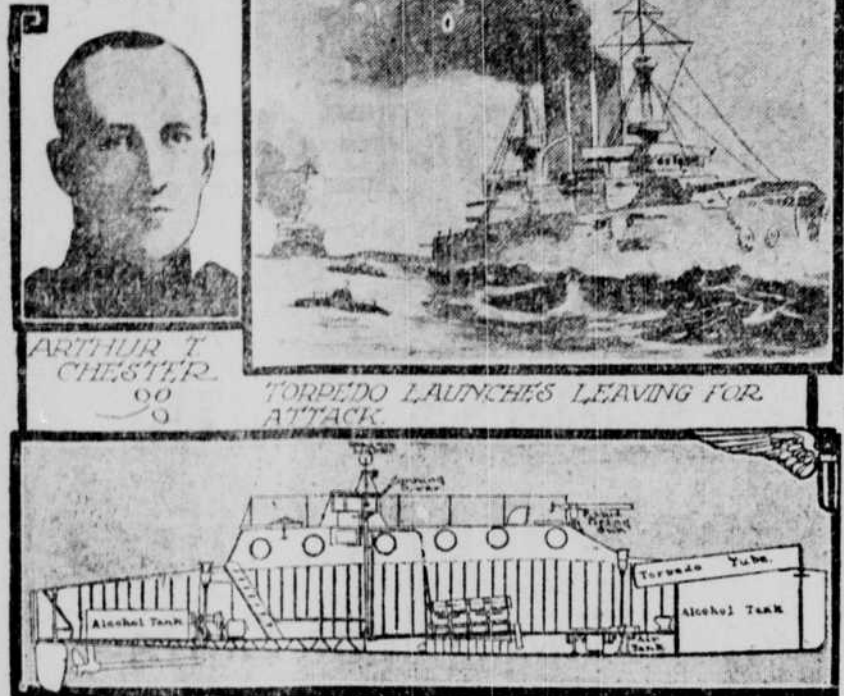


# TORPEDO BOATS AS LAUNCHES TO REPLACE STEAM CRAFT IN THE NAVY



Every battleship of the United States navy is equipped with a steam launch, but the naval officers have long realized that the boat at present in use is far from being as efficient as it might be. The present type of boat has been frequently condemned, and never so freely as at the time of the deplorable tragedy in Hampton Roads during the Jamestown exposition, when a steam launch of the battleship Minnesota drowned her crew and a party of five midshipmen.

The reason why the navy department had so long clung to the type lay in the fact that the steam launch had been found to be the only vessel of a steam driven type that could be carried on deck and be capable of standing the rough work required of them. But they are unsatisfactory in many respects. There is much rough work which they are capable of doing, but infinitely more important, there is much military work which they are incapable of doing.

This is torpedo boat work. Many of the more progressive officers of the service long ago urged that the two qualities should be combined—that the navy should be equipped with boats capable of withstanding the rough everyday work of a steam launch in carrying landing parties to and fro, towing and picket duty in any kind of weather, and that these qualities should be combined with the offensive powers of a torpedo boat. This effort at combination was actually made about 12 years ago, when the navy department caused sea-going torpedo boats to be installed on the Maine and the Texas. It resulted in failure. Not because of there being anything wrong with the theory, but by reason of the fact that boats propelled by steam are too heavy to be hoisted in and out of a battleship; that is, boats which possess the speed and power requisite for torpedo boat work are too heavy to be so handled.

The fault was, therefore, in the type of engine, and not in the idea. The vastly increased powers of offense and defense which a float carrying a flotilla of small torpedo craft would possess have long been recognized by naval strategists and tacticians. In the advent of the gas engine Mr. Arthur T. Chester believes that the problem has been solved. Son of Rear Admiral Coby M. Chester, an officer distinguished for his scientific attainments and professional competence, the younger Chester recently resigned his commission as a lieutenant in the navy to pursue an independent line of investigation he had been unable to conduct while attached to the service.

Mr. Chester long ago saw the possibilities of the explosive engine, particularly its possibilities when applied to naval vessels. In a recent address read before the Society of Naval Architects and Marine Engineers he said that few of those who have seen the rapid advancement of the explosive engine and studied its many advantages can deny that it is only a question of time before steam will be supplanted by the gas engine just as the once universal sail power has been dropped in favor of steam, never again to be considered one of the world's great power generators.

A board on torpedo boats recently recommended that the speed of all torpedo boats be reduced. The assumption in the board had found that structural strength is more important than excessive speed. Working on these lines, Mr. Chester has prepared plans for a vessel fitted with a light but powerful gas engine, big and buoyant enough to stand all of the heavy work that might be required of a launch, equipped with torpedoes, en-

dowed with a speed of 20 knots or so and yet not so heavy to prevent its being readily lowered from a battleship or armored cruiser, and as easily hoisted back on board.

Mr. Chester draws a vivid picture of what a naval battle might be with one fleet possessed of a flotilla of small torpedo craft, carried on shipboard, lowered on the lee side before the beginning of the action and held screened behind the ships until the smoke of battle afforded an opportunity for a dash.

"France, England and Italy," said Mr. Chester, "have already adopted boats of the character that I have described, and excepting the United States every country in the world is progressing along these lines. Are we to see another era similar to the one passed through in the early eighties, when our navy consisted wholly of wooden ships using steam only as an auxiliary, while all other countries were building vessels of steel? Are we to see England launching vessels propelled by gas producer explosive plants; vessels without smokestacks to interfere with the all-around fire of the guns, to be riddled by the enemy's shell and to belch forth a signal of smoke that tells the enemy of your presence long before you could be discovered without them; vessels that can cruise three times as fast as ours on the same amount of coal, while our congress is authorizing steam-driven men of war that will be out of date long before their keels are laid?"

## PURSUIT OF THE DEVIL FISH.

Sport on the Gulf Entails Muscular Racking, Hard Work.

The task of hitting a devil fish from a 14-foot boat was left to the bachelor of the party, the married member explaining that he felt his duty to the ones at home excluded him from anything that smacked of suicide. Accordingly, when near the next fish, the skipper put out from the stern of the Irene, the spearmen standing in the bow while the skipper stood the big boat away so as to give the fish a clear field at the first rush.

The plan developed perfectly—the throw was good, the fish half filled the boat with his first splash, and then rushed away in a great swinging circle, so that in 15 minutes it was possible for the sloop to cut across and catch up, when by some maneuvering it became possible to pass the inboard end of the line up to her bowsprit. After that it was a fight to a finish, with the devil fish on one end of the line and the ten-ton sloop on the other. For a long while it seemed as though the devil fish had the better of it. He towed that big boat steadily out into the gulf for three hours and twenty minutes. It was exactly like being in tow of a fair-sized tug. The progress of the boat was not fast, but as steady as if it were being driven by the Irene's own engines.

It may be fair to remark that killing a devil fish entails as much genuine, muscular-racking hard work as any task on earth. It is much the same as pulling for hours against a yoke of oxen who are moving off entirely indifferent to one's futile efforts. The devil fish will not let simple towing tire him. If left to himself he will ascend to bottom, and after resting proceed on an infinitum. It is to prevent such resting that one must work constantly by hauling the tow in close to him, thereby frightening him to constant effort. If he can be strained to the point of weakening, then he may be hauled close enough to harpoon again.—Scribner's Magazine.

club-like bodies the whole caterpillar is covered with a white mouldy growth which is spoken of as the Isaria form. This is the first form of the fungus and the club-shaped or Cordyceps form, which does not always appear, is the second fruiting stage. Both forms give off spores from which infection may take place. There are three or four of these fungi at any rate which attack many kinds of insects. Plant lice are particularly susceptible to the attacks of some of these fungi. The common house fly is another frequent victim and specimens in large numbers may every autumn be seen clinging to ceilings or walls surrounded by a circular cloud of spores. Wireworms are also much attacked by one species of Cordyceps. Indeed the greatest help farmers have in fighting against white grubs and wireworms comes from fungi of the genus Cordyceps. For almost all of the worst injurious insects there are some remedies which will, at any rate, mitigate the attack, but with these troublesome grubs very little can be done.

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## MAN'S PLACE IN THE WORLD

"Your place, sir, will never be filled," a reporter said to Heinrich Conrod, the retiring director of the Metropolitan opera house of New York.

Mr. Conrod shook his head and smiled.

"There was a ghost," he said, "a ghost in Hell, my native Hell, I will tell you of him."

The ghost haunted the Inn. Nobody minded him, for in Hell, he was well known; but an Englishman stopped at the Inn one night in the season, and to him the ghost had not been explained.

"The next morning the Englishman came down to his breakfast pale, bloodshot and irritable.

"Landlord," he said, "tell me, is not my room haunted?"

"Why, yes," said the landlord. "Didn't you know?"

"Of course, I did not know! What do you mean, sir, by putting me in a haunted room?" the Englishman stormed.

"But the old fellow is quite harmless," said the landlord reassuringly. "The old fellow?"

"Yes," said the landlord. "The ghost. The old fellow who built up the business. He built it up, you know, and died, and now he can't rest easy because it goes on as well as ever it did without him."

The Good Old Days.

The richest man in King Charles II's England could not get so good a dinner as tens of thousands will sit down to today. Cattle were of a far poorer breed, vegetables were few and bad, and the commonest conveniences of the table were unknown. Fish knives, for instance, are hardly considered an extravagant luxury, but Mr. Gladstone could remember when they were not to be found on any table.

Useful Motor Vehicle.

A motor vehicle purchased by the town of Tynemouth, England, can be used as a prison van, fire apparatus or ambulance.

# HANDLING YOUNG TREES AT TIME OF SETTING

Ideas Differ as to Extent the Roots and Branches Shall Be Trimmed Back.

In the accompanying illustration, we show four methods of handling young trees at setting time. Horticulturists differ very greatly as to their notions on the trimming back of trees at transplanting time. Some object to any trimming and some trim off everything.

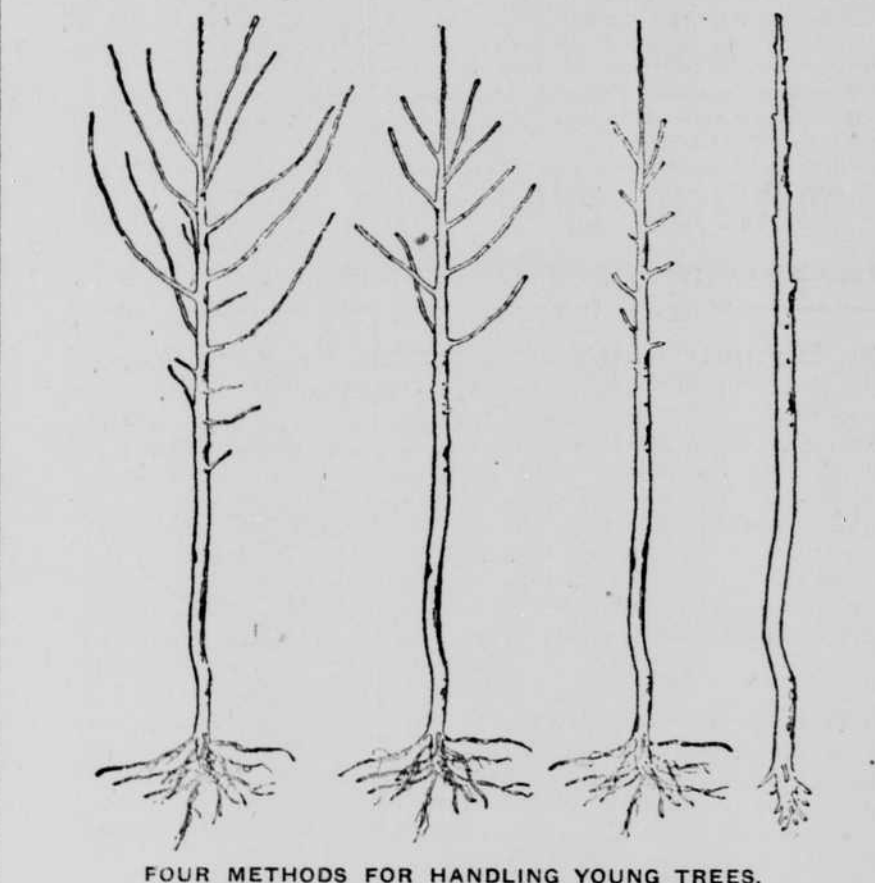
The men that do not trim at all say that a tree should be taken out of the ground with the greatest care, that its roots may not be injured. They advocate digging a circular ditch far from the little tree and gradually working out the roots, so that all the small, fibrous roots may be saved or at least most of them. Then they would save the top because that has plant food stored up in it. They advocate setting out each tree with

worked in around the fibrous roots sufficiently to leave no air spaces below the tree. The careful man will, however, get a quicker growth in this way than in any other way.

The second tree is pruned at the top to correspond with the loss in volume of roots. It will have to be well set and taken care of to enable its small root system to collect enough plant food to supply the leaves that will develop on the limbs.

The third tree has about the same amount of roots as the second, but the branch system has been greatly reduced. This makes it easier for the roots to gather enough food to supply the requirements of any branches that may develop from the stubs.

The fourth system is the form into



Showing methods of cutting back trees at planting time. Beginning at left: No. 1, unpruned; No. 2, pruned sufficiently if the tree is well planted in moist ground; No. 3, showing extent of pruning necessary for weakened trees and trees set in dry weather; No. 4, Stringfellow method.

the greatest care, so that the soil may be brought at once into contact with all of the fibrous roots. Water is used for working the soil down between the little roots, which should be spread out in every direction so that they may cover the greatest possible area of feeding ground. That this method gives good results in many cases can not be denied, but it requires extraordinary care in digging and setting the trees. The nurseryman that sells his trees at little price cannot afford to spend on digging each tree the amount of time this would require. On the part of the tree setter, it is exceedingly difficult to get the soil

## FUNGUS OF CATERPILLAR

The Cordyceps melontheae is a parasitic fungus which has on a few occasions been of great use in wiping out severe attacks of the injurious white



club-like bodies the whole caterpillar is covered with a white mouldy growth which is spoken of as the Isaria form. This is the first form of the fungus and the club-shaped or Cordyceps form, which does not always appear, is the second fruiting stage. Both forms give off spores from which infection may take place. There are three or four of these fungi at any rate which attack many kinds of insects. Plant lice are particularly susceptible to the attacks of some of these fungi. The common house fly is another frequent victim and specimens in large numbers may every autumn be seen clinging to ceilings or walls surrounded by a circular cloud of spores. Wireworms are also much attacked by one species of Cordyceps. Indeed the greatest help farmers have in fighting against white grubs and wireworms comes from fungi of the genus Cordyceps. For almost all of the worst injurious insects there are some remedies which will, at any rate, mitigate the attack, but with these troublesome grubs very little can be done.

# HEALTH EXERCISES



Home exercise is within the financial reach of all, and if only a few minutes each day are devoted to it, not only health, but a symmetrical form will be the result.

In the exercises given there is no special preparation to be made, except to remove all tight-fitting clothing; it would be practical if a skirt is worn to have it short.

The exercise should be indulged in after one has disrobed preparatory to retiring. If there is a tendency toward insomnia one will find the movements conducive to sound and refreshing sleep.

The position for beginning the first exercise pictured is, one leg kneeling, while the other leg is extended forward, with the foot resting flat upon the floor, the trunk to occupy the erect position, and the arms stretched upward.

Begin the action by bending the trunk slowly backward, carry the arms, which must be kept parallel with the head and trunk, as far backward as possible.

Hold this backward position a few seconds and then slowly resume the commencing one.

This action may be repeated four or six times, then reverse the position of the legs and repeat the above action.

The effect of this action is far-reaching, for the lower portion of the abdomen and the whole interior surface of the body are affected and the parts acted on are strengthened.

If you should desire a more vigorous exercise, weights held in the uplifted hands will give it.

The second action is one which should be faithfully practiced by every woman who has a tendency to stoutness about the waist. While this movement calls into powerful action all the muscles of the sides, it strengthens the chest and abdomen, and as a waist reducer there never was a better one.

The position is a standing one with one leg in advance of the other, in walking position; one arm is in "stretch" over head while the hand of the other arm rests at the side.

In the above position begin action by slowly twisting the trunk toward the right side as illustrated. After having twisted the trunk well around, bend sidewise at right angles with the trunk—as far as possible, then slowly assume an upright and front position. Repeat this action four or five times to begin with, increasing it in later exercises.

After having exercised as above described, reverse position of arms and legs and repeat exercise.

If one is exceedingly stout or stiff, more energy may be given by placing the hand on the hip of the advanced leg—thus more force is given to the bending with the hand resting on the hip.

## EXCELLENT FOR TIRED NERVES.

Vigorous Rubbing of Body After Bath Recommended.

There is no greater sedative to the nerves than to indulge in vigorous rubbing of the body daily.

Of course, it is luxurious to afford a masseuse, but it is almost as beneficial if one will rub oneself, either with the hand, with a Turkish towel, or with long strips of flannel.

The best time to do the rubbing is directly after the bath. Any part of the body that cannot be reached by the hand should be rubbed vigorously by the towel or flannel held at arm's length very taut.

One woman whose nerves had gone back on her badly cured herself in a short time by taking each night a warm bath, followed by a cold rise and vigorous rubbing of herself with a rubber flesh brush and a crash towel. She followed her exercising with a glass of hot milk.

## BORROWED FROM THE PAST.

Antique Greek coiffure composed of two gold bands passed round the hair, with a loose cluster of curls at the back.

Pink and Red Poplin.

One doesn't hear very much about vivid pinks and rose reds as modish colors in fashion centers, yet it is a fact that much of these shades is worn. Not as whole costumes, of course, but as wings adorning tiny fur hats, or a black suit touched with deep watermelon pink.

A coat loosened down the front reveals a dainty scarf in flamingo tones, and a trim tailored-looking waist will be finished with a turnover collar embroidered in pink, the bow matching.



## UNFAIR TAXATION

By Howard H. Gross, Chicago.

For a hundred years throughout the Mississippi valley the farmers have carried the burden of highway improvement. They have paid for the bridges and they have worked the roads. Hundreds of millions have been spent and the roads are not much better than they were to begin with; where they are better is because of draining. It requires engineering skill and experience to make a road; these have not been employed and the result has been a failure. If the money expended had been used to the best advantage fully half the roads would now be permanently improved with stone or gravel.

The first great need is to stop the waste—revise the highway laws, provide for skilled supervision, centralize authority, tax every dollar of property in the state for permanent road improvements, do not expect the farmer to do all the paying. The roads are public property and it is up to the public—everybody—to chip in.

The state aid plan has already been adopted by 15 states; it works to the satisfaction of everybody and seems to be the only successful way of handling the subject.

Feeding Corn.—How to use corn for best results should be our study. It is a well-known fact that corn of itself does not contain all the elements, or those elements in right proportion to produce best growth in animals. It contains too much of the fat-forming properties and too little of protein or the property that goes to make up the solid flesh—the lean meat, tendons of the nerves, etc., and the growth of the animals.

Robes and box-suits in cottons, batistes, linens and other such fabrics promise that skirts belonging to them are to have one embroidered bottom flounce, with a series of narrow edge embroidered ruffles, clustered in rows above, as a heading, while bodice and half-sleeves show the same ruffles or trimming.—Vogue.

Inexpensive Band.

A new hat for a child of ten is shown simply trimmed with a deep band of wide ribbon on which are applied several large roses cut from cretonne and fastened on with an outline of gold thread.

This is a very simple idea and one easily carried out, and if it can be worn by the children there is no reason why walking hats for women should not be adorned in the same way.

A Tucked Sleeve.

One gets rather weary of the everlasting sleeve formed of big, careless tucks caught up one over the other from elbow to shoulder; but a newer idea is seen in the tucked sleeve that is treated perpendicularly, not horizontally—and the tucks are just as big and careless and loose, and taper off right up into the neckband, the rest of the blouse—the bodice part of it—overhanging a corselet skirt or one of the prevailing cummerbund belts.

Yield of One Rubber Tree.

A rubber tree four feet in diameter yields 20 gallons of sap, making 40 pounds of dry India rubber.

# Truth and Quality

appeal to the Well-Informed in every walk of life and are essential to permanent success and creditable standing. Accordingly, it is not claimed that Syrup of Figs and Elixir of Senna is the only remedy of known value, but one of many reasons why it is the best of personal and family laxatives is the fact that it cleanses, sweetens and relieves the internal organs on which it acts without any debilitating after effects and without having to increase the quantity from time to time.

It acts pleasantly and naturally and truly as a laxative, and its component parts are known to and approved by physicians, as it is free from all objectionable substances. To get its beneficial effects always purchase the genuine—manufactured by the California Fig Syrup Co., only, and for sale by all leading druggists.

Putting It Concretely.

Although Mr. Lawton was wont to indulge in a sort of language which left his hearers in some doubt as to his exact meaning, yet when he was "put to it" he never failed to make himself understood.

"No, I shouldn't want to live in a house like Philander's," he announced to Mrs. Lawton on the evening of his return from a visit to a nephew. "His cellar, now—it's most desperately overflowed whenever the weather is any ways damp."

"Just what do you mean by desperately overflowed?" asked Mrs. Lawton.

"I mean," said her husband, mildly, "that all they had to do was to open the door that led from the kitchen down cellar, and the apples come floating right in on to the kitchen floor. Is that plain to ye?"—Youth's Companion.

Recommended His Wife.

Irvin Cobb, humorist of New York, was recommended to a lecture management. The latter sought an introduction through a friend, Mr. McVeigh.

"Come here, Irvin, I want you to meet a friend of mine," said McVeigh. After a few minutes' conversation, the lecture man broached the subject of lecturing as follows:

"I was just wondering, Mr. Cobb, what you would think of a proposition to do some lecture work next season?"

Cobb looked at his questioner for just a moment in blank amazement. Evidently such a thought had never entered his head before. Then reaching out his hand confidentially, he said:

"I've got it. My wife will do it. She is the best one I know."—Lyceum and Talent.

REPARTEE.

Younger—I wonder if I shall lose my looks, too, when I am your age?

Elder—You'll be lucky if you do.

Too Free Speech.

The allegations made during a trial for "blasphemy" raises the whole question of courtesy and kindness in public discussion. Ridicule and sarcasm are permissible, and effective weapons in debate, but mere vulgarity and abuse or irreverence in dealing with subjects that are sacred to others, are not to be confounded with free speech and cannot be tolerated.—Lacy's (Eng.) News.

Gladstone's Thrift.

Gladstone's liberality . . . was very great, and was curiously accompanied by his love of small economies—his determination to have the proper discount taken off the price of his second-hand books, his horror of a wasted half sheet of note paper, which almost equaled his detestation of a wasted minute.—Recollections of Sir Algernon West.

Those Peekaboos.

She—Women's clothes are a mystery to men, aren't they?

He—Oh, I don't know. I can often see through them.—Cornell Widow.

LOST \$300.

Buying Medicine When Right Food Was Needed.

Money spent for "tonics" and "bracers" to relieve indigestion, while the poor old stomach is loaded with pastry and pork, is worse than losing a pocketbook containing the money.

If the money only is lost it's bad enough, but with less health from wrong eating, it is hard to make the money back.

A Michigan young lady lost money on drugs but is thankful she found a way to get back her health by proper food. She writes:

"I had been a victim of nervous dyspepsia for six years and spent three hundred dollars for treatment in the attempt to get well. None of it did me any good.

"Finally I tried Grape-Nuts food, and the results were such that, if it cost a dollar a package, I would not be without it. My trouble had been caused by eating rich food such as pastry and pork.

"The most wonderful thing that ever happened to me, I am sure, was the change in my condition after I began to eat Grape-Nuts. I began to improve at once and the first week gained four pounds.

"I feel that I cannot express myself in terms that are worthy of the benefit Grape-Nuts has brought to me, and you are perfectly free to publish this letter if it will send some poor suffering relief, such as has come to me."

Name given by Postum Co., Battle Creek, Mich. News, "The Road to Well-Villa" in 1913. "There's a Reason."