THE FLYING YEARS.

As a dream when night is done,
As a shadow flees the sun;
As a ship whose white sails skim
Over the horizon dim,
As a life complete of days
Vanisheth from mortal ways,
As a hope that pales to fear—
Is the dying of the year.

As the first gold shaft of light
Shivers through the wrack of night;
As the thrill and stir that bring
Promise of the budding spring:
As new thoughts of life that rise
Mirrored in a sick man's eyes,
As strange joy to hearts forlorn.
So another year is born.

Glad or sad, a dwindling span
Is the little life of man,
Love and hope and work and tears
Fly before the flying years;
Yet shall tremulous hearts grow bold
All the story is not told—
For around us as a sea
Spreads God's great Eternity.
—Christian Burke, in Atalanta.

THE PRINCIPLE OF IT.

BY GEORGE E. WALSH.

DRIZZLY rain made the streets of New York muddy and sloppy. Within the small circles cast by the electric-lamps the falling globules of mist and rain resembled sparkling diamonds dropping from the inky darkness overhead. The sticky moisture of the salt air penetrated to the marrow of the bones, and made one feel uncomfortably warm and surly.

It was midsummer, and the humidity in the air made the heat less endurable. John Scollard threw open his light overcoat and tried to take advantage of every breath of cooling air. He was walking leisurely toward the steamboat dock, thinking, meanwhile, of the change in the atmosphere which he would experience when he reached the hotel down by the sea.

"Evenin' papers, sir, only a cent," a newsboy shouted in an appealing voice, shoving the sheet before the banker's eyes.

He pushed by without speaking. Near the crossing he put his foot in an inch of mud, and drew back just in time to avoid being run over. Muttering words of anger against the careless driver, and inwardly cursing the muddy streets, he glanced ruefully down at his soiled shoes.

"The other side of the street, sir, is cleaner," a sweet voice said close to him, "and you will not get so muddy."

It was only the flower girl—no, woman, who had kept her position on the street corner in spite of the rain. Her sweet violets, red roses, and early tulips were wet with the mists, but they enjoyed the ducking and appeared more attractive than usual.

"Than you," Mr. Scollard said.

He turned around to take the advice of the woman. He walked a few steps and then halted. He seldom bought flowers. He had no one to give them to and he was not particularly fond of them himself, But an act of kindness deserves some compensation.

"Give me some of your flowers—the prettiest ones you have," he said he, feeling in his pocket for a bill.

"Violets, roses, or tulips, sir?"

"Oh, anything—I'm not particular," he answered quickly.

The vender of flowers was used to her work. She understood human nature. In a few moments she had deftly put together a pretty bouquet of flowers, and handed them to the stranger. The man threw down a dollar bill and started to walk away.

"Your change, sir," the flower woman interrupted in the same well-modulated voice.

"Never mind—"

He stopped. One look at the sweet face convinced him that he was not dealing with a subject for charity. He extended his hand and looked admiringly into the face.

"Seventy-five cents," she said, dropping three quarters into his gloved hand.

The expression of a face will sometimes recall suddenly the past of one's life. John Scollard felt that he was walking in a dream as he continued his journey toward the boat. That face struck a key-note in his life, long since untouched. He had seen many flower-women before, but he had never cared about inspecting them. They were strangers to him, and they were generally unattractive. Their flowers were often pretty, but the fingers which handled them were hard and coarse.

But that night he dreamed of other scenes. On the front piazza of the hotel, overlooking the wild surf, he recalled his past life. No man could be more thankful for his lot in life. He had succeeded beyond his widest expectations, and at the age of forty-five he was in possession of an immense fortune and a reputable business standing. His life had been well ordered and rational from the beginning.

His troubles had been few, and they were chiefly negative ones. He had few friends and no relatives. He met those in his business life who professed to be his friends, but he knew that it was all from policy's sake. Social life had never attracted him—at least not since his early manhood.

His one great misfortune had been commonplace, such as happens to many in life, but the sting of it had clung to him these many years. It had been a simple lovers' quarrel, followed by separation and jealous rage. He felt bitterly toward Jennie Hawley at the time, and when he learned of her marriage a year or two later, it turned him from the world and all its pleasantest associations. He wrapped himself up in business, and turned everything into gold. The stocks which he handled were sure to advance in value, and he had been often termed the "wizard of Wall street." The pleasure of making money rapidly gave him satisfaction, but as the novelty off it passed off it became a burden to him.

He was rich now—a millionaire several times over. But he was unhappy and lonesome. He shivered as he entered his damp room at the hotel. There was no one to welcome or cheer him. If sickness should overtake him he could hire the best professional service, but there would be no natural warmth or sympathy for him. He was at that age of life when a family is most appreciated. If his life had been ordered differently! If he had only married some one else!

No, he did not wish that. If he had never quarrelled with his first love! He knew now that he was all to blame. He had been a bear—a fool. He had played with the affections of Jennie, and she had endured his childishness patiently for a time. Her meek, patient eyes were so expressive, and when they parted the last time tears were in them.

The flower woman's face and eyes recalled it all. They haunted him all that night. They were the exact imitation of Jennie's, only older and more expressive. The glare of the electric light might have caused the illusion, but he would investigate. He could pass the flower stand again and stop to make another purchase of flowers.

Such eagerness to reach the place on the following day was seldom exhibited by the banker. It was now broad daylight, and he could satisfy his own mind. But he was disappointed. A girl of ten summers stood at the place and dispensed flowers to the public.

"Flowers, sir?" she asked in a childish voice.

"No—yes," John Scollard said mechanically, pulling some money out of his pocket. "Give me some roses."

He watched the deft fingers as they flew quickly around the cut flowers.

"Do you own this stand?" he asked abruptly.

"No, sir, mamma owns it. She keeps it in the afternoon and I attend in the morning?"

"Oh, I see!" absent-mindly. "But what is your name?"

"Jennie Morrow—I'm named after mamma."

The banker's face blanched a little. Morrow! Morrow! Yes that was the name of the man who had married the girl he once loved. Her name was Jennie Morrow and the very picture of her mother. He looked at the golden head and the blue eyes. The girl noted the steady stare of the man, and her young cheeks flushed a little.

"Do you live around here?" he asked again. "I mean would you mind giving me your mother's address? I think I know her. I'm an old friend—knew her years ago."

He obtained the desired information, and dropping a coin in the girl's hand he hurried away. He took an early boat to the seashore. He wanted to meditate upon his discovery. A new happiness appeared to open before him. His early love was apparently a widow and in poor circumstances.

This impression was confirmed on the following morning when he sought out her lodging. It was in one of the tenement house districts, and everything was dirty and filthy. This sight rather pleased him, for he thought of the great change he could bring into the life of the woman he loved. She was alone with her daughter, and poor; he was alone and rich.

"You must come to me," he pleaded when he had explained his mission. "I have always loved you, Jennie, and my life has been made miserable by that one mistake. I am rich, and can give you and your daughter a good home. You must leave this low place, and become my wife."

Was it her pride that kept the answer from her lips which her heart dictated? She could only refuse this kind offer. Love might prompt it, but it now seemed too much like charity to accept. He had pleaded this way before, and her heart trembled with emotion at the remembrance of it. He left her, finally, disappointed and crestfallen. He could not move her. She would not listen to his words of love and affection.

His life seemed more lonely than ever. His handsome rooms were devoid of all comfort. Even his business lacked a certain charm which before attracted him. With all of his wealth he could not give anything to the poverty-stricken woman whom he loved. Small presents she would accept, but nothing expensive. But he heaped gifts and luxuries upon her daughter. This he could do with propriety.

Finally he prevailed upon her to let him educate her daughter. She was sent to a private school, where her natural gifts soon developed. Her mother had taught her the primary lessons of education, and she was not very backward in her studies from the beginning. John Scollard took a deep, fatherly interest in his little protege, and he lavished his wealth upon her. Every comfort and pleasure that money could buy was at her command.

"You will spoil her," the mother said one day with deep concern. "She will soon be ashamed to come back to her humble surroundings here."

"I never intend that she shall come back," he replied boldly.

"What do you mean? Would you take her away from me?"

"No, I would make you come to her. I want to make the mother ashamed of her surroundings, so that she will accept the better home which is waiting for her. This is my object."

"Oh!" she replied, thoughtfully. Then shaking her head sorrowfully she added: "It is no good. I will never come—not even if you rob me of my daughter."

But still he persisted. It had been a business maxim with him to hammer away at the same work until it yielded to his wishes. This hard-headed policy determined him in his present purpose.

Two years rolled by and he was still living a lone bachelor life. Little Jennie was prospering at a fashionable boarding-school, while her mother peddled flowers at the old stand. John Scollard had pleaded with the woman for her own sake, and for her daughter's sake, to marry him; but she always gave the same reply. He grew less hopeful, and his old melancholy, unsatisfied life settled upon him again.

But one day a small cloud came out of the clear sky, and suddenly assumed the shape and strength of a tornado. Wall Street's foremost banker had invested heavily in western mining stocks, and in one day his fortune was swept out of existence. He returned home that night quietly and calmly as ever. He read the evening papers critically. They were full of his disaster, and the terrible crash which had shaken the financial foundations of the city. He grew a little pale as he read, but otherwise he showed no signs of his misfortune.

He found a note waiting for him early the next morning. It had been delivered the night before. He knew the handwriting well, and in his heart he thanked God that he had some one to sympathize with him in calamity.

"Come and see us immediately. We have read of your misfortune. Jennie is home from school. We sympathize with you, and want to comfort you. You have been so kind to us in the past."

He kissed the note paper several times. The waiters at the hotel looked curiously at him as he passed out. Some expected that he would commit suicide after the failure, but he looked strong and calm. He carried a morning's paper in his hand, containing a fuller account of the great failure. He walked briskly toward the lower part of the city, and inwardly thought that people who knew him would think that the appropriate direction for him to direct his steps.

"Oh, John, it's too bad," was the unexpected greeting which he received from the woman he loved. "We've read all about it, and we feel so much for you. Jennie is home and never will go back to school again. But you must come and make your home near us. We'll take care of you."

He smiled at her eagerness, and he thought he detected an expression of pleasure beneath the assumed sorrow.

"And do you mind it so much?" his protege asked, winding her arms around his neck. "You've been so kind to us. It isn't so bad to be poor. I don't mind it and mamma don't. But you—"

"I've been poor, too, he replied, kissing the golden head.

"Then we're all alike again, and we won't feel that you are so far above us."

He smiled at her words. Even she appreciated the difference in their stations in life, and probably in a few years she would refuse to receive any more charity from him.

"We have prepared a fine dinner for you," interrupted Mrs. Morrow, "and you must feel that you're one of the family."

"That's impossible for me," he said gloomily. "That can never be now. When I was rich I had some hopes, but now that I'm poor I'll never be more to you."

She looked tenderly into his eyes. He refused to see the expression of love. He had the right to let his pride keep him from declaring his feelings again.

"There is always hope," she faltered. "When conditions change every barrier must also change."

"But other barriers are erected," he replied.

Her cheeks flushed. Either he did not understand, or he felt that he had no right to ask her to marry him in his present circumstances.

"John," she whispered.

He looked stupidly at her.

"You know I—love you."

Still he remained passive. The words out she felt freer, and continued impulsively:

"I have a right to say it. You have told me that you have loved me many times. But I could not tell you my feelings when you were so rich. Now we are both poor, and I tell you all. I love you, rich or poor, but I could not speak it before."

"Thank God then that I failed," he said fervently. "I have found a home by it."

They did everything after that to make him happy. The home was a small one, but it seemed brighter than his mansion. He spent the rest of the day with them, and only left late at night to return to his hotel. He was busy on the following day in winding up his business affairs. The little flower stand was no longer to be the means of support of the widow. They had decided to move into some quiet cottage in the country, where they could begin their life anew. The wedding was as quiet as the engagement.

John Scollard arranged for the place and had it furnished handsomely. It was far beyond his wife's anticipation, and she was agreeably surprised at the surroundings. Jennie was jubilant with the new prospect.

"It's so nice and cosy here," she said gleefully. "It's even better than at boarding school."

"I'm happy if it will suit you," John Scollard said, with a peculiar smile. "This must content us in the summer time, and in the winter we can live in our city home."

"Why, you expect to make money again in a hurry," his wife said with a look of doubt.

"No, it is already made," he replied slowly.

"But that was all lost."

"No, not quite," he answered. "The reports were somewhat mixed. I had sold out my shares of mining stock before the crash came."

There was an expression of anxiety on his wife's face. Her cheeks paled and then flushed. She had married a wealthy man after all. She buried her face in her hands, but John removed them and said: "But you did not know it. You married me for myself, and not for my money. It was against your principles to take me when I was wealthy, but now that we have the money we should not regret it. That's the common-sense view of it, Jennie."

After some reflection she thought so too, and she accepted her condition with a good grace; but she was never quite sure in her own mind that the reported failure was not a scheme on her husband's part to win her for his wife.—Yankee Blade.

SELECT SIFTINGS.

The most graceful of domestic animals is the cat, while the most awkward bird is the duck.

Of the 18,327 female depositors in the savings banks of Philadelphia, 8246 are described as boarding-house keepers.

Tacoma, Washington, is overrun with tramps and idlers, and robberies of houses and pedestrians are of nightly occurrence.

New Orleans, La., believes she has shipped the largest cargo on record, 20,000 bales of cotton on board the British ship Samoa.

The marriage is announced at New York City of Elephtherios Pelalas to Catharine Eleferopuls. The priest was Rev. Paisios Ferentinos.

Weeping trees, from which drops of pure, cold water fall, are of frequent occurrence in the forests of Oregon, Montana, Washington and British Columbia.

A vegetable curiosity is owned by a resident of Wenatchee, Washington. It consists, it is claimed, "of a network of large potatoes grown upon one another."

Family names seem to be scarce in Denmark. In the Copenhagen direceory the name Hansen takes up thirty-four columns, Petersen thirty-two, Jensen thirty columns.

Among the estates left by persons who died in Vienna, Austria, and whose heirs have not been found, is one consisting of an opera-glass. Another man's estate consists of a scarfpin.

It is said that a man does not reach his full mental power until the age of twenty-five, and the development of talent is most marked between the ages of thirty and forty-five.

British soldiers will wear seamless socks in future, because they insure greater marching efficiency. The old style of seamed socks chafed the shin and made the soldiers footsore; the seamless socks do not.

R. S. Campbell, a resident of North Salem, Ind., claims to have found a stone in the bottom of a creek near his home which resembles, in size and shape, a well-trimmed horn. The curiosity weighs sixty-seven pounds.

Grifton, N. C., can probably lay claim to more division than any other small place in the country. The village is located, it is said, in two counties, three townships, two congressional districts, two senatorial districts and two judicial districts.

A Chicago shoe manufactory makes 20,000 pairs of "dead man's shoes" a month. The soles are of pasteboard, covered with grained paper, the uppers are quilted satin and crochet work and a ribbon tied in a bow knot holds the shoe to the foot.

Florida people are telling of an orange tree in Doctor Abernathy's grove at Altoona which has borne during the past season 15,000 oranges. It is a seedling, twenty-five years old, some thirty feet high, and has received only the ordinary grove care and culture.

In the 227 years since "Don Quixote" was published 1324 editions have been printed, of which 528 were Spanish, 304 English, 179 French, 99 Italian, 84 Portugese, 45 German, 18 Swedish, 9 Polish, 8 Danish, 6 Russian, 5 Greek, 3 Roumanian, 4 Catalonian, 1 Basque and 1 Latin.

Yuma Indian Cadets.

At the Fort Yuma Indian School the classes are taught according to the vocation of life, most properly supposed to become their sex. The girls are instructed in the culinary art, mantua-making and household duties. The boys are taught farming, mechanics and military movements.

The Indian boy cadets are instructed chiefly by the Mother Superior, with occasional help from those of her attaches who are better versed in military tactics. They have their own captain, lieutenants, sergeants and corporals. Recently they gave Yuma a fine treat in the way of a company drill. Under the sound of a drum they marched to martial music, single file, by twos and in squads of fours. Each is armed with miniature rifle, bayonet, belt, scabbard and cartridge-box. The uniform is dark gray, with light gray fatigue caps. Their time in marching was excellent, and in the manual of arms they showed the effects of painstaking training. Making the company wheel, fours left or right about, fours right into line and many other difficult moves were executed better than many older persons could do it.

Here is an opportunity for California to have something unique at the World's Fair by introducing this excellent little band of aboriginal braves to the admiring gaze of the millions of sightseers. The fact that all their commands are made in English and are given by one of their own tribe lends an enchantment to it that would otherwise be lost upon an ordinary mortal.—Yuma (Cal.) Sentinel.

Magnified by Mist.

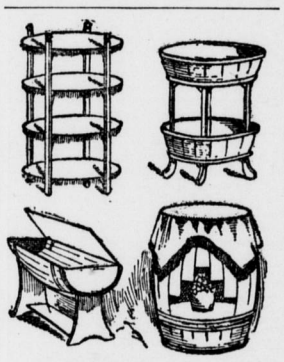
The magnifying power of mist has often been described, but perhaps never in a more striking manner than by Mr. Pike in the "Barren Ground of Northern Canada." "We were traveling in a thick fog and saw an animal, apparently at some distance, bounding along the horizon at a most remarkable pace. All down the line there were cries of 'Musk ox!' 'Wolf!' Guns were snatched from the sleighs and the dogs charged at a gallop in pursuit of the strange animal. After a rush of ten yards the quarry disappeared. The first man had put his foot on it and it turned out to be one of the small mice so common in that country."

USES OF FLOUR BARRELS.

Some of the Pretty and Practical Things That Can Be Made from Them.

You think you are familiar with the possibilities of old barrels. You know how to make chairs of them. You have improved vastly on the rather primitive affair your ingenious grandmother was proud of having fashioned out of a barrel.

Did it ever occur to you that there are other possibilities in an empty barrel? Have you ever tried making a table of one? Four nicely curved staves will make the legs. Use the head of the barrel for the top, or, if you like, buy a piece of wood any size or shape you fancy. Get a square piece of timber a few inches long and about five and a half inches square. Take off the corners for about an inch, making an irregular octagon, and fasten on the sides the four barrel staves, with the ends well squared and smoothed off. Between them, where the corners were, fasten on some brackets to support the top.



THE POSSIBILITIES OF A BARREL.

A small hoop placed between the staves near the floor will make them more firm, and a coat of paint or varnish will complete quite a presentable little table.

A kind of round cabinet table can also be made by sawing out zigzag panels in the sides above the lower hoops and inserting a round shelf inside at this level. Put a round cover on the top and paint it white, first filling the cracks and imperfections with putty and rubbing down with sandpaper.

The cabinet of shelves is built of well-selected barrel heads, whose parts are held together by a broad cleat nailed on the under side of each head. These are supported by four upright pieces, with grooves sawed in the edges at different levels. Brackets strengthen the frame and secure the shelves properly. The edge is finished with a fringe or some other ornamental decoration about three inches deep.

A useful stand may be made of a barrel sawed in half lengthwise and resting upon a framework of plain boards with a shelf below. This may be filled with earth for a winter window garden or may have a cover hinged on for a table and be draped with a cloth to hide the barrel shape, which affords a spacious receptacle.

Still another may consist of two ends of a barrel with the heads in each part being sawed off just at the second hoop. Through four holes in the lower one run the supports of the frame and let the top part rest upon their ends. Some small brackets under each barrel head will strengthen the whole. Covered and decorated with cloth and plush and with cushioned sides and pockets, this makes a very convenient work table, or, decorated in rustic fashion, a very pretty plant stand.

MEXICAN PEONS.

Sunny-Natured People Happy Even in Their Poverty.

The peon population of Mexico live in adobe houses or shanties of corn stalks, writes Henry Ware Allen in the current Review of Reviews. They own but two or three garments each; sleep on straw mats and exist on next to no wages. As an official of the Treasury Department recently stated it, "The population of Mexico is only half fed, a quarter clad and an eighth illuminated" (petroleum retails for 75 cents per gallon). Yet after all there is without doubt, more real poverty, more distress and desperate hardship in a single New York tenement house ward than in the whole republic of Mexico—for here the climate is gentle, nature is prodigal, the necessities of life are easily obtained and the horrors of many-storied tenement houses are unknown. On the one hand is a race of sunny-natured people whose condition is steadily improving, on the other hand a race whose social adjustments are so out of order that an increasing proportion of the population is being crushed under the wheel of unavoidable poverty.

The peon is nothing if not contented. He could no more be induced to join a band of "calamity howlers" than could the most villainous "plutocrat" of Wall street. This characteristic is due to the fatalism which prevails, and is further a result of centuries of servitude. Fatalism is said to be a factor in the army. The Mexican soldier goes into battle believing that if death comes it was foreordained, and so he does not try to evade the danger.

A Parrot's Coffin.

A parrot belonging to a Glasgow lady has recently died, and has been buried in a coffin of a ridiculously handsome character. It was made of rosewood, measuring 16 inches by 7 inches by 5 inches, hand carved, with Persian designs, and lined throughout with pink satin. The parrot's head reposes on an embroidered pillow, and a glass protects the bird from contact with the wood. The edge of the coffin was decorated with wooden beads, fastened in after completion, and seventeen golden screws hold the lid in its place. This elaborate construction cost $250.

POWER OF TORPEDOES.

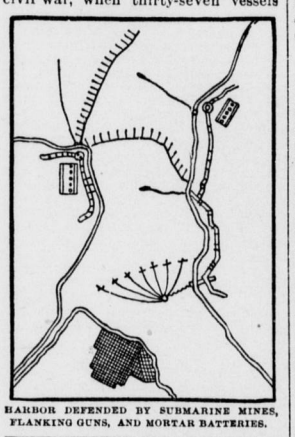
WHAT MODERN SHIPS OF WAR HAVE TO DREAD.

When the First Device of This Nature Appeared—How It Has Grown in Ability to Destroy—The Variety Adopted by the United States Government.

A Formidable Assailant.

During our war of independence, says a New York correspondent, David Bushnell, the father of American submarine warfare, threatened the British war vessels in New York harbor with torpedoes carried in a turtle-shaped boat that glided to the attack beneath the surface of the water.

But the first authentic record of the practical efficiency of torpedoes as a recognized means of attack and defense is found in the river and harbor operations during our late civil war, when thirty-seven vessels



HARBOR DEFENDED BY SUBMARINE MINES, FLANKING GUNS, AND MORTAR BATTERIES.

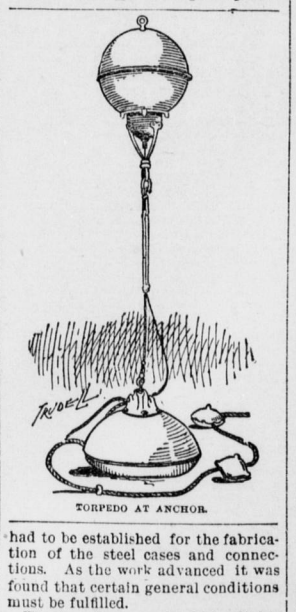
were either sunk or seriously damaged by the explosion of heavy gunpowder mines submerged in the approaches to Southern cities. Submarine torpedo boats harassed the fleet blockading Charleston; while the gallant Cushing leaped a small steam launch over a barrier of floating logs and sunk the formidable ironclad Albemarle by the explosion of an iron pot full of powder lashed to the end of a spar.

Since that time, stimulated both by the rapid advance in electrical engineering and by the study of high explosives, the development of the torpedo, or sea mine, has been rapidly pushed forward both in this country and in Europe.

In 1869 the Board of Engineers for Fortifications was instructed to experimentally study the general subject of torpedo defense and to prepare detailed plans of applying the approved methods to the several important harbors of the United States. Channels, rivers and anchorages were carefully studied, and elaborate projects for their defense were submitted, comprising plans for bomb-proof electric stations, tunnels to protect the protect the insulated wires, and maps showing the number and proposed location of the mines. And as the handling of high explosives held in leash by the electric current allows no margin for ignorance, carelessness or neglect the establishment of a school of defensive submarine mining was recommended, where engineer soldiers could receive a thorough training in this special service.

The magnitude of the work outlined can only be appreciated by those who were associated with Gen. Henry L. Abbot in the development of a practical working system from meager data and an absolute lack of material.

At that time reliable insulated cable was not manufactured in the United States, and the electrical apparatus had for some years to be purchased in Europe, while special plants



TORPEDO AT ANCHOR.

had to be established for the fabrication of the steel cases and connections. As the work advanced it was found that certain general conditions must be fulfilled.

The torpedo cases should be light, easily handled, and sufficiently buoyant to support the charge, mooring rope, and electric cable in a sensibly vertical position against the depressing effects of swift currents, or the torpedoes will sink below the touch of passing vessels; and the mechanical arrangements should be capable of resisting the shock from the explosion of neighboring mines. The adopted spherical case meets all these requirements, and with anchor, wire mooring rope, electric cable and connections constitutes a complete mine ready for action.

From bomb-proof operating casemates seven-colored cables will be laid to junction boxes placed at selected points in the channel. Thence the copper cores will diverge into cables radiating toward the advance, and terminating in three mines, so connected that each will explode singly if struck, while all three can be exploded simultaneously at will. To fill the gaps between the lines, to menace the enemy far in advance of the main defenses, and to compel him to extend countermining operations over a wide area, lines of skirmish or single-cable mines will cut the waters well to the front.

In shallow channels or anchorages on the coast line available for occupation in conducting a distant bombardment large and carefully located ground mines so charged and electrically controlled that their removal by sweeping or grappling would prove both difficult and dangerous will reenforce the mortar batteries in a very effective manner.

The primary defense of the mines rests with the guns of the batteries commanding the channels, where the main lines will be so arranged as to be swept throughout their length by a flanking fire. The machine and rapid-firing guns, when we have them, will play an important part in such operations. But, should war be declared to-morrow, our old-fashioned eight and ten-inch smoothbores would prove very effective against torpedo boats and launches attempting to work mischief under cover of night or a fog. Charged with grape and canister, trained by day-light, and placed in circuit with the electric system through electric primers and insulated wires extended to the operating station, any effort to raise a mine or cut a cable will at once automatically draw a volley that would disable or greatly harass the boats.

In the absence of high-power guns an ironclad will move steadily forward and attempt by countermining to open a safe passage for a beleaguering fleet, and here the adopted Sims-Edison electric fish torpedo would prove a valuable auxiliary to the defense. The range of this aggressive torpedo is over two miles, while its speed exceeds eighteen miles an hour. It is steered, propelled, and exploded by means of a controllable electric current, and carries a charge capable of disabling the most formidable ironclad.

The complete torpedo consists of two distinct parts, the float and the hull. The former is filled with an unsubmergible material and is practically indifferent to the bullets of rapid-firing guns; the latter, a cigar-shaped hull sheltered from fire under seven feet of water, carries in the bow section the explosive, in another an insulated cable, which pays out without strain as the torpedo proceeds, and in the stern section the electro-motor that revolves the propeller and a powerful relay that actuates the steering gear.

The electric current, produced by a dynamo on shore, and conveyed to the torpedo through the cable, is under control of the operator through the keyboard switches by which he can at will start, stop, steer to port or starboard, or explode the charge.

Movable torpedoes of this type will prove formidable assailants to the enemy's vessels moving cautiously in obstructed channels, and will re-enforce the fire of the mortars.

Ignorance of the nature and object of torpedoes has led the public to believe that harbors can, in an emergency, be protected by this branch of the defense alone. Heavy batteries and submarine mines are but correlative terms of a good defense. The function of the latter is to so obstruct the channels that the enemy's vessels shall be held under fire of the former. But at least it can be said that we have ready for duty a perfected defensive torpedo system, supplemented with a skilled corps of submarine miners and electricians.

BAKERSVILLE will have to be spelled with a capital F in future.—Phila-