We claim:

1) A launcher for launching objects, said launcher comprising:

a. a base frame (1) fixed to a platform;

b. a launcher structure (3) mounted on the base frame (1), wherein said launcher structure (3) is a welded structure with support legs (4) mounted permanently onto the base frame;

c. a clamping arrangement (5) to clamp at least one canister (6) onto the launcher structure (3), said canister (6) has a bottom resting unit (50) on its rear end; and

~~d. thrust bearing unit (100) mounted on the platform at rear end of the mounted canister (6) to transfer thrust load to said platform caused during launching of the object:~~

~~wherein said thrust bearing unit comprises external plate members fixed by internal plate members to from a predetermined shape~~

d. a thrust bearing unit (100) comprising:

an enclosure of predetermined shape comprising,

a back plate (9) and a front plate (12) fixed onto top surface of a T beam section (15) of the object launcher platform;

at least two side plates (8) fixed to extreme ends of the front plate (12) and the back plate (9); and

a top plate (11) fixed onto the top ends of the back plate (9), front plate (12) and the side plates (8) to form an enclosure;

plurality of vertical support plates (16,17) and horizontal support plates (18,19) are arranged in predetermined pattern within the enclosure, wherein an edge of the said vertical and horizontal support plate is fixed to the front plate (12) to provide support to the thrust bearing unit (100);

a four arm machined connector piece (20) interconnects the horizontal support plates (18,19) and vertical support plates (16,17) and are reinforced by providing atleast one stiffener (21) whose extreme ends are

fixed to the faces of the horizontal and vertical support plates to form a right angled triangle; and

plurality of four arm machined connector pieces (20) are used to fix the bottom ends of back plate (9), front plate (12) and side plates (8) of the thrust bearing unit (100) to the top surface of a T beam (15) section of the object launcher platform.

2) The launcher as claimed in claim 1, wherein the platform is a ship deck.

3) The launcher as claimed in claim 1, wherein the launcher structure (3) comprises box sections (3A, 3B) welded to each other.

4) The launcher as claimed in claim 1, wherein the support legs are eight in number.

5) The launcher as claimed in claim 1, wherein the support legs (4) are mounted permanently onto the base frame (1) using bolts.

6) The launcher as claimed in claim 1, wherein the clamping arrangements are at least at three places to clamp the canisters (6) to the launcher structure (3).

7) The launcher as claimed in claim 1, wherein the clamping arrangements (5) comprises bottom half (5A) permanently bolted to the launcher structure (3) and a removable top half (5B).

~~8) The launcher as claimed in claim 1, wherein the external plate members fixed on the platform comprising:~~

~~a. back plate (9), front plate (12) aligned with top T beam section (15) of the platform;~~

~~b. top plate (11) is fixed perpendicular to said front plate (12),~~

~~c. at least two side plates (8) fixed at extreme ends of the front plate (12) and the back plate (9); and~~

~~d. plurality of support plates (14) mounted with the front plate (12) for providing support to the thrust bearing unit.~~

~~9) The launcher as claimed in claims 8, wherein the front plate is inclined at an angle 15 degrees with respect to vertical plane of the thrust bearing unit.~~

~~10) The launcher as claimed in claim 8, wherein the front plate consists of lower plate (12A) and an upper plate (12).~~

~~11) The launcher as claimed in claim 10, wherein the lower plate (12A) is thinner as compared to the thicker upper plate (12).~~

~~12) The launcher as claimed in claim 8, wherein the internal plate members comprises:~~

~~a. interconnected plurality of vertical plate members (16, 17) fixed to the front plate (12);~~

~~b. interconnected horizontal plates (18, 19) connected to the vertical plates (16, 17) using four arm machined connector piece, said horizontal plates (18, 19) are fixed to the front plate (12); and~~

~~c. back cover plates (24, 25) fixed to the front plate.~~

~~13)~~8) The launcher as claimed in claim 1, wherein the bottom resting unit comprises dished end (30) bolted to a shell (31) bolted, said shell (31) is bolted to the canisters, removable eye bolts (33) are fixed to the dished end.

~~14)~~9) The launcher as claimed in claim 1, wherein a locking arrangement 34 is placed at a hinge 39 of the thrust bearing unit, said locking arrangement is provided to hold the bottom resting unit against the front plate (12).

~~15)~~10) The launcher as claimed in claim 9~~14~~, wherein the locking arrangement~~unit~~ consist of a centre piece (37) connecting threaded eye bolts (35,36).

11) A thrust bearing unit (100) for an object launcher comprising:

an enclosure of predetermined shape comprising,

a back plate (9) and a front plate (12) fixed onto top surface of a T beam section (15) of the object launcher platform;

at least two side plates (8) fixed to extreme ends of the front plate (12) and the back plate (9); and

a top plate (11) fixed onto the top ends of the back plate (9), front plate (12) and the side plates (8) to form an enclosure;

plurality of vertical support plates (16,17) and horizontal support plates (18,19) are arranged in predetermined pattern within the enclosure, wherein an edge of the said vertical and horizontal support plate is fixed to the front plate (12) to provide support to the thrust bearing unit (100);

a four arm machined connector piece (20) interconnects the horizontal support plates (18,19) and vertical support plates (16,17) and are reinforced by providing at least one stiffener (21) whose extreme ends are fixed to the faces of the horizontal and vertical support plates to form a right angled triangle; and

plurality of four arm machined connector pieces (20) are used to fix the bottom ends of back plate (9), front plate (12) and side plates (8) of the thrust bearing unit (100) to the top surface of a T beam (15) section of the object launcher platform.

12) The thrust bearing unit (100) as claimed in claim 11, wherein the front plate is inclined at an angle 15 degrees with respect to vertical plane of the thrust bearing unit.

13) The thrust bearing unit (100) as claimed in claim 11, wherein the front plate consists of lower plate (12A) and an upper plate (12).

14) The thrust bearing unit (100) as claim in claim 11, wherein the lower plate (12A) is thinner as compared to the thicker upper plate.

~~16)~~15) A method of assembling a launcher, said method comprising:

a. fixing a base frame (1) onto a platform;
b. mounting a launcher structure (3) onto the fixed base frame (1) using support legs (4);
c. mounting at least one canister (6) on top of the launcher structure (3) along with bottom resting unit (50) at its rear end;
d. fastening mounted canister (6) using clamping arrangements (5); and
e. fixing a thrust bearing unit (100) according to claim 11 on the platform at rear end of the mounted canister (6) to transfer thrust load to said platform caused during launching of the object.

~~17)~~16) The method as claimed in claim 16, wherein mounting launcher structure (3) using support legs (4), said support legs (4) are mounted permanently onto the base frame using bolts.

~~18)~~17) The method as claimed in claim 16, wherein fastening using the clamping arrangements comprises bottom half (5A) permanently bolted to the launcher structure (3) and a removable top half (5B) on top surface of the canister (6).

~~19)~~18) The method as claimed in claim 16, wherein a locking arrangement (34) is placed at a hinge (39) of the thrust bearing unit, said locking arrangement is for holding the bottom resting unit against the front plate (12).