

Science and Invention

The cinematograph is being put to novel use by Paris surgeons in teaching students how to perform various surgical operations.

To show the shadows cast by some of the brightest stars, M. E. Touchet places some object in a long box blackened inside, and closed by ground glass. The shadow cast by Sirius on the glass has been photographed.

Its hand and its wonderful intelligence give the monkey advantage over all other lower animals. It cannot well endure cold and temperate climates, and this fact, it is suggested, has prevented the close association with man that would have made the monkey the most useful of domestic animals.

In the experiments of Prof. John Trowbridge, a powerful electric current is passed between terminals of wood and cotton wool saturated with distilled water, and a gap of four inches is bridged by a torrent of bright sparks, with a deafening noise. This is thought to prove that thunder is largely due to explosions of hydrogen and oxygen from dissociated water vapor.

In his scientific pearl farming, Professor Dubois has transplanted a colony of pearl oysters from the coast of Tunis to a point near Toulon. Of these oysters, one in 1,200 yielded a pearl. Acting on the theory that the pearl disease of the shell is due to the accretion of mother of pearl under the action of a parasite, the experimenter has tried to transmit the disease to other oysters, and has succeeded in producing one or more pearls from every ten oysters.

An ancient Chinese tomb of the Han Dynasty, B. C. 220, was recently opened and found to contain a bronze mirror decorated with raised animal figures. These figures, which were of an astrological character, represented the twenty-eight mansions of constellations of the moon, and although the signs were nearly defaced, the serpent coiled around the tortoise was distinctly visible. In addition to the mirror, some small red glazed bowls were found of considerable beauty and finish and bearing a glaze of great smoothness and uniformity of coloring.

The farmers of Germany are noted for their adoption of scientific methods, particularly in the cultivation of potatoes, which is their great specialty. To avoid the effects of inbreeding, the scientific German farmer rarely plants seed potatoes from his own fields. He either gets new varieties from the experiment stations, or exchanges with his neighbors whose farms possess soil differing from that of his own farm. An interesting fact is that potatoes grown on high hill slopes produce best when planted in valleys, and that potatoes from the heavy, wet land make the best seed for use in light, dry soils.

Curious Effect of Tornadoes.—One or two remarkable examples of the effect of the sudden expansion of air inside buildings when the partial vacuum produced by a tornado passes over them was noticed in the storm that devastated Gainesville, Georgia, last June. The walls of a mill were blown outward, and the roof was lifted into the air and suspended there for several seconds. A stand pipe 40 feet in diameter and 50 feet high, placed 50 feet above the ground, lost its sheet-iron cover, which weighed several tons. It was lifted bodily off, carried high into the air, and dropped 100 feet away. In its fall it killed several persons.

Prof. Hans Molisch, of Prague, has reported to the Vienna Academy of Sciences the discovery of a lamp lighted by means of bacteria, which he claims will give a powerful light, and be free from danger, thus being valuable for work in mines and powder magazines. The lamp consists of a glass jar, in which a lining of salt-peter and gelatine, inoculated with bacteria, is placed. Two days after inoculation the jar becomes illuminated with wonderful bluish-green light caused by the innumerable bacteria which have developed in the time. The light will burn brilliantly for from two to three weeks afterwards, diminishing in brightness. It renders faces recognizable at a distance of two yards and large type is easily legible by it. Professor Molisch asserts that the lamp yields a cold light which is entirely safe.

KAISER'S FAMOUS DEATH-DICE.

Curious Old Story of the Seventeenth Century Times.

The German emperor has made a most interesting historic presentation to the Hohenzollern Museum. It consists of the famous "death dice," by the help of which one of Kaiser Wilhelm's ancestors decided a difficult case about the middle of the seventeenth century. A beautiful young girl had been murdered and suspicion fell on two soldiers, Ralph and Alfred, who were rival suitors for her hand. As both prisoners denied their guilt, and even torture failed to extract a confession from either, Prince Frederick William the Kaiser's ancestor, decided to cut the Gordian knot with the dice box. The two soldiers should throw for their lives, the loser to be executed as the murderer. The event was celebrated with great pomp and solemnity, and the prince himself assisted at this appeal to divine intervention as it was considered by everybody, including the accused themselves.

Ralph was given the first throw, and he drew sixes, the highest possible number, and no doubt felt jubilant,

The dice box was then given to Alfred, who fell on his knees and prayed aloud: "Almighty God, Thou knowest I am innocent. Protect me, I beseech Thee!" Rising to his feet he threw the dice with such force that one of them broke in two. The unbroken one showed six, the broken also showed six on the larger portion, and the bit that had been split off showed one, giving a total of thirteen, or one more than the throw of Ralph. The whole audience thrilled with astonishment, while the Prince exclaimed, "God has spoken!" Ralph regarding the miracle as a sign from heaven, confessed his guilt, and was sentenced to death. It is probable that Alfred ever after did not number himself among the those who look upon thirteen as an unlucky number.—New York Sun.

MEXICO AS A RESORT.

Changes that Time and Retirement Make in a Republic.

Those of us who remember the Mexico of Mexico as it was twenty years ago, when neither the Central nor the National was completed, can bear witness to something different that was felt in the very air of the Mexico of that time. It seemed to be imbued with a deeper restfulness, and the writer, as he recalls this capital in the spring of 1883, thinks of it as a place cut off from the busy modern world, a sort of harbor of refuge where the stern exigencies of competition had not yet spoiled the joys of life. The Alameda, in particular, though sadly neglected, as compared with its present state, was symbolical of the Mexico of that time. People spent the days on the benches under the trees without any discomforting self-reproach of occupations neglected. Law students, happy though penniless, repaired thither dominantly to study, but really to chat for hours on end or to ogle the nursemaids. Even the big yellow butterflies seemed to wing the air in the fresh, delicious mornings, or through the long, sunny afternoons, more lazily than now.

The difference between the Mexico of to-day and the Mexico of that time lies not so much in the material transformation of the city that has been accomplished, but in its mental atmosphere. Mexico was not then the busy cosmopolitan place that it is to-day. Life flowed in a placid stream as it still flows in such interior cities as Mordia and Zamora, which, though touched by the railways, have not been metamorphosed by them.

Yet all this is perceptible only to the persons who have long resided in Mexico. To strangers from the States this city is just as capable of affording the rest cure as it was twenty years ago. The fast pace, the pace that kills, of northern cities is unknown here. The southern charm and the arts that give grace and elegance to life are still prominent, and though a large amount of business is now done here at this capital, there is the commercial as well as the political center of the republic, no one is so absorbed in the pursuit of wealth as to be insensible to the amenities of existence. The busiest man has time to shake hands and exchange greetings with his friends. It is probably this social geniality, making the people of this city seem like one big family and causing each individual of the community to feel that he occupies a distinct place in the esteem and consideration of others, that constitutes one of the charms of life in Mexico.—Washington Star.

Farms Are Big in Dakota.

"Yes, sir," resumed the Dakota farmer, as the crowd of agriculturists seated themselves round a little table; "yes, sir; we do things on rather a sizable scale. I've seen a man on one of our big farms start out in the spring and plow a great furrow until autumn. Then he turned round and harvested back. We have some big farms up there, gentlemen. A friend of mine owned one which he had to give a mortgage on, and I pledge you my word the mortgage was due at one end before they could get it recorded at the other. You see, it was laid out in counties. And the worst of it is it breaks up families so. Two years ago I saw a whole family prostrated with grief—women weeping, children howling, and dogs barking. One of my men had his camp truck packed on seven four-mule teams, and he was going round bidding everybody goodbye."

"Where was he going?"
"He was going half way across the farm to feed the pigs," replied the Dakota man.

"Did he ever get back to his family?"
"It isn't time for him yet. Up there we send young married couples out to milk the cows, and their children bring home the milk."—London Tri-Bits.

No Wonder.

The heavy villain had just been scolded by the heroine.
"Percy Periwinkle!" she cried, hurling the heavily laden purse at his feet. "I refuse you offer! Learn now that Doty Conchlozege will never war-r-r-ry for mere gold!"

Percy stared for a moment at the purse, which had flown open and spilled its contents on the floor, and then, with a wild shriek of joy, flung himself upon it. He had forgotten his cue entirely.
A moment later the curtain had been rung down, and a group of excited actors collected around his unconscious form.

"Poor devil!" whispered the comedian, sadly, "he thought he saw a real dollar bill in that stage money. No wonder he fainted."—Cincinnati Times-Star.

Costly Job for Russia.

The Russian government has expended over \$300,000,000 in Manchuria.

A SOLDIER OF FORTUNE.

Amazing Career of Count Savin, a Russian Nobleman.

From favored aspirant to the throne of Bulgaria to the glad acceptance of a position as a street car conductor in Chicago, or from the proud position of one of Russia's most profligate millionaires to that of marker in a Chicago billiard hall would seem to cover the possible range of one man's career; yet that of Count Nicholas Savin, a Russian nobleman, comprises not only this, but includes a trip to the mines of Siberia for the third time to don a convict's garb, which he will now in all probability wear to the end of his life. Surpassing as it does about everything either fiction or history for adventure, monumental money getting in various ways, and equally monumental money spending, the astonishing career of Count Savin, spreading as it does all over the world, is, to say the least, interesting.



COUNT SAVIN.

Count Nicholas Savin, scion of one of the most ancient families of Russian nobility, was born in 1858, as the youngest son of the head of the house at that time. His upbringing was that of the ordinary Russian aristocrat of the old school, and at the age of 20 he entered the smartest regiment of cavalry guards, with the rank of cornet, the lowest grade of officers in the Russian army. Early in life Count Savin had remarkable experiences, for his three elder brothers died one after the other, in a short time, making him sole heir to the vast family estates. His father died soon afterward, and he entered into possession of his patrimony at the age of 22. At that time his property was estimated to consist of 100,000 acres of land, while his invested capital was figured at \$5,000,000.

Feeling secure in the possession of all these riches, Count Savin began a life of the most reckless sort. He rented a magnificent house on the Boulevard des Italiens. He was an expert in getting money from women in society. He had love to them, one and all, and had no difficulty in borrowing immense sums. Men, too, lent him money freely, for he had a wonderful knack of inspiring them with the utmost confidence in his own integrity and in his power to repay loans of any magnitude. French noblemen, wealthy manufacturers, financiers, politicians, writers and actors all fell into the trap and supplied money which they never saw again. But Count Savin's victims were not limited to French circles. On several occasions he joined the circle of the favored few who associated with the Prince of Wales, now King Edward VII. of England, during that royal personage's visits to Paris. The last time he met the Prince of Wales he asked him point blank for a loan of \$1,000, and Edward gave him the amount in bank notes there and then.

Count Savin did not confine his efforts to these limits. He became a Russian spy and sent highly-colored military secrets to the Czar, all of which emanated from his own brain. At the same time he was in the pay of the German, Austrian and Spanish governments as their official spy in Paris. At the time that he was in the pay of four European governments this extraordinary man was a member of a Russian nihilist association, the headquarters of which were in Paris, and he possessed the full confidence of the political conspirators, who had not the slightest idea of his official connections.

Thanks to his high social position, it was easy for Count Savin to manipulate a desirable matrimonial venture. He married the Countess de Lautrec, daughter of a French nobleman, who received a dowry of \$500,000. The count immediately busied himself in getting rid of his wife's money, and succeeded admirably. The countess, after three years of martyrdom, secured a divorce.

Paris now became uncomfortable for the count. To avoid open exposure he went to Berlin, where he repeated his Parisian maneuver; thence to Vienna, Rome, Madrid and Copenhagen.

Towards the end of 1892, when he was 34 years old, Count Savin assumed the name of Count Lautrec de Toulouze and went to the Balkans to seek new adventures in that troubled zone. At the time Prince Ferdinand was in high disfavor with his subjects, and the count conceived the brilliant scheme of becoming Ferdinand's successor on the throne. He became intimate with the great Stambouloff and actually hoodwinked that wily statesman into aiding him in his plot. Here, however, fate intervened. The count went to Constantinople to secure the Sultan's assent to his attempt on the Bulgarian throne. While there he was recognized by a Russian secret service spy.

Cost of American Mission Work. The American investment in religious and educational institutions in Turkey is \$6,500,000 and more than \$20,000,000 has been spent in mission work covering nearly a century.

Destructive White Ants in Africa. In South Africa the white ants have been so destructive to wooden ties that steel has necessarily been adopted.

Coffee was unknown to the ancient Romans; but they had cloves.

A sprinter should never wear shoes that are warranted not to run.

EDITORIALS

OPINIONS OF GREAT PAPERS ON IMPORTANT SUBJECTS

The Marrying Mood.

It is safe to say that if there were no love to urge men and women into marriage there would be very few weddings and mankind would finally become as extinct as the dodo. If marriages should be made after mature deliberation and careful reasoning one might expect those contracted by persons of advanced age to be the happiest. And yet that is not the common experience. The common experience is that the happiest marriages are those which take place early in life, and that when an elderly man or woman gets married—we are not speaking of widows and widowers—they more frequently make a mess of it. The reason for this is not hard to find. It is absolutely essential to the happiness of wedded life that there should be common conceptions. Two minds cannot always think alike; two people cannot always desire the same thing. One of them must, therefore, give way. Young people can learn to do this more readily than older ones. As to the wisdom of getting married and marrying young, there should not be two opinions. Home life is the most wholesome and the very best estate, and every woman should be a homemaker. There are many things, as society is now organized, which militate against marriages except among the rich and the very poor. Among the very poorest classes of the population poverty is not considered a bar to marriage. But there is a great class in every community which is ambitious to "keep up appearances," and which thinks it cannot afford to marry. The young woman has been used to living with a certain amount of luxury, and there is a disinclination to fall lower in the social scale by living in a cheaper neighborhood and with fewer of the comforts and conveniences of life. Each one wishes to begin where the parents left off. Plain living and high thinking are no longer the aspirations of the many. Baltimore Sun.

Unrest and Work.

THE remedy for unrest is to earn one's rest. This implies not merely duty to one's calling, but to one's self. The man who tries to get somewhere and feels at the end of the year that he is farther on the road than he was at the beginning of it, is not pessimistic and downcast, even though he is still distant from the realization of his hopes. We cannot restore the old conditions of labor. We tend evermore toward working with our heads and leaving the work that used to be done with hands to senseless machinery. Many of us, too, are afflicted with a fool notion that it is beneath one's dignity to work with the hands; that it is better to be a spruce clerk on ten dollars a week than a greasy mechanic at twenty. But it isn't.

If many of those who suffer from this unrest will take up an occupation or a fad that calls for the use of the muscles, we shall hear more whistling and less sighing. Our hands are made to use, and we grow just as discontented when we are forbidden to use them as if we were ordered not to use our feet, or our stomachs. We have undergone the occasion for the appendix verminiformis, but it will not do to neglect our hands till they wizen to fringes and cannot crush mosquitoes. The man who has no more to do with his hands than to fold them, or to rest them on the top of a bar, is a man whose unrest may become dangerous. Members of unions who used to work grow so restless after a year of suppression by wholly senseless strikes that they go forth and destroy. Men who used to be kept busy teaching school or practicing law grow so restless under long vacations and perennial postponements that they get up sociological theories and travel around worrying everybody with them.—Brooklyn Eagle.

Rowdism in Colleges.

THE year's news reports from various college centers have been enlivened by some startling accounts of student activity in the way of "cane rushes," "color rushes" and similar diversions. In some cases the girl students took a hand in the rough and tumble of physical encounter. Now come the details as to the late case of lazang at a Baltimore college, where a student was "initiated" into a Greek letter fraternity. After having been undressed, blindfolded and laid on a cake of ice the student was taken upstairs and thrown from a balcony, falling upon a blanket held by his fellow students twenty-five feet below. He was tossed in the blanket until un-

conscious and covered with bruises. This was the "first degree." A few days later the "second degree" was administered. The next morning, not unnaturally, the student was dead. His chum, who had experienced a similar initiatory ceremony, was dangerously ill.

Doubtless this was an exceptional and extraordinary case, but it was not so much unlike some other recent college festivities in character as not to give grounds for speculation regarding the standards of conduct toward which the young American collegian is tending. Much has been said and should be said in favor of athletics and robust physical development, but the recent "rushes" and the common charge of slugging in football matches indicate that physical development is leading not to the health, strength and endurance of the athlete but to mere rowdism.

By dint of vigorous and prolonged effort most of the college faculties of the country managed to suppress hazing a few years ago. But the "initiations," the "rushes" and the football slugging show a resort to practices quite as repugnant. Has the striving after the strenuous life led to a confusion between manly courage and the strong-arm work of the back-lot bully?—Chicago Daily News.

Graft a National Vice.

GRAFTING is by no means confined to the petty and wholesale robbing of the community by public officials. There is the grafter who is false to the interests of his employer; the grafter who uses his position with corporation or company to a dishonest end. In every branch and ramifications of the business, financial and industrial world is found the grafter, smug of face, discreet of tongue—a snake warmed in the bosom of the one he systematically plunders. This spoliation has become the besetting and shameful sin of the American people.

There is hardly an occupation or profession which does not afford opportunity for graft. The time has come when graft is a recognized and conventional factor in determining the incomes of those who profit thereby. . . . If the Benedict Arnolds of a city the size of New York or Chicago were to march in solid rank past the respective city halls, it would take them long to pass, and it is to be feared that they would be greeted and applauded by throngs of envious and admiring followers.

We may accept it as a self-evident proposition that the man who buys his way into office intends to steal his way out of it. These are the professional grafters; they make no pretenses of a fine-spun morality. But equally dangerous and far more despicable are the grafters who pose as respectable members of society. The grafter of the slums has his counterpart in the genteel, educated character in broadcloth, who prates of patriotism and asks the blessings of Providence upon his peculations.

This is the only nation in the world where the holding of a public office raises a suspicion as to the character of the incumbent. We have not enough civic pride to outweigh the energy and the influence of the grafter. Since this astounding and deplorable state of affairs obtains in no other nation, the inference is clear that we have reached a low moral plane.

The grafter is an effect, not a cause. He is the retainer of dishonest business interests; the henchman of those carried away by the lust of greed that they do not hesitate to plunder their fellow citizens through the bribed co-operation of those who are elected to protect their interests.—Brooklyn Eagle.

The Wife and the Criminal Law.

THE law lags behind the advance of women, as we are reminded by a case which was tried at Marylebone the other day, in which a young woman and her husband were charged with stealing and receiving. It is not for us to apportion the blame of a sin to which the husband has pleaded guilty. But the magistrate fell back at once on the old legal maxim that when husband and wife act in concert the wife is not responsible, being under her husband's control. Surely the whole world of modern womanhood will rise in revolt against such an assumption. Even the magistrate hinted that it ought to be "reviewed." Under the present law the man was remanded and the wife was discharged, to protest, as she surely must, against the last remaining feminine wrong. No woman can sit down calmly at home and consent to escape remand on the ground that she was under control of her husband.—London Chronicle.

CRACK SHOT OF REVOLUTION.

Exploits of Timothy Murphy, One of Morgan's Sharpshooters.

The battle of Saratoga, fought in October 1777, has its place in history as one of the fifteen decisive battles of the world from Marathon to Waterloo, so wrote the English historian, Croasay, and thus far nearly half a century has elapsed, and his word has never been questioned.

Let us look at two characters who figured in this battle, Col. Daniel Morgan, afterward general, ever the staunch friend of Washington, and at the date of which we write, the leader of 700 sharpshooters; and Timothy Murphy, the crack shot of Morgan's corps.

Morgan was a far-sighted and clear-headed soldier; he had observed in the action of October 7, a noble looking Jewish officer, who, mounted on a magnificent charger, dashed from one end of the line to the other. While this officer lived, Morgan considered the issue of the contest a doubtful one; he therefore selected twelve of his best marksmen, among whom was Timothy Murphy, and leading them to a suitable position, he pointed out to them the doomed officer, who was dressed in full uniform, and said to them: "That gallant officer yonder is Gen. Frazer. I admire and respect him, but it is necessary for our good that he should die. Take your stations and do your duty."

Within a few minutes a rifle ball cut the crupper of Frazer's horse, a second passed through his horse's mane, calling his attention to this, his aide said to him: "It is evident you are marked out for particular aim; would it not be prudent for you to retire from this spot?" Frazer replied: "My duty forbids me to fly from danger." The third shot was from the rifle of Murphy, and Frazer fell, mortally wounded.

His death so disheartened the British at the moment he felt the tide of battle turned against Burgoyne. He had at his best subordinate, the only one

of his officers who had the slightest influence with him.

At the close of the Revolution Murphy married and settled in Scholastic as a farmer, but his old habits still clung to him.

To his last day he maintained the reputation he had won as a sharpshooter in Morgan's corps. It was a custom in those days for riflemen to shoot for a prize. On one occasion a large oak tree had been blazed near the ground and in the circle a small piece of white paper was fastened by a brass nail. The distance to be fired was over 100 yards. Several close shots had been made, and it became Murphy's turn to fire. He lay down on the ground at full length, resting his rifle on his hat, as the others had done, and, after glancing over the barrel, he was heard to say: "Sure, and I believe I can see that nail." Again he sighted his piece—fired, and the paper fell. An examination showed a center shot; the ball had driven the nail exactly in.

In person, Murphy was stout and well made, handsome in face, with jet black hair and an eye that would kill and flash like the lightning when excited; quick as a cat in all his movements and possessing an iron frame that nothing apparently could affect. What, moreover, is very remarkable, is that in the most dangerous duty that war could possibly entail upon him, in which he passed seven years of army life, his body was never wounded or even scarred.—United Service Review.

RUSE OF THE REJECTED ONE.

How a Girl Who Had Promised to Be a Sister Was Brought to Terms.

"I understood you to say that you reject me," he said.
"Your understanding is correct," she replied, "a though somewhat blunt. I feel that I can't marry you."
She took a step forward and gently touched his arm. A tear was in her eye. "I'm so sorry," she said.
Something in her voice made him

straighten up. He had not asked for sympathy. He resented it so suddenly that it was as if some outside power had taken possession of him. He felt mad right through.

"You needn't be," he replied. "Why should you be? If you entertain the slightest notion that I'm going to jump off the dock or ruin my life dismiss it at once. There are, I can assure you, worse things than being a bachelor. In the first place, there are no enormous bills to pay. Then, a man can go and come as he pleases, without let or hindrance. Instead of being bound down to one woman, subject to her whims, her hide-thunder, he is free for all. He can pursue his cherished ambitions without interruption. When he is sick he can secure proper care without being nursed by an amateur. He doesn't have to attend dinner parties, or any other kind of parties, if he doesn't want to. His time is his own. He can smoke or not, without question, and he is absolutely free to pursue his own ideals. There are worse things than being single. I was willing to run the risk, with you, but don't sympathize with me. I shall get along all right, thank you."

She turned toward him with a sudden movement of determination, and held out her hands, pleadingly.
"Now you must marry me!" she said.—Smart Set.

Bullet or Rope Always.

Stranger (In Frozen Dog)—Is there an opening here for a physician?
Brunco Bill—Can't say that there is. Yer see, it don't require no specialist in this community to tell what folks died of.—Puck.

Japan as Nets for Alaska.

Orders have recently been executed in Japan for a supply of fishing nets for Alaska valued at \$300,000.

Once there was a man who fell in love with a woman's voice; she seldom used it.