"PACIFIC ISLAND SMALL BOAT DEVELOPMENT"

A DISTRIBUTORS VIEWPOINT

Presented by:

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I. INTRODUCTION - McWAYNE MARINE SUPPLY BACKGROUND

McWayne Marine Supply has been involved with supplying private, government and commercial sources in the island communities of the Pacific Basin for the past 100 years.

The real interplay between our Hawaiian company and other island communities reached voluminous proportions during the past decade. McWayne Marine now sells between two and three million dollars per year to its customers in the Pacific Basin.

The logistics of doing business in the far flung island groups has presented a real challenge. Solving the problems has lead to the implementation of a 90/30 Univac On-Line Computer capable of properly maintaining a 25,000 line item warehouse stock with an average of two million dollars.

McWayne Marine Supply has been involved with supplying customer requests from KimChee and wedding dresses to complete plane loads of outboard motors. Backed by "on the job" service training classes the educational process has been thorough.

The 300 different suppliers represented are shipped both from our Honolulu warehouse and through a West Coast warehouse where container load consolidation for our customers is offered.

We hope the following thoughts will be of some assistance toward the continuing small boat development of your island communities.

II. PACIFIC ISLANDS SMALL BOAT DEVELOPMENT TO DATE

The advance by islanders from sail and paddle to modern day power plants for propulsion was inevitable. As individual income has increased and information about power boats has reached the islands over the past few short years, more and more islanders have turned to modern day propulsion. Because of the low cost and comparative ease of repairs, the biggest single form of propulsion has been the outboard motor.

In the lower horsepowers both price and technical grasp are presently within the reach of most islanders. We estimate that the total motor population of Micronesia, as an example, is approximately 8,000 units against a population, excluding Guam, of only 100,000 people.

The majority of those engines sold in all of the island areas are 40hp and under, with 25's and 40's being the most prevalent. Above 40hp the motor count drops dramatically. There are exceptions, such as Palau in Micronesia, but the dominance of small horsepower basically holds constant throughout the basin.

This report may seem that we favor outboard motors. It is important to point out that our company represents both gas and diesel inboard and inboard/outboard engines as well. From the experience we have gained thru participation in the various development programs established in the basin in the last decade, history throws a lot of weight and favor toward the two cycle outboard as perhaps the prime selection of marine propulsion for some time to come.

III. RETARDING FACTORS OF POWERBOAT GROWTH AND POSSIBLE SOLUTIONS

The growth of powerboating in the basin is almost entirely controlled by three factors:

1. The cost of the equipment in relation to the prevailing income structure in any given island area.
2. Repair and maintenance sources.
3. Availability of parts.

A. PROPULSION - RESTRICTIONS AND SOLUTIONS

1. Cost - Ability to Purchase: At this point in time the larger horsepower outboard, inboard/outboard and inboard engines simply cost too much and are too complicated to maintain and repair for the average islander to buy and keep operational. There is no question that a diesel operates much less expensively than an equivalent horsepower gas four cycle or two cycle engine.

The problem is in the initial purchase price. Comparing a 40hp diesel to a 40hp outboard, the diesel would have an initial cost of approximately $3,000.00, whereas the 40hp outboard would only be $817.00. The argument in favor of the diesel is, of course, direct operating costs.

Operating for equivalent hours we calculate that it would cost $9.00 per day more for a 40hp outboard than a 40hp diesel.

Doing a little math, however, points out that using a 20 day per month operational factor, it would take one full year to amortize the difference in the cost of the diesel. Further, smaller horsepower diesels are only functional in a displacement hull with top speeds of 12-13 knots. With outboards wedded to planing hulls, a fisherman can theoreticlaly get to and from the fishing grounds faster and overall considerably more economically.

The above exercise was done with a single 40hp diesel against a small 40hp Johnson. Basically the same economics would hold true comparing a single 80hp diesel to twin 40hp outboards.

Regardless of the power comparison, the economical restrictions remain the same. The average Pacific islander can only afford so much outlay of money for his propulsion system.

Local economics must be the guiding factor for any program involving the purchase of modern day marine propulsion.

2. Availability of Trained Repair Personnel: In the most advanced countries where heavy salt water use is prevalent, the expected life span of an engine will decrease and malfunction is greatly increased due to corrosion.

In the Pacific Basin where maintenance doesn't come to mind until the motor won't start or stops, engine life and trouble free operation is of even shorter duration.

Marine operations, whether the project of an individual, a co-op or a government program such as fisheries development, can only be successful if the equipment continues to operate.

I once purchased a U-drive company on the island of Molokai that had gone bankrupt. Analysis of the operation proved that on an average over 50% of the automobile in the fleet were down at any one given time. The equipment still had to be paid for with the basic fixed costs of insurance, loan amortization, labor, etc. but the cars were not being productive.

Getting the fleet to a 95% average operational factor proved the key to success and the operation grew and was eventually sold for a handsome profit.

I liken this to any marine equipment program established where partial success is predicated by the continuing operational ability of the equipment.

Where a particular type and horsepower motor has a large existing population, avilability of repair personnel follows suit. Over the past few years McWayne has trained, in on-the-job training programs, approximately 75 islanders. These people were predominately funded by government programs and agencies.

Other trainees were sponsored by import/export companies, churches, and in a few cases, individuals wishing to attend have paid for their own per diem.

The number of trainees from a given area were directly related to the number of engines in that area. There seems to be no shortage of repair personnel for outboard engines for example in Truk.

The biggest shortage of repair personnel apepars to be where a given motor population is limited.

Many programs where there is a limited number of new propulsion units used must take a man and train him specifically for the advanced technical repairs required to keep the units going. The entire success of a program can evolve around one repairman. If he leaves for whatever reason, the program can flounder until a replacement is found and trained.

Rather than be dependent upon a single repairman, a marine program is safer with the availability of one or more backup mechanics. If one individual is lost, the program doesn't flounder.

Even where there are numerous repair people, the quality of their training is many times dubious.

This problem is not sometimes due to talent but merely a lack of updating. A 1968 training course does not maintain adequate kmowledge for the proper repairs on the technically advanced 1975 engines.

Constant training is necessary just to keep existing service personnel technically sharp and up on latest innovations. The repair schools offered by the international motor companies, distributors such as ourselves, and the domestic factories in the United States, should be utilized when possible.

Update training material is readily available requiring no instructor and can be activated with the selection of a cassette and the flick of a switch.

There is a cassette sight and sound instruction system offered by both Johnson and Evinrude that is one of the finest training systems available to you. (Demonstration).

Along with this sytem, there are numerous periodicals, including complete repair manuals, trouble shooting booklets and so on. I have brought a number of books and brochures that if you do not already have them in your library, will greatly assist you where you are involved with small boat maintenance and repairs. Please help yourselves.

3. Parts availability: Parts availability in the Pacific Basin is directly related to the number of a specific engine currently in use. In a given area, for example in Truk, we estimate a population of approximately 2,000 engines. Of the 2,000 engines, approximately 50% are 25hp and 30% are 40hp engines. Our parts orders shipped to both government and commercial concerns are predominately replacement parts for these two

horsepower models. Parts shortage complaints in these areas are infrequent.

This same comparison holds fairly constant throughout the basin. I would estimate, again using Truk as an example, that there are not more than 100 small marine diesels in the district and parts are a big problem.

The conclusion is simply that the smaller the population of motors, the less readily available parts are in the area and the more difficulty in guaranteeing quick efficient repairs. We highly recommend that any new grass roots marine program attempt to utilize propulsions already established to take advantage of ready parts availability.

The difficulty in controlling a parts supply for a limited number of engines is astronomical. You are almost obligated to stock parts for one or more total replacement engines to make sure you are covered. Even then, until history of breakage (that is repetitive problem areas) develops, a program invariably finds it is short of hot replacement items.

If you find yourself in a situation like this, call on the manufacturer or distributor like ourselves to let you know what is happening in your specific area. For example, areas where we do heavy business such as Micronesia, our computer can give us a listing by frequency of use on the parts that go there. This can possibly give you a further look at breakage and replacement problems. Also, we have available the national warranty claim averages and from this we can get an indication of chronic problem areas that might jump up.

Worthy of note under parts consideration is availability of special repair tools. Every manufacturer offers special tools to make repair work fast and correct. Use of improper tools can snafu a project as badly as lack of parts or technical skill. A few of the programs we have seen in the past have a comprehensive inventory system for their back up parts. Most do not. It is really important to establish a manual cardex system to valid the chronic problem of shortages and overages.

All the repair talent in the world can't get an engine back in the water unless every part is made available to complete the job. A single 5¢ part can keep a $5,000.00 rig inoperable for a month or more. I think everyone in this room has faced this problem. The more parts a propulsion unit requires, the more stocking problems you are faced with.

Comparing a 70hp Johnson outboard against a Volvo MD21 75hp diesel, the outboard has 746 parts and the diesel approximately 1,250 parts; over 67% more individual parts.

4. Individual Maintenance: Motors used commercially have a much shorter warranty period than engines used less frequently for pleasure. Although most marine engines are designed to handle all water conditions, heavy commercial useage and salt water conditions raise hell with marine propulsion units.

I sincerely believe that 50% of the engine failure we have observed in the propulsion systems of the Pacific Basin are due to owner negligence and lack of maintenance. It seems most of the owners learn the hard way. Training the for the proper care and feeding of the engines should be "up front". We have tried to get

this across to the import/export companies selling to individuals but I feel that actual courses in engine care should be offered in every island community. The course should dwell on three subjects:

1. Preventative Maintenance
2. Preventative Maintenance
3. PREVENTATIVE MAINTENANCE

5. Supplier Technical Assistance: When a project is created using an advanced inboard/outboard or inboard propulsion system and the only units in the area are those associated with the project, technical help can become difficult to get. When there are only 10-15 engines involved some factories don't offer as much as they might be capable of in terms of technical assistance. This is not true of all manufacturers but from our own experience where leverage is small with our suppliers, allow me to be a little cynical concerning factory support.

Where you are using propulsion systems that are numerous in the area, you will find factory assistance much more readily available.

B. BOAT DESIGN - RESTRICTIONS AND CONSTRUCTION ALTERNATIVES

Just as propulsion selection is restricted by income structure and ability to maintain and repair, so goes boat development in the basin.

Is it possible to design and produce the perfect small boat for fisheries development that will fit the requirements of all of the Pacific Basin island communities?

Assuming the economic restrictions can be met, it appears to us that a design compromise is the answer. Past and present fisheries programs have shown that most island fishermen do not wish to spend continuous days at sea like their Korean and Japanese counterparts. They prefer fishing on a daily basis and, as a rule of thumb perhaps 3-4 days per week. Time and economic evolution will possibly change these habits but meanwhile the type, size and cost of the boats use are somewhat dictated by existing social attitudes.

It is obvious that the average islander cannot afford a $10,000.00 rig under the present income structureswhether it be from land oriented jobs or from off shore "casual" fishing.

1. Cost Restrictions: The majority of the hulls being used in the Pacific Basin are locally built and with good reason. A fancy mainland built boat is 4-5 times more expensive than and equivalent locally produced wooden boat. Further, by work boat standards, most small production pleasure boats are equipped with un-usable "garbage" appointments.

To compound the problem, freight can add as much as the original cost of the rig when delivered from a foreign source.

Until local income structures improve dramatically, the mass use of continental production boats is out of the question.

A small boat of acceptable hull design must continue to be produced on the spot in island communties . The idea would be to produce a quality, locally built boat in a short period of time from a lasting, easy to repair material.

2. Material: After dealing with boats for a number of years I am a 100% supporter of fiberglass as the best base material. Once a mold is available, the hulls can be built quickly, maintenance is minimal and repairs easier than any other material.

The key is producing an efficient, high quality mold and developing the technical skill to quickly produce "low cost" fiberglass boats.

3. Design: This subject has been an area of heated debate since the beginning of time. Every boatman that I have ever met is totally opinionated. Remembering that we are dealing with cost restrictions here are some conversations:

A deep V planing hull rides much better in rough water but is expensive to operate, since high horsepower propulsion is needed to plane. With lesser horsepower a deep V is relegated to the displacement hull (nonplaning category.

A flat bottom skiff on the other hand, can reach planing speeds heavily loaded with a minimum horsepower.

Also, the shallow draft characteristics of a flat bottom offers better operating versatility in shallow, protected lagoon waters. A flat bottom skiff is quite stable.

The flat bottom characteristics, however, lead to a miserable ride in rough open seas.

The answer might be a compromise toward a shallow, semi-V leaning more to a flat bottom design that to a deep-V configuration. The ride would be less that deep-V comfortable in rough open seas, but operational

cost would outway the crews sore bottoms.

Other considerations are minimum boat with maximum room, minimum weight with maximum strenth and simplicity of construction.

Again, following economic restrictions, we are talking about a boat in tne 20' to 24' size range, open skiff, outboard powered configuration.

The basic design would be able to accommodate the addition of a cabin or fly bridge and larger inboard or inboard/outboard horsepower engine if the owner, due to good fishing, can afford to upgrade in the future.

4. Construction Technology: Assuming you agree on a basic hull design, you need to get a mold built as reasonably as possible and create trained personnel capable of quickly popping complete fiberglass hulls in a short period of time.

Here is a proposal that may be of interest to some of you.

IV. A PROGRAM FOR THE PRODUCTION OF A LOW PRICED FIBERGLASS WORK BOAT

In Hawaii the various boat compaines sell every conceivable brand of mainland built pleasure boat. They are expensive and made more expensive by freight from the mainland factory. The per capita income we enjoy allow are customers to purchase such rigs.

Still our most popular seller, especially to the local fishermen is a stripped down 19' open skiff style work boat..

Also, very popular are two inexpensive, open skiff type boats produced by local manufacturers that have absolutely no frills but fulfill all tne needs of the local commercial fisnermen.

One manufacturing company, The Fiberglass Shop, produces these boats as well as outrigger canoes. Working with the owner, Sandy Stein, we have come up with a production package that might be of interest to you.

This program, by the way, would have no connection with McWayne Marine Supply. As a distributor of motors, hardware, parts and accessories, we would hope to have the opportunity of furnishing this equipment.

Here is the proposal:

1. Plug and Mold Construction: After decided on a hull design of your choice, The Fiberglass Shop would create a high quality plus and than mold. The mold would be capable of producing up to two hundred units if properly maintained. Construction of the plug and mold would take approximately one month.

2. Fiberglass Construction Training Program: Those of you participating could send a key individual from your organization to learn how the mold in constructed, and how to lay up the fiberglass hulls and assemble the complete boat.

Along with building the plug creating the mold and training your personnel, Sandy would build the first four hulls to be stacked in the mold for simultaneous shipment to your area. Inside the mold and stacked hulls would be all of the accessories for assembly of four complete boats.

Your personnel, under the supervision of the trainee who helped create the mold, could assemble all four boats in your area in a short period of time.

3. Delivered Cost - Mold and Four Hulls: The size of the mold is 24' with a plug insert capable of stepping the mold down for a 20' boat. The first four 20' hulls and completed mold would land in your area at approximately $20,000.00. The same package with four 24' hulls would land for around $22,000.00. (See reference material)

4. Cost and Construction Time For 20-24' Locally Built Fiberglass Work Skiff: Sandy Stein can splash a complete hull in his existing mold, working with two other individuals, in two days. Using his estimates for cost, labor and time as a basis, but adding additional

freight cost for resin, lumber, etc. and extending the construction time, we have estimated that you should be able to build one fiberglass open skiff, completely rigged, with twin outboards, fishing boxes, steering and deck hardware in one week!!

In arriving at this time frame, we are assuming a crew of four led by the man who received the training in molding.

5. Cost of Locally Produced Complete Work Skiff Rig: Attached is a sheet showing three rigs that could then be quickly made ready to go in the water for what appears to be an acceptable island price.

Estimating salaried island labor, (not using the potential buyer and his crew), and adding $150.00 for ammortization of the boat mold, based on 100 boats, we have arrived at prices ranging from $3,900.00 for a 20' boat with twin 40 outboard to $5,200.00 for a 24' boat with twin 75's.

Along with a picture of the proposed design, attached is a performance data and cost analysis. We intend to produce the same boats for commercial resale in Hawaii.

Unless Islanders stick with locally made wooden boats, we do not feel there is a more economical method of building mass produced, long lasting, small work boats for the water locked communities of the Pacific Basin.

V. THE PROPER SELECTION OF HARDWARE AND ACCESSORIES

The boats and motors selected for fisheries programs are only a part of the problem. Proper selection of hardware and accessories is critical.

Here are some comments about suppliers in general:

The marine industry is not as advanced in its buisness activities as, say, the automotive industry. Many suppliers are prone to peak and trough merchandise availability. It is often hard to get merchandise in the summertime but it's readily available in the wintertime. The answer is to stock adequate quantities of fast moving items you know you will need.

Many manufacturers aim their total production to the competitive price market, that is, fresh water pleasure boats designed for once or twice a week use. They produce hardware such as Zaemac dye cast, plastic, etc. Our experience in the past has shown us that cutting costs in selection of quality hardware is a bad mistake. For example, brass or chrome/brass hardware is the only way to go in salt water conditions.

In small boat construction hardware and accessories can be grouped into five major categories. They are:

1. Deck hardware
2. Steering
3. Lights
4. Gas Tanks
5. Electric

McWayne Marine Supply handles over 300 different manufacturers of marine merchandise. Over the years we have come to favor those suppliers that offer good delivery and quality products backed up by warranty and technical information.

For your information, we have consolidated a sheet listing the five major categories showing the products basically associated with each category and then listing those manufacturers and their supplier that we feel give the best value. (See reference material)

Your goal is to buy equipment that will be as trouble free as possible. As with motors, poor maintenance can kill the best quality equipment. A mechanical steering assembly that is not greased on a regular schedule can give you a frozen cable right now in heavy use, salt water conditions.

A few years ago we contracted with the Trust Territory Government to produce a series of efficient dive boats for the "Crown of Thorns" Elimination Program. We furnished 18' cathedral hulls for stability, powered by twin 40hp engines for ease of repair. The gas tanks were furnished by a very prominant tank company who produce a "better than average" quality tank. The tanks in these boats were specially coated "aluminized steel" that would stand corrosion two to three times longer than standard template painted tanks.

Six months after the boats were delivered I had the displeasure of getting a long distance call from Truk. The tanks had virtually corroded out and had to be replaced. The company who produced these tanks were red in the face, as they well should have been.

The program wasn't badly hurt but it did cause considerable embarrassment.

As a result of this problem the gas tank company in mind, and I am referring to the Tempo Gas Tank Company, have spearheaded the development of an inert molded plastic tank which is available only to boat manufacturers. The tank has undergone every type of

test that is available in the United States. Here is an example of where your problems using standard manufacturers marine products have helped upgrade the industry.

This tank is available to you on direct request for your commercial programs.

Again let me emphasize the importance of your choosing high quality manufacturers that along with their distributors back up their products with warranty and technical information.

VI. LOGISTICAL PROBLEMS

We are grateful for the business that has been given us in the growing Pacific Basin programs. We hope we have earned that business with the service help and supplies we have offered.

As a matter of interest here are some problems we face servicing your marine needs from our point of view.

The areas that bear some discussion are freight, communication/order information, discounts, shipping sources, and payment terms.

1. Freight: Water freight into the Pacific Basin is sometimes a disaster. Using Micronesia as an example, two shipping lines have gone out of business during the last seven years; Mille and Transpacific Lines.

Transpacific Lines went under with $8,000.00 worth of claims never paid and merchandise that was stranded subsequently shipped on a government barge, was sunk in transit. You have got to be a sucker for punishment to wake up smiling after news like this comes in.

Further, the water shipping companies can't afford to give good repetitive service in an area where they don't have volume. The communities of the Pacific Basin are a long shot from offering the kind of volume shipped to or from Singapore, Japan or the United States.

Water freight obviously must be used for large volumes of equipment. Shipping by container load so that you have a sealed container to protect your goods against water and theft is ideal but not always possible.

For smaller shipments, we are firm believers in air. A schedule is attached to this document showing some of the comparative costs to various parts of the Pacific Basin from Hawaii and the mainland. In this example, you have a 40hp outboard motor valued at approximately $900.00. To ship this motor to Pago Pago the air freight from Honolulu is only 13% of the cost. From Los Angeles it is 28% of cost, but the delivery time is three days.

The same shipment via water from both Honolulu and Los Angeles is only 5% of the cost. But you are looking at a wait for that engine from 6-8 weeks. My recommendation is that if you really need a piece of equipment, pay the additional cost and get it there by air. The additional cost of waiting for inadequate water shipment far outweights the additional cost of air shipment.

For parts replacement this is even more obvious. I recommend that you order all of your parts by air to keep your programs running.

2. Communication/Ordering Information: The most serious problem we have run into as a supply source in the basin has been lack of communication, that is, items ordered without proper

nomenclature. The time it takes for descriptions to go back and forth by letter is detrimental to your projects and become uneconomical to a distributor.

As before mentioned, McWayne Marine Supply is totally computerized with an on-line system. Next month you will receive a complete catalog covering 14,000 items. There are many supplier catalogs on the market, but we have tried to design this one to specifically combat the difficult communication problems of the Pacific Basin.

Here is a mock up showing some of the pages duplicated by Xerox. You will notice that the ordering instructions are repetitious and thorough. Along with this we have a current price list and discount structure. We have even included a metric conversion table for those communities operating on the metric scale.

The production of this book is costing $80,000.00 and it is free to you on request. We hope it will be of much value.

3. Discounts: A distributor normally works on an overall profit of between 20-25%. This profit structure is based on selling volume to commercial outlets and resale dealers who buy in quantity. One or two item sales at full discount are uneconomical. Large volume sales are profitable to the distributor and if the volume is large enough, you deserve to get additional price break. In many cases, if your volume reaches very large scale in any given marine commodity, you are entitled to buy direct from the manufacturer. In such cases if we can be of service to you in arranging the purchase, we will act only as a manufacturer's agent, which means the factory will pay us a small fee for the business while giving you the longest discount possible.

In boat building projects where the volume is great, you may

qualify as an OEM account. OEM stands for Original Equipment Manufacturer. Most manufacturers of marine products will not offer you discounts unless volume warrants it. For example, Perko will not offer OEM unless the quantity is in the hundreds. Where you have limited quantity on multiple pieces of equipment your best bet is purchasing through the distributor of your choice.

Establishing volume through a single dependable source should give you better service. The logic is obvious.

Some distributors may treat you as a commercial account with a smaller than maximum discount. Your island areas in the Pacific Basin have the potential for considerable future volume and you deserve to get longest discounts available to assist your programs.

4. Payment Terms: Companies like ourselves get killed on open accounts when they drag on and on. For example, assume we make 10% on a volume sale and payment is not made for three months after the time we have paid the manufacturer. Money is costing at least 1% per month. Therefore, after three months, we have realized a 3% loss. Our total profit on the sale is only 7%. This is before the cost of warehousing, paperwork and other overhead.

The problem seems to lie with the left hand/right hand syndrome. That is, the program doing the purchasing is not necessarily the department handling the payment. On today's money market, fast payment is worth money. When establishing terms, if you are able to pay faster, additional "quick payment discounts, i.e. 2%-10, net 30" are the way to go. I think you will find most suppliers give better service where this is possible.

5. Shipping Source: In the case of our company, because of our volume, a good portion of our merchandise is totally pre-paid to Hawaii. In some cases, however, we have found it is more economical to ship to you from our warehouse source on the west coast. The prime benefits are faster delivery to you from the manufacturer and the ability to consolidate your orders from multiple sources. This cuts down the cost of freight, prevents pilferage and shipping damages.

I will be happy give you more information on west coast consolidation upon request.

IN CONCLUSION: We appreciate the opportunity to present a "distributor's point of view" to you. Doing business in the Pacific Basin is extremely exciting to the personnel in our company. The success of your programs is important to us and our mutual growth. We hope we can continue to be of assistance to your individual endeavors.

ANDY JONES
President
McWayne Marine Supply

40 E 76 Motor ---------- $899.00

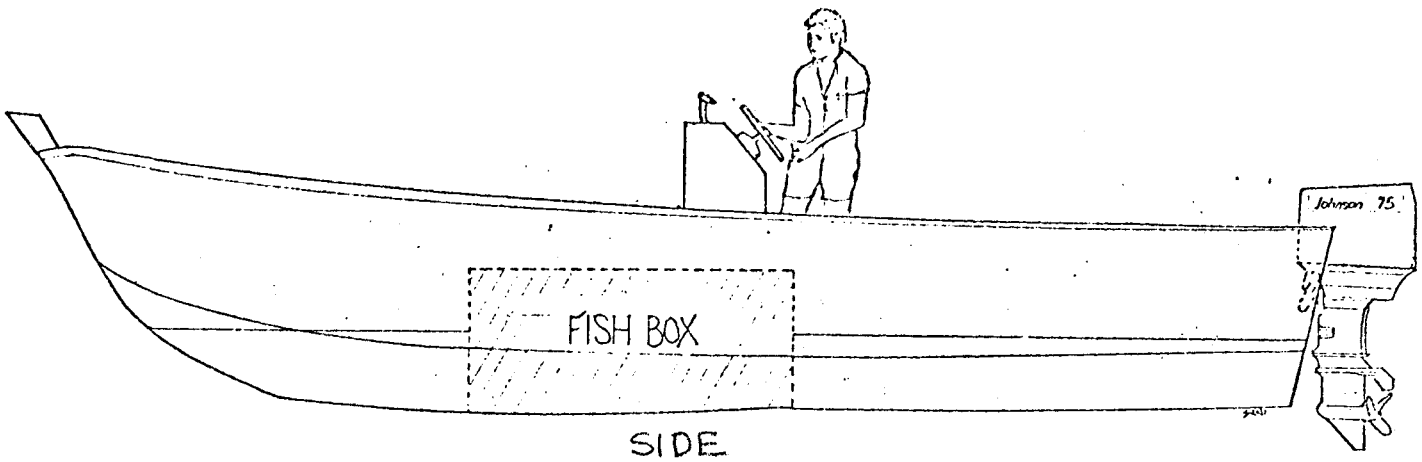
202 lbs. ---------- 25 cu

FROM/TO	VIA AIR FREIGHT	% of cost	Frequency	VIA SURFACE (sea)	% of cost	Frequency/ Arrival time	AIR/SURFACE	DIFFERENCE
HNL/Truk	210.08 $1.04 per lb	24%	3-5 days	$90.04 44¢ per lb	10%	once a month 8 wks a/t	210.08/90.04 24/10	$120.04 14%
LA/Truk	272.70 $1.35 per lb	30%	same	$90.04 44¢ per lb	10%	once a month 8 wks a/t	272.70/90.04 30/10	$182.66 20%
HNL/Pago	121.20 60¢ per lb	13%	same	$49.03 25¢ per lb	5%	once a month 26 days arr time	121.20/49.03 13/5	$ 72.17 8%
LA/Pago	256.54 $1.27 per lb	28%	same	$49.03 25¢ per lb	5%	twice monthly 7 da arr time	256.54/49.03 28/5	$207.51 23%
HNL/Fiji	228.26 $1.13 per lb	25%	same	$62.20 30¢ per lb	7%	once a month 26 da a/t	228.26/62.20 25/7	$166.06 18%
LA/Fiji	337.34 $1.67 per lb	38%	same	$64.48 32¢ per lb	7%	once a month 30 da a/t	337.34/64.48 38/7	$272.86 31%
HNL/Gilbert	331.28 $1.64 per lb	37%	same	No surface information is available to this area. This island is government controlled.				
LA/Gilbert	624.18 $2.09 per lb	70%	same	Ditto to above.				
HNL/Tahiti	204.02 $1.01 per lb	23%	same	$57.80 29¢ per lb	6%	once a month 6 da a/t	204.02/57.80 23/6	$146.22 17%
LA/Tahiti	321.18 $1.59 per lb	36%	same	$60.09 30¢ per lb	7%	once a month 9 da a/t	321.18/60.09 36/7	$261.09 29%
HNL/Apia	270.68 $1.34 per lb	30%	same	$65.40 33¢ per lb	7%	once a month 33 or 63 da. a/t	270.68/65.40 30/7	$205.28 23%
LA/Apia	361.58 $1.79 per lb	40%	same	$65.40 33¢ per lb	7%	twice monthly varies dep on feeder vessel	361.58/65.40 40/7	$296.18 33%
HNL/Noumea	272.70 $1.35 per lb	30%	same	$152.01 75¢ per lb	17%	once a month 21 da a/t	272.70/152.01 30/17	$120.69 13%
LA/Noumea	383.80 $1.90 per lb	43%	same	$152.01 75¢ per lb	17%	once a month 21 da a/t	383.80/152.01 43/17	$231.79 26%

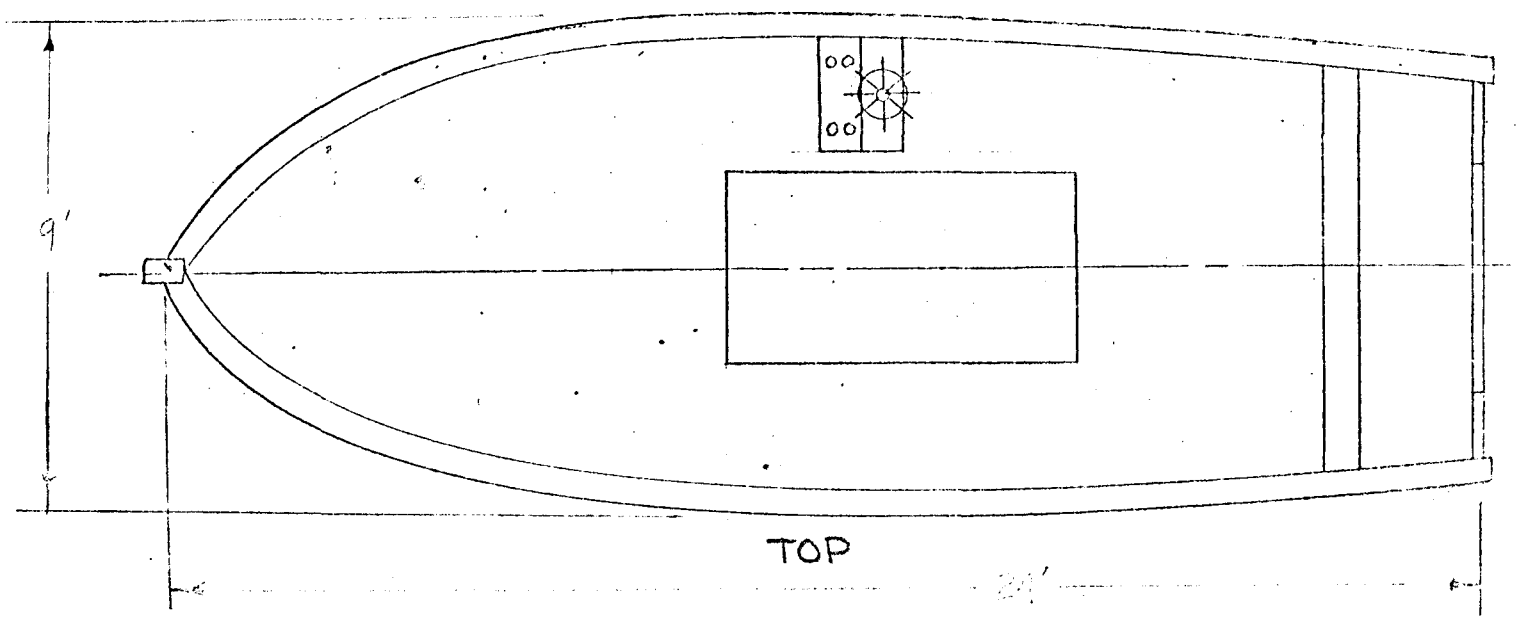
MARINE HARDWARE & ACCESSORIES
FACTORY REFERENCE

		MFG		
DECK HDWE -	Lights	Perko	-	Lights - Cleats - Chocks
	Cleats	Wilcox	-	Eyes - Snaps - Cleats
	Chocks	Kainer	-	Rails - Cleats - Lights
	Anchors	Danforth	-	Anchors - Lights - Cleats
	Winch	Plath	-	Winches - Chocks
	Eyes			
	Snaps			
	Rails			
STEERING -	Mech	Attwood	-	Cable Type
	Cable	Teleflex	-	Mech -Hydraulic
	Hydraulic	Morse	-	Mech - Gear - Hydraulic
	Gear	Wilcox	-	Gear
LIGHTS -	Bow	Perko	-	All Type
	Stern	Wilcox	-	All Type
	Side	Kainer	-	All Type
	Cabin			
	Deck			
GAS TANKS-		Tempo	-	Aluminum
				Plastic
				Steel
ELECTRIC -	Switches	Perko		All Type
	Wiring	Wilcox		All Type
	Bulbs	Kainer		All Type

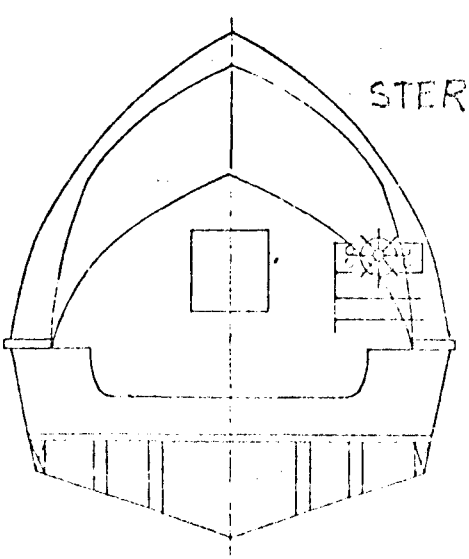
LOCALLY BUILT 20'-24' SEMI-V WORK SKIFF
9' BEAM



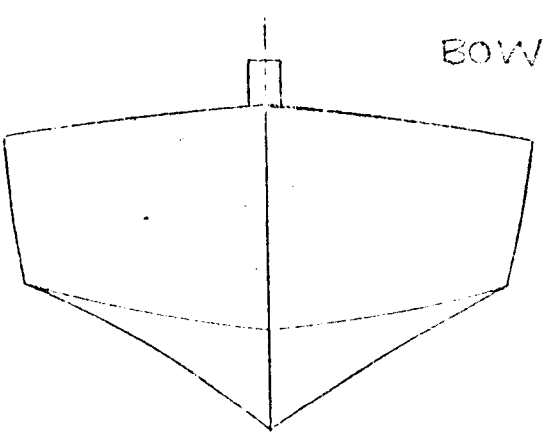
SIDE



TOP

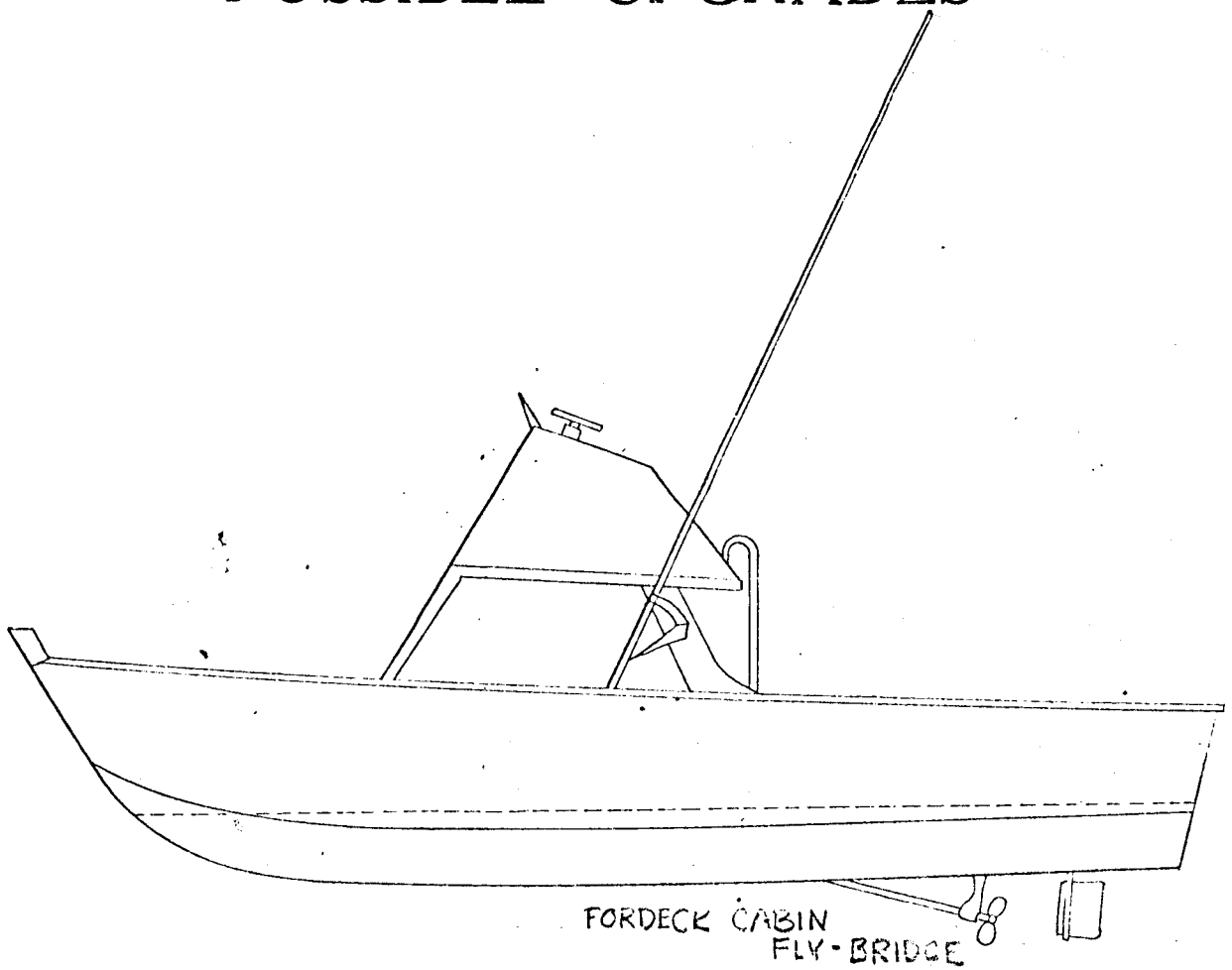


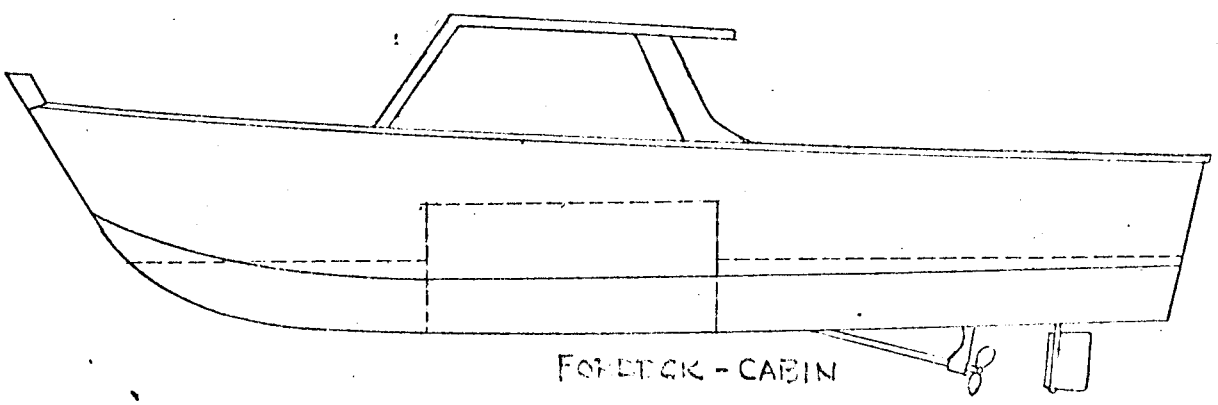
STERN

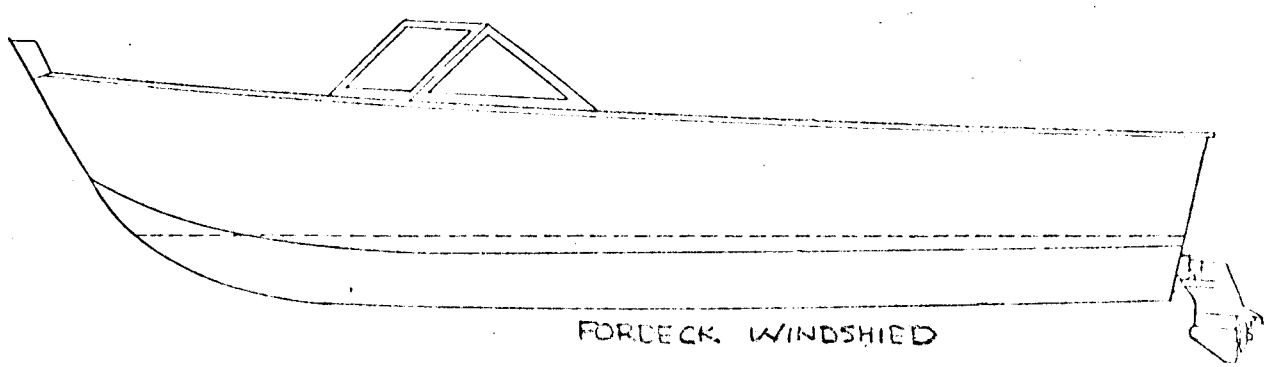


BOW

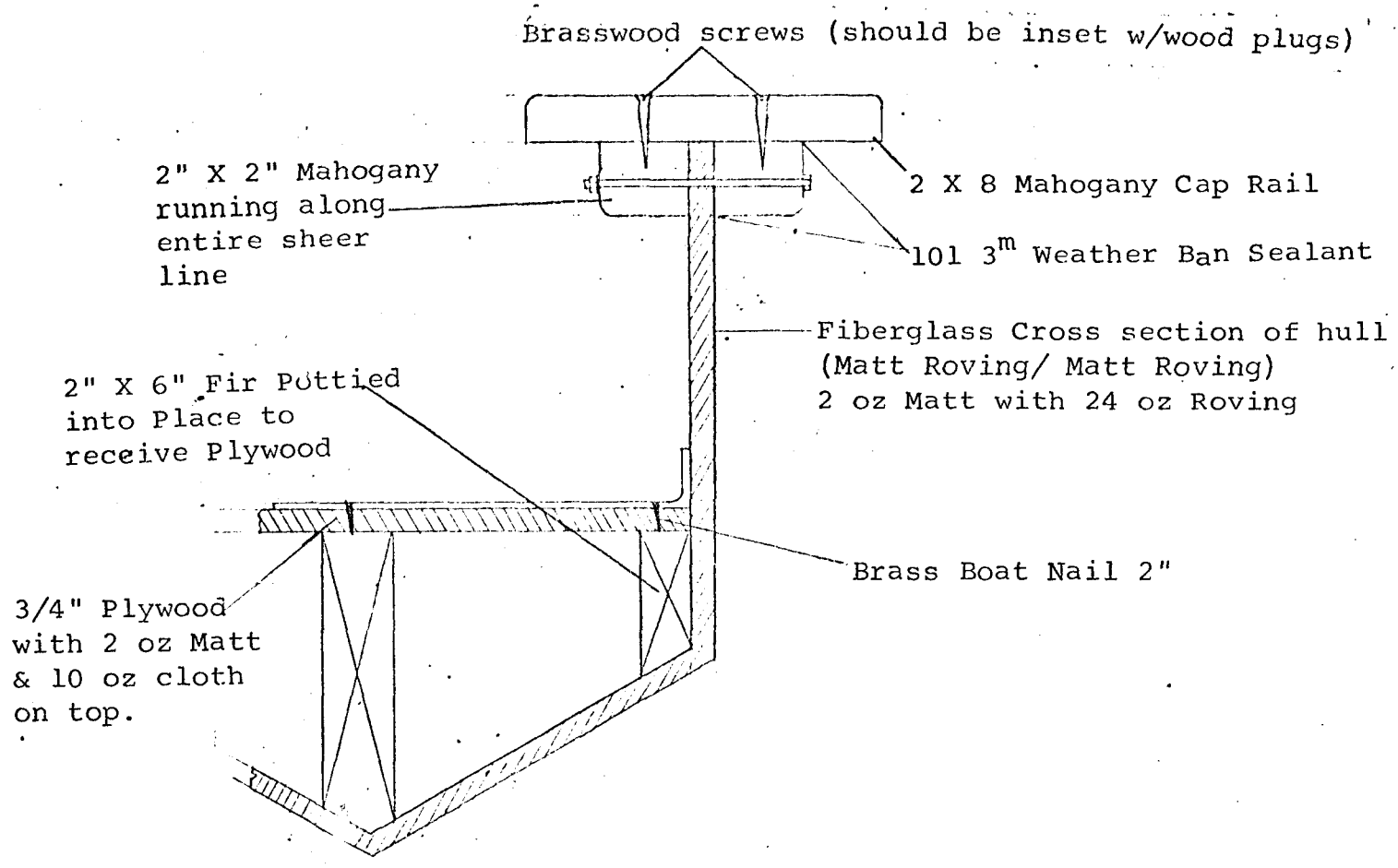
LOCALLY BUILT 20'-24' SEMI-V WORK SKIFF
POSSIBLE UPGRADES



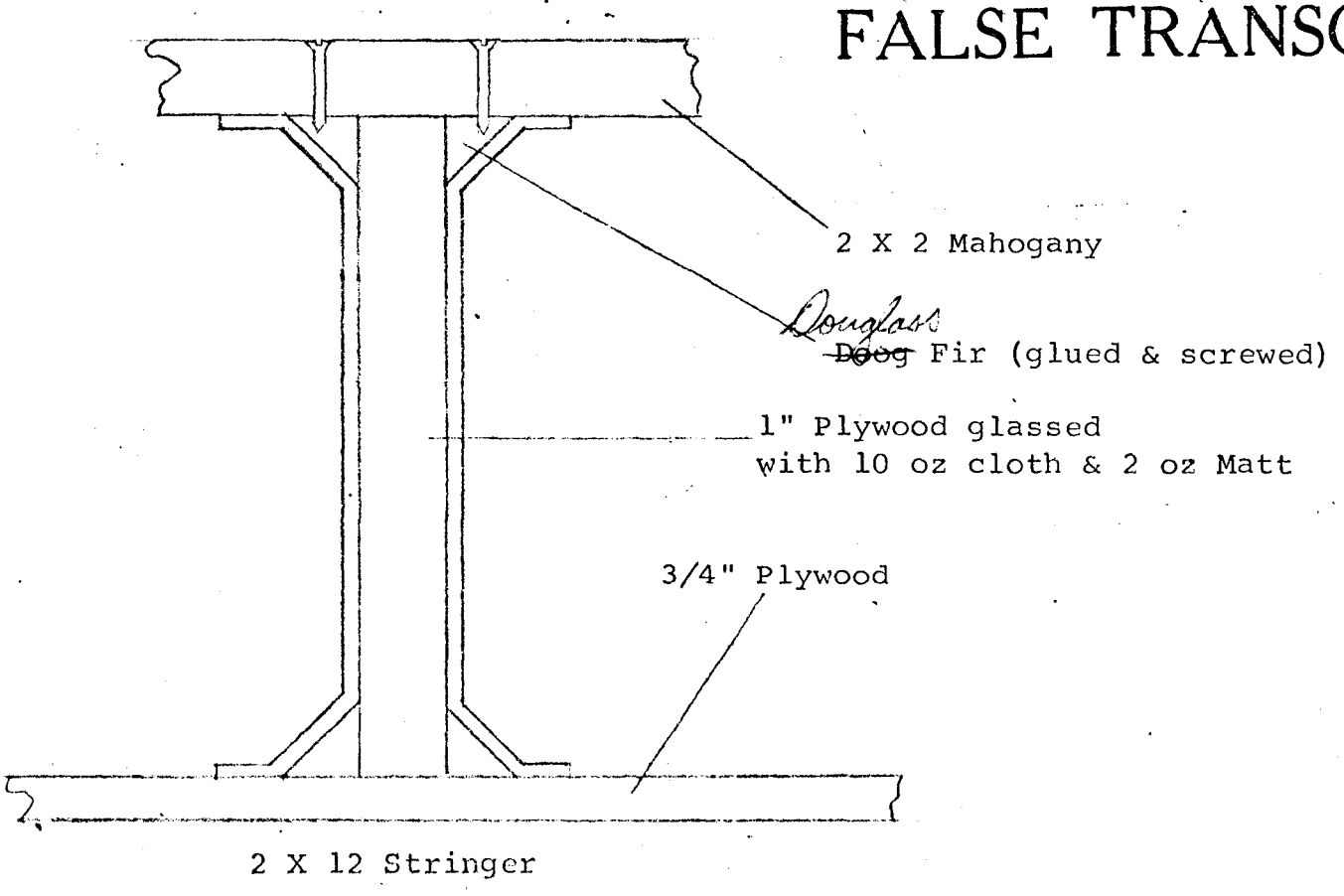


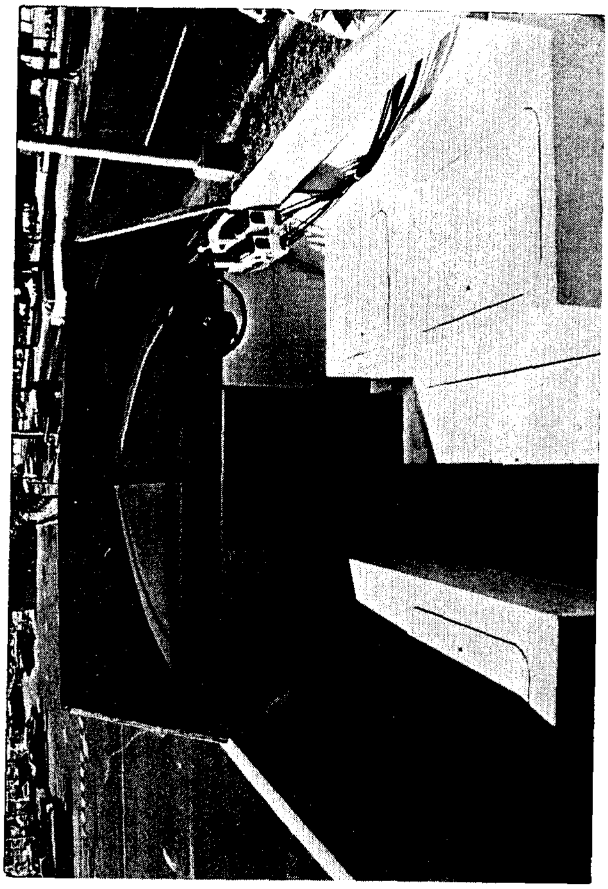


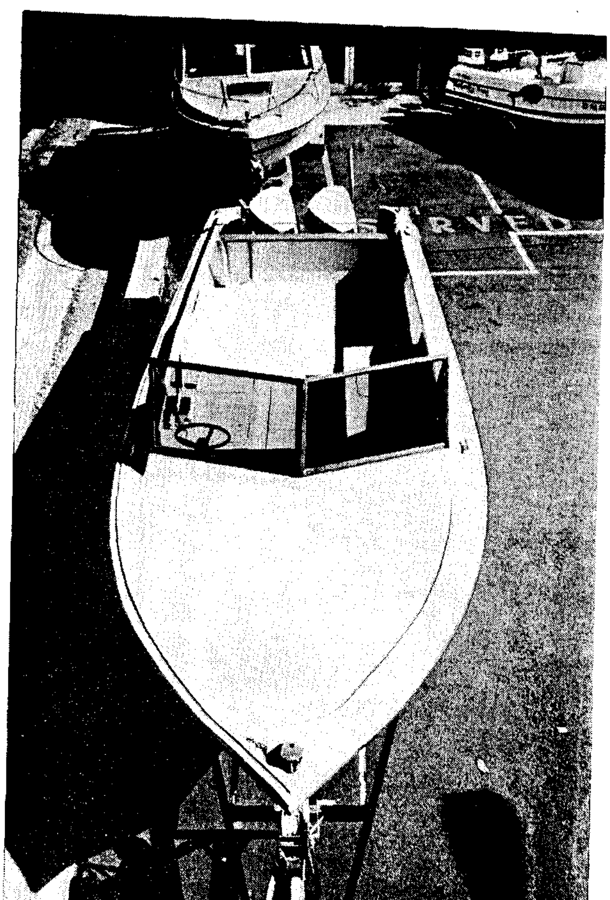
CAP RAIL DETAIL

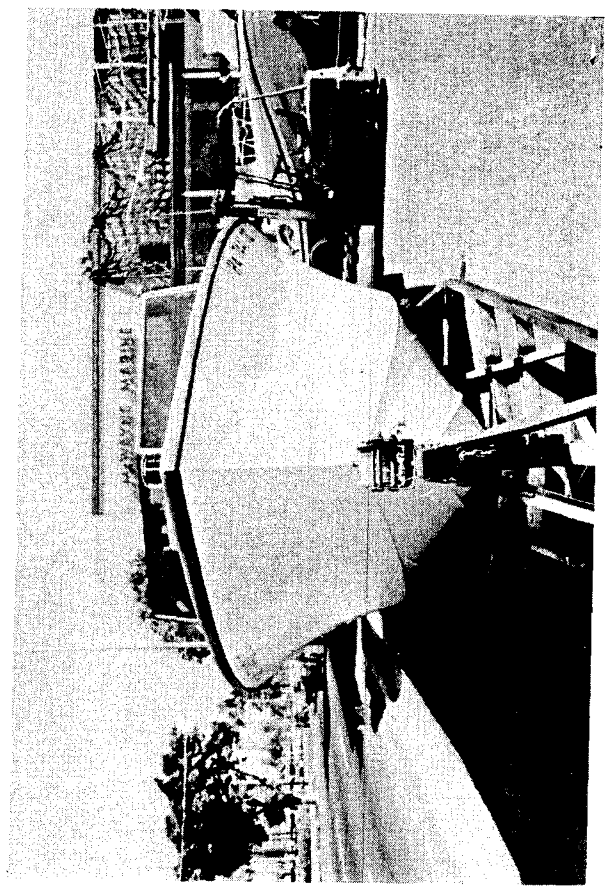


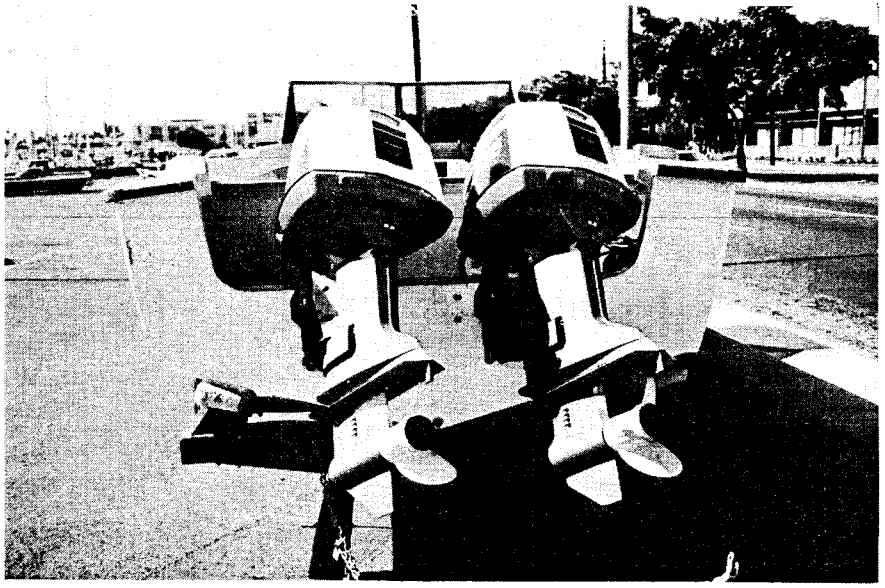
FALSE TRANSOM

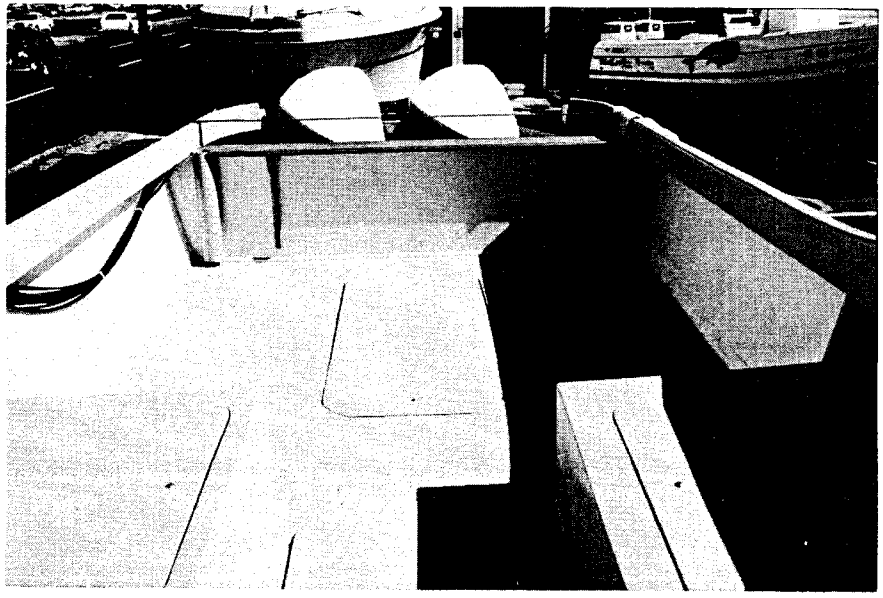












McWayne Marine Supply, Ltd.

WEIGHT SPECIFICATIONS ON 24 FT WORK BOAT

24' Power Ocean Skiff

1000 lbs.	Fish & Ice
450 lbs.	Crew
300 lbs.	Gear
320 lbs.	Fuel
440 lbs.	Motors
1400 lbs.	Basic Boat w/o Full Deck, Bunks, Tuna Tower etc.
3010 lbs.	*Weight of total rig to be pushed by twin 75 HP Johnson motors

*Estimated performance
Max speed unloaded 24 Knots
Max speed loaded 18 Knots

Boat to be hard chined with a "V" shaped flat bottom. Bottom to have step strakes for planing and bottom stiffness w/o weight.

McWayne Marine Supply, Ltd.

COST OF MOLD & 4 EACH 20' HULLS & ACCESSORIES DELIVERED (FRT. APPROX.)

------ 20 FT. ------

Mold	$ 12,000.00
Hulls	4,000.00
Freight estimate	3,000.00
Accessories (250 each)	1,000.00
TOTAL	$ 20,000.00

------ 24 FT. ------

Mold	$ 12,000.00
Hulls	5,000.00
Freight estimate	3,600.00
Accessories (350 each)	1,400.00
TOTAL	$ 22,000.00

COST OF LOCALLY PRODUCED 20/24 FT. WORK BOATS

	20 FT.	24 FT.
Labor 4-men (one week)	$ 600.00	$ 800.00
Amortize mold (100 boats at 150 each)	150.00	150.00
Material 250/350 each	1,000.00	1,200.00
Steering	150.00	150.00
Deck hardware	100.00	100.00
Gas tank 40-gallon	200.00	200.00
TOTAL	$2,200.00	$2,600.00

McWayne Marine Supply, Ltd.

ESTIMATED "WATER READY" WORK BOAT RIGS, TWO SIZES

"THREE POWER PACKAGE COMBINATIONS"

--- 20 FT.---

Boat	$2,200.00
2-40RL	1,700.00
Controls	70.00
TOTAL	$3,970.00

--- 24 FT. ----

Boat	$2,600.00
2-55EL	2,526.00
Batteries & boxes	80.00
TOTAL	$5,206.00

--- 20 FT. ---

Boat	$2,200.00
2-55EL	2,526.00
Batteries & boxes	80.00
TOTAL	$4,806.00

--- 24 FT. ---

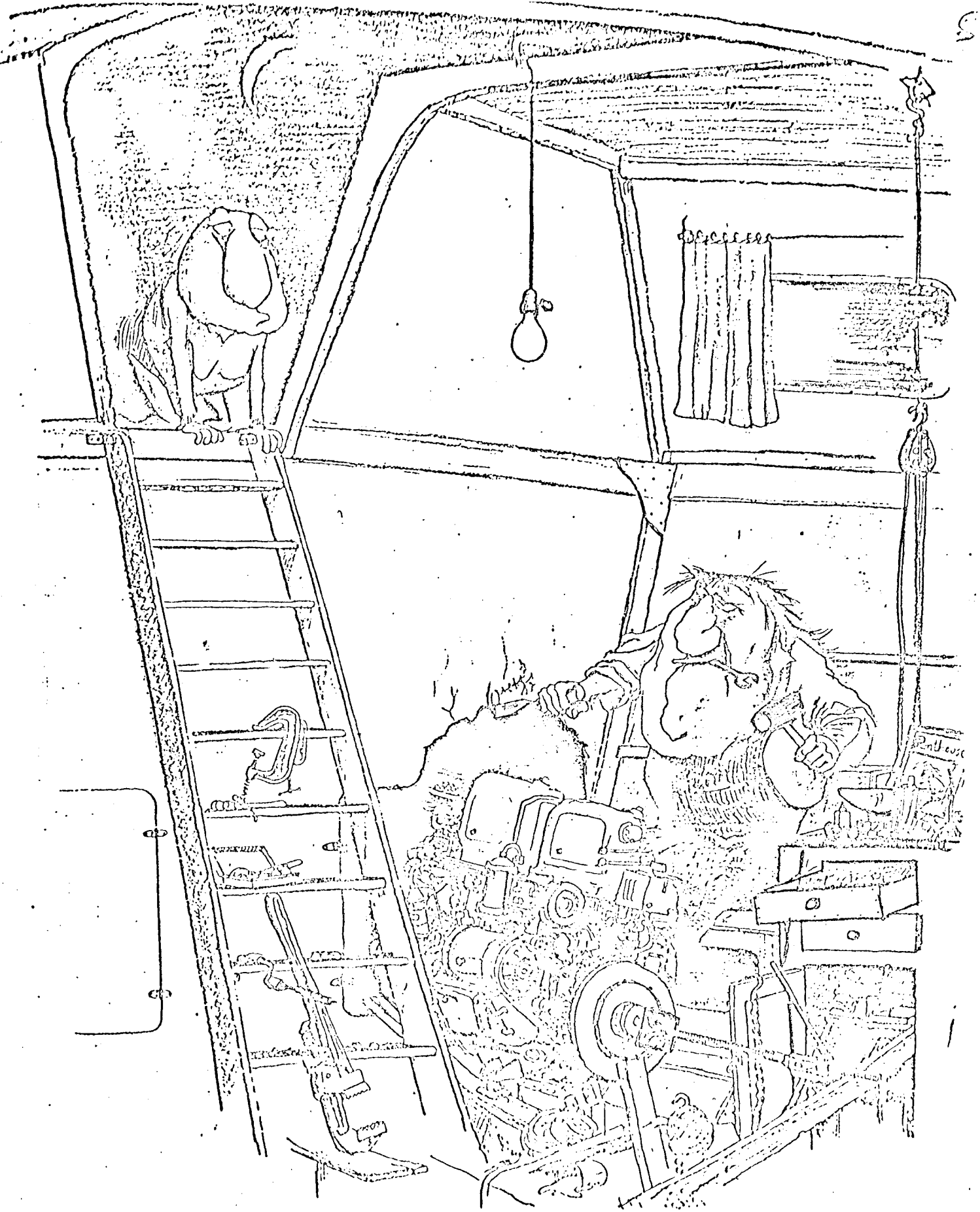
Boat	$2,600.00
2-70EL	2,822.00
Batteries & boxes	80.00
TOTAL	$5,520.00

--- 20 FT. ---

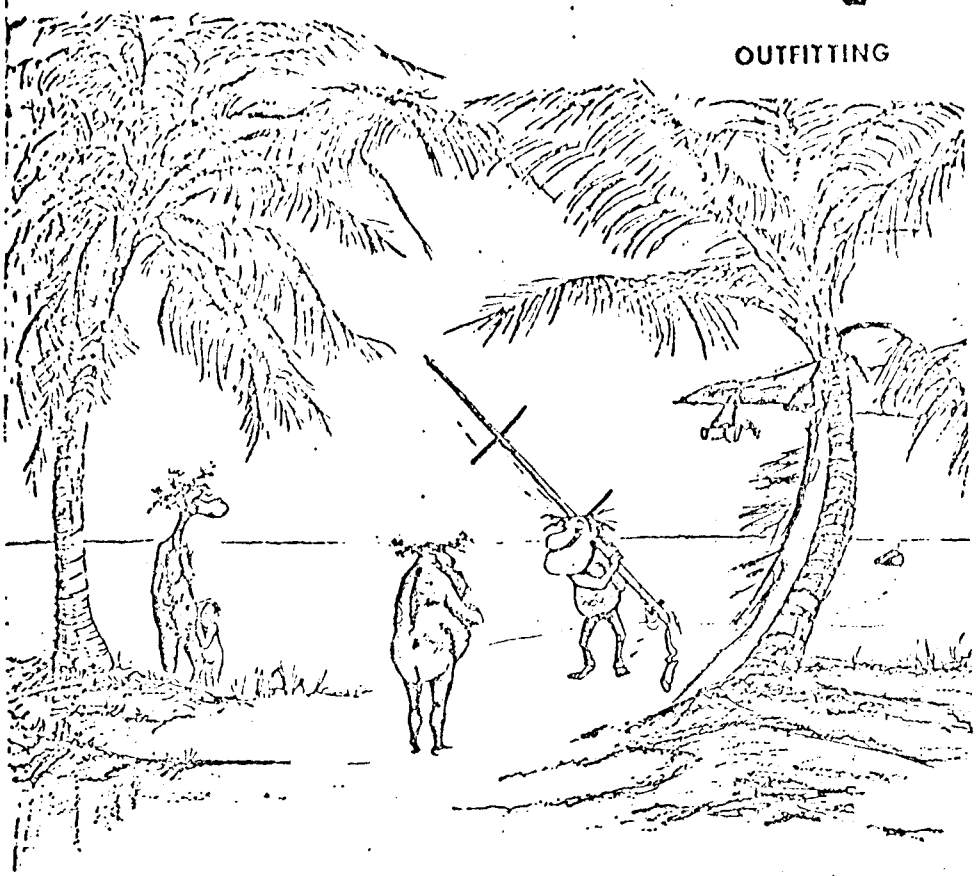
Boat	$2,200.00
1-85 h.p.	1,600.00
Batteries & boxes	80.00
TOTAL	$3,880.00

--- 24 FT. ---

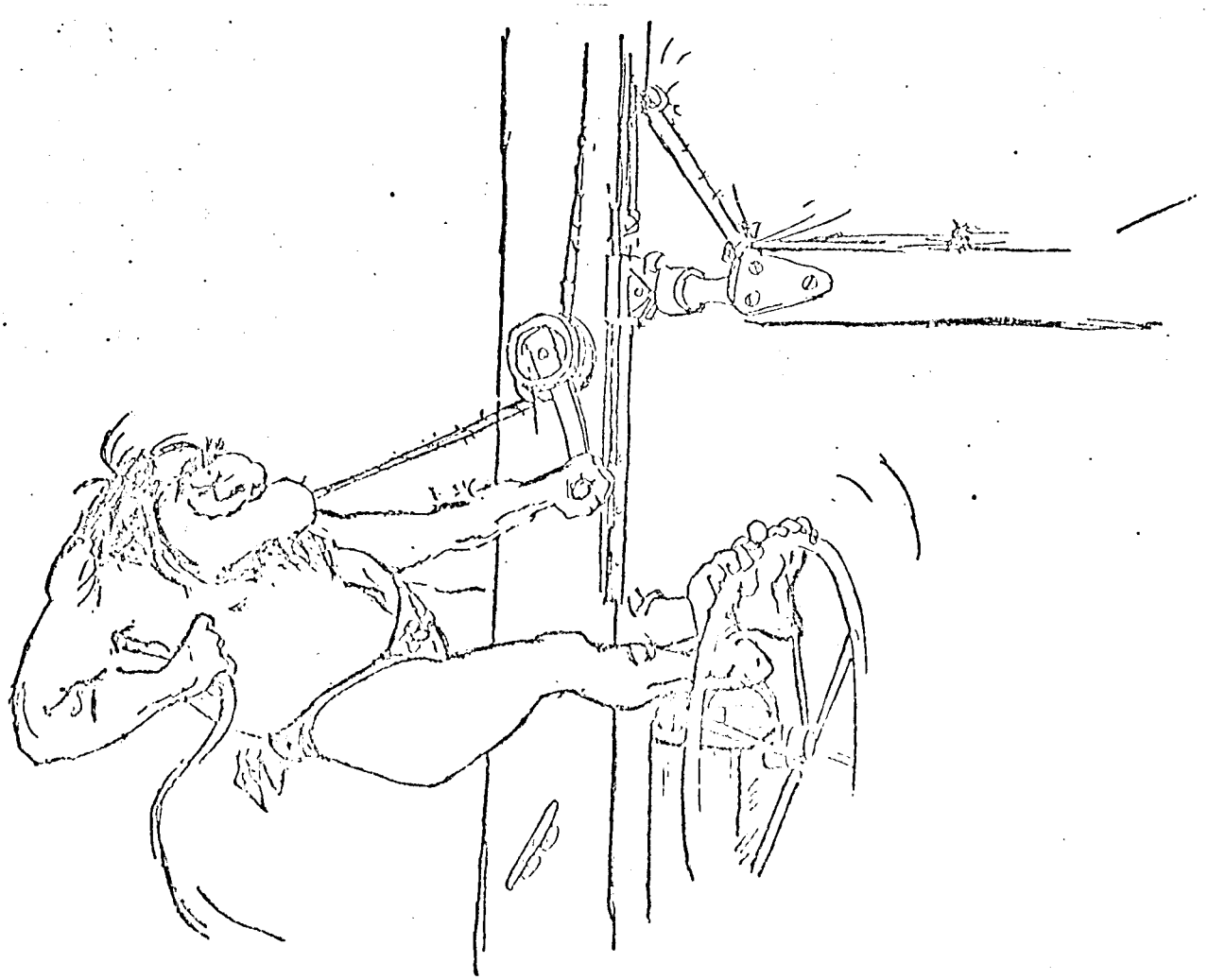
Boat	$2,600.00
1-135 h.p.	1,800.00
Batteries & boxes	80.00
TOTAL	$4,480.00



What the hell do you think I'm doing?
... I'm putting in the engine!



Hi there. You weld-um aluminum?




oh God!


... muta-muta-muta · crackle · tropical · zap · storm force · muta · muta · muta · muta...