

The METRIC SYSTEM of

THE ORIGINAL CUBIT & THE ORIGINAL FATHOM

WEIGHTS & MEASURES

The bill introduced by Congressman Shafroth providing that on and after January 1, 1903, the weights and measures in the metric system shall be the legal standard weights and measures in the United States is simply another in a long line of attempts to supplant the present awkward system by the easy and simple metric or decimal system. Though the bill has been reported favorably by the committee on weights and measures it has still a hard fight before it. The chances for its adoption are not the brightest.

In one sense the United States may be said to have been even before France in the adoption of at least a portion of the metric system. In 1785 congress adopted the decimal system of money, with the dollar as the unit, whereas the metric system proper was not adopted by France until 1795. The basis of the metric system, the meter, was determined by two French astronomers and mathematicians and is exactly one-fourty-millionth part of the circumference of the earth on the meridian of Paris. The meter is 3.37 inches longer than the American yard. It is the standard of the measures of length and all other measures are based upon it. Thus the metric unit of surface measure is the centare, which is one square meter. The unit of capacity is one liter, which is the cube

The use of the metric system was declared obligatory in France on November 2, 1801, but the French people were not prepared for so sudden a change, and in 1812 a compromise was adopted which lasted until 1837. In that year a law was passed making the use of the metric system obligatory and ordering its enforcement after January, 1840. At present it is universally used by France, as well as by all European nations, except Great Britain, where it is allowed, but not compulsory. Russia was the last of great powers to make the change, having put the metric system into force only a few weeks ago. On the continent the metric system has been adopted by Mexico, Brazil, Chile, Peru, and other of the South and Central American republics.

As early as 1817 the subject of adopting the metric system in the United States was agitated. John Quincy Adams was appointed to investigate the weights and measures of the United States and he found that the standards of weight, measure, and capacity differed considerably in the different states and even in the same state. He reported fully on the result of his investigation and did not favor the adoption of the French or metric system because of the popular repugnance to a change and the inconvenience which would follow the adoption of a new system. At the same time he declared his belief that the metric system was almost ideal and reflected the greatest credit on the men and on the age which had devised it.

In 1839 another investigation was made and it again was found that a pound or a yard in one state or city was often more or less than in another. As a result the treasury department was authorized and instructed to have made copies of the standards of weight and measure then in its possession, a set of which copies were to be delivered to the governor of each state in the union.

In 1866 it was made by an act of congress lawful to employ the weights and measures of the metric system throughout the United States and the secretary of the treasury was instructed to furnish the governor of each state a set of standard weights and measures of the metric system for the use of the respective states.

Under the regulations of the international postal convention the metric system was adopted as the standard in all transactions between the nations which are members of the postal union, and accordingly the mail matter transported between the United States and fifty other countries, including even the mail sent between the United States and England, is weighed and paid for entirely in terms of the metric system.

In 1875 a convention was held by representatives of practically all the civilized nations, except England, at which "a scientific and permanent bureau of weights and measures" was established at Paris, the expenses of which are paid by all the powers party to the convention. Great Britain has since become a party to this conference and now pays its share of the expenses of the bureau.

One duty of the international bureau of weights and measures is to furnish exact and correct copies or duplicates of the standards of weight and measure to the several countries which contribute to its support. These new standards were supplied to the United States and were received by the president and his cabinet with considerable ceremony on January 2, 1890, and are now deposited in a fireproof room in the coast survey building at Washington.

In 1893 the secretary of the treasury ordered that thereafter the standard meter and kilogram, deposited in the coast survey building, should be recognized as the fundamental standards from which the customary units of the yard and the pound should be derived.



HON. JOHN F. SHAFROTH, (Colorado Congressman, Who Is Author of the Present Bill.)

It is therefore true that at present the United States is using a system of weights and measures which is based on the units of the metric system.

The metric system proper is now exclusively used by the United States marine hospital service, by the foreign department of the postoffice, by the United States coast and geodetic survey, to some extent in the mint, United States signal service, and United States census department.

Degree of "Doctor of Arts."

The proposal of President Thwing of Western Reserve University that a new degree of doctor of arts be established does not meet with the approval of the majority of the heads of the more important colleges. The degree for men distinguished in technical and industrial pursuits for whom the degree of doctor of laws seems inappropriate. The plan is opposed by Presidents Angell of Michigan, Eliot of Harvard, Butler of Colby, Carter of Williams, Hadley of Yale, Harris of Amherst, Jordan of Stanford, Low of Columbia, Northrop of Minnesota, Raymond of Union and Schurman of Cornell. It is approved by Presidents Stryker of Hamilton, Wheeler of California, and Faunce of Brown in a modified way.

Hard Work for St. Louis Fair.

The appropriation made by congress to aid the St. Louis fair of 1903 provided that the money should not become available unless the city of St. Louis should raise \$10,000,000 for the same purpose. The congressional appropriation was \$5,000,000. The city of St. Louis will issue bonds for \$5,000,000 and is making a vigorous effort to raise \$5,000,000 by private subscription.

Sullivan's Jewish Blood.

The late Sir Arthur Sullivan was said to have Jewish blood in his veins, but this is wrong. His mother was an Italian named Righi, and his father, of course, was pure Irish. His grandparents was an impoverished Kerry squire, who served under Wellington and was a member of the garrison at St. Helena.

Dr. Charles F. H. Wilgohs of Akron, O., has just celebrated his ninety-seventh birthday. He still attends to his practice as a physician, and even visits his patients at night when called upon to do so.

Forsaking all Others

By AMELIA DUGHEMIN

CHAPTER X.

Nearly half an hour passed before the married pair, looking formidable determined and united, presented themselves at her door, and in the interval she had forced herself into a cold calmness that enabled her to meet them composedly. Almost before they were seated Harvey, who seemed much excited, opened the subject uppermost in the minds of all.

"So you threaten to shut up the house and go to New York?" he angrily asked.

"It is an intention, Harvey, not a threat."

"And do you think I will submit to such a course, merely because you have chosen to quarrel with my wife, whose only offense has been her care for us both? You do not know me, madam."

"I am afraid I have never known you, Harvey."

"Perhaps not; you hadn't applied to my character the test of injustice and the most monstrous selfishness ever shown by mother to son!" he hotly retorted. Helen had made good use of her half hour. "You reared me with the expectation of sharing my property; but for that I should not have married. And now you coolly say that henceforth I must depend upon myself—I, who have been accustomed to every luxury!"

"I think you would have married in any case," said Gladys, in a tone that made his eyes waver for a moment. "It is as well; I do not fear for your future. You certainly have not suffered from my selfishness in the past."

"Don't you think the less you say about your past the better?" he asked, carried beyond all prudence, all kindness, by a burning sense of his wrongs.

For a full minute they looked steadily at each other; her womanly intuition enabled her to read the thoughts that owed their existence to Helen, and her weakened affection for him seemed to fall dead.

"If I live to be a hundred," she said slowly, her face hard with scorn, "I will never forgive you for that insult, even though I know it originated with the woman who has so strangely perverted your moral nature. Your wickedness and covetousness deserve punishment, and it has overtaken you in the way you will feel most; for though you have no legal claim upon my money, I always intended to provide for you when you came of age, and should have carried out the intention, in spite of the fact that you married against my wish, had not your wife's character so soon revealed itself. Recent events have shown me that you are equally unworthy, and not a dollar of mine shall ever pass into your possession and hers unless you come to actual want."

A dead silence ensued. Both listeners saw that Mrs. Atherton was in earnest, and had been pushed too far, though righteously pushed; for they had so blinded themselves by specious reasoning that even now they would not admit they were wrong. It was Helen who broke the dreary pause.

"You hated me from the first," she said in a voice uneven with rage, "and have well calculated your revenge. You know I would die for Harvey, and by making me the apparent medium of his downfall, you try to inflict upon me the most harrowing of punishments. But here you fail, Gladys Atherton, for it is you who have been his ruin. You have scorned me, not in words, perhaps, but with meaning looks, for having deceived him into marriage before your appointed time, I know how you regard my people—that, too, your looks have told. And what are you, pray, with all your pride? In the beginning a bold, pampered girl following the first man who thought it worth his while to beckon her to shame, for aught she knew or cared, so that her fancy was gratified."

"Harvey," cried Gladys, deadly pale, "bid this impious woman, be silent. She is speaking of your mother."

"A mother to be proud of, truly!" exclaimed Helen, her eyes imperatively demanding Harvey's silence, though she spoke so fast and loud that he had no opportunity to interrupt her, even had he wished. "The wife of a drunkard and gambler, the widow of a criminal! I despise you, and so shall your son. Be very sure of that. But we'll have our right if we claim them in a court of law. I doubt if you have power to withhold what you call your money. How do we know your story is true? You were not squeamish in the past, when you had a purpose to serve, it appears. Why should you be over particular at this late day?"

Gladys, still pale, but with her former look of scorn intensified, turned to Harvey.

"You have heard your wife, sir. I have no claim upon her affection, as on yours, and care nothing for her opinion unless you uphold her in it. Do you?"

"This is not the time for heroic speeches and professions of belief in virtues that never existed," he said sulkily, his eyes on Helen's prompting face. "We must recognize the fact that the person who marries unwisely entails certain consequences upon the children of the marriage for which he or she owes them compensation. Through you I am my grandfather's natural heir, and should not be robbed of my birthright. If I am covetous in urging a just claim, what then are you? In keeping control of your property you may be right by law, but you are acting dishonestly none the

less. So far I fully agree with my wife."

With a low cry Gladys fell back in her chair. As if waiting for the signal, Phoebe entered the room, a terrible old woman in her wrath.

"I am going to tell them the truth, Miss Gladys, whether you forbid it or not," she defiantly announced. "As Mr. Harvey says, this isn't the time for pretending, and I guess we can settle the matter out of court." Gladys up a protesting hand, but she did not heed. "I'll make short work of it. You're wrong in thinking I have any sort of share in the misadventure. Mr. Harvey, because of my father, Joseph Stirling, your grandfather, didn't own a dollar in it. He married twice—first a poor girl who died when her baby was born; then a rich young heiress, who also died early in life leaving her money to her only child, Gladys, your aunt or half aunt; for you are the son of the daughter of the first marriage."

"My God! The matter is not my mother?" cried Harvey, after a stupefied pause. He sprang to his feet and gazed wildly from one face to the other, with the look of a man pierced to the heart. "Madam, madam, is this true?" he impudently asked. Then, meeting Gladys' compassionate yet strangely cold look, with a half sob he threw himself into chair and buried his face in his hands, never moving until Phoebe had finally ceased speaking.

Helen said nothing; her burning eyes were fixed on the housekeeper; she knew she told the truth, and that from the fair domain which had promised to be her garden of Eden, she was banished forever.

"You know how your mother married. Mr. Stirling swore he would never forgive her; but he was a just man, and sent her the money she would have had when she came of age. It didn't last long. Twenty thousand dollars isn't much in the hands of a gambler. And when it was gone he went too."

"Miss Gladys was at school when your poor mother begged her way to New York, her baby in her arms. She did not seek her father; she knew his unforgiving spirit, but she sent for me—I was in his service—from the hospital where she lay dying, and by her deathbed I promised never to forsake her child, and to hide him from her husband, Matthew Harvey, who would try to make use of the boy to get money from his young aunt, Gladys. He was bad enough for anything, she said. I had a little money saved, and put you to board with a woman I knew. I always had it in my mind to tell the master some day; but he had a heart trouble and I daresn't do it."

"I hadn't a chance to worry long, for in a few months after your mother died he fell dead in the street, without a moment's warning. Miss Gladys came home for the funeral, and after the first shock was over I told her everything. She had a tender heart, my lamb, and wouldn't rest till she had seen her poor sister's baby."

CHAPTER XI.

Phoebe paused, overcome by sad memories. Gladys, unnerved by all that had passed, was crying, but not as the wholly desolate weep; she no longer strove to prevent her old friend from speaking.

"Your mother's sorrows had left their mark on you, Mr. Harvey; you were a sad little tot, with mournful eyes and a timorous manner. You ran to my dear young lady, attracted by her sweet voice, and hid your face in her gown, and when we left they had to drag you away; we heard your screams as the carriage drove off, and Miss Gladys sobbed all the way home. After that, the idea of your growing up among strangers, with no one to love you—just considered for the money you brought, mayhap—was terrible to her. We must take you far away to a corner in the west, where none would know us, and you'd be safe from your father. I begged her on my knees not to spoil her life; but she coaxed and argued and cried till she got the better of me, and we left New York unhindered, her having no relations."

"She put on widow's mourning, to make her look older and prevent explanations, and took your grandmother's family name. Your mother had given it you for a first name; it was easy to change it round."

"Rockville was only a village then; people hadn't taken to coming here for their healths, and what are now streets were farms. It was just the place to be lost in, and until Mrs. Leonard's doctor sent her here last year, nobody but the family lawyer—Mrs. Leonard is his daughter—knew what had become of the pretty Miss Stirling. How much she has been to you, Mr. Harvey, you well know. She was only eighteen when she left New York, a light-hearted girl. Now she's turned thirty-six, with a great sorrow on her of your brewing. She'll get over it, for she's young yet. But you've made a strange return to her for wasted years!"

Not a word was spoken by either of the other three. Helen stole over to her husband and timidly laid her hand on his shoulder. All self-confidence was gone from her bearing; she seemed cowed and beaten; and for the first time her loving touch was unheeded. Phoebe looked at her frowningly.

"Ay, comfort him if you can; he'll have need of it," she said in a hard

tone. "If he comes to ruin he may thank you; but for your avarice and meddling he'd have had a good bit of money—a hundred thousand dollars, no less. He'll never have it now. Perhaps he'll not reproach you just yet for his loss, since he helped you out with the devilry you called your duty. But he'll know it's to you he owes it—he wasn't full grown when you took him in hand, and easily led—and the thought will grow and grow until one day he'll despise you in his heart, and turn from the love that dragged him down."

As if that day had come, Helen moved nearer to her husband, the rich color ebbing even from her lips. Gladys half rose.

"Be merciful, Phoebe," she gently remonstrated. "You are too hard. Go now, dear old friend; enough has been said."

Muttering still, Phoebe lumbered away, furtively wiping her eyes; under her bristling exterior beat a warm heart, and, despite her anger, she felt for Harvey in his hour of darkness. As the door closed behind her he raised his head, revealing a white, wild face.

"I must speak to my—my aunt alone, Helen," he said hoarsely. "Leave us together."

(To be Continued.)

MORE PLAY NEEDED.

Increasing Number of Poorly Developed Men and Women.

It used to be that boys and men who worked had shorter working hours and less work to do in the same time than do the men and boys of today. Consequently they had better opportunities and greater inclination for recreation of the healthiest kind. They felt able to rise in the morning early enough for gymnastics, their work the day before not being so irksome as to make them feel they needed every moment of sleep possible, as is often the case nowadays, and in the late afternoons and evenings they could enjoy an athletic game. The girls some years ago exerted much less than they do now, their course of study usually being mild in comparison to the average of today, and few of them were in business or the professions. Therefore their need was less for strengthening exercises. Although the mental and physical work that the men and women of this generation do has greatly increased they do not seem to have realized that a counteracting force is absolutely necessary for the number is growing larger every day. We cannot help observing it on the streets and everywhere—of men and women who slouch along with drooping figure and dragging steps, the picture of undeveloped physical manhood and womanhood. There is nothing more pleasant to look upon than a strong, graceful, happy young man or woman and the last two qualities depend on the first and all three on physical exercise and development. Therefore, you know what you must do to be happy and attractive, and it is your duty to be all three. You can, of course, in varying degree and you ought to add much to the beauty of this old world whose fine men and women are its most splendid features.

GAME KILLING.

Denver Times Sees Danger in Allowing Indians Latitude.

There is a curious disposition among the people to make sport of Gov. Thomas' crusade against the Indians who are said to be killing game outside their reservation and within the boundaries of this state. That it has a comic side is probably not to be denied. But it may also have a very serious side. The border country has not had any Indian experiences of late, and the American people show an astonishing facility in forgetting unpleasant things. Those who know anything about the Indian know that the kind of movement now begun may very easily incite him to acts which will have a very serious significance to outlying settlers and possibly small villages. The Indians know as well as Gov. Thomas does that the federal power is not behind this movement. They rarely forego a chance for immediate revenge because of the possibility of a remote reprisal. That the state can prevail in the end nobody doubts, perhaps, but aside from the harvest of trouble and loss of life we may have to reap, citizens are also looking to the harvest of debt that must follow, though we are now at our wits' end to devise means for paying what we already owe. Some of them are inclined to suspect the governor of a kind of "after us, the deluge" policy. —Denver Times.

American Books in Mexico.

Mexico buys more American books than does France, and nearly as many as Germany. Much of this trade is due to the large resident American population to be found in Mexican cities and to the demand from mining camps, where Americans are living, and not a little is due to the growing spread of English among the Mexican people. There is a strong tendency here in favor of popularizing the English language, and the learners of that tongue comprise professional men in middle life as well as thousands of youth. Some large institutions of learning have put English ahead of French.—Mexican Herald.

Quarantine Against Tuberculosis.

Tuberculosis has been placed among the diseases which are subject to quarantine. The commissioner of immigration has so decided in the case of a Japanese who arrived at San Francisco from Japan ill with this lung trouble. It was decided that the patient could not land, but must return to the port from which he sailed.



JOHN QUINCY ADAMS, (First Defender of the Metric System.) of one-tenth of a meter. The unit of weight is the gram which is the weight of a cubic centimeter of water.

A standard meter was constructed in 1799 by an international commission representing France, Holland, Sweden, Switzerland, Denmark, Spain, Savoy, and the Roman, Cisalpine, and Ligurian republics. It was made of platinum and was deposited in the palace of archives in Paris and was declared to be the definitive basis of the metric system forever.

General Chaffee in Peking.

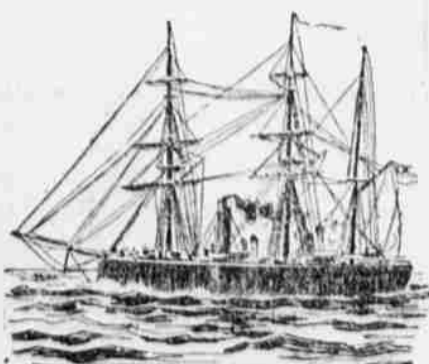
The Peking correspondents of the London newspapers do not approve of General Chaffee and his American methods. They complain of the guard that he posted to prevent looting. They report that the ministers are offended by General Chaffee's individual assumption of authority in issuing orders to prevent looting, and that Field Marshal Count von Waldersee is not pleased with the independent tone of General Chaffee's communications to headquarters. They report also that General Chaffee has created dissatisfaction by his refusal to join the other governments in giving increased salaries to officers assigned to duty in the provisional government at at Tientsin.

This is a British view. The correspondent of the Chicago Inter Ocean at Peking takes a different view. He reports that the provisional government at Tientsin is cumbersome, expensive, and unsatisfactory; that its chief object seems to be to supply sinecures for military officers; that the high salaries paid condemn western government in the eyes of the Chinese, and that the provisional government has made a demand for unlimited power regarding public works, the levying of taxes, contributions, import duties, etc.

To all this General Chaffee, commanding the American troops, objected. He opposed the proposition to give the Tientsin provisional government unlimited control of the territory. He declined to approve the proposition to inaugurate new public works except such as were temporarily necessary, and he instructed Captain Foote, the American representative in the government, not to accept any remuneration beyond his army pay.

Americanizing England.

The Britisher is in a plight about the introduction into London of the whizzing, whistling American trolley. The work of the trolley car in the development of American towns and in relieving the congestion of the big cities is one of the marvels of the time. It goes tearing through the country, linking towns and cities and spilling the denizens of the crowded and smoky cities over woodland and prairie. As an evangel of progress it is a ripper. But it does not follow from all this that



THE ICARUS.

why. The Icarus is not a modern vessel, but still she should be equal to bringing the Columbians to time.

The late Marcus Daly invested several hundred thousand dollars in valuable copper property in Mexico during the past year. It is reported that these mines will now be disposed of and that they may be acquired by W. A. Clark of Montana, who already has mining interests in Mexico. Representatives of Mr. Clark are now in Mexico investigating certain copper properties.