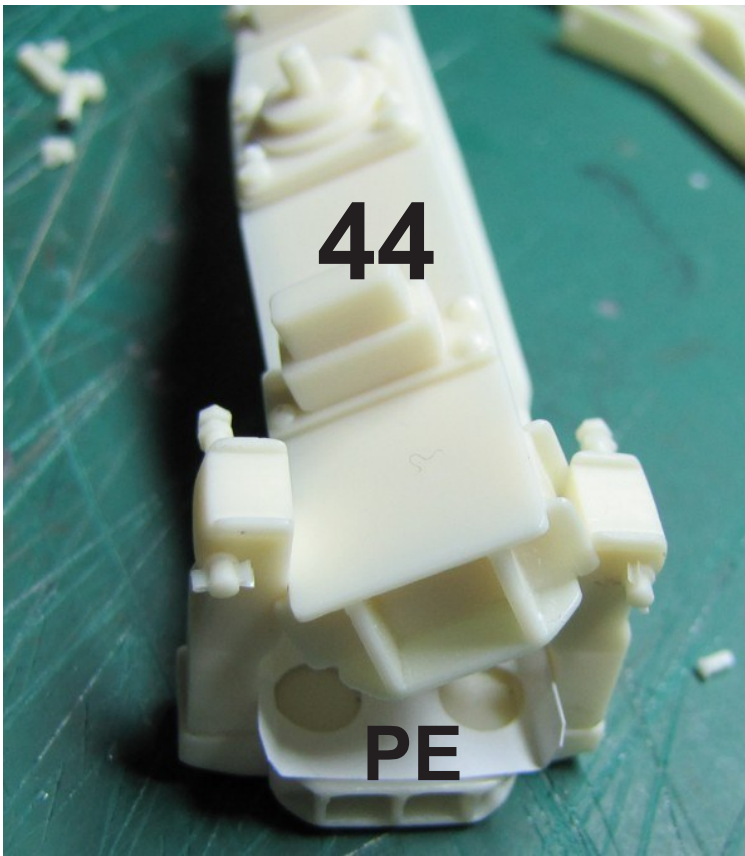


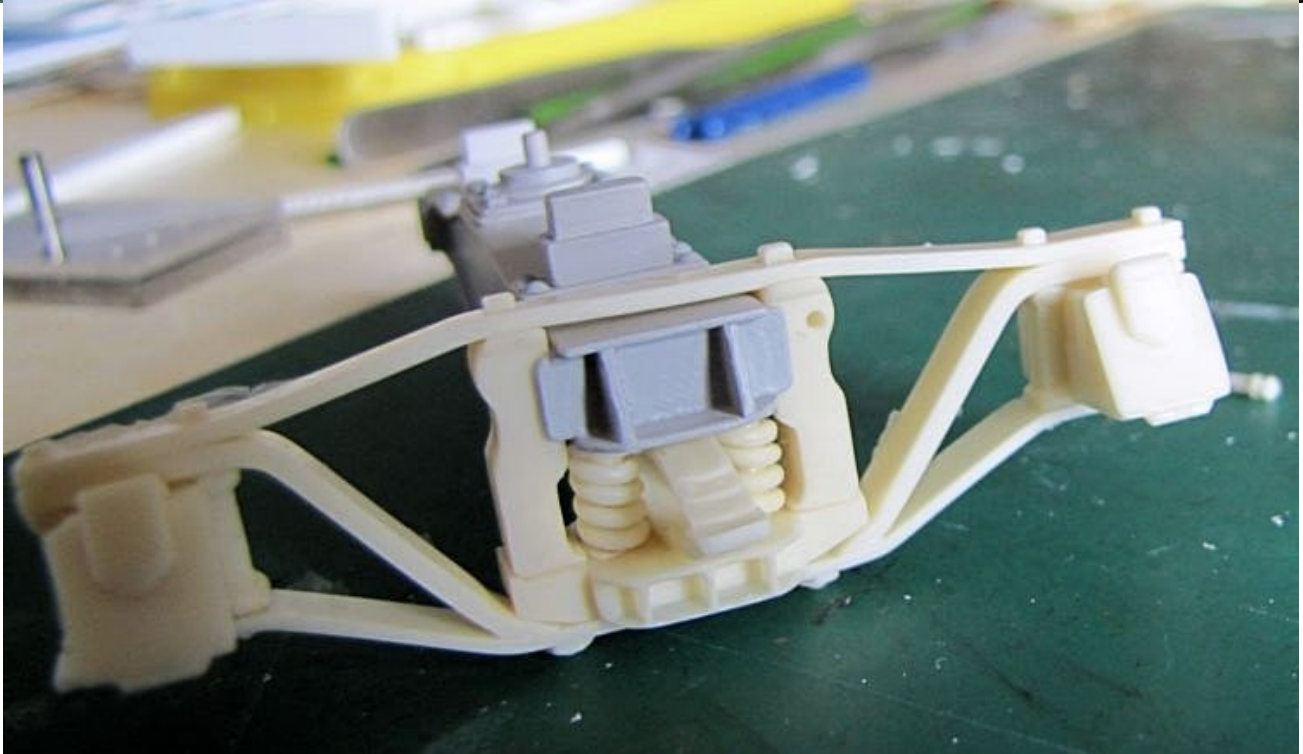
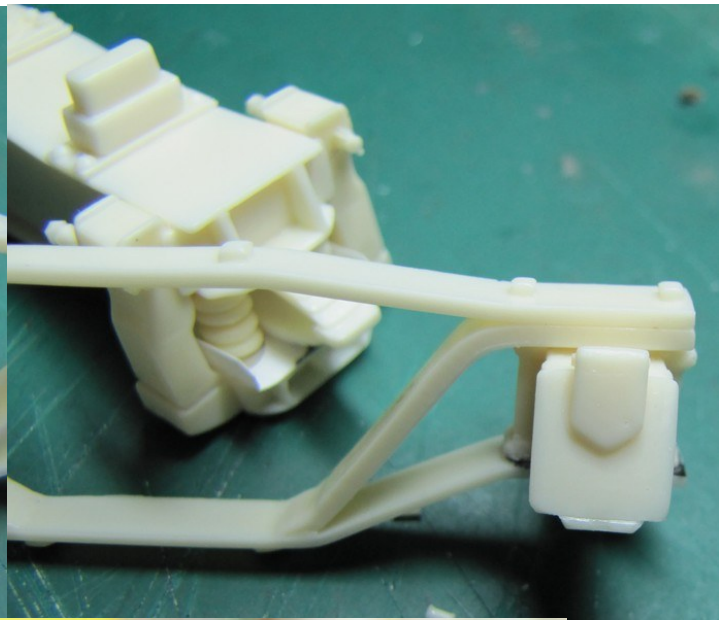
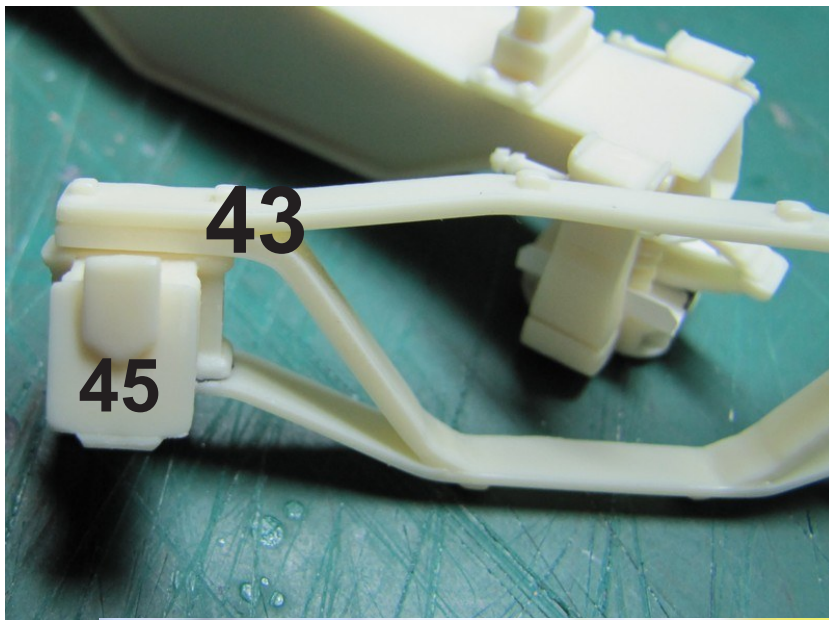


Bogies

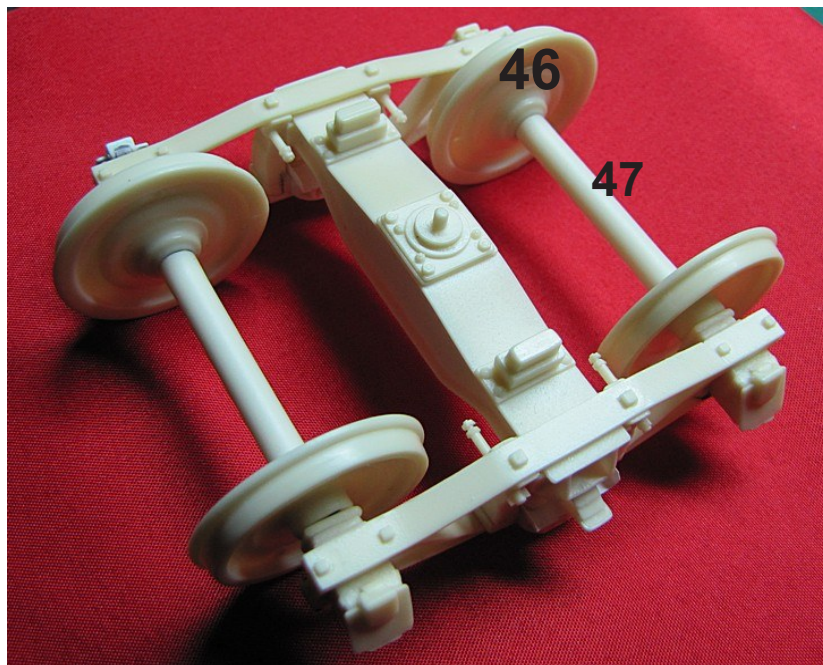






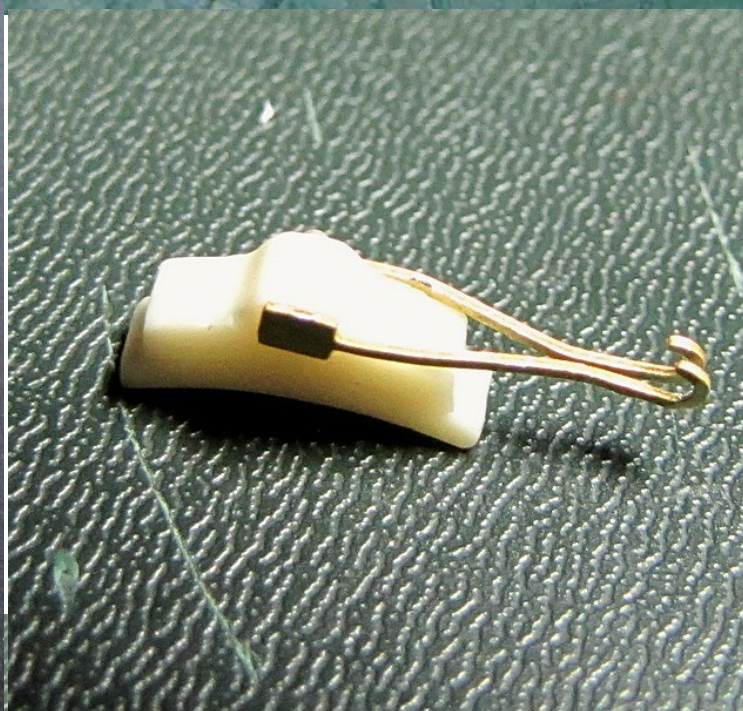


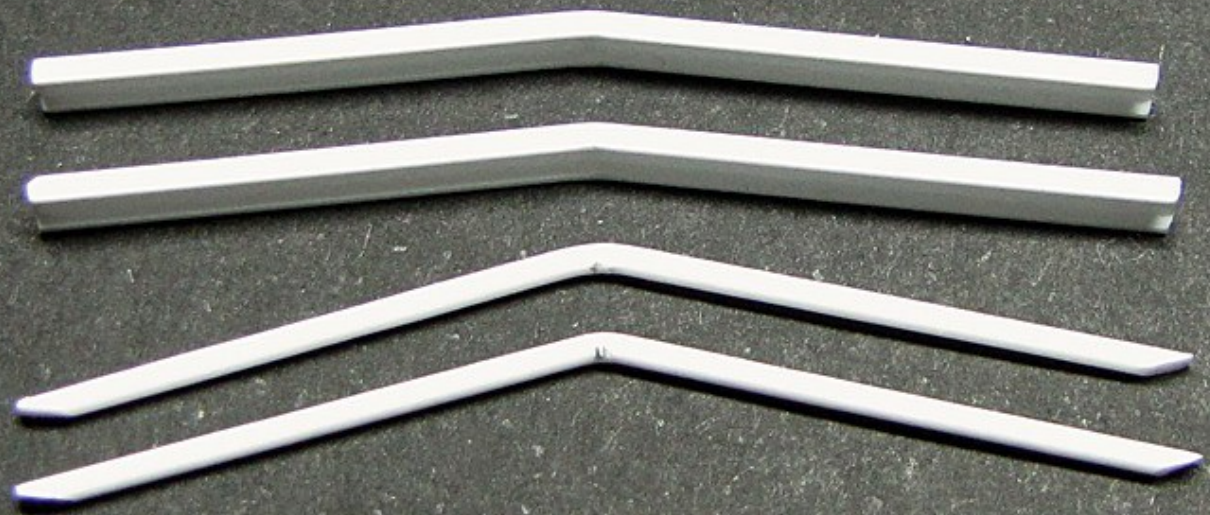
Holes in wheels need to clean up and extend with 4-4,2mm diameter drill bit. Extra care to assembly wheels on axles in right angle needed.



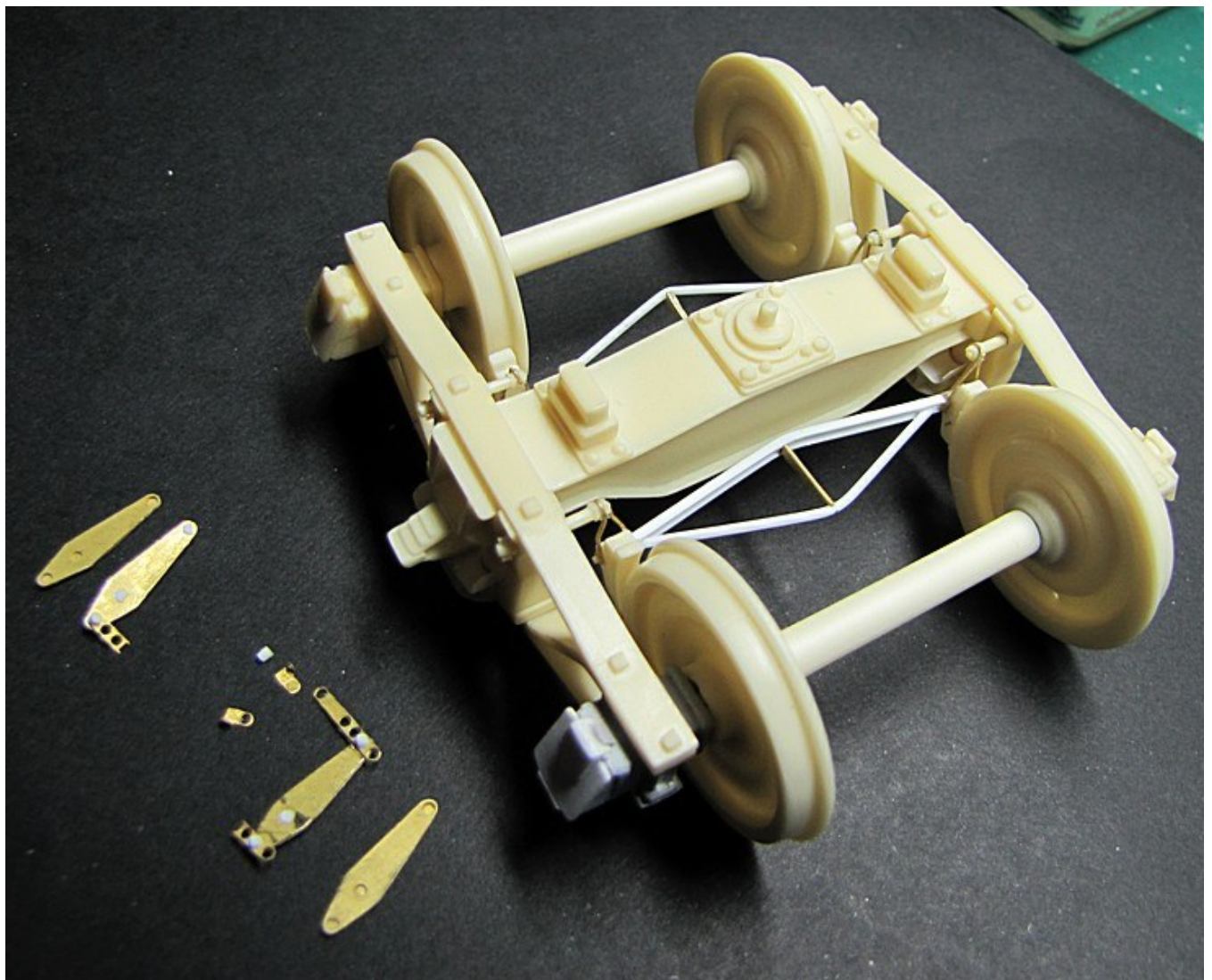
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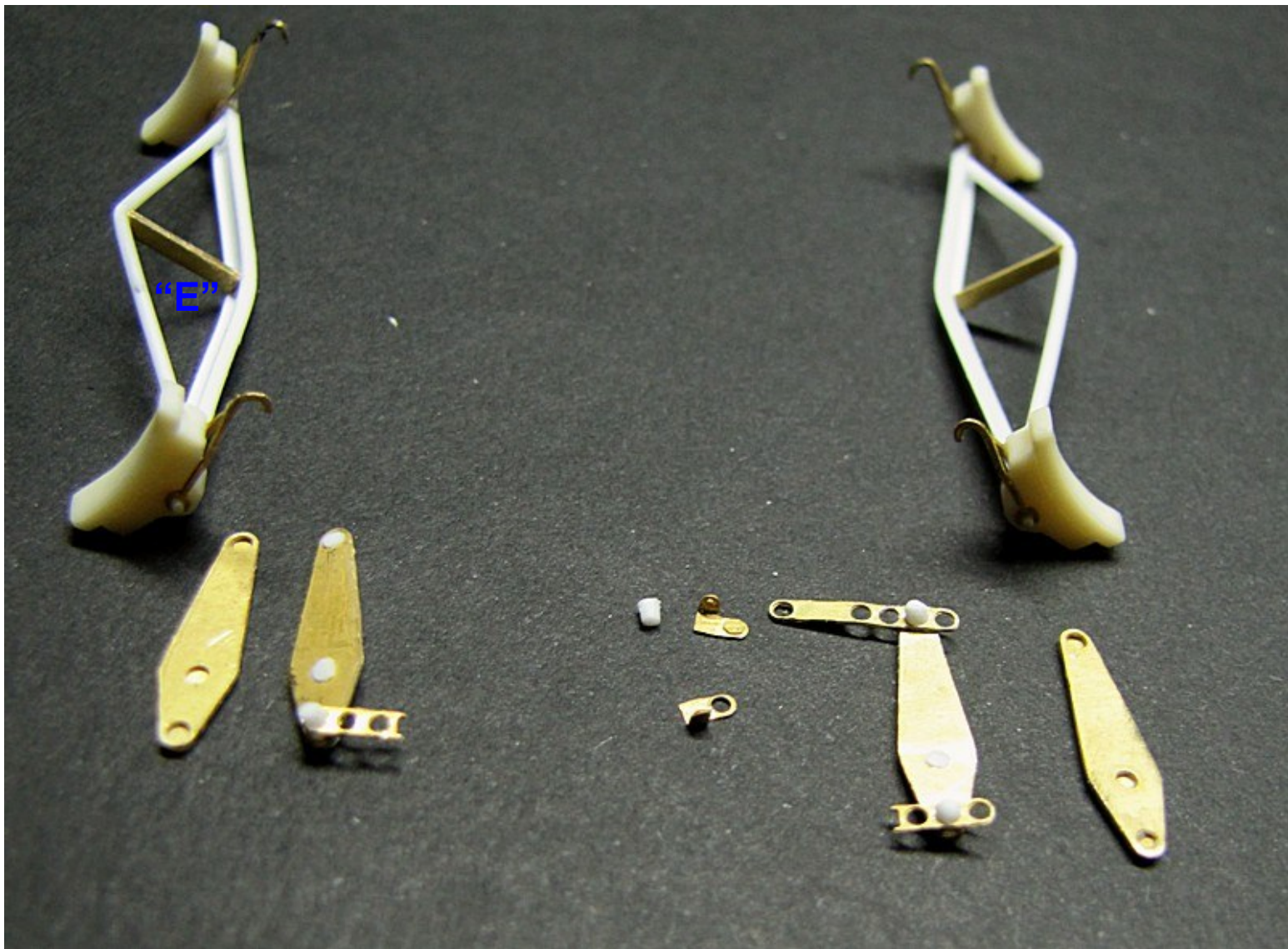
"J+K"



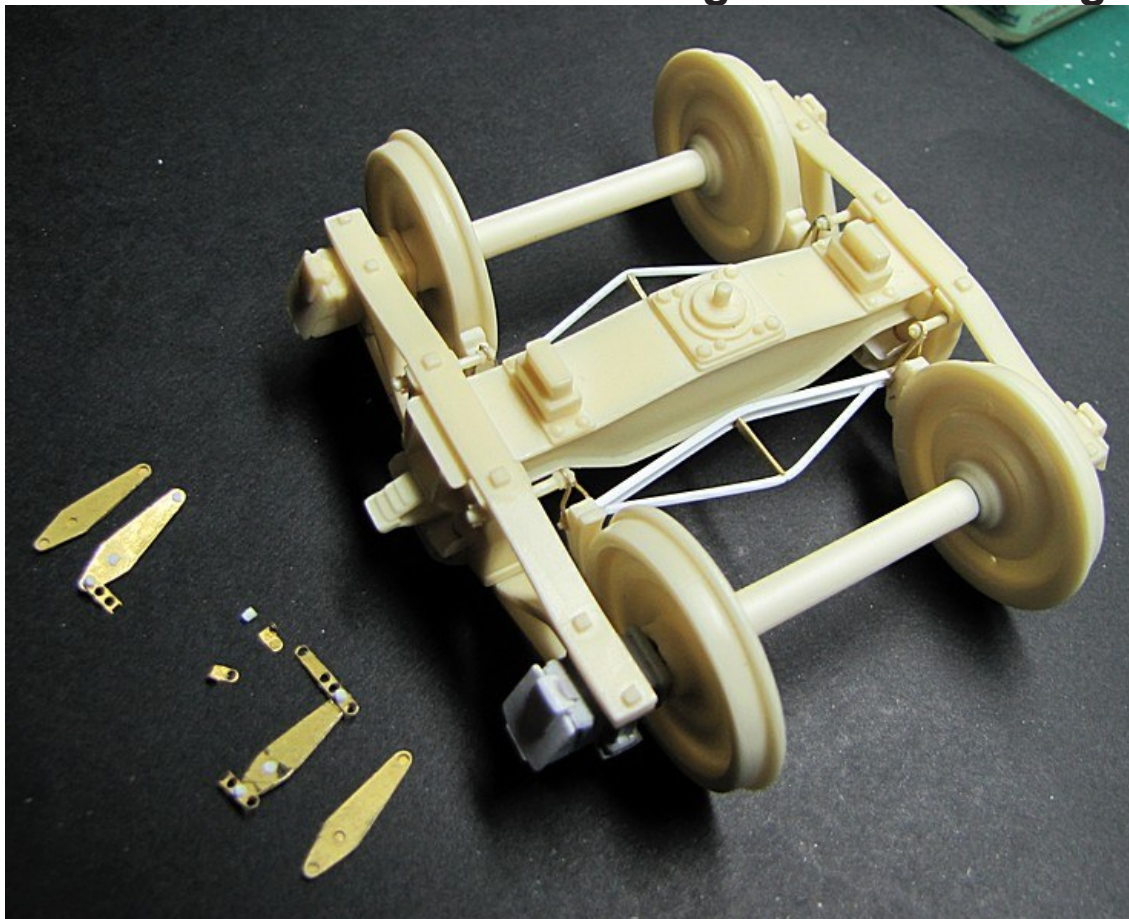


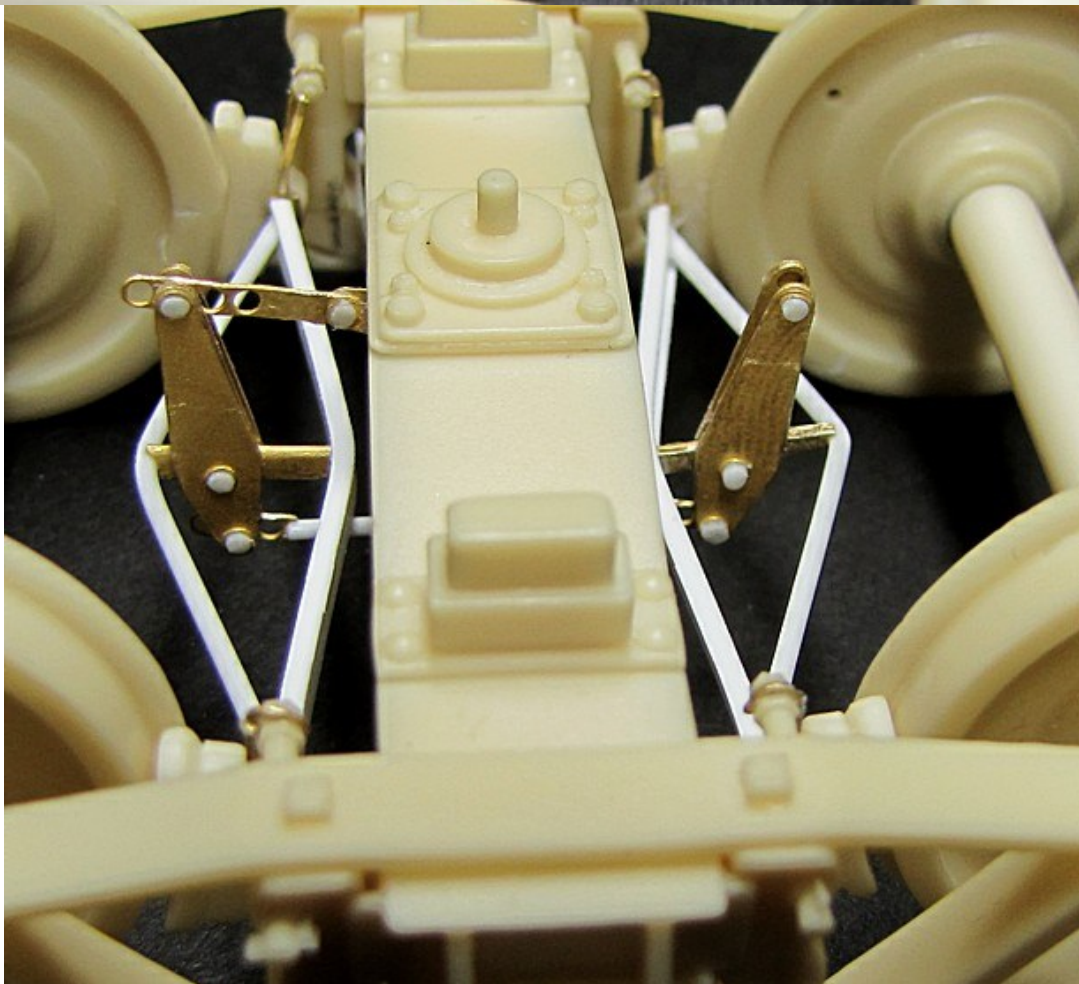
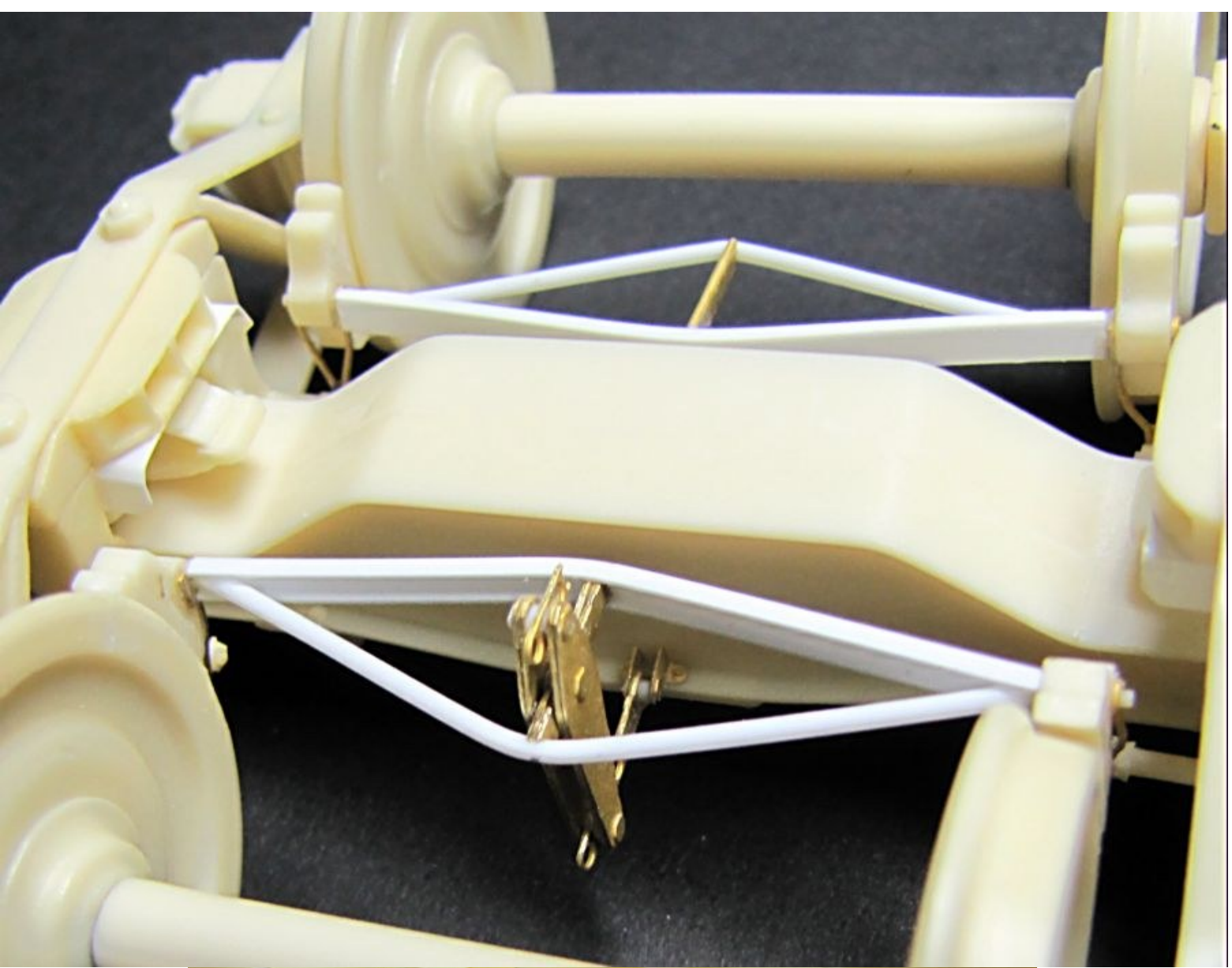
2mm channel long 40mm, 1,2mm diameter rod long 41mm
bend like in picture

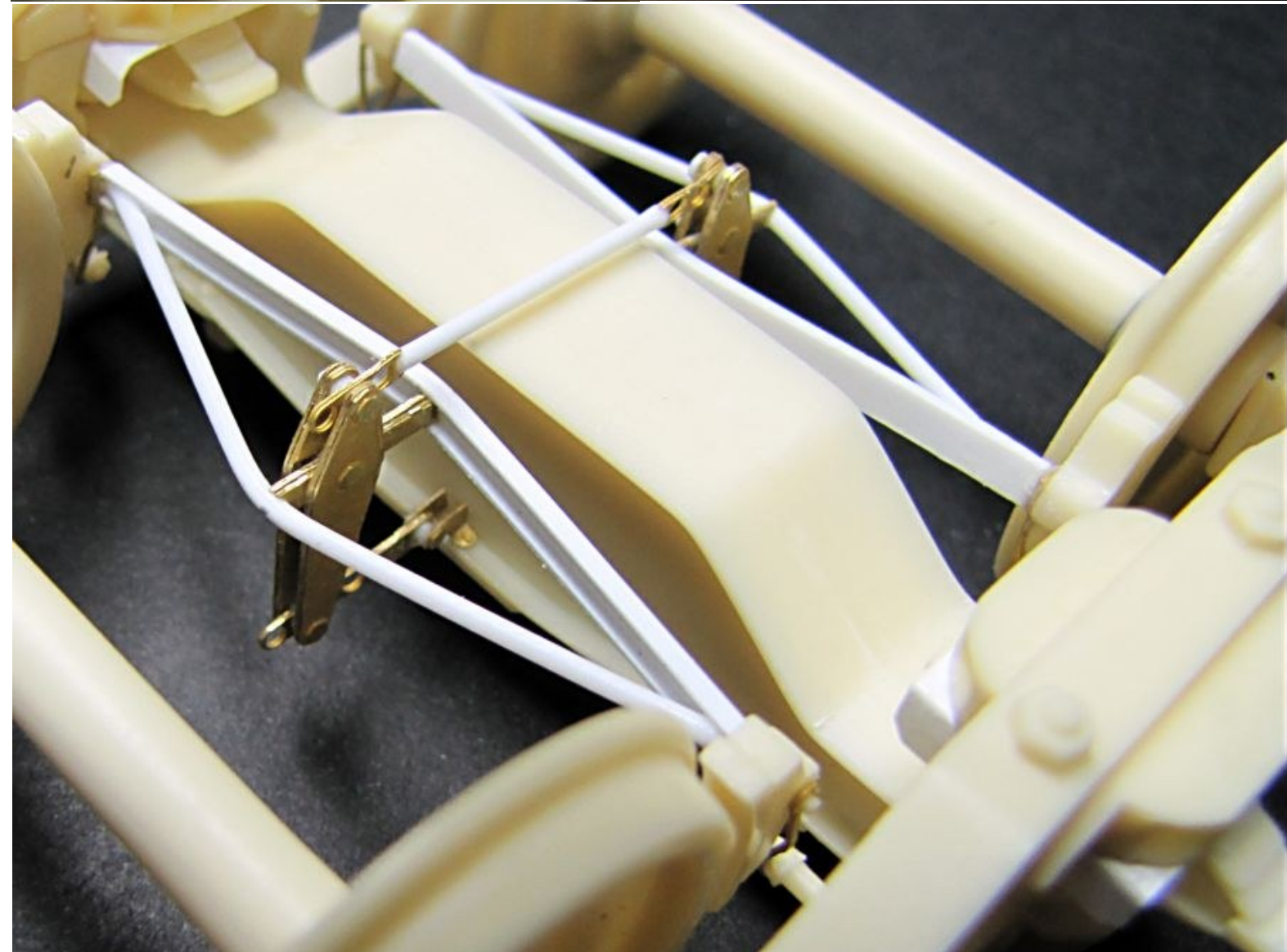
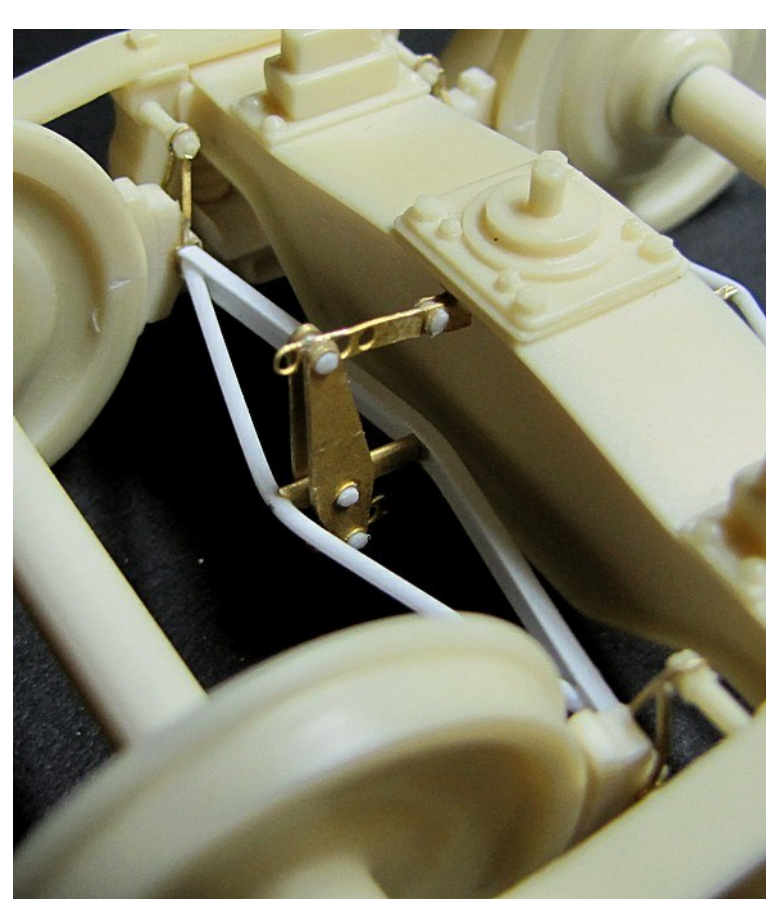


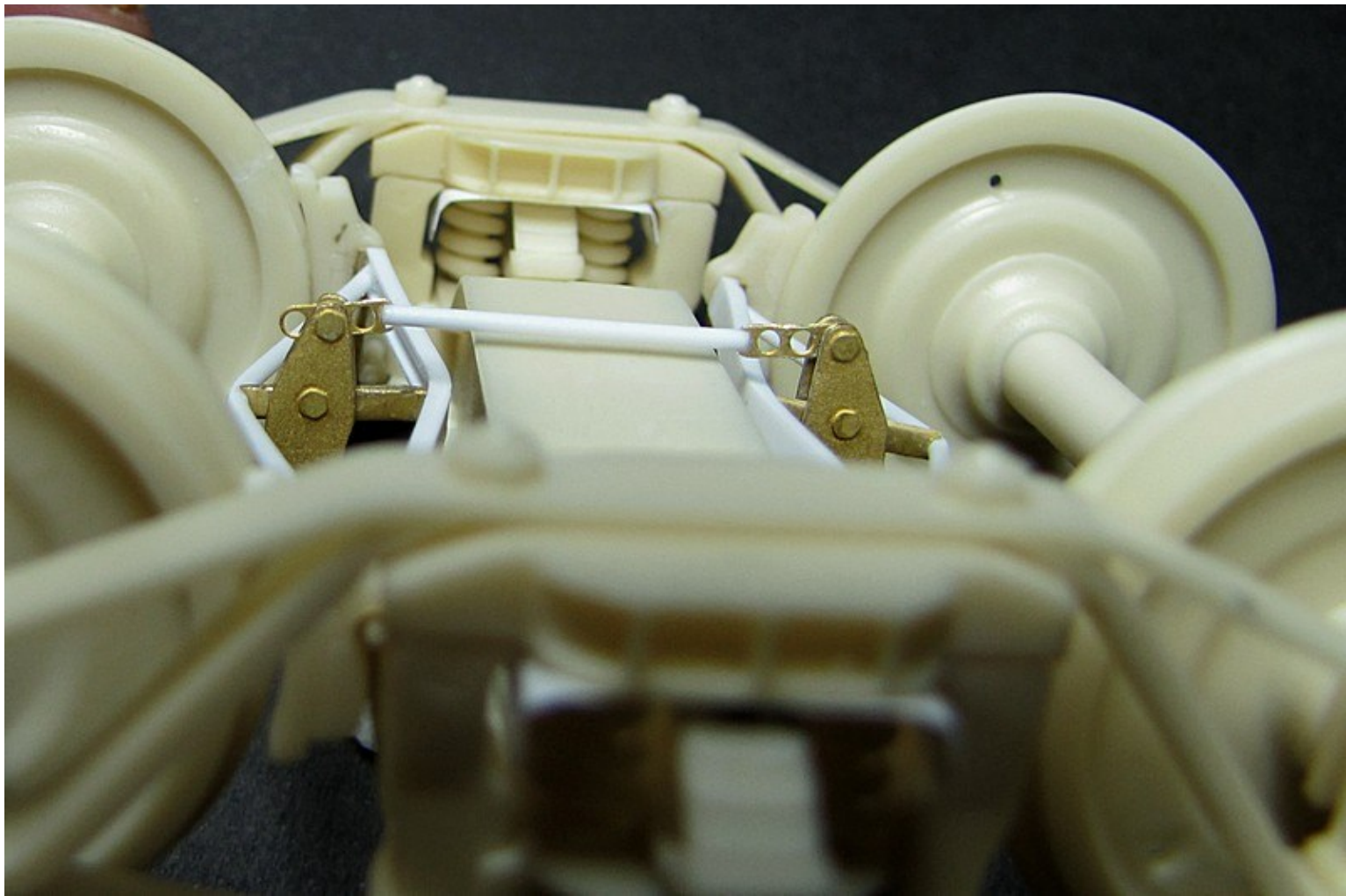
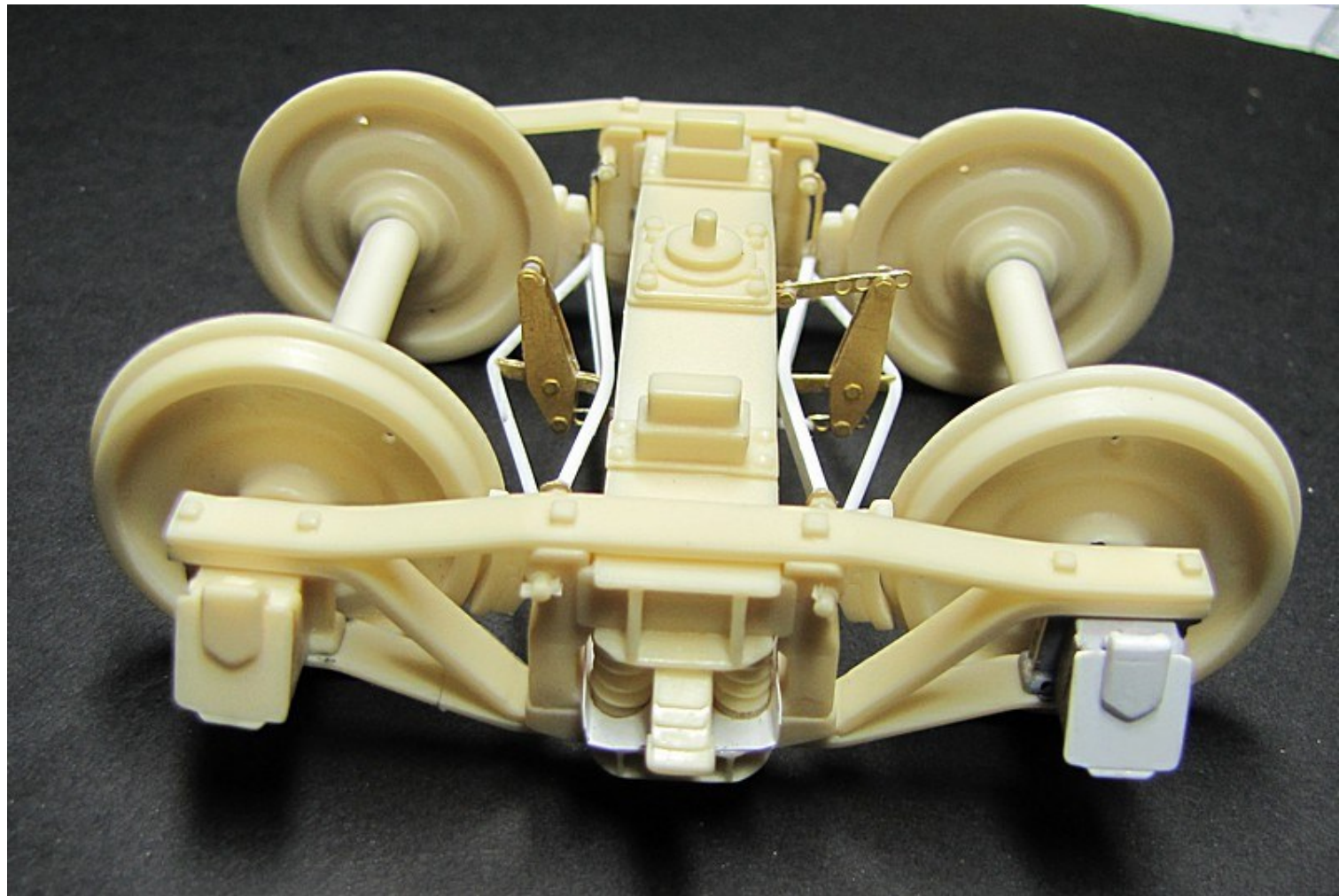


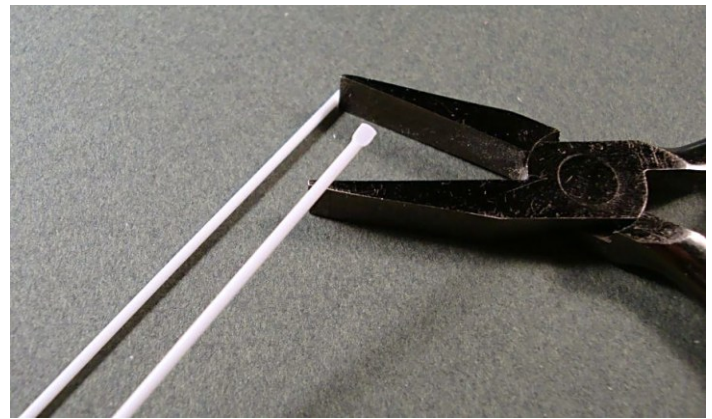
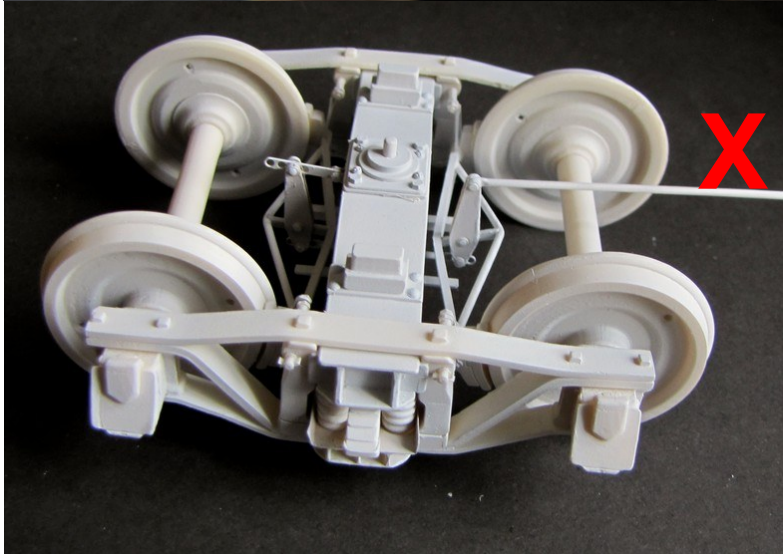
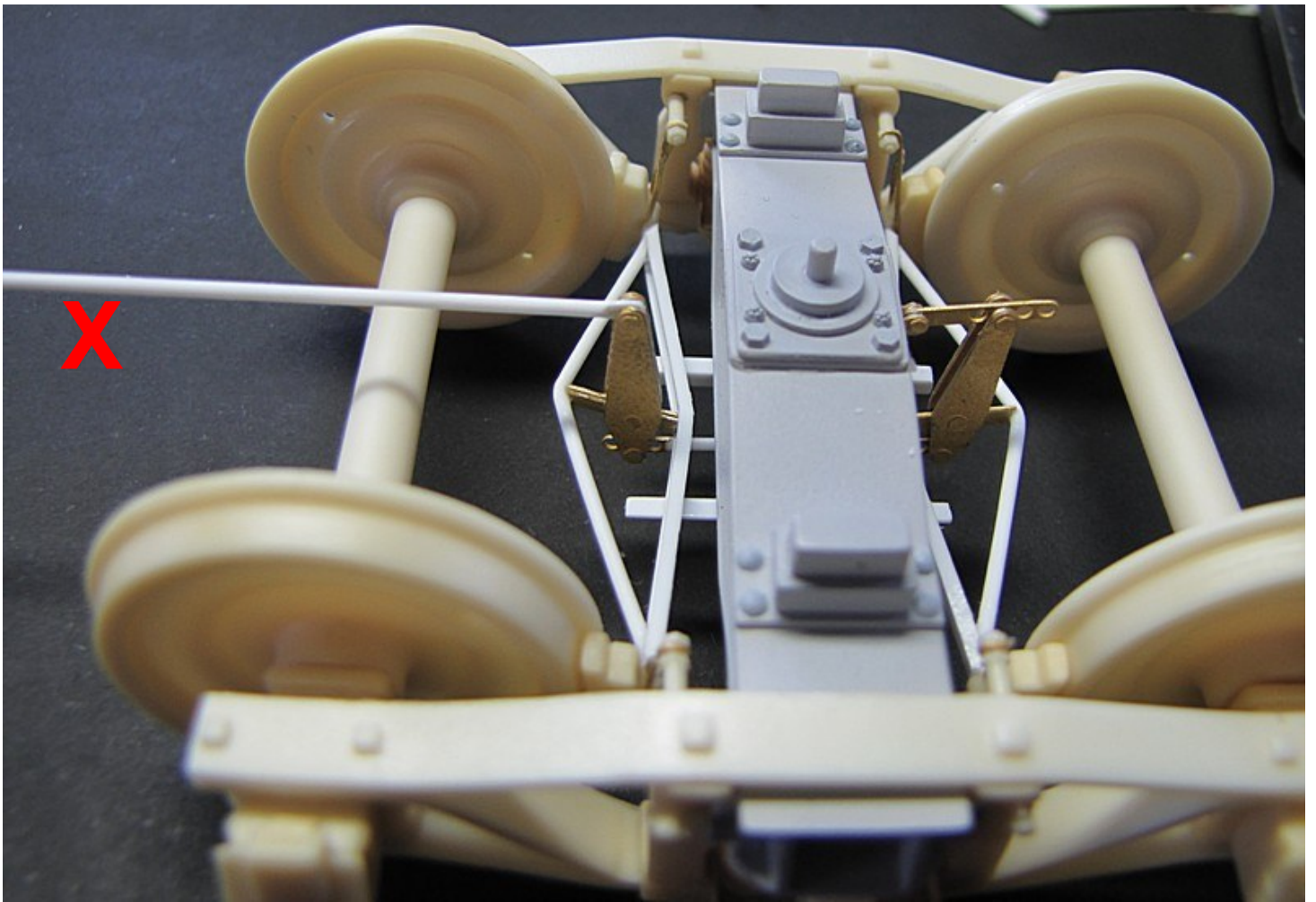
**1mm diameter rod used to make pins for brake construction
brake arms "C+D" - bend halves and glue or solder together**



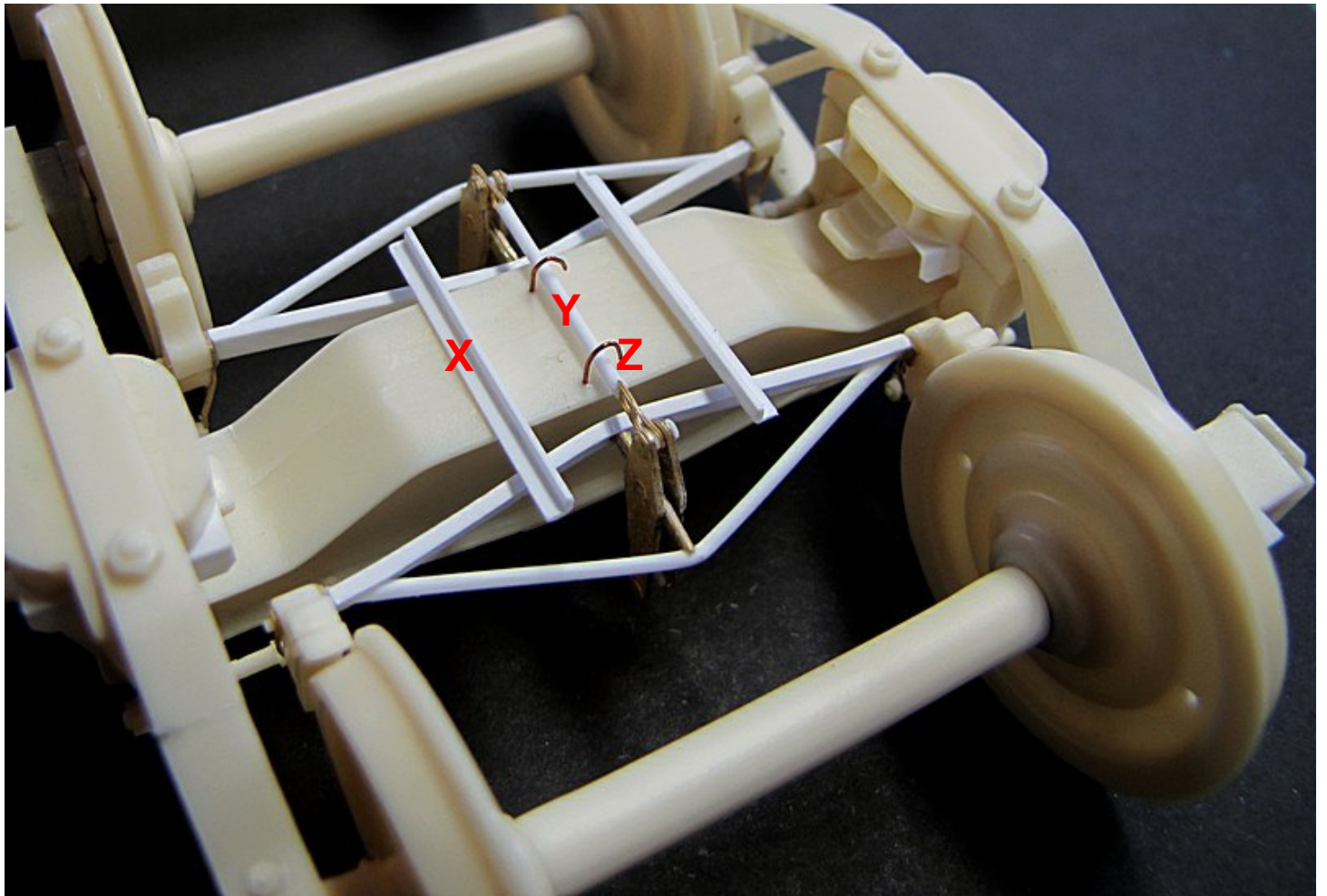




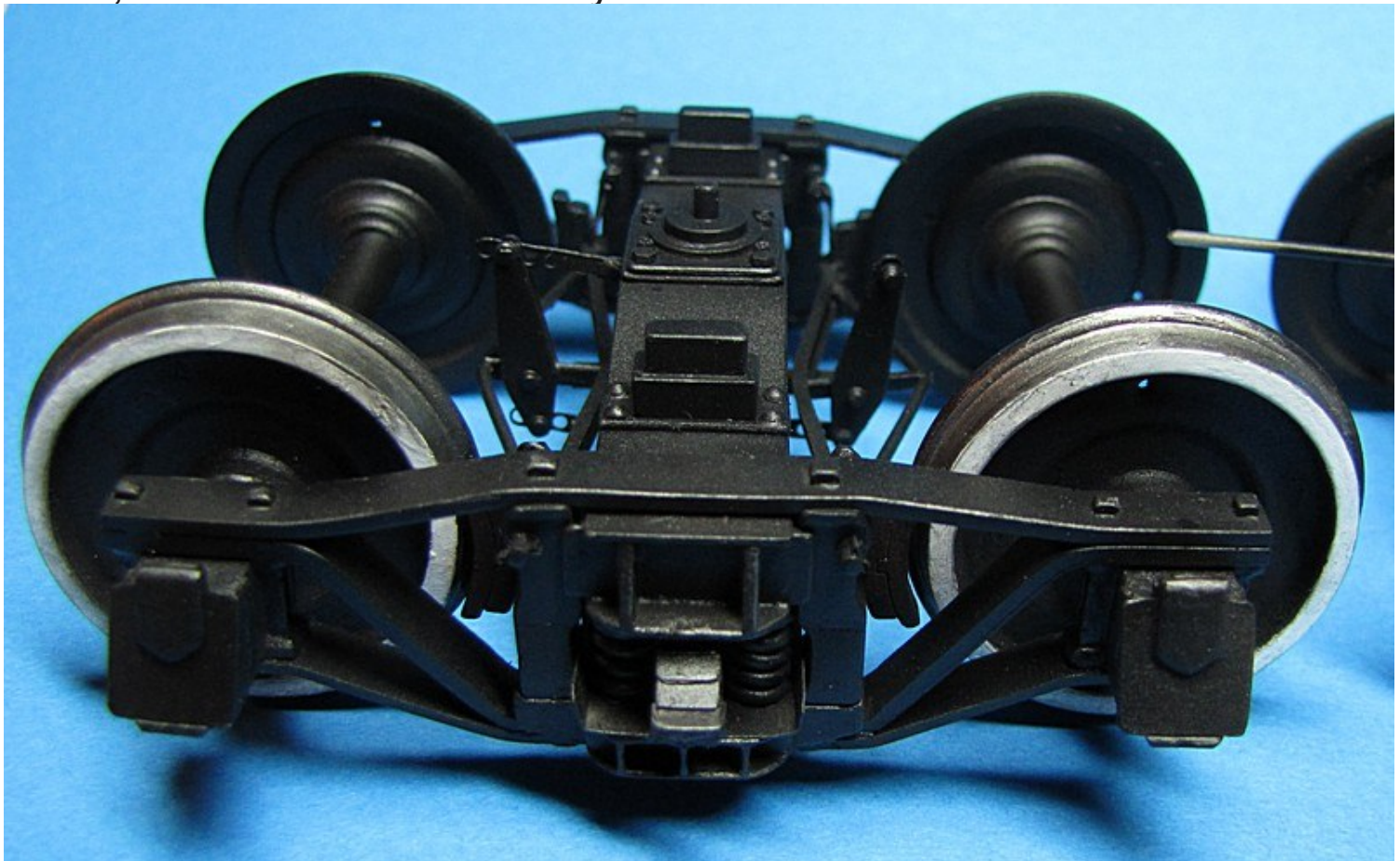


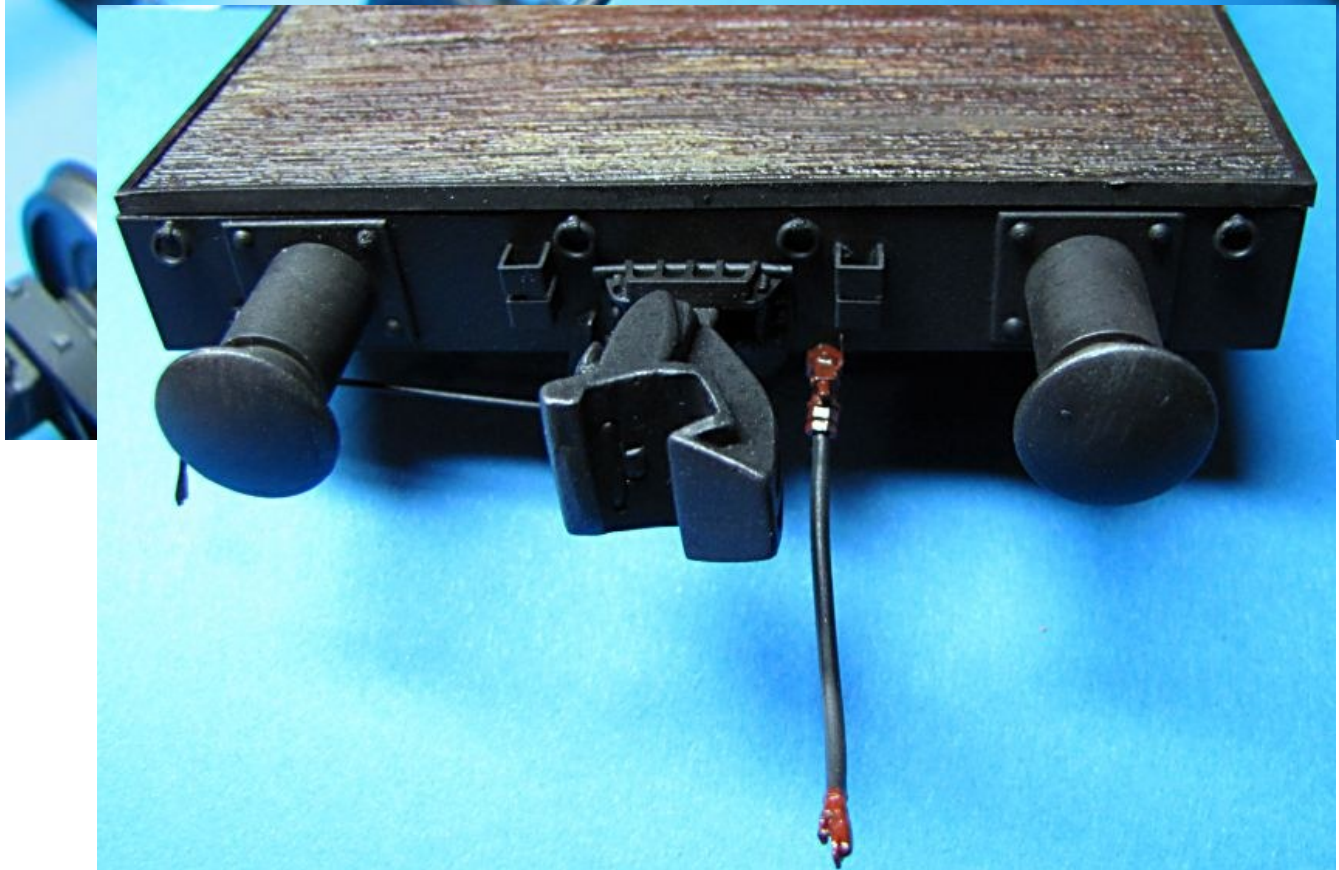


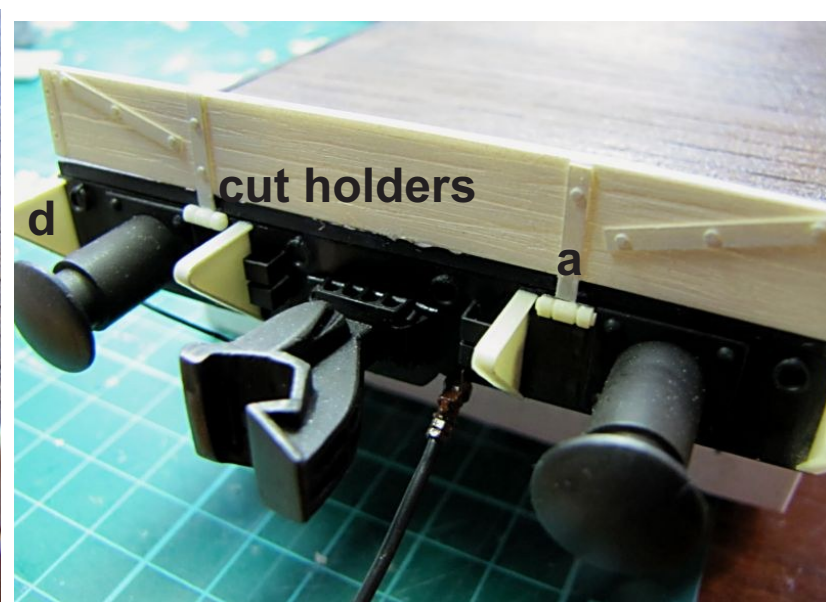
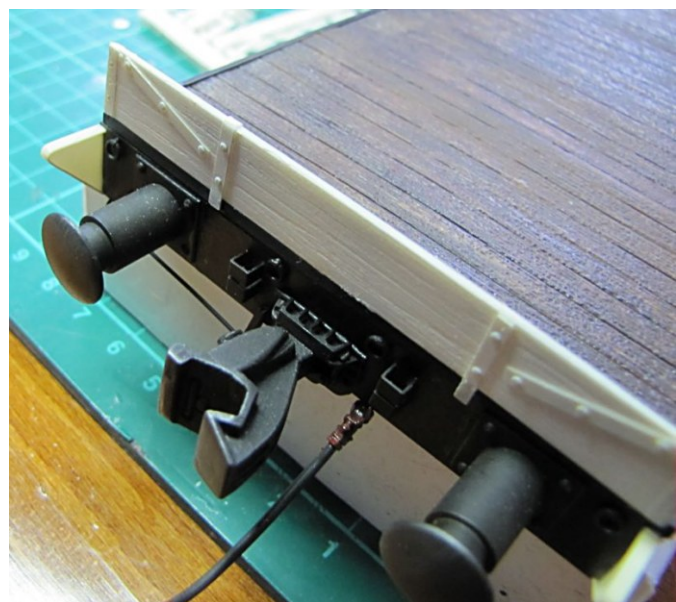
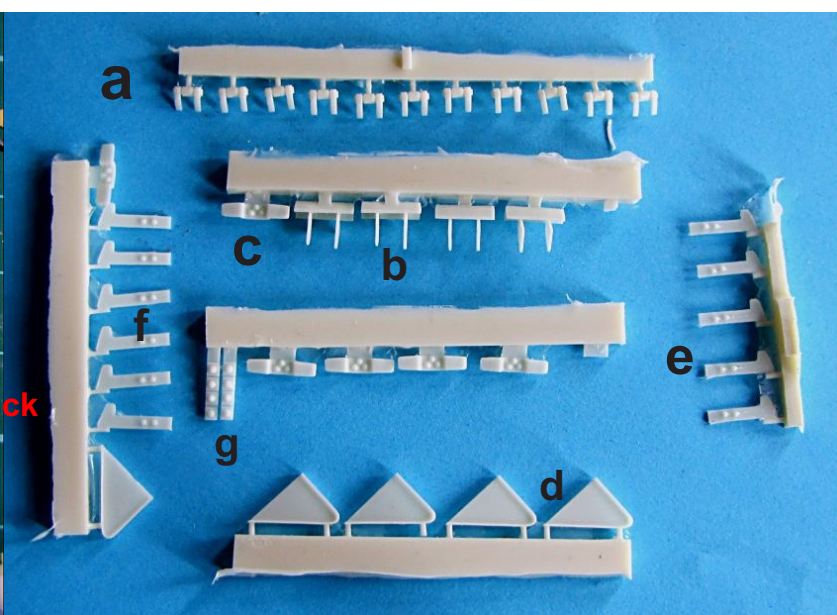
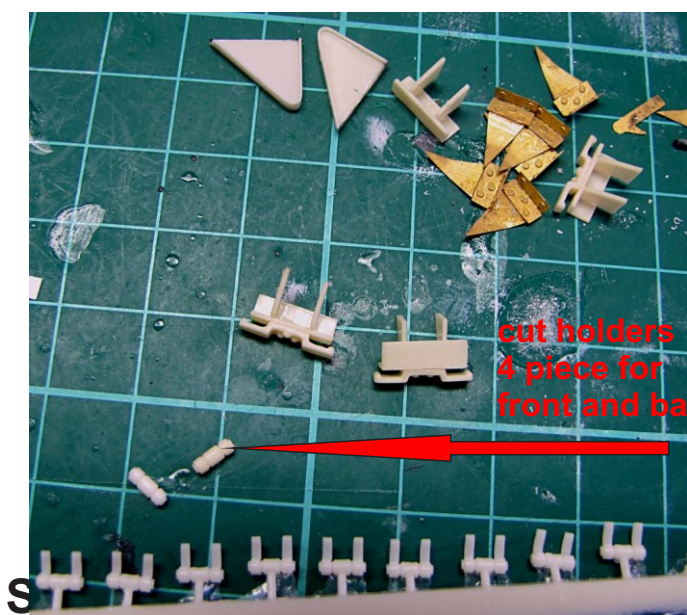
X - 1mm diameter rod to be connected to brake cylinder arms - at ends pinched in some toothless pliers --this is very easy and results looking very much like how real steel rod is hammered flat for attachment points



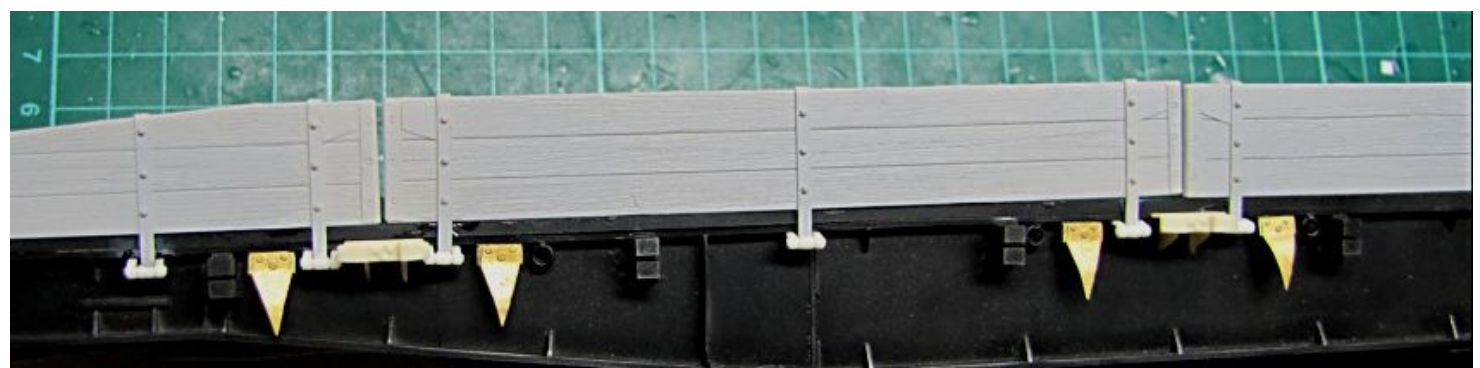
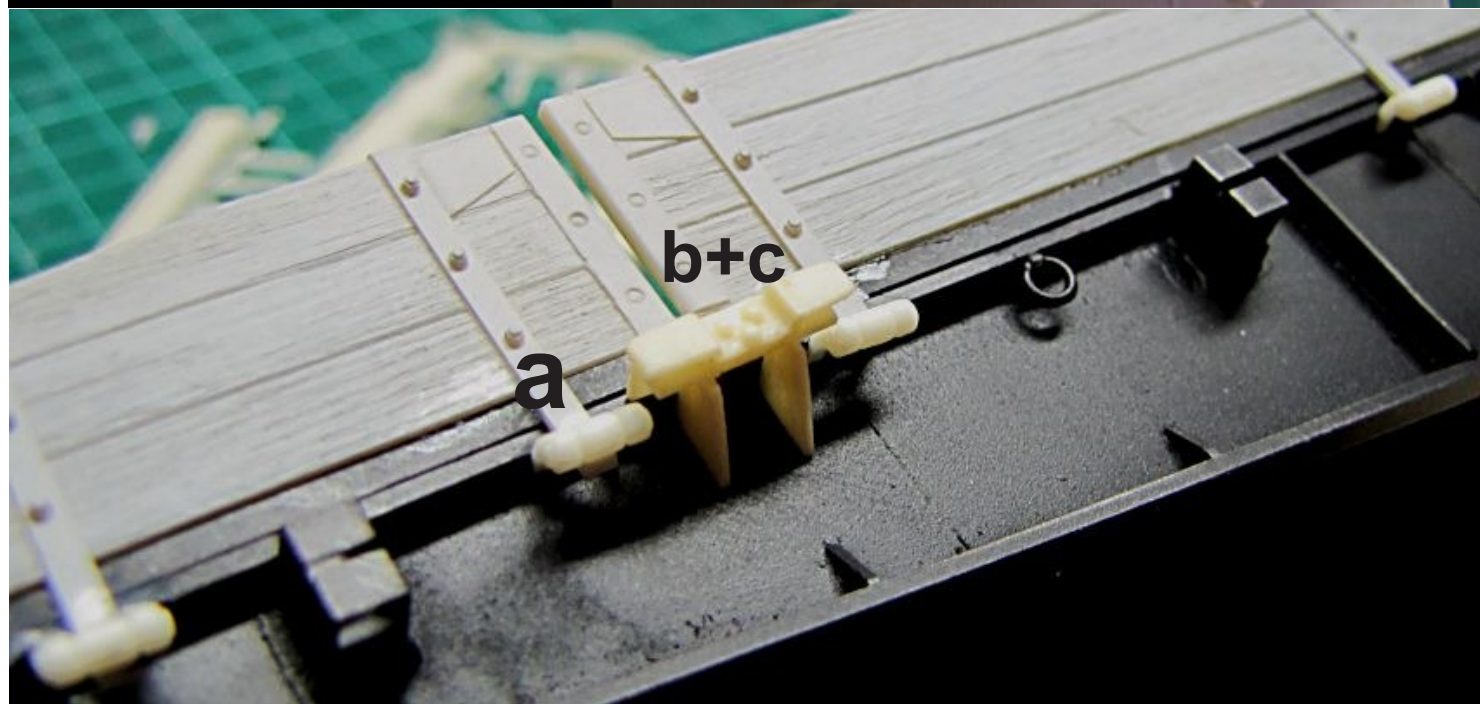
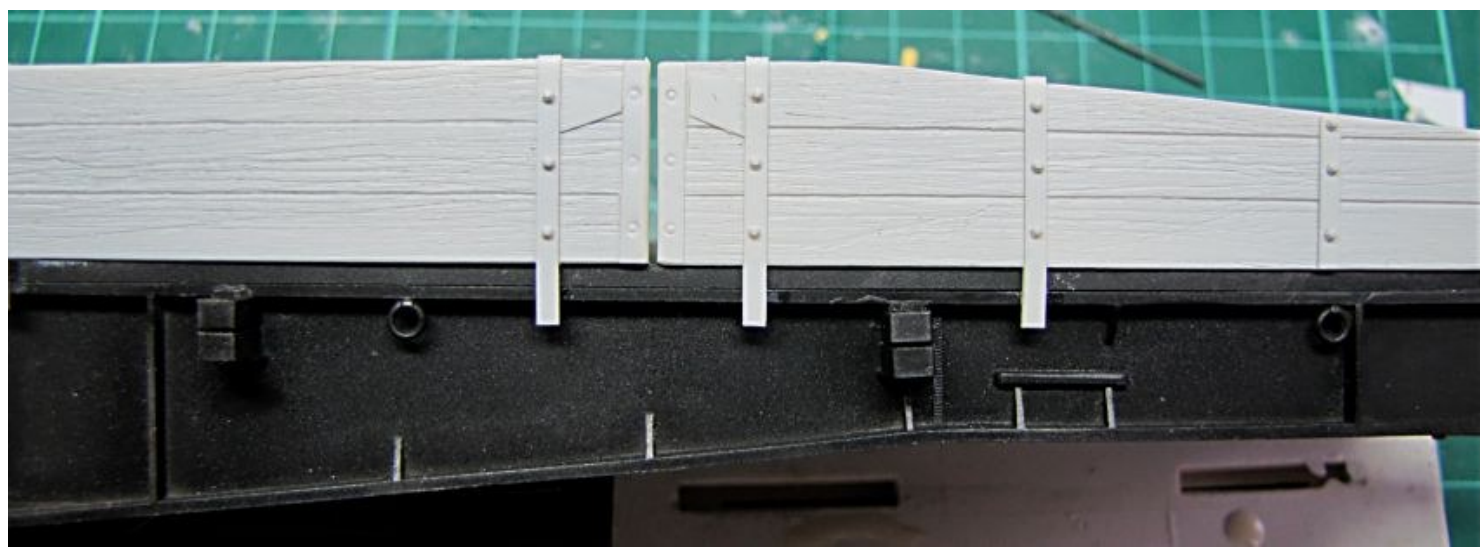
- X** - 1,5mm angle strips 22mm long
- Y** - 1mm diameter rod to connect PE "I"
- Z** - 0,3mm wire to bend safety holders





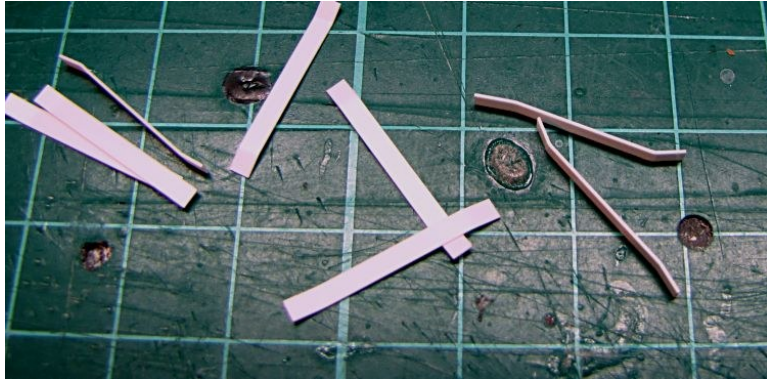
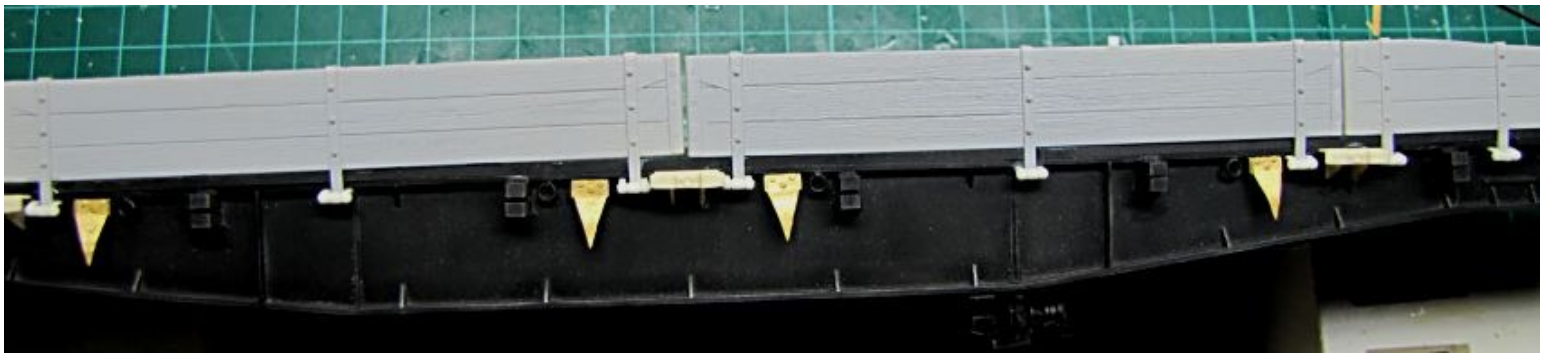


Walls assembled first, then hinges and other parts fitted.

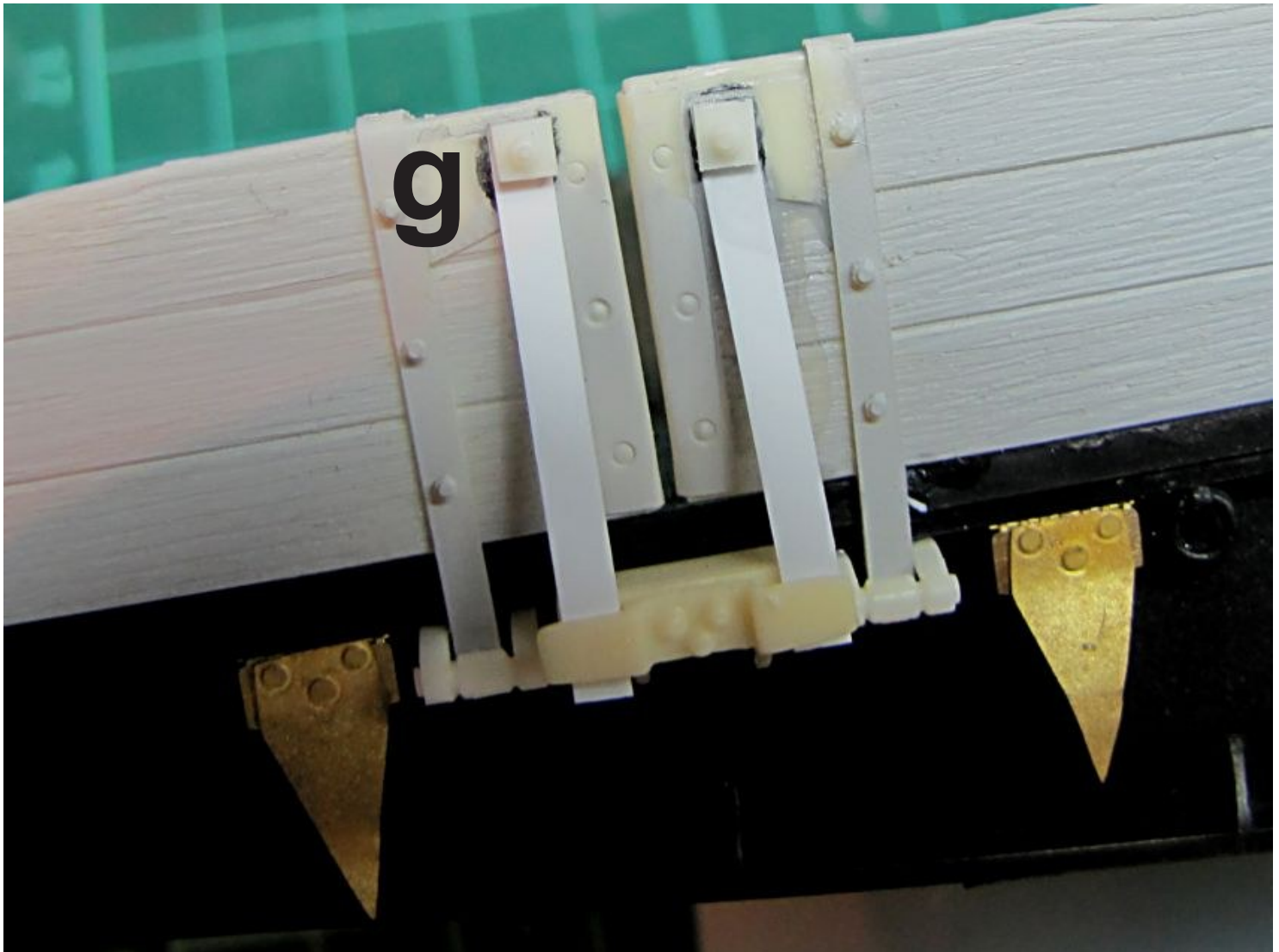


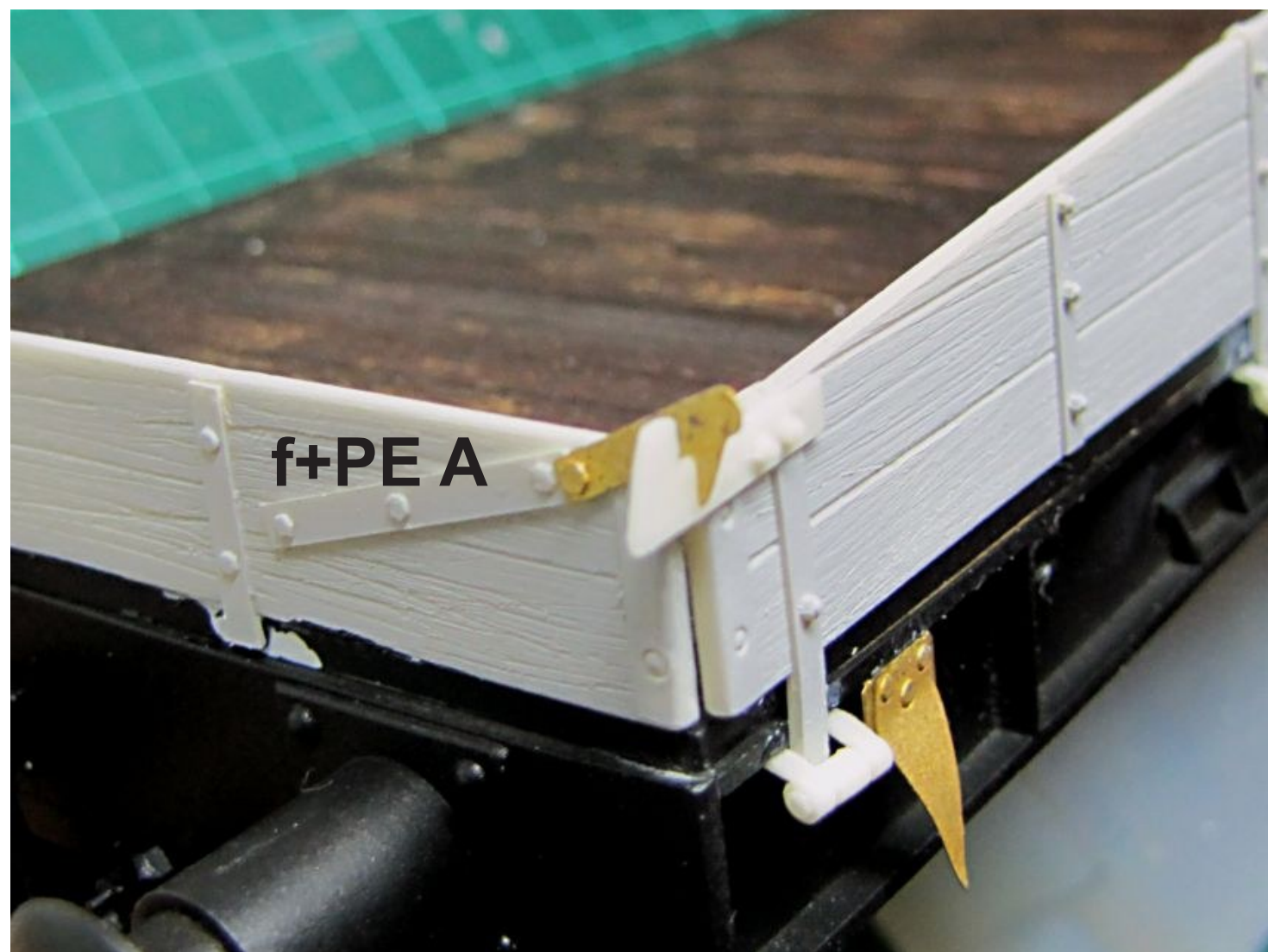
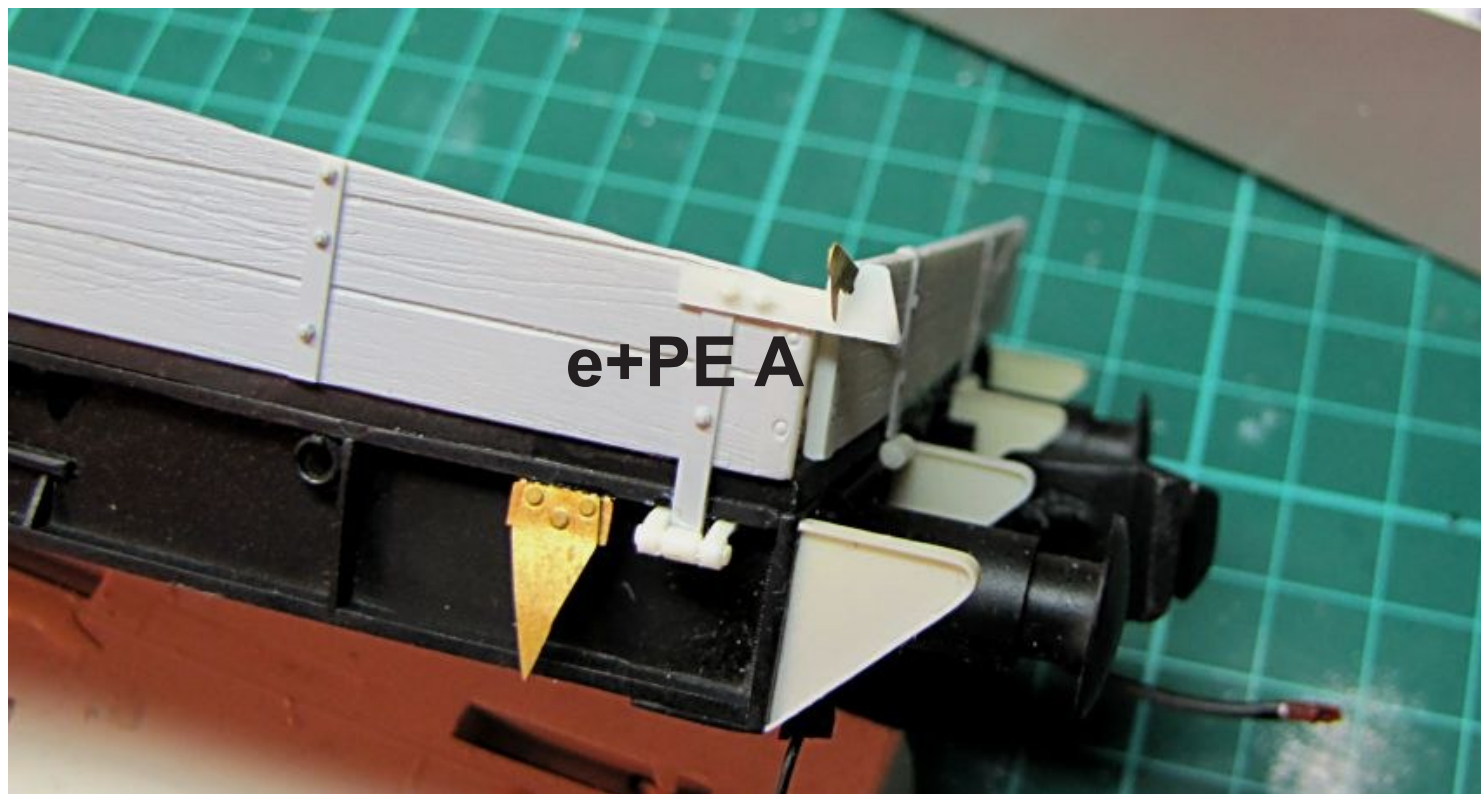
**completed spikes
PE B+C**





**20mm long bits of 0,25x2mm
styrene strip to make bars**











Painting and decal placing example