

## How-To-Build-A-Fishing-Punt

Punting on the River Thames in Oxford, UK, is a recreational pastime enjoyed in the outdoors by many students and residents in Oxford. The punt is long and narrow, able to take 6 passengers. One person poles it along. To the uninitiated poler, it can be an hilarious experience, especially for those who are spectators.

A punt has an extremely shallow draft, the whole boat being nevertheless quite sturdy on the water.

The following are instructions and plans to build a fishing punt.

“Punts are easy to build. No more skill than that of a rough carpenter has, is required to build them. This is because straight planks are not fitted to curved surfaces. The basic tools required are a hammer, bradawl, handsaw and some nails, but having a jack, a smoothing plane, tenon saw, rule square and bevel will make the job go more quickly and produce better work.

Almost any wood can be selected. Also almost any nails can be selected, but if none are available, then common iron cut nails, heated to a dull red heat and allowed to cool gradually, will do very well.

The design which follows is for a fishing punt. Were it to be for shooting in very shallow flats and marshes, then a much lighter punt can be designed. The fishing punt will be heavy – the main considerations are comfort, durability and strength. The first step is to draw a small sketch so as to fix the dimensions.

Let the punt be 18' long, and mark this dimension off on the water-line of the drawing. From this a plan is drawn in order to establish the width of the punt. The width shown on the diagrams is set at 4'. Thus the length is four and a half times the beam, which is a very good proportion for a fishing punt.

An inside depth of 12” is ample. This brings the outside dimension to 13” overall. Fig 12 gives the proportions of a good fishing punt. The diagram is drawn to a scale of one quarter inch to the foot. Drawing out on a sheet of paper a sketch of the plan and sheer plan on a large scale, say 3” to the foot, will assist in the building of the punt.

The next step is to choose the material. Red pine or spruce are the best and the cheapest types of timber. Copper boat nails or galvanised iron hammer nails are both suitable. A few strong iron screws are also necessary.

Wood quantity: **PLEASE SEE NOTE AT END OF INSTRUCTIONS**

2 planks 18' long by 1' wide by 1” thick in sound red pine free of knots or shakes  
4 planks 14' long by 1' wide by 1” thick in spruce or red pine  
4 planks 16' long by 6” wide by 3/4” thick, for decking – of any wood – but spruce or

pine are best.

Get the supplier to plane them all and tongue and groove the following:

5 of the 14' planks, 2 of the 16' planks and all the 3/4" planks.

Also required are some 1" curly grained elm or oak planks, or black birch if neither of the others are obtainable. About 12' of this will be enough. 2 1/2" nails are required for all except the decking, 1 1/2" common cut nails or wire nails are sufficient for the decking. Lastly 8 by 2 1/2" iron screws are required.

The best place to assemble the boat is in a room or shed, but if this is not available, then 2 horses or trestles, laid firmly into the ground can be used.

The two 18' planks need to be taken and laid one on the top of the other on the horses, and the dimensions for their shape marked out. With a 2' rule and pencil, draw a line from the bottom edge of the plank, 2'6" from its end, to within 1" of the upper edge and end of the plank, as in Fig 13. This needs to be done on each end of each plank, and the triangular piece neatly and squarely sawn off. Put these aside.

Now saw off from one of the plain-edged 16' planks, two pieces 3' 10" long, and make these into a temporary box, the two ends and bottom of which will be hereafter closed in by the sides and bottom of the punt, and the top by the well-decking. These two pieces must therefore be temporarily fastened together with any odd strips of wood. They must be spaced 2' apart, and must be exactly square with each other. Now take up the side planks and fix them with a light stay and tack, as show in Fig 14, on to the trestles, exactly 3'10" apart, and *upside down*.

Great care must be taken to ensure that they are exactly true to each other, that both are on the same level and are perpendicular, and that they tally with each other in length.

Next, take the box and place it exactly into the center of the length of the planks, across the punt, where it should fit nicely. This must be temporarily supported in its place, which may be done by a stay from below if (see Fig 14).

Now screw in a 2 1/2" screw through the side plank into each side piece of the box, about 2" from the top edge, and another again about 3" from the bottom edge. The box will thus be fixed in its position, where it will be a permanent midship frame to the punt.

Take any two odd pieces of wood and nail them lightly on to the top side of the side planks, keeping them just 3' asunder over all, and with two more pieces draw in the bottom edge of the planks, fastening each piece of wood so as to keep them about 2' 6" apart. This drawing of the planks together will give a good shape to the punt.

The frames, which are really the foundation and strength of the punt, must now be put in. To do this, saw out a lot of 1" stuff 1" square for bottom strips; about 84' run will be

wanted for this, and it should be planed up on all sides. Cut out of the hard wood plank twenty knees, as per A in Fig 15; the angle of each air of these will vary, but with the help of the bevel-square, it will be easy to ascertain this by measuring the angle of the side planks and a board laid across at each position of the frames. These frames are placed 15" apart from center to center, the first starting from the side of the well.

This allows for four frames on each side of the well. These angles should be alike for similar positions at each end of the punt, but it is seldom that such accuracy is used in construction as to make them so. It is possible to use light iron knees instead of the wooden ones. The advantage of the wooden ones, if carefully selected, is that the grain runs as far as possible with the curve, and for some little distance up the long arm of the knee.

Going now to the framework of the punt on the trestles. First put in the side stringers. These run the whole length of the bottom of the punt, on each side, to strengthen it. They are made of the 1" pine that has been sawn out. Two pieces of this that will bend easily, and which are about 13'6" long are required.

Each of these must be carefully nailed inside the punt, along the bottom edge of the side planks, so that they may project a little beyond  $1/8^{\text{th}}$  of an inch. This is done so that when the bottom of the punt is put on there may be a little recess between itself and the side plank and stringer for the caulking, as is shown in B, Fig 15. In nailing these on, the nails must be placed about 6" apart, being driven in from the outside, and the rooves put on and riveted before proceeding any further. The two planks forming the well will interfere with the placing of these two stringers, so they must each have a small recess cut into them, to allow the stringers to be placed.

The bottom frames and side frames must now be put in, and when doing this, exercise some care to ensure that they are all on the same level. This makes putting on the bottom easier.

Mark out their position, starting at the well, and placing each at 15" from the other. This allows for 4 on each side of the well, or 5 on each side of the center of the boat including the one at the well. Put each pair in complete, that is, the two side frames and the bottom frame, before proceeding to put in another pair. With the assistance of a light batten slightly tacked to the well and used as a gauge, they can all be easily kept to their proper level.

This batten should be nailed so as to go along the centre line of the boat, and must be used in the following manner: First, nail on with two nails each to the side plank, each side frame by the well; these nails must not be rooved or clinched as yet. Also drive two nails through in the short arm, and two nails in the long arm of each knee from inside the well, and roove and rivet these.

Be sure that the bottom of the frames are on a level with the stringers, that is, projecting about  $1/8^{\text{th}}$  inch beyond the well boards. Do this for each side of the well. Now cut off two pieces of the 1" strip of pine, of just sufficient length to fit nicely between the

stringers when lying against the inside of the well boards, but projecting beyond them on the same level as the stringers and knees. Nail these firmly on to the well, the nails 6" apart.

The batten before mentioned to be used as a gauge must now be laid on and nailed lightly to these two bottom frames in their center. Now proceed to treat each set of frames in the same way, not clinching any of the nails till it is sure that all the frames are right, which, if found to be the case, go over again, rooving and riveting all the nails firmly. The bottom frames should all be put on the same sides of the side frames, so that the spaces between them may be even; and if as each bottom frame is put on the gauge batten is lightly tacked to it, all should be correct.

The next step is to finish the ends, and as these are straight, a straight-edge of service is a guide. First of all prepare 4 pieces of wood, 1" thick by 2" wide, and about 2'6" long. These must be planed on all sides. Make twelve hard wood knees, 1" thick and 6" long on each side, of the shape shown in B. Figs 16. Now take one of the two 1" pieces, and saw it off at such a length that it shall fit firmly between the stringers at A, Fig 16. This must be placed so as to project a little beyond the bevel of the side planks, as shown by the dotted lines at A, and on a level with the stringers.

To secure this in its place, nail a hardwood knee on each end of it, as shown in B, Fig 16, with two nails, and nail the knee to the side planks. Now put in a 1" strip of pine on each side, plank up the bevel to act as the stringers along its bottom, and then fasten it to frame C of 1" strip and D of 1" and 2" strip.

This latter projects beyond the side planks, as marked off by the dotted lines at D. Frame C is half-way between the frames A and D. With the help of the straight-edge these must be made level. The nails of these must be all rooved and riveted. Each end must be thus treated. This being finished, it is time to put in the bottom.

Take the 14' planks, and after seeing that they are all good and sound, and not curled up, take one of them, and laying it on to the well board frames with one nail in each to the center of the board. Bore the holes for these nails, and for all that go through the bottom planks, with a rather fine bradawl, otherwise the plank may split, giving much trouble. Now bring the plank down on to the frames at each end of the punt, and secure it there with a nail lightly driven in as before. If this lies on the frames all right, take another and lay it on in a similar way; but on the other half of the punt, being careful to fit the tonguing and grooving very closely, and above all things, not to split off the edges of the planks. Remember, all these planks are tongued and grooved.

Now put on the two side planks with the same care; but exercise a little judgment in placing the nails at the ends where the planks narrow on account of the taper of the bottom of the punt. The ends of all the planking will project over a little at each end of the punt. This is not a problem. Just ensure that the bottom lies closely and evenly on the bottom frames, and that the tongues and grooves go home and fit close. If this has been done, the tongues and grooves need a coat of rather thick paint just before they are

put together. Too much paint will hinder the action to close them together. If all the bottom fits right, go over it, and put in two more nails through each plank where it crosses a frame.

Put the nails as close to the edge of the plank as can safely be done without splitting it – about 1 1/4” to 1 1/2” ; but where the side planks are very narrow at the ends, as before remarked, judgment must be used, as perhaps only two nails can be well put in.

The punt must now be turned on its side or bottom, whichever is convenient, and with the assistance of someone obtained, roove and rivet all the nails. The assistant will need to back up the nails with a very heavy hammer, or a light anvil of the shape shown in A, Fig 17. (Fig 17 is not included in the diagrams as the tools can quite easily be obtained today at most hardware stores). In hammering the nails in, or riveting them, a very light hammer is needed. To drive the rooves on to the nails close down to the wood a tool will be required like a punch with a hole or pipe in it.

This being done, turn the punt back again, and proceed to saw off the ends of the planks and the end frame, as show at A. Fig 16; and also saw off the frame D, as shown in the same figure. Now put in the ends, as the bottom was put in, and rivet up the ends of the nails as before.

The chief work of the punt is now complete, all that now remains to be done is the caulking, painting and fitting.

The first step is the caulking of the seams in the bottom, and for doing this a caulking iron and mallet is required, but it can also be done with a wood caulking chisel, made of hard wood, an any light mallet with a springy helve. B and C of Fig 17 illustrate what can be made. The dimensions of the chisel are given, and for material a piece of oak plank will do. To prepare the pitch, melt several pounds over a gentle fire with a little tallow in a pot. Keep it well stirred and be careful that it does not catch fire.

When it is well melted, test its quality by dipping a little stick in it and cooling the pitch that adheres to it in cold water. If the little drop that hangs from the stick breaks brittly it shows that there is not sufficient tallow in it, so more must be added and well mixed in; if the drop is soft and sticky pitch must be added, for there is too much tallow – and so on till the right temper is reached. One or two trials is usually sufficient for this.

If pitch is unavailable, then resin may be used. Add an equal quantity of lampblack or powdered wood charcoal. This type of pitch requires more skill in its manipulation.

Having spun the oakum into a loose cord of a size that will fit nicely into the seam or crevice to be stopped when it is compressed under the mallet (this needs to be judged accordingly), it must be dipped piece by piece into the hot pitch until saturated, and then driven into the openings hard and firm with sharp, quick elastic blows of the chisel and mallet.

It takes a good deal of experience to caulk well and neatly, and the operation necessary is very difficult to describe, but a few trials will soon put show the way. The cracks need to be quite full, going over them two or three times if necessary. However, repeatedly going over them risks the breaking of that which was put in first, so doing it well the first time is the best way. If a hole is very large, it may be done by first filling it with dry oakum, and then driving in the pitched oakum. The chisel will be constantly sticking to the oakum and drawing it out of the seams between the blows of the mallet. The must be obviated by having a small vessel of oil at hand into which the point of the chisel will be dipped when it shows a tendency to stick.

The seams that have to be pitched are the seams on each side of the punt, along the bottom edge of the side planks, also the seams formed by the well-boards and the frames, and any cracks that may show themselves in the bottom and end planking. Afterwards the inside of the boat needs a thin coat of pitch, with a brush, all over the inside of the well, and along the joints of the side stringers, with the sides and bottom, and also the joints of the end frame with the bottom and end planking. When this is all hard and dry, all surplus pitch must be dressed off with a sharp chisel well oiled, and then the inside of the punt given a good coat of paint, filling up all the little cracks and joints.

Next is to make the decks for the ends and well. In decking in the ends, first of all, put in a piece of wood, 1'' by 2'' deep, 2'6'' from each end of the punt, and across it from side to side. This must have a knee of hard wood at each end, and by them secured to the side planks. (See E. Fig 16) From the center of this another piece 1'' square must be mortised, the other end being mortised to the frame D at the nose of the punt. This must be done for each end of the punt.

The three-quarter inch planking must now be taken and cut into proper lengths and nailed on to the side planks and the frame, the 1/2'' nails being used. This decking will be laid across the punt from side to side, and, as it is all tongued and grooved, it must be made to fit well before the nails are finally driven home.

Each piece of planking for the decks may receive a coat of paint on its lower surface before being nailed in its place. In decking the well exactly the same process must be used, 1'' cross pieces being put in from one well board to the other to form a support for the well-hole cover. The well-hole should be 1' 3'' long by 9'' wide.

Now is the time to add any fittings. It is also the time to iron the nose, but this is only necessary if the punt is intended for knocking about much. A piece of oak 1/2'' thick and 1'' deep, secured as a stringer all along the top of the side planks and round the ends, will be a great improvement, as it saves the planking from roughing up when poling. Having thoroughly inspected the work, observing that all the nails are properly clinched, and that there are no rough, untidy corners, the next step is to paint it and finish up.

For painting, dark grey or green is the best color. For painting a punt of this size, giving it three good coats outside and two inside, about one gallon, or 12 lbs to 14 lbs of prepared paint will be required. With a good-sized brush, give all the inside which can be

got at, a good coat of paint, rubbing it well in.

The punt may then be turned over and the outside receive a coat. When this is thoroughly dry a second coat may be given, which should be allowed to dry well and hard for, say, at least five days. The outside may then receive a third coat, put on very thin, and this coat must be allowed to dry thoroughly, say from seven to ten days. When painting, if any rough places show themselves, they may be rubbed down with sand-paper.

This completes the punt. The subsequent craft will be serviceable and durably for many years, yet not so heavy or clumsy as those usually found at the river side.”

*Extracted from Practical Boat Building and Sailing for Amateurs by Neilson, Kemp and Davies (published 1903)*

NOTE: Although these are the instructions from the book, the timber quantities seem to be in error. For instance it says 4 x 14' planks, and then goes on to ask that 5 x 14' planks are tongued and grooved. There is a discrepancy with the 3/4” planks as well.

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