# THE ADVERTISER.

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### A WARNING FROM THE SAWDUST RING.

The other day, in Union Square,
I met my old friend Brown,
His face was deeply lined with care—
He seemed all broken down;
And yet he used to be a most
Successful circus-clown.

"Why aren't you on the road?" asked I.
He turned on me a gaze
Of sad surprise; then heaved a sigh,
And said: "Alas! the days
When I could get a date are gone;
Or, as they say in plays:

"I lag superfluous to the stage?"
"Why, nonsense, Brown," said I;
"You surely have not reached the age
At which a man should die?"
"I've reached the age," quoth he, "at which
The sawdust will not fly!"

"It happened in this wise," said Brown;
"For twenty years or more
I earned my living as a clown,
Repeating o'er and o'er
The antiquated jokes you heard
When in your pinafore.

"At last it came into my head
'Twould be a glorious thing
If something novel could be said
Within a circus-ring;
A brand-new joke I therefore tried,
One luckless day, to sing.

"And this is why you see me here;
For when that joke they heard,
The people rose up on their ear,
As by one impulse stirred,
And threatened there to mob the show;
They did, upon my word!

"And since that day I've tried in vain
My business to pursue;
For all the managers explain
That it would never do
To have a circus clown who once
Had got off something new!"
—*N. Y. Clipper.*

### THE STORY OF THE TIDES.

**What They Tell of the Growing Length of the Day and of the Birth of the Moon.**

From a scientific point of view, the work done by the tides is of unspeakable importance. Whence is this energy derived with which the tides do their work? If the tides are caused by the moon, the energy they possess must also be derived from the moon. This looks plain enough, but unfortunately it is not true. Would it be true to assert that the finger of the rifleman which pulls the trigger supplies the energy with which the rifle-bullet is animated? Of course it would not. The energy is derived from the explosion of the gunpowder, and the pulling of the trigger is merely the means by which that energy is liberated. In a somewhat similar manner the tidal wave produced by the moon is the means whereby a part of the energy stored in the earth is compelled to expend itself in work. Let me illustrate this by a comparison between the earth rotating on its axis and the fly-wheel of an engine. The fly-wheel is a sort of reservoir into which the engine pours its power at each stroke of the piston. The various machines in the mill merely draw off the power from the store accumulated in the fly-wheel. The earth is like a gigantic fly-wheel detached from the engine, though still connected with the machines in the mill. In that mighty fly-wheel a stupendous quantity of energy is stored up, and a stupendous quantity of energy would be given out before that fly-wheel would come to rest. The earth's rotation is the reservoir from whence the tides draw the energy they require for doing work. Hence it is that though the tides are caused by the moon, yet whenever they require energy they draw on the supply ready to hand in the rotation of the earth. The earth differs from the fly-wheel of the engine in a very important point. As the energy is withdrawn from the fly-wheel by the machines in the mill, so it is restored thereto by the power of the steam-engine, and the fly runs uniformly. But the earth is merely the fly-wheel without the engine. When the work done by the tides withdraws energy from the earth, that energy is never restored. It, therefore, follows that the earth's rotation must be decreasing. This leads to a consequence of the most wonderful importance. It tells us that the speed with which the earth rotates on its axis is diminishing. We can state the result in a manner which has the merits of simplicity and brevity. The tides are increasing the length of the day. At present, no doubt, the effect of the tides in changing the length of the day is very small. A day now is not appreciably longer than a day a hundred years ago. Even in a thousand years the change in the length of the day is only a fraction of a second. But the importance arises from the fact that the change, slow though it is, lies always in one direction. The day is continually increasing. In millions of years the accumulated effect becomes not only appreciable, but even of startling magnitude.

The change in the length of the day must involve a corresponding change in the motion of the moon. If the moon acts on the earth, so, conversely, does the earth react upon the moon. The earth is tormented by the moon, so it strives to drive away its persecutor. At present the moon revolves round the earth at a distance of about 240,000 miles. The reaction of the earth tends to increase that distance, and to force the moon to revolve in an orbit which is continually getting larger and larger. As thousands of years roll on, the length of the day increases second by second, and the distance of the moon increases mile by mile. A million years ago the day, probably, contained some minutes less than our present day of twenty-four hours. Our retrospect does not halt here: we at once project our view back to an incredibly remote epoch which was a crisis in the history of our system. It must have been at least 50,000,000 years ago. It may have been very much earlier. This crisis was the interesting occasion when the moon was born. The length of the day was only a very few hours. If we call it three hours we shall not be far from the truth. Perhaps you may think that if we looked back to a still earlier epoch, the day would become still less, and finally disappear altogether! This is, however, not the case. The day can never have been much less than three hours in the present order of things. Everybody knows that the earth is not sphere, but there is a protuberance at the equator, so that, as our school-books tell us, the earth is shaped like an orange. It is well known that this protuberance is due to the rotation of the earth on its axis, by which the equatorial parts bulge out by centrifugal force. The quicker the earth rotates the greater is the protuberance. If, however, the rate of rotation exceeds a certain limit, the equatorial portions of the earth could no longer cling together. The attraction which unites them would be overcome by centrifugal force, and a general break-up would occur. It can be shown that the rotation of the earth when on the point of rupture corresponds to a length of the day somewhere about the critical value of three hours which we have already adopted. It is therefore impossible for us to suppose a day much shorter than three hours.

Let us leave the earth for a few minutes and examine the past history of the moon. We have seen the moon revolve around the earth in an ever-widening orbit, and consequently the moon in ancient times must have been nearer the earth than it is now. No doubt the change is slow. There is not much difference between the orbit of the moon a thousand years ago and the orbit in which the moon is now moving. But when we rise to millions of years the difference becomes very appreciable. Thirty or forty millions of years ago the moon was much closer to the earth than it is at present, very possibly the moon was then only half its present distance. We must, however, look still earlier, to a certain epoch not less than fifty millions of years ago. At that epoch the moon must have been so close to the earth that the two bodies were almost touching. Everybody knows that the moon revolves now around the earth in a period of twenty-seven days. The period depends upon the distance between the earth and the moon. In earlier times the month must have been shorter than our present month. Some millions of years ago the moon completed its journey in a week, instead of taking twenty-eight days, as at present. Looking back earlier still, we find the month has dwindled down to a day, then down to a few hours, until at that wondrous epoch, when the moon was almost touching the earth, the moon spun around the earth once every three hours.

In those ancient times I see our earth to be a noble globe, as it is at present. Yet it is not partly covered with oceans and partly clothed with verdure. The primeval earth seems rather a fiery and half-molton mass, where no organic life can dwell. Instead of the atmosphere which we now have, see a dense mass of vapors, in which, perhaps, all the oceans of the earth are suspended as clouds. I see that the sun still rises and sets to give the succession of day and of night, but the day and the night together only amount to three hours, instead of twenty-four. Almost touching the chaotic mass of the earth is a much smaller and equally chaotic body. Around the earth I see this small body rapidly rotating. The two revolve together, as if they were bound by invisible bands. The smaller body is the moon.—*London Nature.*

### Humorous Writing.

Almost every one privately indulges in the idea that he would become a celebrated humorist writer if he were only to try.

He takes up a magazine or newspaper and reads a humorous article, and says to himself: "If I only had time I could do vastly better than that."

Now, friend, suppose you take time and try.

If you can produce a first-class sketch your fortune is made. You need not plod along in counting houses or vegetate behind the counter of dry goods stores selling calico at a profit of two cents a yard. You can just go on with your first-class humor, and fix your own valuation upon it, never fearing but it will be paid.

But the fact of it is you are a little mistaken. This humorous business is much easier in theory than in practice. Anybody can criticise and find fault with our funny writers, but the question is, can that same "anybody" do any better? If so, let him do it.

You think it a very simple and easy thing to sit down with a pen in your fingers and a sheet of paper before you and indite thoughts which shall convulse the world with laughter, and sayings which shall be repeated for years to come.

Well, we are all willing you should try, and when you achieve success we will laugh at your witty sayings and sun ourselves in the flash of your diamonds and not feel any envy. We are apt to look upon humorous writings as a pastime, as requiring less thought and intellectual power than the heavier essays which crowd reviews; but in this we are mistaken. Your true humorist must have wonderful imagination, a keen sense of the ridiculous, a thorough understanding of men, a generous power of language, delicacy, sensibility, tenderness and a strong love of humankind.—*Mobile Register.*

### FACTS AND FIGURES.

—Chicago has 50,000 girls working at the various trades for the average wages of $2 a week.

—The production of anthracite coal in 1881 was about 28,500,000 tons. An increase of 1,500,000 tons is expected to occur this year.

—There are in England and Wales 10,000 women who are classed as habitual drunkards. The number of men in the same category is 27,878.

—About 30,000 people in the city of Buffalo are supported by the railroad companies. The amount expended there by the different roads in wages alone will foot up over $3,000,000 annually.

—The securities held by the Hartford (Conn.) banks and insurance companies, during the two years ending December 31, increased in value $8,765,026, or more than $12,000 for every day of the two years, Sundays included.

—It has already been noted that fires were unusually prevalent and disastrous last year. There was no exception to the rule in New York City, where the losses by fire in 1881 were $5,800,000, against $3,183,000 the previous year. The fires numbered 1,780.

—Late statistics show that to the 36,000,000 Japanese people there are only about 1,000,000 head of cattle, or two head to every one hundred people; while in the United States there are seventy-three head of cattle to every one hundred people.

—The amount of money in circulation in the country at present is estimated at the enormous sum of $1,456,681,016, composed of: Legal tender notes, $346,681,016; National bank notes, $361,000,000; Gold, $563,000,000; Silver, $186,000,000.

—The Chicago *Tribune* states the number of private banks in sixteen cities at 717, of which 508 are in New York City, 52 in Philadelphia, 47 in Boston, 24 in Chicago, 19 in Baltimore, 11 in St. Louis, 9 in San Francisco, 8 in Cincinnati, 7 in Pittsburgh, 7 in Detroit, 6 in Washington, 5 in New Orleans, 4 in Cleveland, 4 in Milwaukee, 3 in Louisville, 3 in Albany. Capital, $58,534,300; deposits (New Orleans omitted) $89,996,545.

—During the past year there has been a steady increase in the number of money-orders sent from and received at the New York Post-office. The total number of domestic and foreign money-orders issued during the year ending December 31, was 64,288, and the amount was $1,338,083.67. The fees thereon were $14,670.55. Drafts were paid on letter of credit account to the amount of $10,225,592.05. The domestic and foreign orders paid and repaid numbered 883,802, and the amount $8,332,861.02. There were 362,632 international orders received and certified to Europe for $6,179,718.75, which, with other items, makes the total business of the year $58,992,768.81, an increase over 1880 of $7,761,019.77.

### WIT AND WISDOM.

—"Its scold day when I get left," Xantippe remarked when Socrates went off to the circus without her.—*Burlington Hawkeye.*

—It has been discovered that the Arabic for cat is "gitt." This is the English form of speech applied to tramps.—*N. O. Picayune.*

—A New York paper says there is no champion billiard player now. This national calamity should be looked after at once.—*N. O. Picayune.*

—The man who has all knowledge at his fingers' ends should not bite his nails; he might bite off more than he could conveniently chew.—*Boston Transcript.*

—A priest once asked a condemned criminal in a Paris jail: "What kind of a conscience have you?" "It's as good as new," replied the prisoner, "for I have never used it."

—Talmage says: "Men of talent and commanding intellect are never good dancers." That is the first time we have seen any public allusion to our awkwardness in dancing.—*Texas Siftings.*

—Lady—"Marie, go and see if the butcher calves feet has?" Marie, back coming—"Madam, I know not. I have them not yet seen, could." Lady—"What?" Marie—"If he calves has. He has boots on."

—The principal amusement in rural New York this winter is guessing at the weight of a hog. The guessers pay fifty cents a chance, then they guess, and the man who guesses nearest the correct weight takes the hog. At a village near Croton Lake one hundred and twenty-three men took chances and four men guessed the exact weight—five hundred and eighty-nine pounds. Thus does the cultured orient gild the precious moments with the germs of intellectual growth, while in the rude unlettered West the ignorant masses hunger for the food of thought, and pine away in sad æsthetic inanition.—*Burlington Hawkeye.*

—A Missouri paper tells of a farmer who owed Walt Perkins twenty-five dollars, and had owed him for years. One day he met Walt and said: "Don't be uneasy, Walt. I have the thing all fixed so that I can pay you." Walt asked him how he had got it fixed, and the old granger said: "Well, Walt, if nothing happens, next year I hope to raise a good crop of corn, and I intend to trade some of the corn for a yoke of oxen, and I know an old man in St. Charles County that owns an old mare, and he wants to trade her for a yoke of oxen. Now, Walt, when I raise the corn, and get the oxen, I will make the trade for the old mare, and then I will bring her home and raise colts—and Walt, the very first mule colt I sell you shall have the money."

### RELIGIOUS AND EDUCATIONAL.

—The gifts of Mr. George I. Seney, of Brooklyn, to Wesleyan University now amount to $550,000.

—Two ladies, Mrs. Caroline Wyckoff and Mrs. Mary Olin, were recently elected trustees of the Presbyterian church of Perry, Wyoming County, N. Y.

—The total number of students in regular attendance at Oberlin College, Oberlin, O., is, according to the latest catalogue of that institution, 1,325, of which number 809 are residents of Ohio.

—The Lutheran Synod of Missouri numbers 847 pastors, 970 congregations and 40,722 voting (male) members. It has 868 parochial schools, with 44,323 children in attendance. The baptisms last year were 18,735; confirmations, 8,380; funerals, 6,640.

—The grandson of Horace Binney occupies the same room at Harvard College which his illustrious ancestor lived in seventy years ago, and many of the old books and pictures are back in their places after an absence of three score years and ten.

—It is proposed in Switzerland to pass a Federal School Law for the government of the schools which are at present under the control of the separate cantons. One section of this law provides that every youth, after leaving the primary school, shall spend at least two hours every week in a night school.

—Shaw University, a Baptist institution for the education of the freedmen, is reported to have graduated over a thousand teachers and preachers during its existence. These have gone out among their race and have proved most efficient home missionaries, especially in organizing and carrying on Sunday-schools.

—The Rev. George O. Barnes is conducting, in Louisville, a religious revival which in most respects is not uncommon; but he introduces a novelty by carrying a bottle of oil as he goes among the penitents and anointing them on their foreheads. He claims Scriptural authority for this ceremony. Although harshly criticised for his oddities, he is said to be sincere in his work—so sincere that he will take no pay except food and lodging—and his converts are numerous.

—A story is told of a member of a certain theological seminary who was so sensitive as to any suspicion of plagiarism that he never allowed himself to make the slightest quotation without giving his authority. On one occasion he commenced grace at breakfast thus: "Lord, we thank Thee that we have awakened from the sleep which a writer in the Edinburgh *Review* has called 'the image of death.'"—*Methodist.*

—There are 5,765 mission stations now, against 502 fifty years ago. The number of ordained missionaries has increased, in the same time, from 656 to 6,696, and the assistants from 1,236 to 33,856, and the communicants from 70,000 to 857,382. The annual contribution from America for the work has grown from $250,000 to $2,500,000 in the same period. During 1880 Great Britain contributed $5,544,750, nearly one-half of which was given by the Established Church.

### The Impending Ruin of Chios.

Chios would, if a telegram from Athens prove correct, seem hardly a profitable place for the investment of money in freehold land. Not only have earthquakes of late given the inhabitants more than ordinary trouble, but the ground is gradually sinking, hot springs are everywhere appearing, and the inhabitants look forward to finding the whole island submerged in the sea at no very distant date. This does not seem to be by any means a pleasant prospect for the natives who, while they deplore the instability of the land which they have been used to regard as home, are scarcely prepared to share its fortunes should it sink much lower than at present. But as in the darkest storm there is often a streak of light, so in the troubles of Chios there is one section at least of humanity that will find room for consolation. It is in Chios that the finest and headiest raki is made; the raki which beguiles even the followers of Mohammed, and makes the greatest Christians of Athens at times a little unsteady in their gait. With Chios at the bottom of the sea, this seductive fluid will enchant the Eastern epicure no more; and, in default of the tasteful liquor, he will probably drink nothing but water. The disappearance of Chios might accordingly be regarded as a great temperance movement in the Orient.—*London Telegraph.*

### The Rifle Bullet.

The rifle bullet in use in the United States service is formed by compression; is made of lead alloyed with 6.6 per cent. of tin and weighs .405 grains; in form it is cylindro-conoidal, with a hemispherical head and a small cavity in the base; it has three broad grooves on the cylindrical part to contain the lubricant; it enters more than one-half its length into the case, which thus covers and protects the lubricant; it is securely held in place by turning in the end of the case closely against its sides; this crimping effectually closes the case, and protects the powder from moisture, making the cartridge perfectly waterproof, but is attended with a loss of initial velocity to the ball of twenty-three feet. Bullets for long range firing have usually one part of tin to twenty of lead; a soft lead bullet also inflicts a worse wound than one that is hardened. The word caliber applied first to the weight of the bullet, then to the diameter, which determined the diameter of the gun, now signifies the diameter of the bore of any firearm, and is expressed in inches or fractional part of an inch.—*N. Y. Graphic.*

### GARFIELD'S ASSASSIN.

**The Last Day of the Trial—"Guilty as Indicted"—The Verdict Received With Uproarous Demonstrations of Approval—The Convicted Murderer Taken to Jail Amid the Jeers and Yells of an Excited Crowd.**

WASHINGTON, January 25.

After the jury had been out about twenty minutes, a recess was taken until 5:30 o'clock. Many of the audience, who had virtually been imprisoned since 9:30 in the morning, availed themselves of the opportunity to obtain fresh air and lunch. The prisoner, at his request, had been allowed, soon after the jury left the court-room, to retire to the little room he has occupied since the trial began as a waiting room during recess. Before leaving the court-room he evinced considerable nervousness, but on getting away to comparative seclusion his usual composure and assurance soon returned to him. He sent out for some apples with which he treated his attendants, meanwhile chatting familiarly and good-naturedly. He was asked what he thought the jury would do, and replied: "I think they will acquit me or disagree, don't you?"

Within ten minutes after recess had been taken the jury called to the bailiff in waiting that they were ready with their verdict.

They were informed that a recess had been taken and Judge Cox had left the court-room. So they remained in their room until the court reassembled.

The rumor that the jury had agreed was quickly spread from one to another, and the excited crowd surged back into the court-room, and anxiously awaited what all seemed to expect, a verdict of guilty. The musty, antique room is devoid of gas, and a score or more of candles which had been placed upon the desks of Judge, counsel and reporters imparted a weird and fanciful, unnatural aspect to the grim old place. The shadows thrown upon the dark background of the walls seemed like fitting specters to usher in the somber procession of those who held in their hands the destiny of a human life.

First came the prisoner, with a quick, nervous step, and, as he seated himself in the dock, perhaps for the last time, the light of a solitary candle fell full upon his face, and disclosed its more than usual pallor. Not a tremor of the limbs or movement of the muscles of the face was observable as he threw back his head and fixed his gaze upon the door through which the jury were to enter.

Judge Cox soon afterward took his seat. The crier called "Order," and the jury, at 5:35, filed slowly into their seats. Every sound was hushed save the voice of the clerk as he propounded to the foreman the usual inquiry: "Gentlemen of the jury, have you agreed upon a verdict?"

Clear and distinct came the reply: "We have."

"What is your verdict, guilty or not guilty?"

With equal distinctness came the reply: "Guilty as indicted."

Then the pent-up feelings of the crowd found expression in uproarous demonstrations of applause and approval.

"Order," "order," shouted the bailiff.

Mr. Scoville and counsel for the prosecution were simultaneously upon their feet. Mr. Scoville attempted to address the Court, but the District-Attorney shouted: "Wait till we have the verdict complete and in due form of law."

Order was at length restored, and the clerk, again addressing the jury, said:

"Your foreman says: 'Guilty, as indicted.' So say we all of us?" "We do," all responded.

Another demonstration of approval followed this announcement, but not so prolonged as the first. Mr. Scoville demanded a poll of the jury, which was granted, and each juror was called by name, and each, in a firm voice, promptly responded: "Guilty." As the last name was called, the prisoner shrieked:

"My blood will be upon the heads of that jury. Don't you forget it."

Mr. Scoville again addressed the Court, saying: "Your Honor, I do not desire to forfeit any right I may have under the law as a practice in this District. If there is anything that I ought to do now to save those rights, I would be indebted to your Honor to indicate it to me."

Judge Cox, in reply, assured him he should have every opportunity, that the charge would be furnished him in print to-morrow, and he would be accorded all the time allowed by law in which to file his exception, and that he would also be entitled to four days within which to move arrest of judgment.

Guiteau, who, from the moment Judge Cox began delivering his charge, had dropped completely his air of flippant arrogance, and sat with rigid features and compressed lips, called out in tones of desperation: "God will avenge this outrage!"

Judge Cox then turned to the jury and said: "Gentlemen of the jury: I cannot express too many thanks for the manner in which you have discharged your duty. You have richly merited the thanks of your countrymen, and I feel assured you will take with you to your homes the approval of your consciences. With thanks, gentlemen of the jury, I dismiss you."

With this announcement the court was declared adjourned. And now the famous trial, which has absorbed public interest and attention for more than ten weeks, was ended.

The crowd quickly left the court-room, and the prisoner, gesticulating with his manacled hands, was led out. As he passed the reporters' table he leaned over and called out to an acquaintance: "The court in banc will reverse this business."

His appearance was that of a man deeply moved with indignation at some outrage or indignity which had been put upon him. As he was being put in the van the crowd of men and boys yelled and shouted themselves hoarse in mockery of the prisoner's boast: "The American press and people are with me."

The van was quickly driven away, followed by the jeers and yells of the crowd.

Mr. Scoville will probably file a motion in arrest of judgment and for a new trial on exceptions. The law gives defendant four days to file a motion and reasons for a new trial, and it is customary for the court to sit some day to hear argument thereon. Should this motion be overruled, defendant will appeal to the general term, and under the law the defendant is entitled to a suspension of sentence until after the next general term, not exceeding thirty days. The January general term is now in session, and the case cannot go there, but will be appealable to the April term. It is the custom at the April term to adjourn until September, taking a recess over July and August. But should it be closed by the latter part of May, then, if judgment is affirmed, the execution might take place in July.