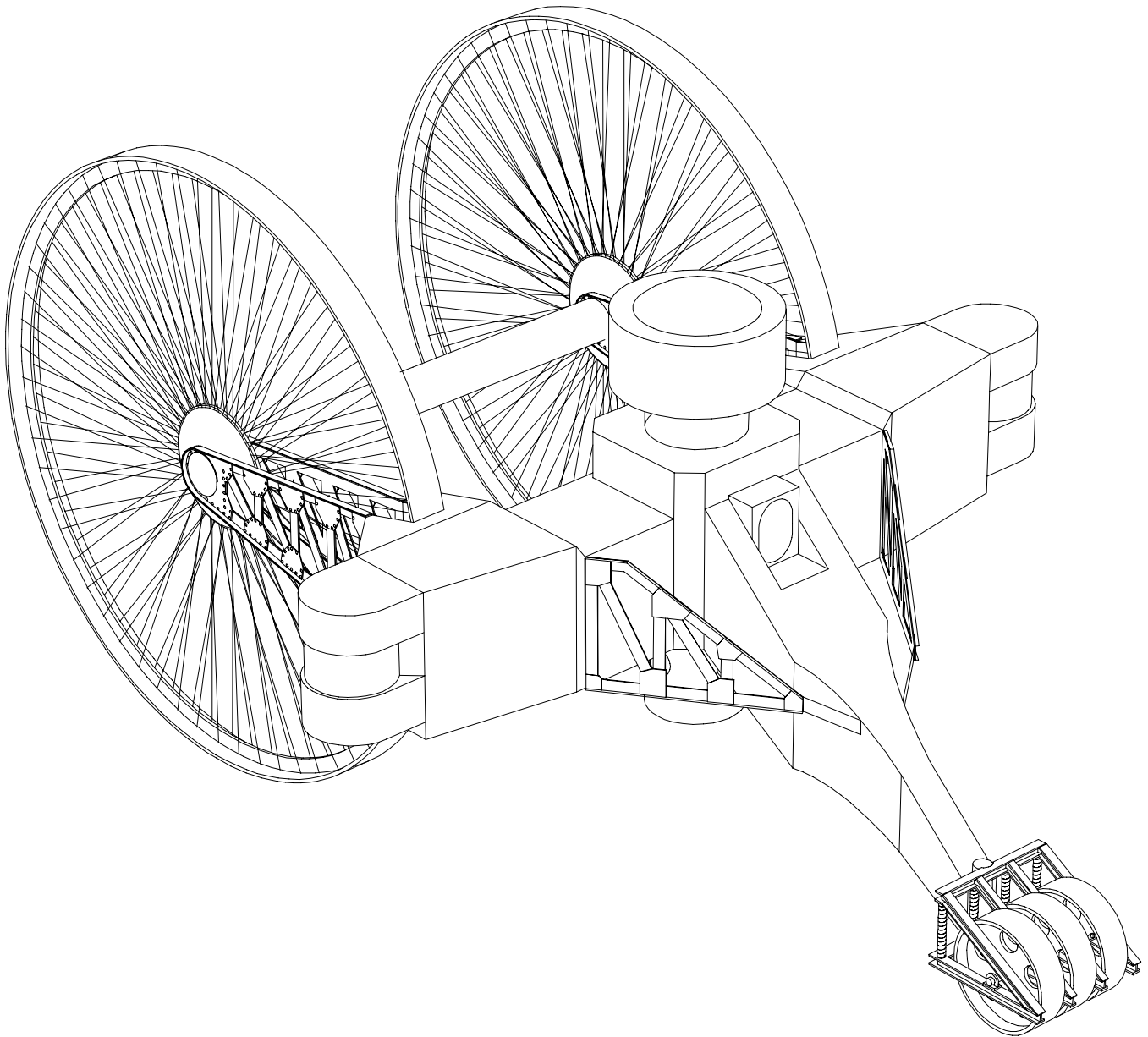


The "Tzar Tank" of Capt. Lebedenko

1915 Giant Russian War Tank Prototype

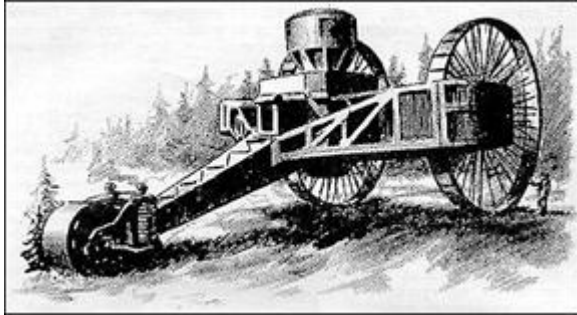


Scale 1:48

Designed by Steven Marshall

Background

In the history of armored fighting vehicles, probably the strangest would have to be The Russian Lebedenko or “*Tsar Tank*”. Developed in the earliest days of tank development, it was not alone amongst many other strange designs.



Conceived by the engineer N. Lebedenko in 1914 who at that time was employed by a private firm working for the Russian War Dept., the tank was essentially an enlarged gun carriage. Working with N. Zhukovskiy and his nephews, B. Stechkin and A. Mikulin, they designed a motorized battle machine weighing approx. 40 tons with 2 large spoked wheels in the front about 9 meters in diameter tapering in the back to a much smaller double wheel used for steering. Between, the hull

of the tank “hung” from the front wheels supported on a pair of tuning-fork like arms. The large front wheels, it was hoped, would give the tank the ability to cross practically any obstacle. They initially called the vehicle Nepotir, but it came to be known as the Lebedenko, after the designer. (Sometimes it was nicknamed “The Tsar”, after the financier.)

To obtain financing for this project, a small working wooden model of the Nepotir was made, driven by a spring motor taken from a gramophone. The model was demonstrated to Tsar Nikolaj, who was so impressed when the toy made it across some scale obstacles, i.e. a number of thick books, that promptly ordered the designers to go ahead with the project, and allocated the needed funds himself.

Construction of the full-scale Lebedenko started.

The drive assembly consisted of two 240 hp Maybach engines, one for each big wheel. The wheels themselves (designed by Zhukovskiy) had a T-shaped metal mid-section. A wooden overlay was then fastened to the shelf of the T-beam. The drive itself was very simple. Each engine drove a pair of automobile wheels, which were in turn pressed down (by means of a railway carriage spring) onto the wooden overlay of the big wheel. By counter-rotating, the automobile wheel transferred the energy from the engine to the big running wheel. It was thought that the Nepotir should be able to reach a top speed of some 17 km/h – which was pretty impressive compared to other WW1 AFV’s.

The hull of the vehicle would have one top-mounted centrally placed turret, equipped with MG’s and/or light cannons, giving the Lebedenko a total height of some 12 meters. In addition to this, at the outer flanks of the hull, small MG sponsons were to be placed. There was also a small weapons turret placed underneath the belly of the beast.

The construction progressed rapidly and at the end of July 1915, the Nepotir was ready for its first trials. Because of its weight and size, it was designed to be transported in sub-assemblies, to be assembled again before action at the front (like it was later envisioned for the huge German K-Wagen). This procedure was followed, and the sub-assemblies were transported to the testing ground, some 60 km from Moscow. At their assembly it was found that the weight of the machine exceeded calculations by some 50%, due to the use of thicker metal. In August the test began in front of a high commission. It started well. The vehicle moved well over some firm ground, crashed a tree, but then went into a soft patch, where the small double wheel got stuck in

a ditch. Soon it was obvious that the engines were too small, as they were unable to free the rear double wheel.

After this fiasco, two of the designers, Mikulin and Stechkin, worked on equipping the vehicle with more powerful engines, but this plan was never fulfilled. The military had decided against the project. It was simply too expensive, it had thus far cost some 250.000 rubles. Also the vehicle (and then primarily it's wheels) was deemed to be too vulnerable to artillery fire, which probably was quite true. (And by this time both France and Britain were near to completing new types of all-terrain armored fighting vehicles, running on caterpillar tracks.)



The Lebedenko stood there, bogged down, for the rest of the war, but was finally scrapped in 1923.

General Instructions

Tools and Materials: metal ruler - scissors - craft knife - awl or other pointed tool for scoring fold lines - white glue - cutting mat - toothpicks or small paintbrush - tweezers or needle-nose pliers.

Caution: Knives and scissors should only be used with proper adult supervision. Use glue sparingly and only in a well ventilated area.

Printing Tips: Print on 67 lb Cover Stock or 110lb. Card Stock. Select "Auto-rotate and Center". Do **not** select "Fit to Page"

Assembly Instructions:

- Before cutting, carefully score all fold lines using the ruler and awl or other pointed tool. Be careful not to cut through the paper.
- Use the ruler and craft knife to carefully cut out each piece.
- Fold and dry fit each piece before gluing.
- Use a toothpick or small paintbrush to apply glue sparingly to the glue tabs.
- Use tweezers or pliers to clamp the glue tabs until dry.

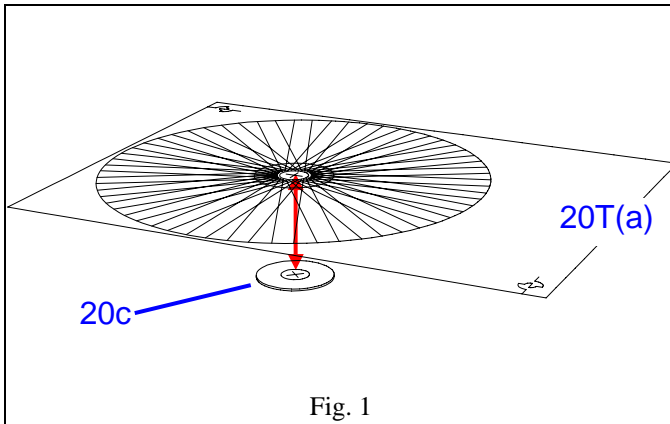


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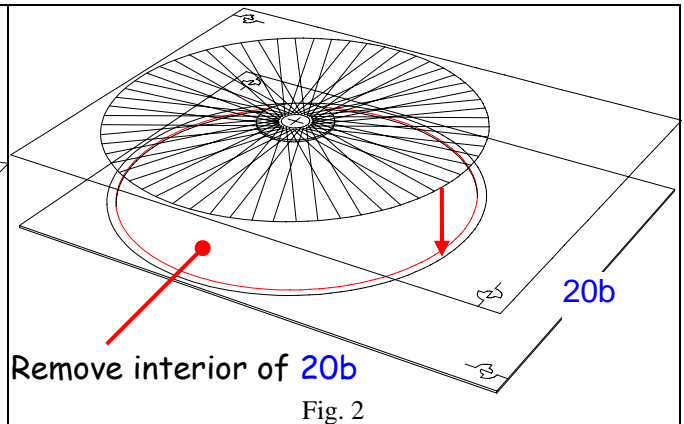


Fig. 2

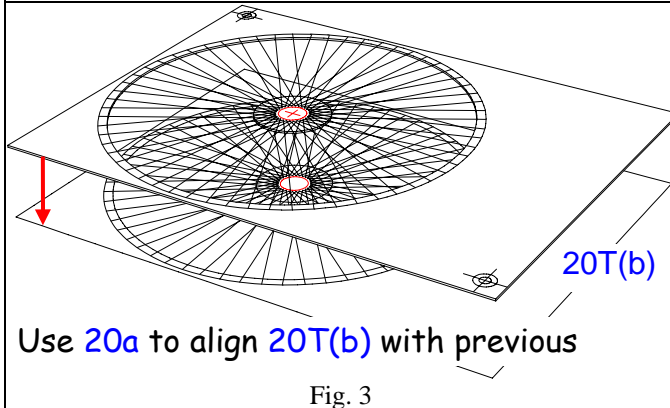


Fig. 3

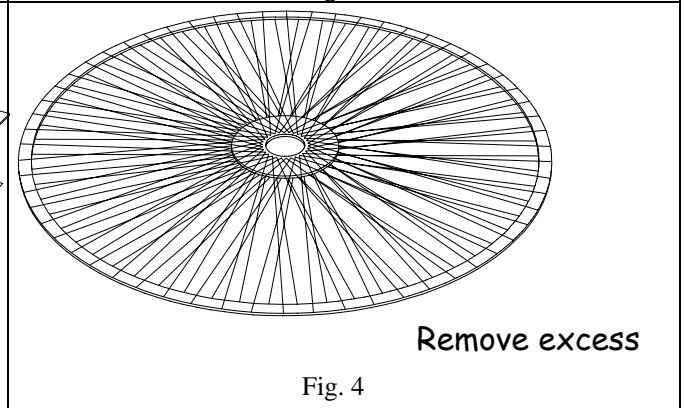


Fig. 4

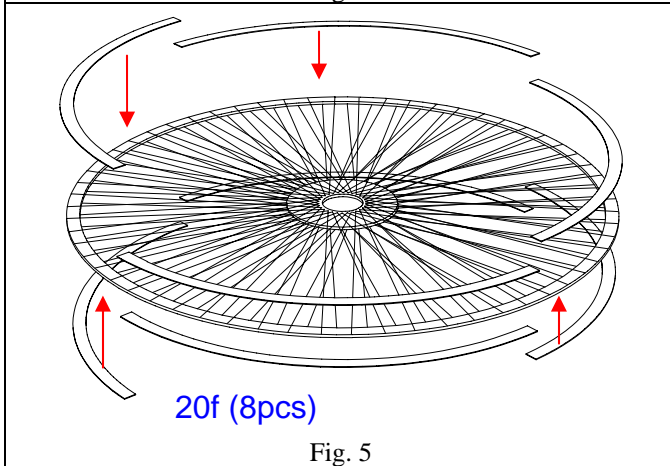


Fig. 5

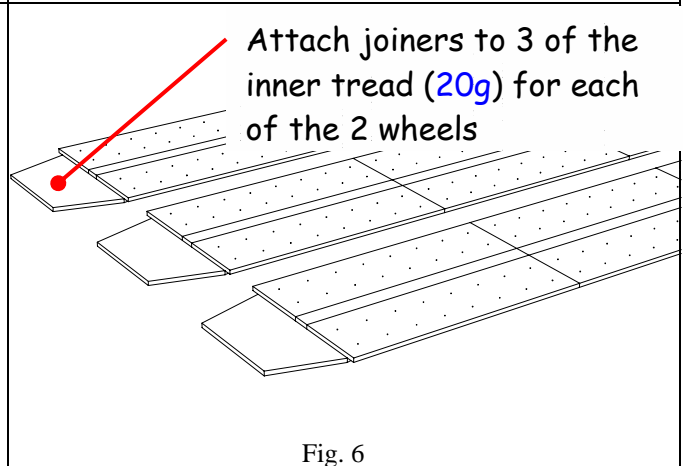


Fig. 6

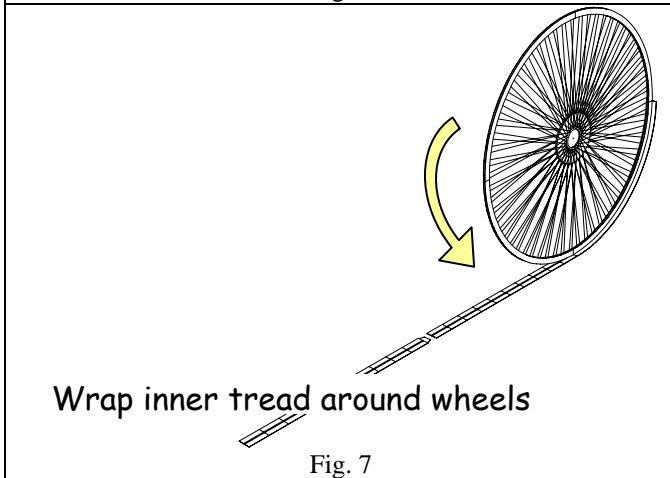


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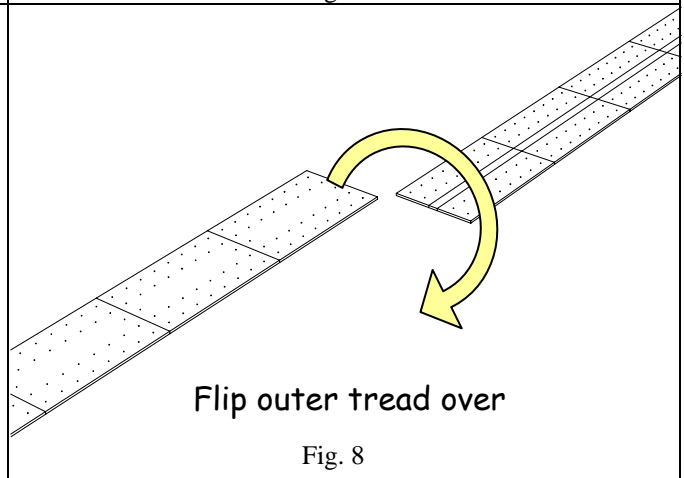


Fig. 8

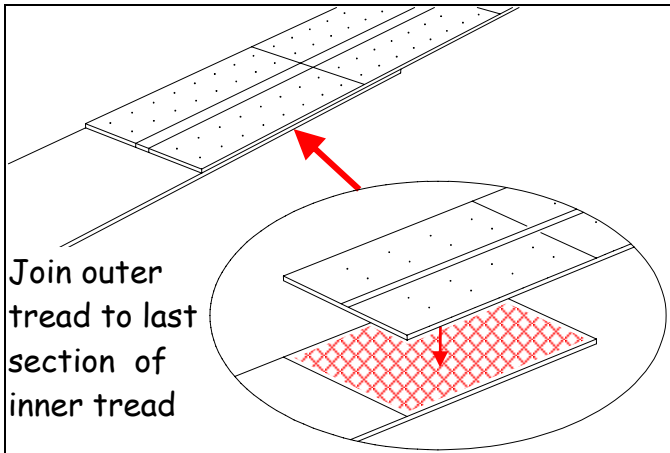


Fig. 9

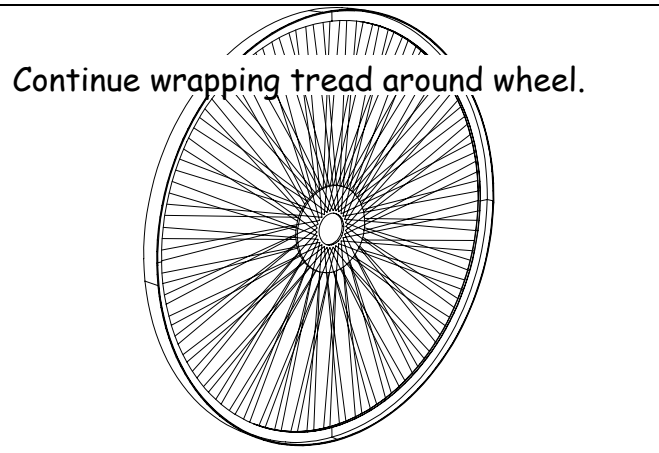


Fig. 10

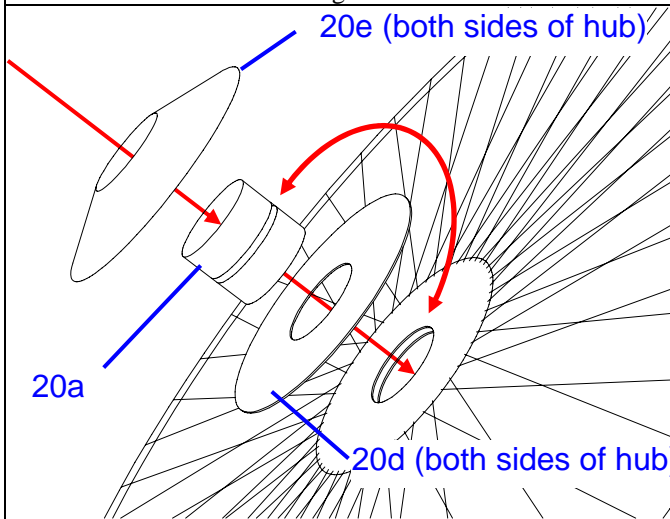


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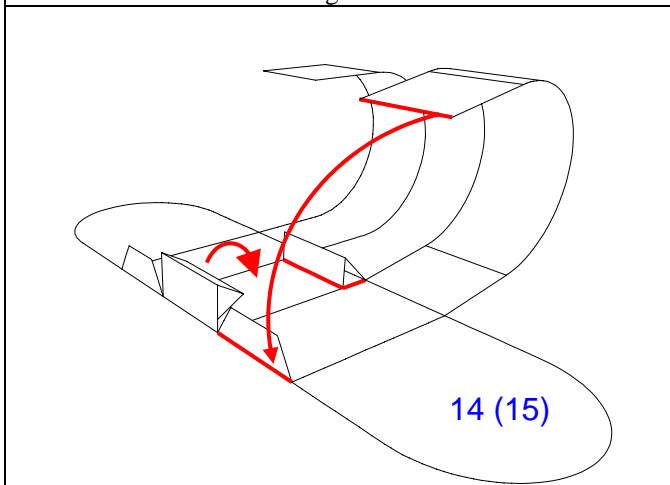


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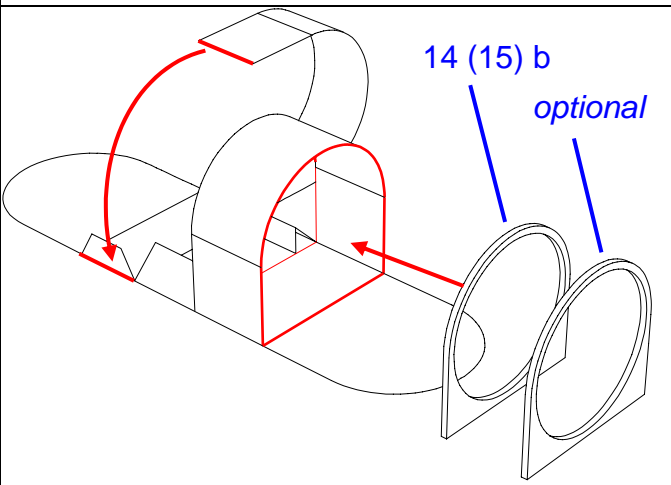


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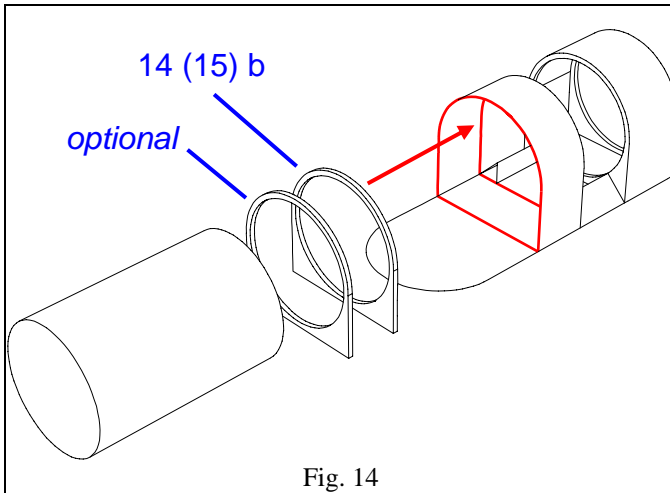


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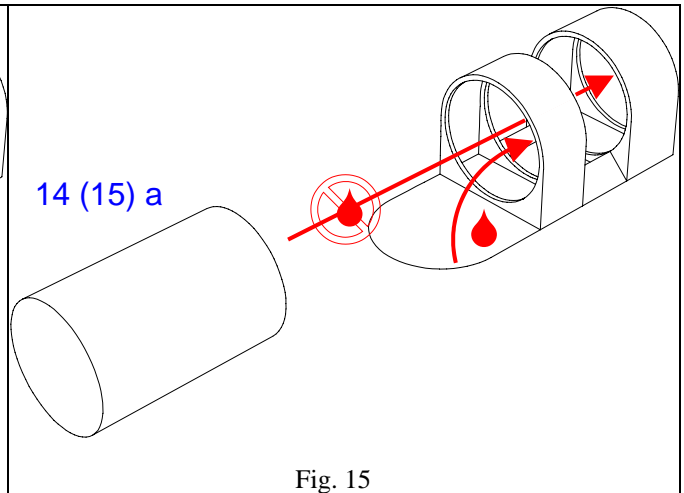


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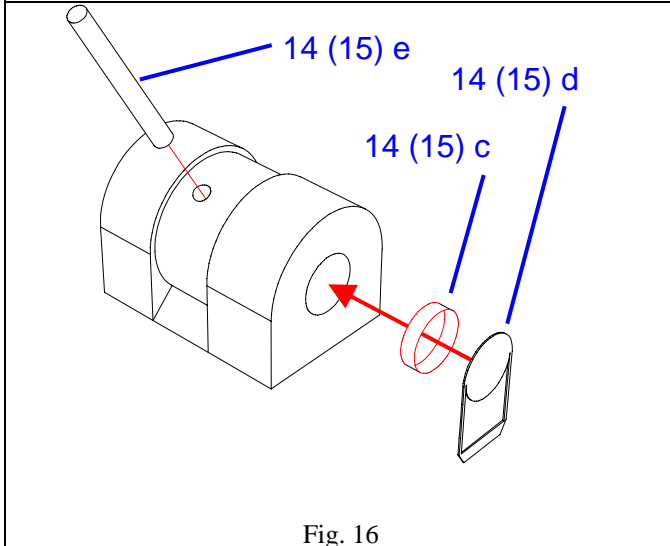
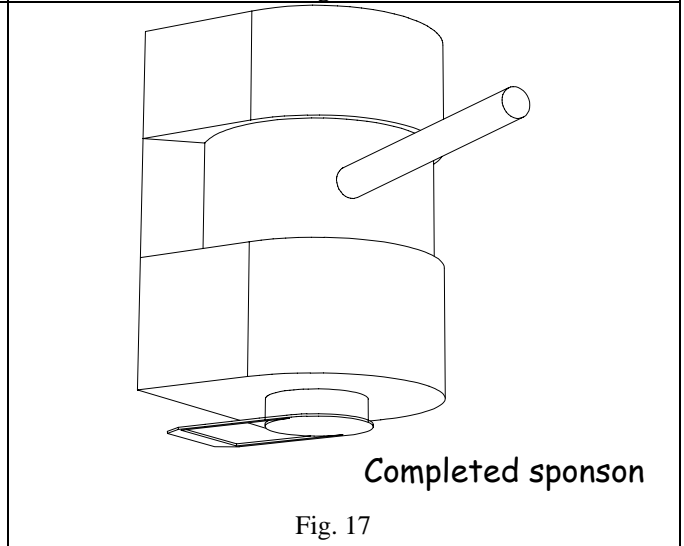


Fig. 16



Completed sponson

Fig. 17

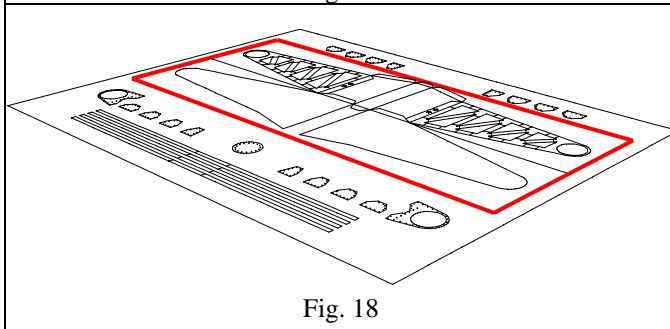


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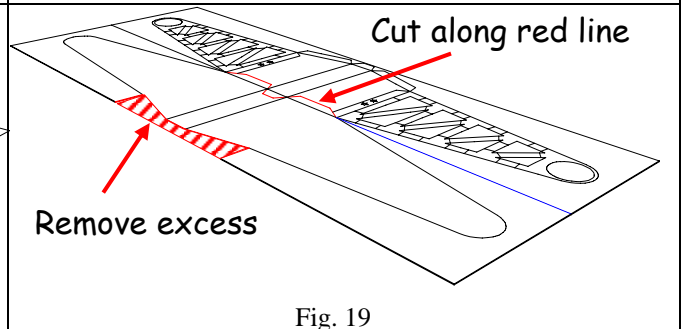


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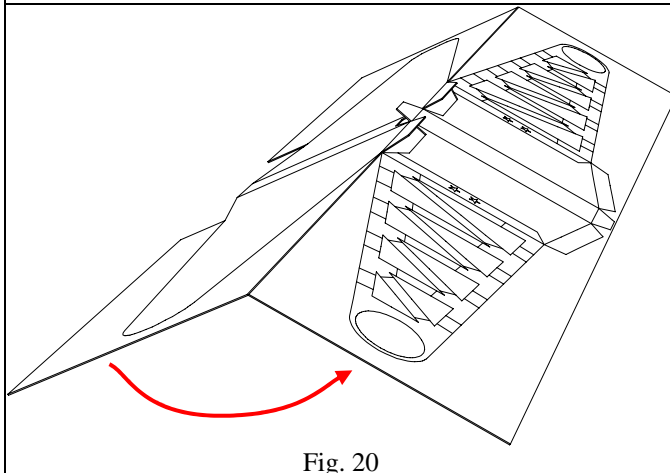


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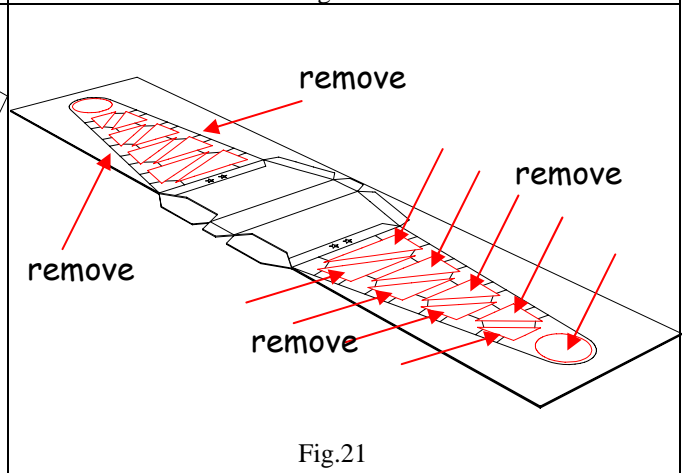
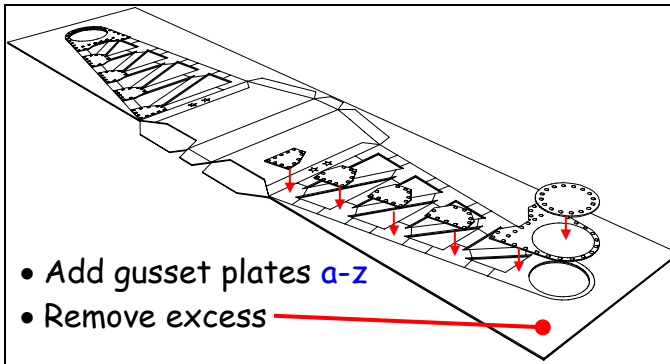
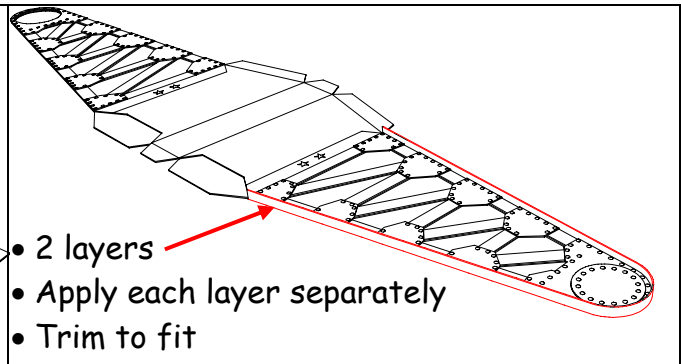


Fig. 21



- Add gusset plates **a-z**
- Remove excess

Fig. 22



- 2 layers
- Apply each layer separately
- Trim to fit

Fig. 23

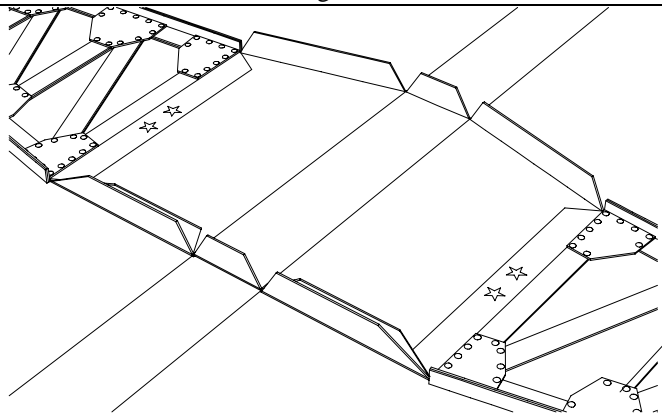


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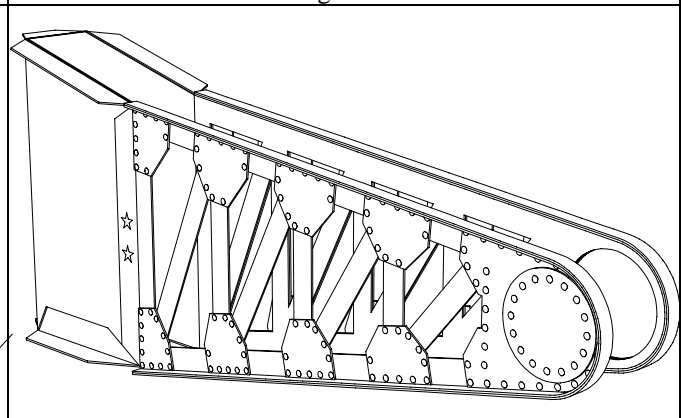


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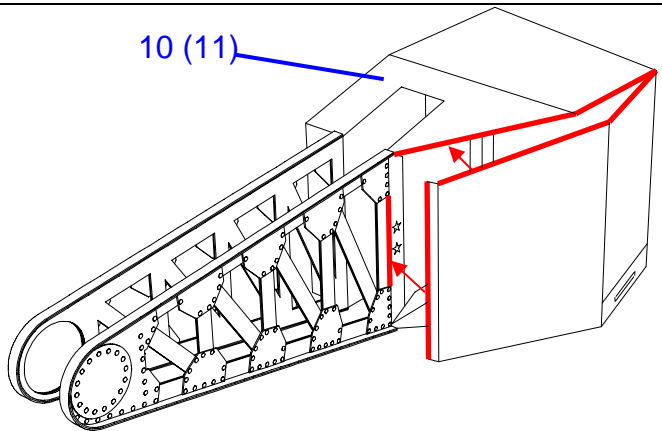


Fig. 26

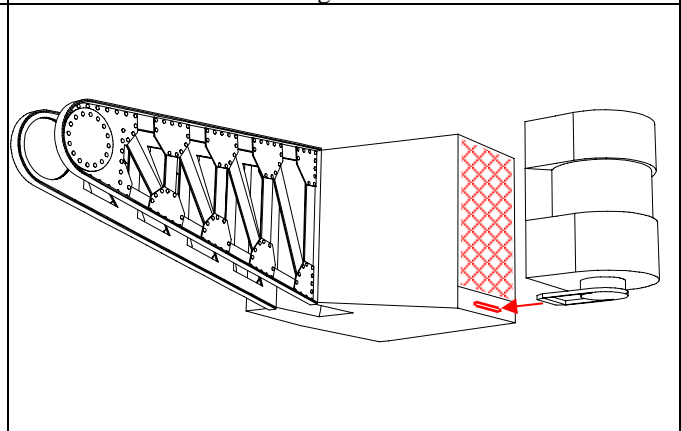


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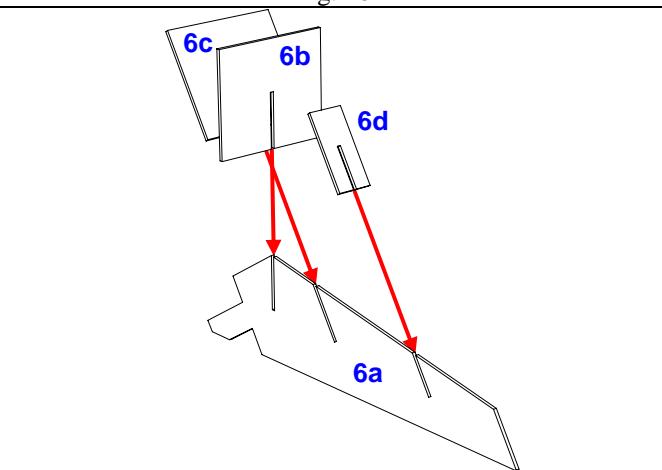


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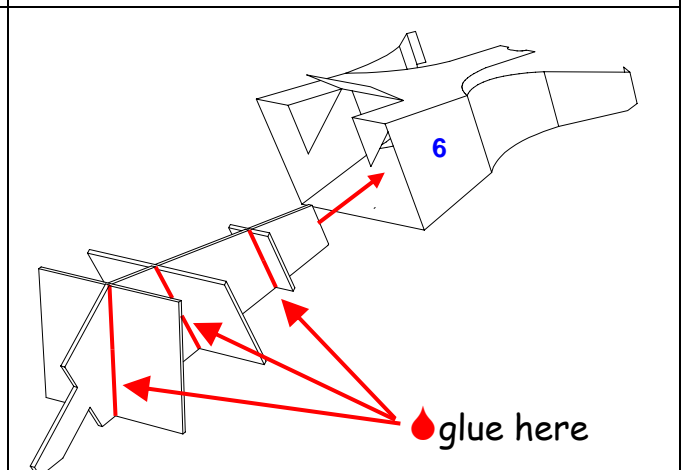


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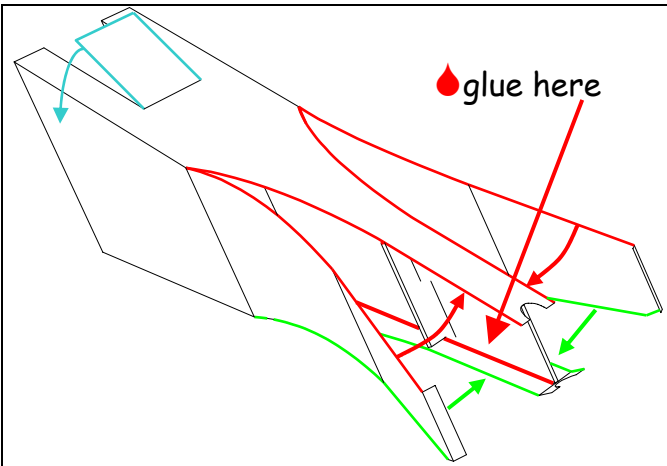


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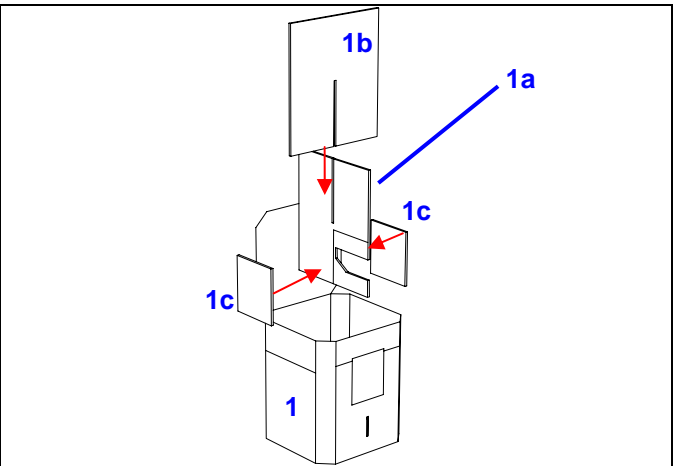


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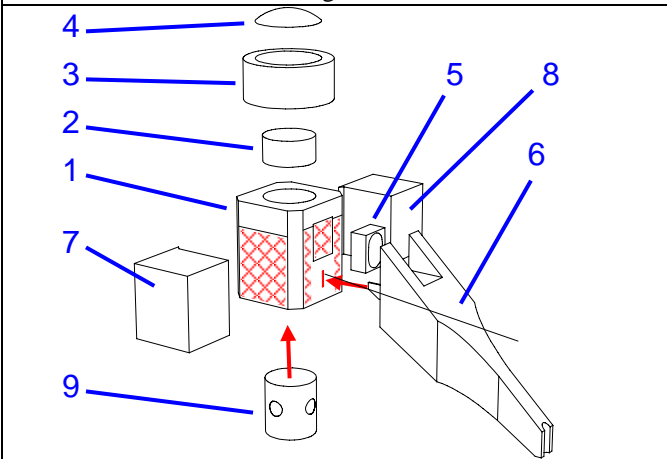


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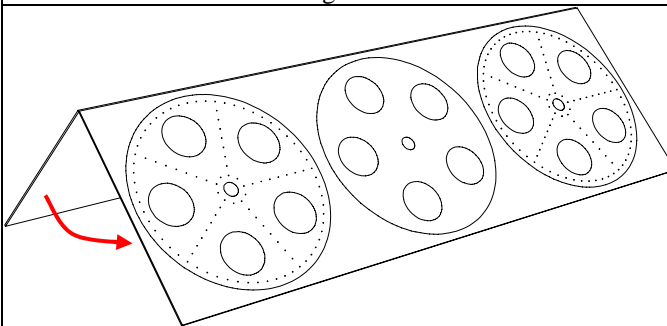


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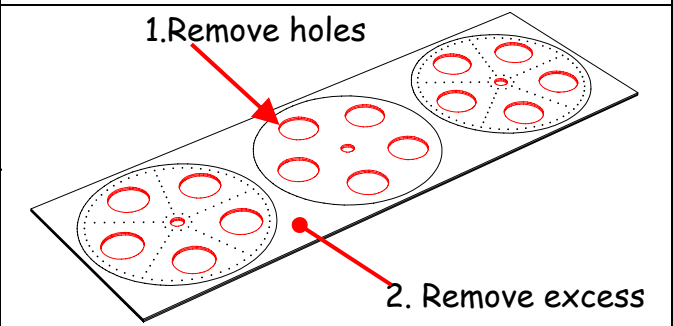


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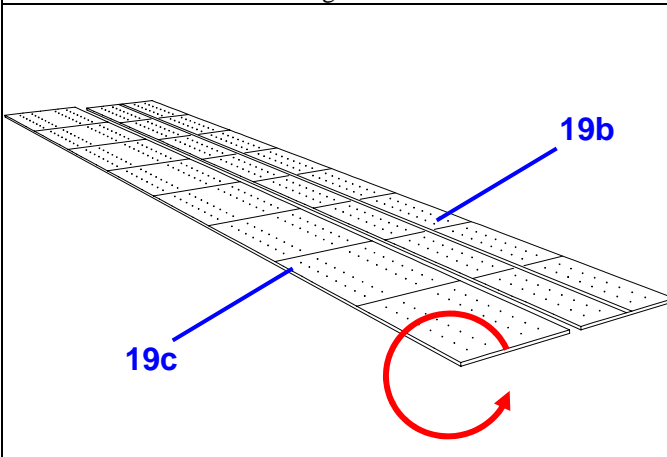


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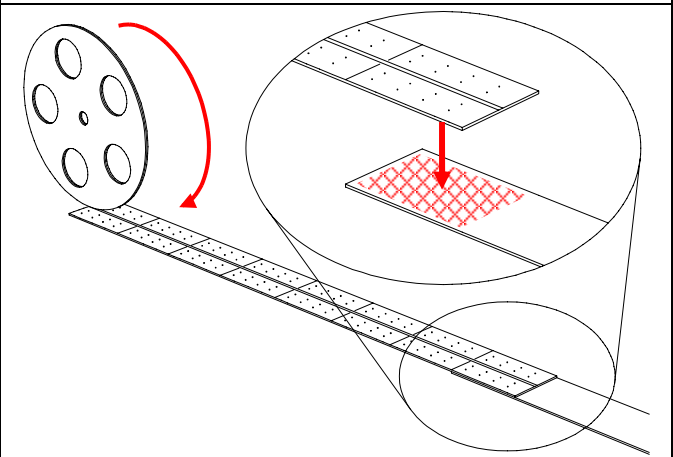
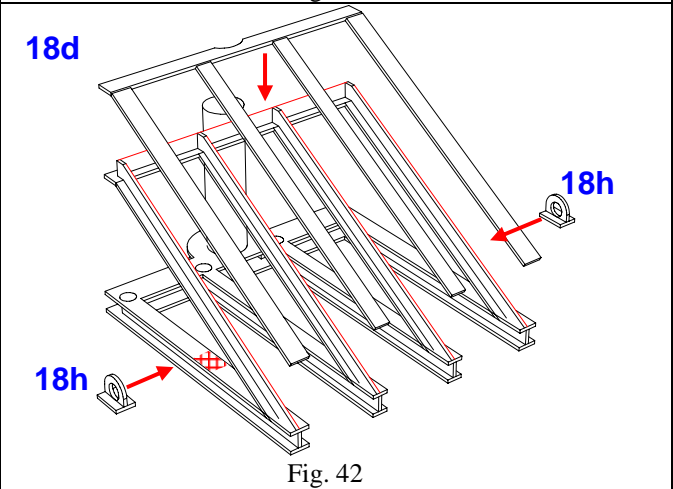
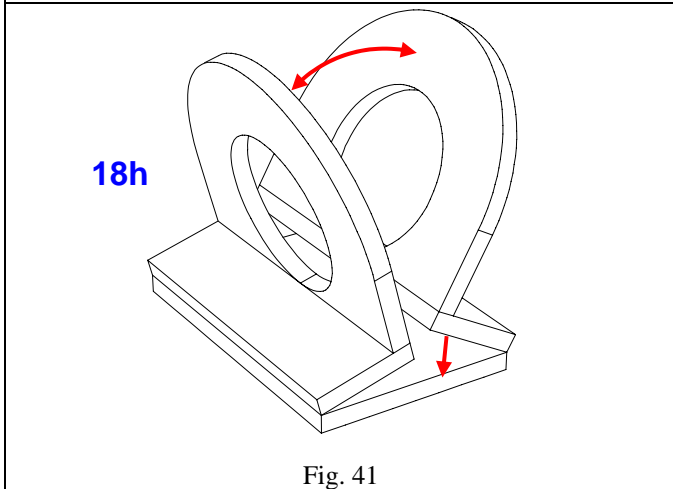
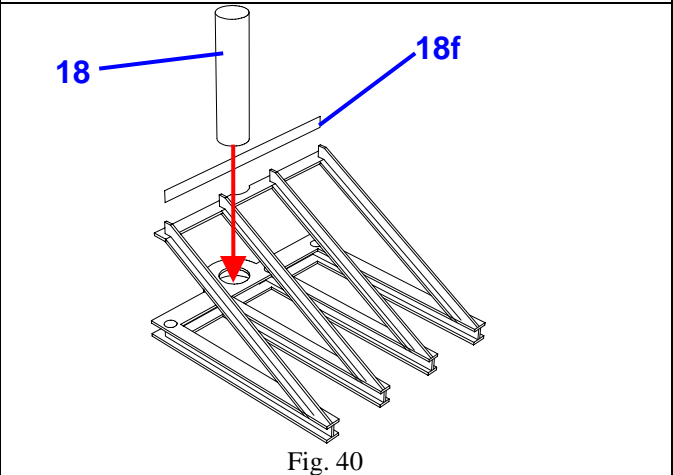
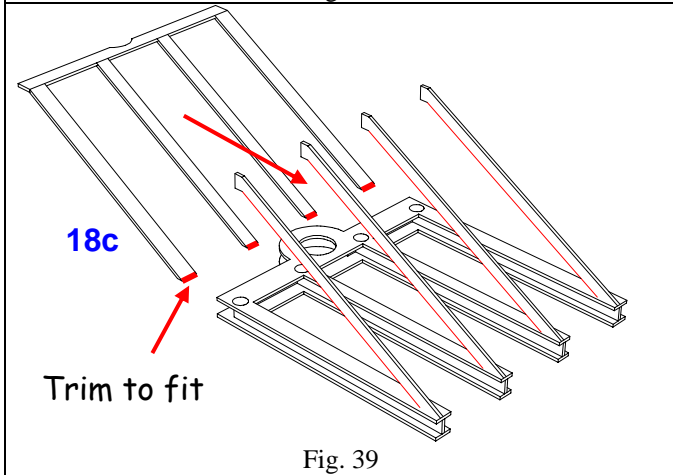
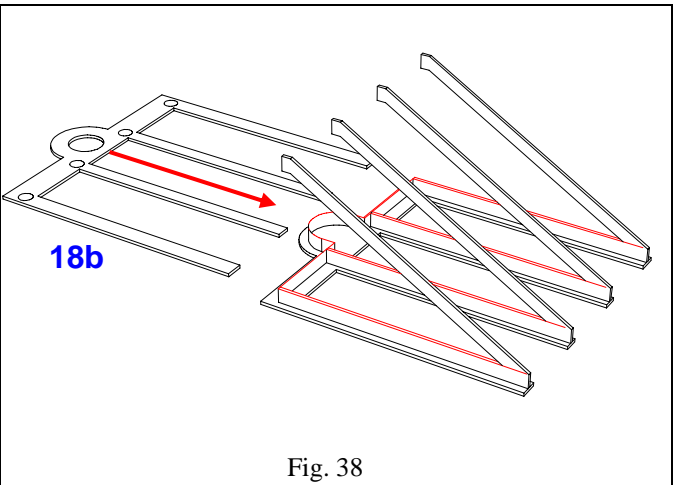
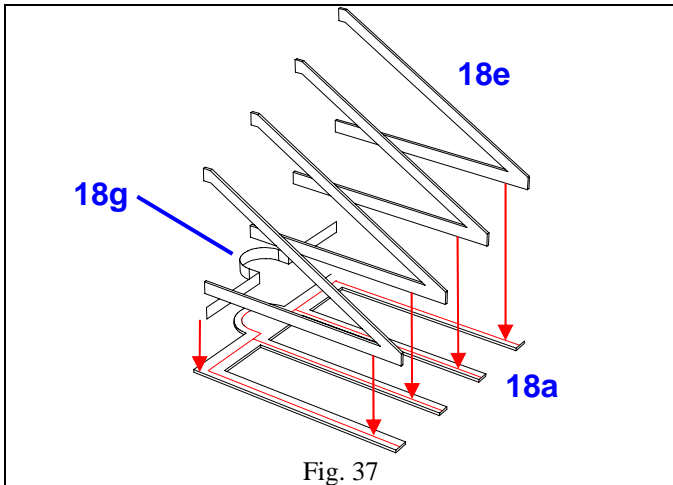


Fig. 36



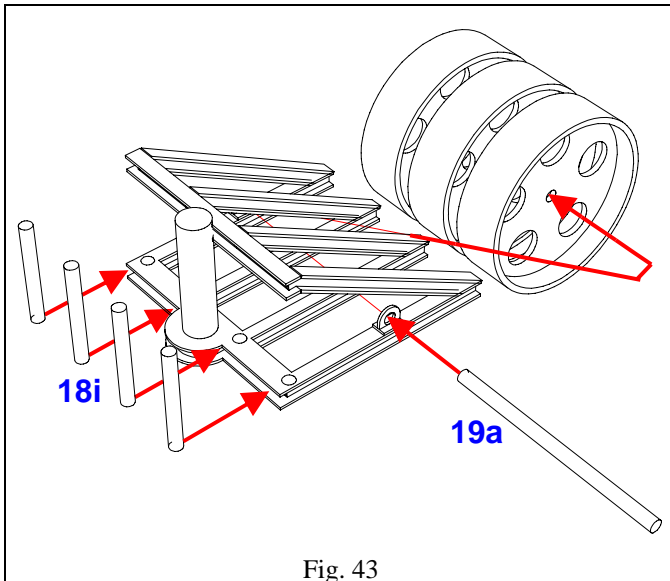


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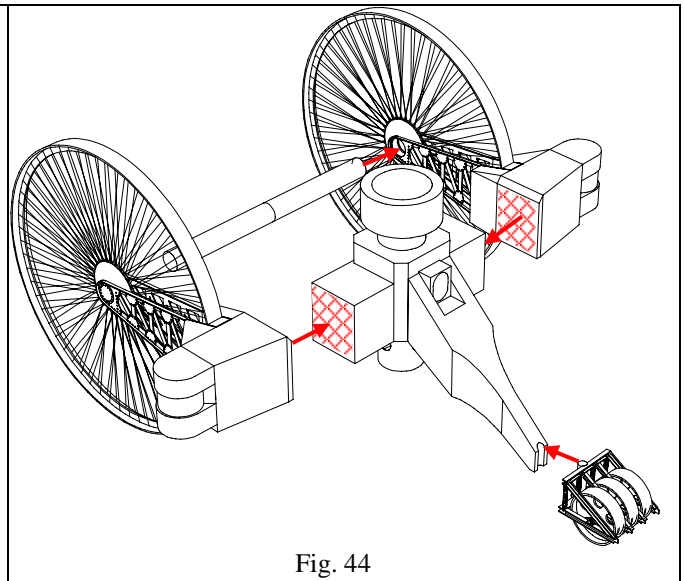


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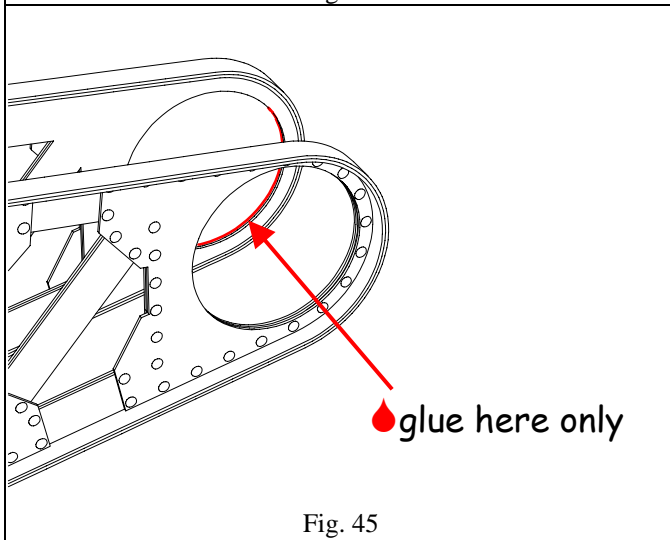


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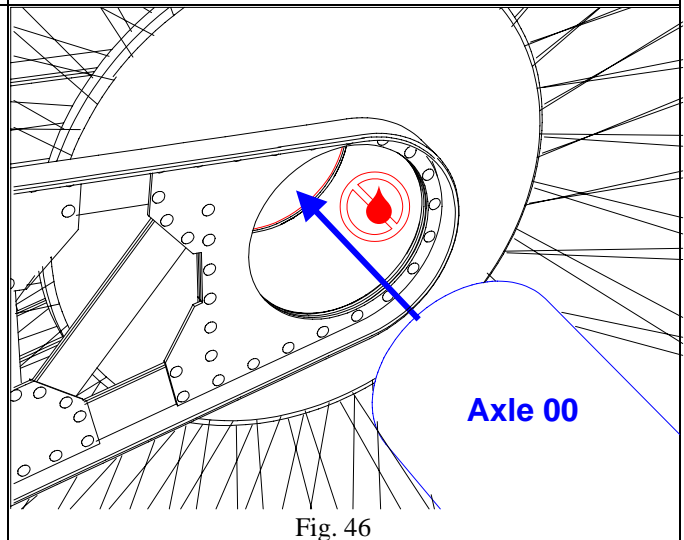


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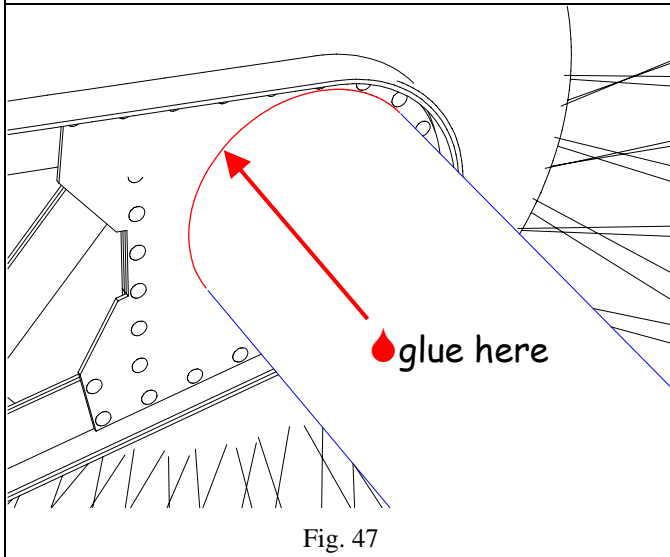


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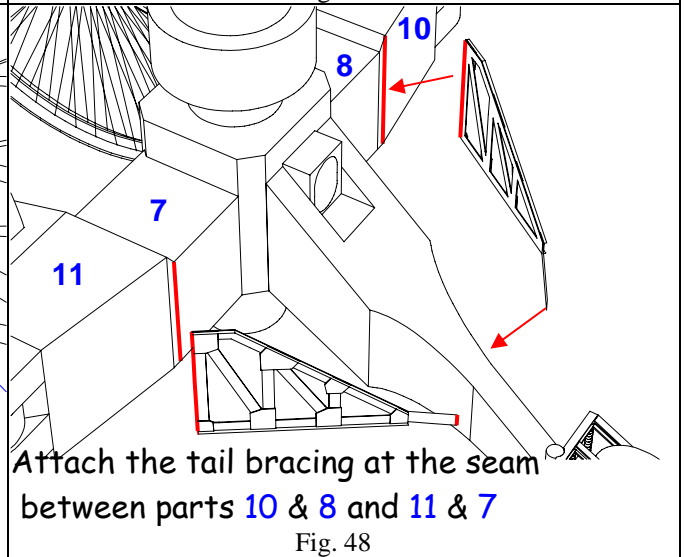
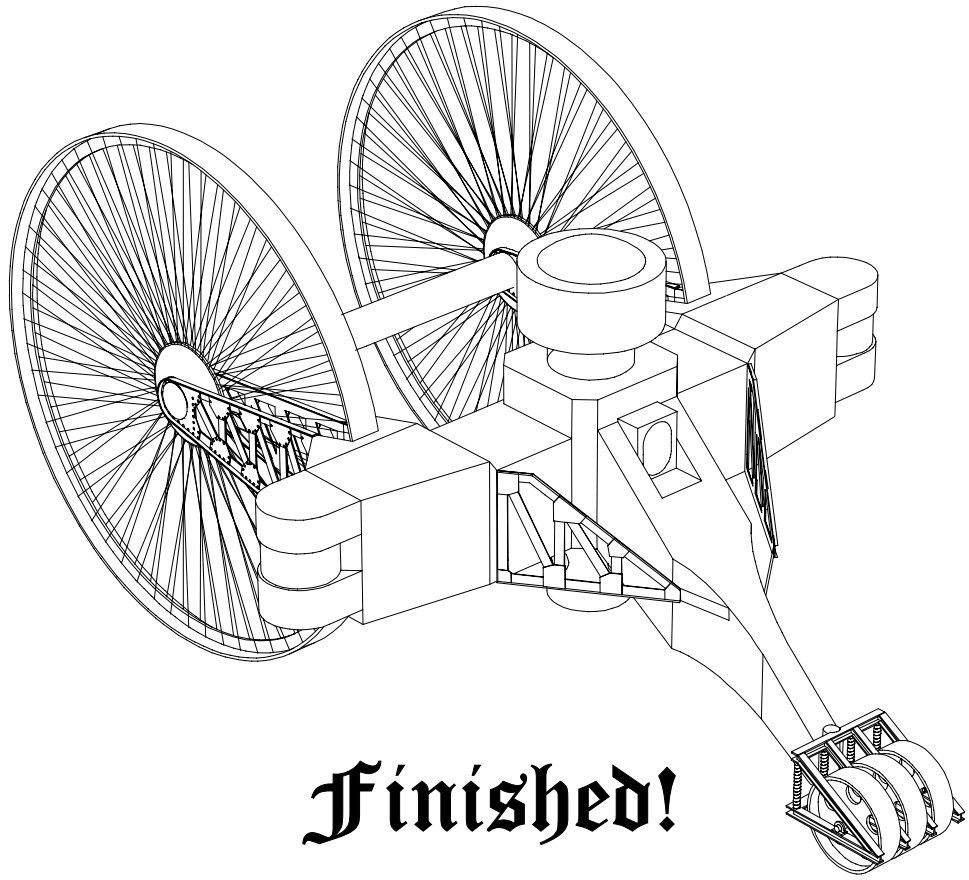


Fig. 48



Finished!

Parts Locator

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0	9	12g	6	13z	7	18d	10
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1b	13	12k	6	14c	8	18g	10
1c	13	12m	6	14d	8	18h	10
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2b	1	12q	6	15a	8	19a	10
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3b	1	12x	6	15d	8	20a	11
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