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MIRAMICHI ADVANCE

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The "MIRAMICHI ADVANCE" having its large circulation distributed principally in the Counties of Kent, Northumberland, Gloucester and Restigouche, New Brunswick and in Bonaventure and Gaspe, Quebec in communities engaged in Lumbering, Fishing and Agricultural pursuits, offers superior inducements to advertisers. Address

Editor Miramichi Advance, Chatham, N.B

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Our Stock of General Hardware is complete in every branch and too numerous to mention.
All persons requiring goods in our line will save money by calling on us, as they will find our prices away down below the lowest, prove his by calling.
The COGGIN HARDWARE STORE, CHATHAM.

NAVAL BATTLES IN A TANK.

How the British Admiralty Experiments With New Models.

Some years ago a Mr. William Froude brought to the notice of the Lords of the Admiralty a scheme that was then adopted, and has been in use ever since.

A large tank was constructed, fitted with an apparatus for carrying on experiments with models of warvessels—an apparatus that has, since that date, been considerably elaborated, with the result that there is now in existence a miniature sea, where the naval engineers may play at mimic warfare, practising with the models that are continually being evolved as one type of battleship displaces another. The Italian Government has also a tank on the same lines.

The models are made of paraffin wax, and the usual length is about twelve feet, a size found by experiments to coincide best of all with the "genuine article" of so many thousand tons.

The models are cast in moulds, and then finished by hand with the aid of certain elaborate tools. The tank is about 300 feet long and 10 feet deep, with a breadth of over 30 feet. Twenty inches or so above the surface of the "sea" is a kind of diminutive railway on which a small engine is placed, by means of which the models are towed through the water.

A model that may, in outward appearance, be a masterpiece of symmetry, will often be found to have numberless defects when "launched. Either her resistance to the water is too great, or she may ride awkwardly, or she may be found incapable of being moved at any high rate of speed.

The Admiralty are naturally very chary about supplying information It would not do for foreign governments to be allowed access to the designing rooms of the British Admiralty.

Numerous experiments are carried on in the Government tanks with models of submarine and torpedo boats as well as the larger craft. The models have speed indicators affixed, and are regularly put through their paces.

An ingenious arrangement, first discovered by Mr. Froude, consisted of a small paper-covered cylinder, upon which a pen operated, marking a line that indicated the speed of the model when being towed through the water by the railway engine already mentioned. Thus it could be easily ascertained if in her "trial trip" the "ironclad" came up to expectations as regards the way in which she moved.

It is interesting to learn that private ship-building firms, besides the Admiralty have their tanks for experimental purposes.

Some years ago the Duchess of Connaught was seriously ill—so ill that only her husband, the doctor, and one nurse (the wife of a clergyman) were allowed in her room. During that time of fearful anxiety and suspense the Duke, who was as tender as a woman to the Royal patient, with his own hands dusted and even swept the sick room, and sat up night after night with unflagging courage and devotion.

The skeleton measures one inch less than the height of the living man.

The Don's Last Coup.

They called him The Don because in the uttermost extremity of fortune he managed to retain a fair semblance of that spick-and-span exterior which bespeaks your true egotist. He was a brainy man, for all he had at one time been a valet. His brains, indeed, had proved his ruin, for they brought him down to the level of the cracksman.

Things were at a somewhat awkward pass at the time, and as his pals shuffled out "hands" from a vile pack of cards and scooped their tricks by the light of a reeking, evil-smelling lamp, they threw many anxious glances at The Don. He was reading a paper, seemingly quite oblivious of his surroundings. Then he slit a small rectangular hole in the newspaper, and holding up to the light the printed scrap of paper that had filled it, he addressed the other two occupants of the room.

"Listen to this, boys: it has given me an idea which may or may not prove a bonanza: 'A Murderer's Escape.—The Balfe Hill murderer, James Cooney, who was lying under sentence of death at Barneville Gaol, effected his escape this morning with singular cleverness and daring, and is believed to be hiding in the neighborhood of Lutingdene. You know Lutingdene, Steve?"

"Viscount Woodward's place? I oughter, Don. Got six months to remember it in when I first joined the profesh. What's yer lay, anyway?"

"To crack that crib in a distinctly new and original style, and give you your revenge at the same time. This is how I propose to do it. On the 23rd, two days from now, the Viscount is giving a ball to celebrate his son's return from South Africa with the V. C. The affair will be one of considerable magnitude, as the society papers say, and in all probability every jewel in the country worth looking at will lend its sparkle to the general brilliancy. We've got to annex those jewels."

"Huh," said Steve, while the other man, "Welsher," was content to mutter hoarsely an encouraging "Go on, Don."

"The opportunity will arise when the party are assembled in the Blueroom for the amateur theatricals. The servants will be there, too. The consequence will be that every living soul in the mansion will be gathered together in one room at the hour we select for operations. Now, there are two doors in this room, one at the side and one behind the stage, and at the appointed time your station shall be at one, Steve, and yours, Welsher, at the other, both of you ready at a given signal to lock those doors from the outside. I will give the signal from the stage."

"From the stige, Don?" echoed Steve. "Yer a-gwine to tike part in the play-actin'?"

"My performance will be a solo, and will, I expect, prove so absorbingly interesting that a rich harvest of jewels shall reward my efforts. After my 'turn' has concluded the door at the back of the stage shall open to permit of my exit with the spoil, when it will immediately be relocked, and we depart with as much celerity as may be."

Welsher looked at the speaker angrily. "There's a time fer all things, Don, and rip me if this is any time fer fairy tales. What yer mean to say?"

"Hol' on Welsher," said Steve with a grin. "I know what The Don's up to. He's a-gwine to hypnertize 'em so as they all go to sleep, eh, Don?"

"Hypnotize them?" repeated the Don. "No, Steve, the force I advert to is the sort of moral suasion that is exemplified by a dynamite bomb on the point of explosion."

There was a slight pause, in order that this utterance might have due comprehension, and then The Don proceeded:—

"It shall be necessary that I have the stage temporarily to myself, and this end I will attain by a simple subterfuge. I will then claim the attention of the audience for a few minutes, and this shall be readily accorded to me if only on account of the strangeness of my appearance, which will be an exact facsimile of the escaped felon, James Cooney."

With great lucidity he continued to expound his scheme, weighing its possibilities and combating its difficulties with a wealth of ingenuity worthy of a better cause. When he had finished there was silence, and two deep-drawn breaths were simultaneously inhaled.

"What about gee-ography, Don?" inquired Steve, slowly.

"Shall we say topography?" corrected The Don, smilingly. "There is no need for anxiety on that score. I was a valet once, you know."

"What! Yer boss was——no, garn."

"Fact. Viscount Woodward. I know every nook and corner of Lutingdene."

"What about gettin' away, Don? Tikin the jools may be all right, but tikin our hook's the chief thing after all. What yer say, eh?"

"That, Welsher, is, I fancy, my trump card. For the purpose of putting as much real estate as possible between our precious selves and Lutingdene after effecting the coup, we will take temporary possession of the Viscount's motor, which a wise forethought shall have ready prepared for us. You will recollect that the engineering of a motor represents a small component part of my varied accomplishments."

"Don't you think, Don," said Steve, doubtfully, "that a dynamite bomb is an awkward bit of goods to be experimentin' with in that kinder fashion? Might go off suddenlike and bring down the house in earnest."

"Steve," said The Don with solemnity, "the light that will cause that bomb to explode will never be invented."

"What! Spoof 'em?" was the delighted query.

"Marvellous intuition. You've guessed it. Undoubtedly the game is spoof."

* * * * * *

Lutingdene was thronged with guests and the revel was at its height. The magnificent ball-room was a glittering panorama of whirling forms rhythmically obeying the strains of a popular waltz played by a celebrated band. On the terrace scattered groups of men smoked in silent communion; the garden walks were paraded by mysterious whispering couples. Only the yard and stables were deserted, for the servants were waiting eagerly for the signal which would summon them to witness the theatricals in the Blueroom.

In the shadow of the coach-house wall three motionless figures, one of them carrying a peculiar shaped parcel, stealthily made their way toward the house.

Had anyone gone down to the coach-house afterwards he might have observed that the lock had been skilfully picked, leaving the door ready to be opened at a moment's notice. Pursuing the investigation, the back gate would have been found in a similar condition, and inside the coach-house it would have been seen that the Viscount's automobile was in a singular state of preparedness for a journey, considering the hour, and rapidly generating the force necessary for speedy departure.

Some twenty minutes later the guests were all seated in the Blueroom, facing a miniature stage beautifully draped, and soon to be trod by the clever amateurs who had graciously consented to amuse their fellows. All the theatrical surroundings and accessories which the wand of wealth could summon served to convert for the nonce the handsome chamber into a veritable theatre, and the delighted acclamations of his guests rewarded the Viscount for his efforts towards their amusement. As the orchestra concluded a brilliant overture his companion, the Dowager Lady Trillington, tapped him with her fan.

"Do you believe in dreams, Viscount?"

"My dear Lady Trillington, I confess I have never asked myself the question. Stay, I do believe in dreams, that is if the lobsters are strong enough. If they're not, why, you may escape after all."

"Don't treat the matter as a jest, pray. It is a pet theory of mine."

"From which I infer that some vision of deep import disturbed your rest last night. Not anything unpleasant, I hope?"

"Indeed, yes. It was more a nightmare than a dream, and was so vivid that I have not shaken off the effects of it yet. It foretold a calamity if ever a dream did, and I am convinced some misfortune shall follow from it."

"Your dream could have no better ally than your own faith in it, Lady Trillington. You must really understand that the thing is absurd. If we were to live in constant dread of the unknown existence would be intolerable."

"It is not the unknown I fear. There are plenty of very real dangers always around us, even in charming Lutingdene. For instance, that escaped murderer, James Cooney, who is supposed to be in hiding hereabouts. Our very lives are not safe while he is at large. Why don't the police do something to capture him and put an end to our anxiety?"

"Well, I grant you they have allowed our confidence in them to be shaken somewhat. But we must not expect too much. Few of us have any comprehension of the manifold difficulties the police encounter in their work. By the bye, Lady Trillington, I notice that you do not drive about as much lately as heretofore. I trust your penchant for the open air has not suffered through the escape of this criminal?"

"I fear it has. I must retaliate, however, with a similar query. What have you done with your motor of late?"

"It is out of order I am sorry to say. The brake refuses to work, and other matters prevented me having it repaired up to the present. Tomorrow I shall have it looked after. I hope your fears won't prevent you accompanying a few of us for a run when it is serviceable again."

"Oh, no, I shall be charmed. But here are our budding actors all coming down to us. What does it mean? Something must be wrong."

The Viscount looked up in surprise as the players in the piece trooped into the room from one side of the stage, dressed in character.

"What is the matter, Woodward?" inquired one of the men approaching him.

"The matter?" echoed the Viscount. "What do you mean? Why don't you begin?"

"Why, there is a slip of paper pinned up there requesting us to go before the curtain for a few minutes before commencing the performance. It is signed by you."

"You must be joking, Plimsoll. I never wrote it. Halloa!"

The exclamation was caused by the sudden rising of the drop curtain, revealing a strange figure standing in the centre of the stage, a man of middle age, unshaven and uncouth, with close-crouped hair and repulsive features. His ragged clothes, stamped with that hall-mark of infamy, the broad arrow, enhanced his sinister exterior. He held in one hand a round, black, ominous-looking object, and in the other a lighted taper. At his feet was an open brown leather bag. It was our friend The Don, dressed with as much faithfulness to the published description of the escaped murderer as his experience as a valet enabled him to exercise.

When the curtain had folded back, which it did automatically, he took a step to the front and said, in a harsh voice:—

"Silence. Let no one move, on the peril of his life and the lives of every soul in this building. I have in this hand (holding up the round object) a deadly explosive, and the moment this taper touches it we shall all be hurled to destruction. If anyone moves I shall apply the light. I am reckless as to the consequences. My life is forfeit in any case, and I place no value upon it. I wish to offer you certain terms for your safety which you must accept. The alternative is death."

There was a short pause, during which everyone sat as if turned to stone. The conviction that here indeed was the escaped murderer, James Cooney, was absolute. Had the man shrieked out his words and flourished his argument, so to speak, in their faces, very probably some of the ladies would have fainted, and the men, rendered furious in consequence, might have precipitated matters in a very unpleasant manner for The Don. As it was, his cool demeanor and low, stern tone, which rang with the deadly earnestness of a desperate man, merely stunned the senses of his hearers into a kind of mesmeric stupor.

"I must have the jewels of every lady in the room. The gentlemen I will excuse, as their valuables are too bulky for my purpose. You, sir, will collect the articles. Take this bag. Quickly. Time is precious." The youth he addressed, extending towards him the hand holding the lighted taper, rose hurriedly with ashen cheeks, and seizing the bag lying on the stage in a trembling grasp he began to collect the valuables.

He experienced no difficulty in obtaining the jewels. The Don's superb acting so wrought on the nerves of the ladies that they flung their costly treasures almost with relief into the bag, and the men, with the consequences of resistance so surely before their mind, showed little desire to prevent them. That the man was utterly reckless and desperate was the uppermost thought in the minds of all, and in comparison with human lives jewels were cheap. Furthermore he would be pursued as soon as he had discarded his hideous plaything, and his capture was certain. Indeed, it was hard to see how he could possibly escape.

Driven by his own overmastering fear, the trembling collector rapidly made the tour of the room, the bag meanwhile swelling visibly as its costly contents became augmented, till finally with difficulty the patent self-locking jaws clicked together. The coup was completed, and nothing now remained for the conspirators but to beat a rapid retreat.

The Don glanced down at the bag at his feet and then round the room. With the pride of genius he could not resist that triumphant pause, that exultant look of victory at his conquered enemy. Society, now so helpless despite its elaborate protections and far-reaching power. But the tension was obviously relaxing. With the yielding up of their possessions everybody seemed to breathe more freely, as if the danger had lessened and it was time to think of retaliation. So The Don quietly stooped and picked up the bag, tapping the floor with his boot as he did so. Then with his face to the watching crowd he backed slowly towards the door, which in the meantime had mysteriously swung open. When he had passed through it closed with a bang, and the key was turned in the lock.

* * * * * *

Half an hour afterwards a strange spectacle might have been witnessed on the bleak country road between Lutingdene and Trillick, the railway station of the district. The road was one long and uninterrupted descent, in part perilously steep, and a huge automobile was flying along it at a whirlwind pace, jolting over the eccentricities of the primitive roadway and reeling horribly in the clutch of ruts and depressions. Inside the car were three terror-stricken, wild-eyed men, one of them vainly tugging at a useless brake with the monotonous persistency of despair, and the horror of swift approaching death writ large on the faces of all.

The moments passed, the huge vehicle gathering momentum with every rood traversed. And then Fate appeared in the shape of the massive white gate of a railway crossing. The motor hurled itself into the obstruction with the force of a score of battering rams. There was a horrible rending noise of splintering timber, the hissing of escaping steam, a sharp cry of agony intermingled with a long, shuddering moan, and then the silence of the grave.

When the catastrophe was discovered (which was soon afterwards, owing to the clue furnished by the missing motor) one of the occupants of the car was found unconscious in a field some distance away, having been shot from the car like a cannon ball at the moment of collision. It proved to be Welsher. His superficial injuries were practically nil, and he lived to taste the hospitalities of a Government retreat for several years afterwards.

Steve was with difficulty extracted from the ruins of the motor, and presented a pitiable spectacle of sprains, fractures and abrasions. Many weeks, therefore, were spent in the local infirmary before he was enabled to join Welsher in his seclusion. The Don was beyond the reach of mundane justice. He was discovered at the bottom of the railway gate, lifeless, concussion of the brain having cut short his career abruptly but painlessly.

The jewels which he had plotted so daringly to obtain possession of were recovered intact.—London Tit-Bits.

ABOUT THE SUN.

Its Distance From the Earth and Its Substance.

The sun is about 92,000,000 miles off. The only way of measuring the distance of a fixed star is by parallax, and scarcely more than half a dozen can be estimated that way. Suppose the sun is here, in space, on January 1, On July 1 he will be 184,000,000 miles over there. This is the base of measurement. The observer who wants to estimate the distance of, say, the star A Centauri, notes its position with regard to the next star, In six months he notes again, and if they are separated by a different distance, a so-called parallax is established and some calculation can be made of the distance of the nearest one. In the most favorable cases this parallax is extremely slight.

What is the sun made of? The lines of the spectrum give an idea of his chemical properties, but beyond that all is hypothesis. His substance as a whole, is of much lighter material than the earth, but yet there may be a hard and heavy fiery pudding inside, for there is a light and thick outer coating named the photosphere. Outside this, again, refining away to an unknown distance, is the chromosphere, of hot air, so to speak. The spots are rifts through the photosphere, coming and going and some are so large that our whole earth could be shot right through with a thousand miles to spare all round. When a total eclipse covers the sun, flames to the height of thousands of miles are seen out of the photosphere. The sun is 100 times larger than the earth, an easy thing to say, and yet our sun is believed to be a rather small one. For instance, Sirius is at least nine times as big.

A CHINESE COLLEGE FOR LONDON.

In future if you want to learn Chinese there will be no need to travel to China to do it. A Chinese college is to be established in London; and, though the college is not yet built, some of the professors have already arrived and have started work. The professors wear their ordinary Oriental garments when taking classes, and many pupils have joined—Army men, engineers, city clerks, and budding diplomatists. Of course, there have long been Chinese professors at Oxford and Cambridge, but this is the first venture of the kind where the teachers are all natives of the Celestial Empire.

FARM·FIELD AND GARDEN

HOW TO OPERATE THE MOWER.

In cutting timothy for hay, the sickle bar should be two or three inches above the base of the plants. Clover and other meadow plants may be cut closer. After the hay has been harvested, close pasturing by horses or sheep is fatal to timothy meadows. As a rule it is not desirable to turn stock in at any time. If pasturing the aftermath is practiced, however, it should be done very late in the season and the animals allowed to remain on only a short time.

To facilitate hay harvest, the meadow should be in as large fields as possible with no division fences. This will make it possible to go around large lands when cutting. Much turning with the mower will be avoided and time saved. If the horses are good walkers, about ten acres a day can be cut with the ordinary five-foot mower. Of course this varies with the condition of the ground, the condition of the hay crop, the kind of team used, etc. Where everything is favorable, it is easily possible to cut a larger acreage with a six-foot machine, but one acre per hour is about the average.

The modern mower is a very simple machine, with but few complex parts, consequently it is not at all difficult for the average farmer to operate. There is little excuse for the machine getting out of order. Of course, some skill and experience are required. Keep the machine in perfect condition by using a sharp sickle—the most important item to be looked after. No machine can do good work with a dull sickle. It is best to have two sickles on hand. If one gets out of order the second can be substituted. Another important item is to keep the sickle bar free from gum and dirt. The juice from the cut ends of the grass plants is sticky. Dust falling upon this tends to form a gummy substance, which must be removed at frequent intervals. By keeping the machine well oiled, particularly the sickle bar, this trouble will be reduced to the minimum. The pitman rod must be oiled every few hours or so and also the other bearings where friction is greatest.

Go over the machine at least twice a day and see that every nut is tight and there is no lost motion anywhere. As soon as the boxings begin to wear, take to the factory and have them overhauled. It is a good idea to have a blacksmith or a machinist go over the mower each season before taking to the field.

Where the meadow is free from weeds or brush, there is little danger of injuring the sickle, but in many fields, particularly those recently seeded, immense weeds with hard, woody stems appear. These are frequently an inch or more in thickness and almost as hard as hazelbrush. Before cutting the hay, these should be removed, or they will certainly injure the machine. Then, too, along the hedge in meadows, formerly cultivated fields, there are frequently sprouts from the hedge plant. These, of course, are very hard and must be taken out before the grass is cut. With the precaution referred to, a modern mower will last for a dozen or more years and remain in almost perfect condition. Of course, it is taken for granted that the machine is kept in a dry shed when not in use.

THE FAMILY GARDEN.

The family garden usually pays a greater profit on the labor bestowed upon it than any other portion of the farm, even when managed by the old-fashioned method of small plats and beds and hand cultivation. This being the case, it can surely be made to pay a much greater ratio of profit by planning to plant every thing possible in long rows far enough apart so as to work them with a horse and cultivator, thus greatly relieving your own muscles. And the saving in cost of cultivation is only a small part of the benefit of the long row arrangement. It will naturally lead to a much more frequent and thorough cultivation of our garden crops. The important advantage of a frequent stirring of the surface soil among all our growing crops, we are convinced, is too often greatly underestimated. It is said that it pays to hoe cabbage every morning during the early part of the season, and although this may be carrying it to an extreme, we are convinced that a more frequent cultivation than is ordinarily given might prove profitable. The frequent breaking of the crust admits of a freer circulation of the air to the roots, and aids them to make the most of all the dews and rains which fall. Next to actual irrigation frequent and continual surface cultivation aids in securing and retaining moisture, and supplying it to the growing plants.

SCIENCE IN FARMING.

From time to time someone denies the value of science in agriculture. Not long since in the legislature of a rich agricultural state a member in opposing a bill which called for an appropriation for educational purposes, stated that the best farmer in his neighborhood did not know how to read and write. The time has long since passed into oblivion when it is necessary to repel the assaults upon scientific agriculture. While occasionally a man entirely ignorant of science may be a good farmer, no one can attain the highest success unless he understands the principles which underlie agriculture. He must know something of soils and fertilizers, plant and animal growth, nitrogen's place in agriculture, the nature of the changes which take place in milk, butter and cheese, etc. During the last 20 years it has been demonstrated over and over again that a thorough understanding of these general principles and their practical application are great factors in successful farming.

SUBSOILING.

Subsoiling, which consists in stirring the soil below the depth usually plowed, acts differently in different soils and different seasons. It makes more room for development and enables the plant to extract food and moisture from a greater area. By loosening up more of the soil its capacity for absorbing and retaining moisture is increased. By absorbing greater amounts of moisture in winter and spring, provision is made against summer drouth. The effects of subsoiling last from two to three years and are more marked on the growth of root crops, such as turnips, beets, carrots, potatoes and parsnips, than upon others. The best test as to profit in subsoiling is to try it upon an acre and note carefully the yield and result as compared with a given area not subsoiled.

ESSENTIALS OF POTATO CULTURE.

After planting do not wait for the weeds to start before cultivating, but begin with the weeder and spike tooth harrow, both length and crosswise of the row, destroying millions of sprouting weed seeds, writes Mr. R. M. Winan. When the plant appears go into the field with the horse hoe or the riding cultivator and continue to dig up and turn over to the sun and air all the earth you can reach without literally tearing up the plant. Do not be afraid to expose or even break off some of the small lateral rootlets while the plants are young. It will let in the air to soil and roots where most needed and tend to send the large roots deeper down to the moisture.

Should the growth of the plant indicate a marked deficiency of active food at an early stage I have found it decidedly advantageous to apply some soluble and quickly available manure alongside the row and cultivate deeply into the soil. Almost all of the firstclass high grade potato manures are readily soluble in water and will give the plant a quick, healthy start that will tide it over the season of usual drouth, leaving it in vigorous condition to mature a crop when the fall rains come. Two or three applications of from 75 to 100 lbs. each per acre, made at intervals of from ten days to two weeks, the last dressing not to be made later than ten days before the plants come into bloom, will produce the same result.

If it is not desired to hill or bank up the rows when laying the crop, a furrow should be left in the centre between rows at the last cultivation, serving to drain the surplus water from the row, to hold it in reserve, and to prevent rotting during a possible wet period after maturity.

ANTS STOP A TRAIN.

An extraordinary experience fell to the lot of a through train to Perth, which left Albany, West Australia. When travelling up an incline about 180 miles from Albany, between Wagin and Beverley, the wheels of the engine failed to grip the line, notwithstanding the customary application of sand, and the train was brought to a standstill. An investigation then revealed the fact that the metals for hundreds of yards were covered by millions upon millions of black ants. The tiny insects were evidently taking advantage of the smooth passage offered by the rails in an extensive trek in search of fresh fields and pastures new. The wheels of the engine crushed the ants, and thus greased the rails so that no purchase could be obtained. The sand put out from the engine failed to produce the usual result.

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