MODERN SCIENTIFIC DISCOVERY.

Application of Science to the Useful Arts What the Future Holds in Store.

When a new discovery is announced, society sits and stares at the discoverer as if to say, Well, what are you going to do about it? Capitalists dodge him when he calls. By common consent he is voted a bore. He is generally poor. A long course of meditation on mathematical problems has imparted a dazed air to his physiognomy. His clothes are apt to be shabby. His eyes have a hungry look. He is generally a one-idea man; on all other subjects than the one he has in hand he is apt to be dull and ill-informed. Men of the world know that, as a rule, such men are either enthusiasts or impostors. It is safe betting that nine out of ten new discoveries or inventions will turn out to be useless or frauds. The prudent capitalist never embarks money in enterprises where the chances are nine to one against success.

And yet there are great discoveries in course of evolution which are destined to revolutionize the world, and to pile up fortunes for their patentees compared to which the colossal wealth acquired by the owners of the Bell telephone will seem triffing. Take the one subject of aerial navigation. A hundred years have elapsed since Montgolfier demonstrated the navigablility of the air. The missing link with him was the power to direct his balloon. Fifty years afterward John Wise believed he had discovered the secret; he declared that the air lay in strata, in some of which the wind was invariable. The defect of his theory was that his premises were fatse-there is no aerial stratum in which the wind is invariable. Since 1880 Capt. Krebs and others in France and Germany have actually constructed dirigible balloons. Capt. Krebs made four miles an hour against the wind. Of course, this is not very fast traveling; but the first railway carriage only made six miles an hour. If Krebs can sail four miles an hour against the wind, he can, by perfecting his machinery, sail forty. When he does, railroad passenger travel will be at an end and the age of aerial travel will begin.

In a late number of this journal we noticed the progress that is being made in the use of electricity as a motor. It seems that a large proportion of the boots and the clothing that is made in San Francisco is to some extent sewed by electricity. We say "to some extent," because thus far the motors are only an auxiliary to the sewing machines; the human hand and foot are still required, though their labor is reduced. But it is obvious that the next step in the course of invention will be to devolve the whole work upon the machine when it is once started. One girl will be able to manage half a dozen machines working simultaneously. There is no limit to the use of electricity as a motor, if once it can be taught its business.

Surgery is a science which seems destined to benefit largely by the progress of science. We noticed the other day the admirable use to which the telephone had been put for purposes of auscultation, and for the diagnosis of throat and lung diseases, where the patient could not visit the doctor. Here is a field of wide promise for the scientist. The tendency of medical and surgical science is toward the adoption of specialties; men of the highest scientific rank will evidently hereafter devote themselves to a single organ, or to a single class of diseases, and will deal with them exclusively. Such men will be unable to spare time to travel around visiting patients, and in many cases patients will be unable to visit them. The telephone will bring the doctor to the sick man's bedside, and with the assistance of a photograph and a careful record of symptoms from the family physician, the specialist will be enabled to diagnose and prescribe. Surgery has already derived some help from the experiments which have been made with the oxy-hydrogen and other fierce lights, but the progress has not been as large as might be wished. It seems possible to make a light so piercing that it will enable a practiced eye to see through the tissues. When this is accomplished the physician will call in the aid of the surgeon to deal with diseases of the heart, the liver, the kidneys, the bowels, the lungs, the throat, the brain; instead of an empirical diagnosis based on external symptoms, the surgeon will see what the trouble is not through a glass darkly, but clearly with his own eyesight; and the patient will have a better chance of recovery than now when the doctor doses him with nitrate of potash to cure a pain which he calls rheumatism because he doesn't know what it is, and fills him up with quinine to antidote malarial poison.-San Francisco Chronicle.

An Iguana from Brazil. "I want to show you a new and wonder

living thing that arrived at the garden lately," said Head Keeper Byrne, as he led the way to the snake-house the other day. The new arrival is about as horrible and vet as dandified a looking fellow as can be found on the banks of the Schuylkill. He is in a glass case. It is the iguana, a species of the lizard family, and was forwarded to the garden by the commissioners of fisheries of Massachusetts, with the request that when he dies his body shall be sent to the Smithsonian institution at Washington. The iguana does not look much like dying, although the only one of its kind that was ever previously brought to this country died the day he was brought to the zoological garden, some years ago. His body is a drab color, mixed with black streaks. His neck and head are erect; he has a long tail like an alligator, and four paws which spread out flat upon the sand in his warm cage just like a lizard's feet. Sticking out from the center of his back,

from the head all the way down towards the tail, is a row of black bristles, which stand erect and do not look as if they would make a person comfortable who would have the temerity to sit down upon them.

"The most wonderful thing about the iguana is his appetite," said Mr. Byrne. 'He eats the most delicate and choicest fl.wers, and a white rose is the sweetest morsel that we have yet found for him. He eats it with avidity." Mr. Byrne disappeared for a moment and returned with a Jacqueminot rose, which he inserted in the cage. The curious looking reptile lowered his head, and with a quick motion seized the pretty flower and swallowed it. Its eyes are intensely black and snappy, and from around the mouth there hang curious pieces of skin looking like plated armor.

The iguana is found in Brazil, and the epicures of that country are said to highly prize its flesh for food. It is the toothsome terrapin of South America. When the iguana is stretched out he will probably measure five feet in length. There is a pool of water in the cage, and he occasionally takes a bath.-Philadelphia Times.

Against the Use of Slang.

A little intentional way wardness grows into habitual carelessness. We come to possess a loose, incorrect, inaccurate style of expressing ourselves. This injures our manner of thinking and perverts our taste. Do not give false names to ideas, else it may finally happen that you will find it difficult to tell the truth about them when you would. To keep our language pure, to keep it exact, to keep it forcible, to make it mean something, we must put it to no improper use. And we put it to improper use, for girls of her own age in the school she example, when we take a word that enters. should weigh a ton to express an idea lighter than chaff, when we take a word that should be as sublime as the stars to stand for an idea as commonplace as an old fence, when from the horror of very Touhet we borrow a metaphor to apply to the annoyance of an insect.

The slang expression is the outlaw of language. It is a ruffian. Fortunately if we but leave it alone it will not moles: us, but go into exile and oblivion. But there's the rub.-R. C. Craven in Chi-priced doctors in relation to getting them cago Journal.

Foreign and American Cometeries

I do not think that either Pere L dition to mastering all the branches their Chaise or Kensal Green are as naturally more fortunate sisters have ac beautiful as Greenwood in Brooklyn. quired a they have acquired lan-guage new to them which they here-Laurel Hill at Philadelphia, Bellefontaine at St. Louis, or Mount Auburn in after adopt as their mother tongue. Boston, but they are superior in artifi-There is very little ground for the com cial embellishments. In the United States plaints about overwork in schools. The where splendid fruit trees and shruboverpressure is produced by musicbery of all descriptions are so abundant, teachers, dancing-masters, and doting it is the easiest thing in nature to conmammas who desire to have their vert the churchyard of the smallest town daughters prepared for society .-- Ch into an attractive object without great expense. In England and in France the the hand of affection plants cypress and willow over the grave and riches build the proudest marble that art can erect. I do not know why wealth should place over our tombs a mark of any sort. A tomb is one of the shallowest ideas of our finite conceptions .-- London Cor. Boston Herald.

AGRICULTURAL NOTES. OVERWORK IN SCHOOLS

peated Complaint-The Trouble.

The president of an eastern college

as been collecting evidence in relation

to the justice of the oft-repeated com-

plaint that pupils in public schools are

generally overworked. He addressed

circulars to 150 teachers and physicians

of observation and experience, asking

for their opinion on this subject. Only

five suggested that the work ordinarily

required of pupils in schools was exces-

sive or beyond their ability to perform

without impairing their health. A very

considerable number, however, reported

that in their opinion very many of the pupils in the public schools were injured

by the branches they pursued out of

school, by injudicious home training,

and by what are termed "the require

Girls-and the complaints about over

work in school chiefly come from girls

and their mothers-who take three music

lessons a week and who practice on the

to break down. If they take dancing

lessons on Saturday, "go to parties" one

evening each week, receive callers on

stated occasions, and devote considera-

ble attention to society matters, they

generally lose their vivacity and health.

Their brothers, however, of about the

same age, who do not take music lessons,

who do not drum on the piano, who do

not entertain company in the parlor, but

who prepare the wood for 'the kitchen

fire, bring in the coal, play ball, and en-

gage in sports likely to prove somewhat

detrimental to good clothes, come out all

right. These observing persons remark

that boys remain boys at an age when

their sisters have an ambition to be con-

sidered young ladies. As a consequence,

the former are generally healthy and strong, while the latter are sickly and

The complaints about overwork in

schools, or "overpressure," as the Eng-

and large towns. Complaints in regard

to this matter never come from the

observationt hat the advancement is much

work. The country girl who prepares

to the school-house, masters all the les-

sons assigned by her teacher, walks home

at night, and gets supper before she com-

mences her studies for the evening, does

move to the city, the chances are that

she will find herself in advance of the

The complaints about over work in

schools in cities come from wealthy and

fashionable families. They are most

frequently heard in relation to schools

that draw their patronage from the

avenues. The German, Scandinavian,

and "country-raised" girls, whose parents

work for a living, and who are obliged

to work themselves, make no complaints

about overwork in schools, and their

priced doctors in relation to getting them

carry off most of the honors and leave

school rosy, healthy, and strong. In ad-

They

excused from certain studies.

lish term it, are chiefly heard in cities

feeble.

ments of modern society."

A Column Devoted to the Interests of Farmers Evidence in Relation to the Oft-Reand Stockmen

Early sown grain throughout Cregon is looking fine, and a big yield is promised.

that the orchard paid him over \$100 per acre.

It is authoritatively stated that the aggregate exportation of Indian corn and meal since the beginning of our commerce does not equal the corn product of the United States for this year. piano two hours each day are very likely

A putrid carcass polluting the air of A putrid carcass polluting the air of a pasture will spoil not only the milk of the cows running there, but also the entire contents of the vat into which the tainted milk is poured at the factory. Most of the experiments made in

feeding swine with cooked and raw food have not shown sufficient difference in favor of the former to pay for the extra labor required, which in some cases better results have been obtained from feeding raw 'corn meal than that which has been cooked.

Mulching is done by placing a layer of coarse manure from three to six inches deep, extending one or two feet further in each direction than the roots. This protects the earth about the roots against drying or baking with the wind and sun, retains to it the requisite moisture, and obviates all occasion for a practice, generally of injurious effect-the watering of newly planted trees.

country. Still it is a matter of common It is asserted that the number of sheep is diminishing in Europe. This rapid in country than in city schools, more is attributed to more land being which shows that the pupils do more brought into arable cultivation and cropped with roots and forage plants. breakfast for the family, walks two miles But the total amount of meat and wool does not appear to have decreased. These observations apply especially to France since thirty years. There has been augmented consumpnot lose the roses on her cheeks or the tion, but then also the population has strength of her limbs before she has increased. donned long dresses. If she happens to Roses should be planted in a deep,

rich, well-drained soil, so that the top roots are not less than two inches be low the surface, and should be severely pruned every spring before the buds start, cutting back on the last growth to three or four buds, except climbing

require kindness and patience to overcome this habit. The operation of milking is pleasant to the animal, and if she is given a mess of warm slops while being milked her attention will be so diverted that she will yield without remembering her calf. It is important to milk clean from the first, as it and tends to decrease the yield.

size and shape while being filled.

is unavoidable, the potatoes

should be kept in the warmest part of

the cellar, and the barrels of apples,

well headed up, near the windows

where, on days when the air outside

is only a few degrees above freezing,

they can be treated to a cold breeze

from the open windows, while, at the

same time, the atmosphere in the

part of the cellar where the potatoes

are kept does not fall below forty de-

cellar it is quite possible to cool off

the apples without injuring the pota-

toes. Do not unhead the barrels until

the apples are wanted. It is rarely a

good plan to sort over the apples to

The virtues of St. Jacobs Oil as pro-claimed by millions of restored sufferers, should induce everyone to supply his household with this great specific. It

At Canton, China, recently, a Chine

With a thermometer in the

this

grees.

allowed to remain.

SOMETHING AN INVESTOR FOUND OUT Irish May Flower Among literary peop's *Phineas Garrett's* volumes of 'One Hundred Selections' are standard works. Among business men all over this country he is known as the inventor of the Penn Letter Book for copy-ing letters without the aid of water or press. Mr. Garrett was found at his office, No. 708 Chestnut St. Philadelphia, and asked regarding his experience with Com-pound Oxygen.

There were 932 shipwrecks dur discal year ending September, 1886

INVALIDS' HOTEL AND SURGICAL TUTE.

This widely celebrated institu-cated at Boffalo, N. Y., is organ a full staff of eichteen experie skillful Physicfans and Surg or tuting the most complete organ medica and surgical skill in An the treatment of all chronic

promised.
John Likens and John Kilcup took
40,000 hop plants to Nooksack crossing, W. T., recently, with a view to establishing a hop ranch.
Potatoes marketed immediately after digging at 40 cents will give more profit than if held over until spring and sold at 50 cents.
Joseph Watt, of Amity, Oregon, sold his apples on the trees, and when they were accounted for it was found that the orchard paid him over \$100 whether requiring medi whether requiring medical or a means for their cure. Marvelous, has been achieved in the cure of a throat and lung diseases, liver and diseases, diseases of the digestive bladder diseases diseases pee-women, blood taint and skin d rheumatism, neuraleia, nervo paralysi«, epilepsy (fits), spen impoter cy and kindr d affectio

cured

impote cy and knod d allections, sands are cured at their homes is correspondence. The cure of the ruptures, pile tumors, varicocel cele and stri tures are guarante "'Did its use entirely restore you ?" "Yes. I have been quite well for some time. My wife uses Compound Oxygen with excellent results when occasion re-quires, and I have seen its effects on others." cele and strittures are guaranteed, only a short residence at the instin Send 10 cents in stam s for the lan Guide Book (63 pages), which give particulars. Address World's Dispa Medical Association, Euffalo, N.Y.

"Have you had an opportunity to observe its effects on persons outside fami y?" "Yes," answered M . Garrett. "I recall

me to grow enthusiastic when the subject is mentioned."

ment?

attack of indigestion, to to and the contract of the second secon

"On the contrary. The heart is strength-ened and the pulse is steadier after using it. In every respect my experience and observations lead me to regard Compound Oxygen as a valuable remedial agent and one that only needs to be better known to find universal acceptance." A pamphlet on the su ject is mailed free to all who

want it. Orders for the Compound Oxygen Home Treatment will be fille i by H. A. Mathews 615 Powell Street, San Francisco.

A female of uncertain age was asked by a consustaker: "How old are you, madam?" "Thirty years," she replied. "That's what you told me last census, ten years ago." "Well, I'm not one of the years ago." "Well, I'm not one of the kind of women who tell one story one time and another story another."

THE PARENT OF INSOMNIA.

The parent of insomnia or wakefulnes n nine cases out of ten a dyspeptic stomach Good digestion gives sound sleep, indigestion to three or four buds, except climbing to three or four buds, except climbing partly cover the space desired. Old decayed branches should never re-main. Every autumn compost should be placed around the stems of the plants, and spaded into the ground the following spring. When a new milch cow has her calf taken from her she will often hold up her milk, apparently for the purpose of saving it for her offspring. It will require kindness and patience to overinterferes with it. The brain and stomach

During the year the United States used 7,038,651 barrels of salt, of 280 pounds each.

. . . A disease of so delicate nature as stricture of the urethra should only be entrusted to those of large ex-perience and skill. By our improved methods we have been enabled to speedily retention of milk in the udder injures it and tends to decrease the yield. In Francisco decrease the yield.

In France butter is packed in bags ot more than three inches in diame-Street, Buffalo, N. Y. not more than three inches in diameter for family use, not more than two inches for restaurants. Each bag 99.009,216 long tons of coal during the holds two pounds, and when filled year. they are tied and packed in brine, in BRIGHT' DISEASE tubs or casks which can be headed DR. FLINT'S HEART REMEDY, tight. The cloth used must be quite through its curative influence over Bright's disease of the kidneys, causes pain in the free from lint and should be very small of the back to vanish, and dimin-ishes the abnormal flow of urine. At druggists, \$1 i0. Descriptive treatise with slightly starched-just enough to

Cayenne pepper blown into the where ants congregate, will drive away. The same remedy is also go DELICATE WOMEN. Children and delicate women she e forced to take the vile comp be forced to take for constipation, are usually given for constipation, indication, etc. HAMBURG Flux are usually given in consultation, indigestion, etc. HAMBURG Fig. like preserved fruit, and are the bas ative known. 25 cents. At all dra J. J. Mack & Co., proprietors, S. F.



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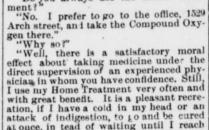
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"Do you always use the Home Treat



The Work of Two Painters.

If we allot to each twenty-five years of painting we shall be within the mark. A brief calculation will, therefore, show that if Diaz were indeed the undoubted author of all the more or less authenticated canvasses that bear his signature, he must have painted between seven and eight pictures e ary day, even counting Sundays and the intercalary days of lean year. Theodore Rousseau painted only five each day, and obviously was comparatively a less diligent artist. It is true that he worked laboriously over the manipulation of his pictures, but the compositions have not been thought out so thoroughly. . Of the two, the palm of diligence must be awarded to Diaz. It is hard to say what the millionaires who are the happy owners of these treasures think of the cold facts.-The Forum.

She Wanted Her Perquisite.

Florence, aged 4, demanded as her perquisite the wishbone of every fowl brought into the house. One day she was carefully arranging her collection when her father came into the room. "Fader," she said, looking up-"Fader, is you doin' to die?" "Why, yes, Florence, we must all die some time," he said, touched by her earnest look. "Fader, when you does die, may I have your wishbone?"-Rome Sentinel."

Every noble life leaves the fiber of it interwoven forever in the work of the world -Ruskin.

Thilosophy About Lightning.

A case of serious illness from fright in thunder-storm has been reported. There's a little philosophy about lightning which, if everybody could have perfect faith in, would save considerable mental pain. It is the certain fact that a person who is struck by lightning ver feels any pain. He hasn't time to think what killed him. If he is conscious at all it is after he has found himself awake in another world. There is no use in any one getting scared when he hears the crash or sees the flash. He is safe for that time at least, because if the bolt is aimed at him he has no oc casion for the use of either his ears or his eyes .- North American.

Krupp's Big Business.

Alfred Krupp owns probably the largess business in the world dependent on one individual. The works within the town of Essen, Germany, occupy more than 500 acres, half of which are under cover. According to a census taken in September, 1881, the number of hands employed by Mr. Krupp was 19,605 and the members of their families 45,776making 65,381 persons supported by his works.-Chicago Tribune.

Great Britain's Machinery.

The statement is made that all the varied machinery of Great Britain, now operated by steam power, is capable of performing more work, and hence producing more products, than could be produced by the labor of 400,000,000 ablebodied men, a greater number than all the able-bodied men on earth.-Hartford Times.

Berlin's Consumption of Eggs.

The annual consumption of eggs in Berlin amounts to 11,944 tons, or 191,-107,920 eggs, of the value of 9,459,842 marks. This is equal to 145 eggs per capita, or about one egg in three days to every inhabitant.-New York Graphic

Most any one can make blunders, but ew people try to make the best of them after they have. -Jud Lafagan.

Times.

The Swallow in Japanese Houses. In the building of its nest and rearing of its young the Japanese swalle w pay the highest compliment to and exhibits the greatest amount of confidence in its protectors; for, however incredible it may seem, its habitation is built and its little make them iron smoothly-then run family brought up, in the living-rooms of Japanese families, and this not only in the unfrequented parts of the country,

but, as Professor Morse assures us, in the midst of their largest cities. The professor, than whom no more interesting and acute observer of Japanese life exists, in speaking of these nests, says that they are not built in any remote part of the house, but in the principal and often visited rooms, where the inmates are the busiest about the household affairs. He adds that the children take great delight in watching the nests in process of construction and in the rearing and education of the young birds afterward. As soon as a nest is fairly begun, some member of the household puts up a neat little shelf beneath it to prevent litter on the floor, and the bird, accepting this as a "locus in quo," returns, year after year, to rebuild or repair and reoccupy the old nest in the same place.-Scientific American.

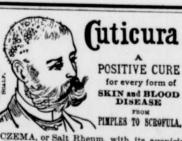
The First Written Senatorial Speech. The first written speech read in the United States senate was by the Hon. Isaac Hill of New Hamy .ire, a firm supporter of Gen. Jackson. When about half through he suddenly lost the thread of his discourse and stopped, evidently embarrassed. His wife, who sat in the gallery almost directly over him, comprehended the situation, and said, in a voice heard all over the senate chamber: "Mr. Hill, you've turned over two leaves at " He immediately corrected his once. mistake and proceeded with his remarks amid a roar of laughter.-Ben: Perley Poore.

Coal, Lead and Iron in Persia

Coal, lead and iron have lately been discovered in abundance in Persia, in a conquors pain. land which has been inhabited as long as any portion of the globe. There are At canton, China, recently, a Chinese woman aged only 18, underweat the Ling Chi execution which is that, while still living, one piece of her body after the other is cut away until the body is di-vided up into exactly 10 0 pieces. vast sections of country in Asia which have never been "prospected," and the discovery of gold and silver miner there is not an improbable event. -- Philadelphia Call

each bottle; or address J. J. Mack & Co., S. F. together of uniform size. The bag should be placed in a mold of suitable The who'e talk of the Ladies now is, that Irish May Flower is the great skin beautifier. Sold by all druggists at 75c. The great secret of keeping apples through the winter is to store them in

a well-ventilated room or cellar that is Go to Towne & Moore when in Portland for best Photographic and Crayon work. kept as near the freezing point as possible without actually freezing the "A Slight Cold," Coughs .apples. Apples and potatoes should "Brown's Bronchial Troches" give immediate relief. never be kept in the same cellar, or if

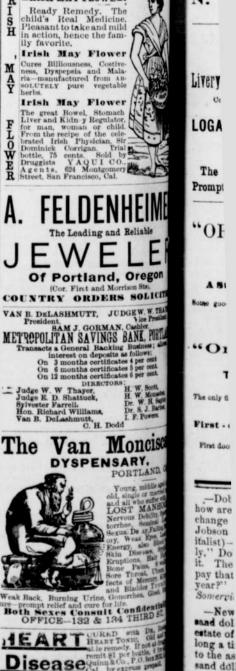


THEFLES TO SCREPTLA.
CZEMA, or Salt Rheum, with its agonizing in the thing and burning, instantly relieved by a supplication of CUTICURA. Shar and a single application of CUTICURA. The great Skin Cure. This repeated daily, with two or three doese of CUTICURA RESOLVENT, the New Blood Purifier, to keep the blood cool, the perspiration pure and unirritating, the bowels open, the liver and kidneys active, will speedily cure.
Externa, Tetter, Ringwon m. Psoriasis, Lichen. Pruritus, Scall Head, Dandruff, and every species of Itching, Scaly and Pimply Humors of the Skin and Scaln, with Loss of Hair, when the best physicians and all known remedies fail. Sold everywhere. Price, CUTICURA, Sol, Soap, 25c.; RESOLVENT, \$1. Prepared by Portreas Datto and Cure Skin Diseases.
KIDNEY PAINS, Strains and Weakness inpick out the rotten ones. Better let them remain undisturbed. Apples in ripening give off carbonic acid, which cannot be allowed to accumulate in the house cellar, but must be removed by ventilation. This deleterious gas, carbonic acid, aids in preserving, the



HALL'S ARSAPARI S Cures all Diseases originating from a disordered state of the BLOOD or LIVER. Rheumatism, Neuralgia, Boils, Blotches, Pimples, Scrofula, Tumors, Salt Rheum and Mercurial Pains readily yield to its purifying properties. It leaves the Blood pure, the Liver and Kidneys healthy and the Complexion bright and clear.

J. R. CATES & CO., Proprietors. 417 Sansome St., San Francisco,





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