

CHAPTER III.—(Cont'd.)

As soon as Tom heard this, he applied for leave, and, the young lieutenant having reported that Tom had

with his father and mother, but as ing surrounded by sylvan beauty. On the whole he was satisfied with they're here too!" Polly's reception, although he felt that days when she was trying to win him away from Alice Lister. It was during his stay in Brunford, too, that

said he would only take a bottle of ginger ale, "I never heard of a soldier who was worth his salt but would not take his beer like a man." And Tom,

feeling, which he could not put into that the advent of a new battalion farmers occasionally neglect to transwords, that Polly was a little bit loud, Her dresses were always highly colored, while her hats were bedecked with big feathers. Of course these things suited her to perfection, and although to them there were doubts at the back of his mind. Neither did he altogether like the way in which she bandied jokes, which were not always of the best taste, with the young fellows - who came to the Thorn and Thistle. Altogether it was not an unmixed sorrow to him when his leave was up and he returned to his regi-

He did not see Alice Lister during his visit, and if the truth must be told

A week after this Tom's battalion of digestion. entered the train at Waterloo he notic- about one quart of saliva a day.

altographer different from the hard bare altographer different from the hard bare hills which he had been accustomed to in the manufacturing districts of Lancashire. The air was sweet and Lancashire. The air was sweet and Lancashire all nature seemed to the manufacturing districts of Lancashire. Here all nature seemed to the manufacturing districts of Lancashire. Here all nature seemed to the manufacturing districts of Lancashire. He had answered to the manufacturing districts of the fact that it stops food fermentation produce serious results.

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"Five years," said Penrose.

you had liked, I suppose?" Penrose nodded

rose. "A chap who doesn't do his bit ed or steamed as in drip coffee. at a time like this is just a skunk. Tea is valued for its theine, which is fourth pound of mustard, one table- on us.

Tom was silent for some time.

with me any more, and I shall have to eaten or made into a drink. Cocoa place. "Discipline is discipline," replied is insoluble, but when added to boiling Sweet Pickles.—Peaches, pears and Penrose. "As to friendship, I am not water the starch thickens sufficiently plums may be used. Peel and remove

The battalion, eleven hundred Condiments .- Flavoring extracts, small picees. To three pounds of strong, climbed a steep hill, under seeds, herbs, spices and sauces are mixed and prepared fruit, weighed great overshadowing trees. Birds called condiments. They are used to after cutting, add: three cupfuls of were singing gaily; May blossom was give food a pleasing flavor and should brown sugar, two cupfuls of best cider blooming everywhere; the green of be partaken of moderately. Salt is vinegar, one cupful of seeded raisins. the trees was wonderful to behold. classed as a condiment as well as a Bring to a boil and then stand aside Presently they came to a great clear-food. Persons living in hot climates for twenty-four hours. Repeat this country seemed suddenly to end, and soon learn to like pungent hot spices, and then on the third day, add: one they arrived at a newly improvised town. There were simply miles of wooden huts, while the sound of men's liver. Vinegar is the fermented juice spoonful of cloves, one-half tablevoices, the neighing of horses, and the of apples, fruit or sour wine. hand. These huts, from what Tom could see, were nearly all of them about two hundred feet long, while around them were great open spaces wish to avoid muddy, soggy pickles, Seal in the usual manner.

"All for a Scrap of Paper." "Dearer Than Life," etc. Published by Hodder & Stoughton, Limited, London and Toronto where all vegetation had been worn away by the tramp of thousands of all the way during their march, be-

wards him as she had been during the camp in the country where you don't talion. With the exception of Penrose, guns spitted out their steel venom,

brass. Where did they get the brass "I expect the people who believe in religious lolly-pops gave it to them,"

replied Penrose. It took Tom two or three days be- of the finest and softest muslin. who could not bear to be laughed at, fore he became accustomed to his new Profits from feeding are greatest should attack. to sing to the soldiers, and he had a all here. - Tom had rather expected well as stock. It is unfortunate that would have caused some excitement, fer registry papers promptly.

but scarcely any notice seemed to be taken: their coming was a matter of course. Three days before a battalion had left for the Front, and they had come to take their place, that was all. Instead of being billeted at various houses, as they had been in Lancashire, they had now to sleep sixty in a hut. Tom laughed as he TURNING THE HEAVENS INTO A saw the sleeping arrangements. Beds were placed close together all around the buildings these beds were of the most primitive nature, and consisted of a sack of straw, a couple of rugs, Hairbreadth Escapes in the Aerial and what might be called a pillow. These sacks of straw were raised some feet. The men, who had been singing three or four inches from the floor bye means of boarding, and had only behaved very well since his punishly different from what they had left. acy was possible, but everything was ment, and had apparently turned over That morning they had left a grim, clean and well-kept. In a few days grey, smoky manufacturing town; in Tom got to like it. The weather was story:— He did not spend much of his time the evening they had entered a clear- beautiful, the country was lovely, and There were one hundred of ussoon as possible made his way to the Thorn and Thistle. He had saved practically all his last four week's yon'," and he pointed to a long low er than he had had in Lancashire, but devils could have made running ramthe air was pure. Tom had a good fifty on a side-but we turned the hut, at the door of which the letters he enjoyed it; on the whole, too, he he spent on a present for Polly Powell. "Y.M.C.A." were painted. "Why, could not help noticing that many of the men seemed of a better type than The sky blazed and crackled with "Yes," said Penrose, "there's not a those which made up his own bat- bursting time bombs, and the machine find the Y.M.C.A. huts; for that mat- nearly all his company were drafted while underneath us hung what seemter they are on the Continent too." from coal pits and cotton mills. Here ed like a net of fire, where shells from "But yon' place must have cost a lot were numbers of university men, the Archies, vainly trying to reach of money," said Tom, "you can't build public-school men, and the like. Truly us, were bursting. shanties like that without a lot of the Army was a great democracy.

> An Indian turban of the largest size contains from ten to twenty yards

to himself, "and a rare beauty too; she's got eyes like black diamonds, and a face like a June rose." All the same he remembered some of the ladies who had come to the Y.M.C.A.

Same he remembered some of the ladies who had come to the Y.M.C.A. all here. Tom had rather expected well as stock. It is unfortunate that



Ninth Lesson-The Process of Digestion

necessary for us, we will begin a study and then, when they are transformed riggers grew fainter.

excitement the ren boarded the train the first act in the process of diges- ach. which took them there. He had hop-ed they would stay in London for at tion; for this operation one should The remainder of the food is con-staring up at us.

"What blithering fools they are!" fold: first, it lubricates and softens the comes mixed with the bile, pancreatic med the trenches and sprayed bullets ing against the empty bomb rack, said Penrose to him, as seated in their food so that it may easily be swallow- fluid and the ferments from the varicarriage they saw many of their com- ed. Second, the saliva brings about a ous intestinal glands. Each of these ing of the weapons drowned the roar As we sailed over the foremost panions staggering along the plat- chemical change in the starch contain- fluids has a part to perform. The of the engines. form. Tom was silent at this, never- ed in the food, which, when thoroughly bile emulcifies the fats and prevents I saw ahead of me a column of just leaping into it. The "ladies from FOY theless he thought a great deal. chewed or broken up, is transformed decomposition. The pancreatic fluids flame shoot up from one of our ma- hell" the Germans call them because It was now the beginning of May, into a convert sugar called glucose. complete the digestion of fats. | chines, and I caught a momentary of their kilts. and the Surrey meadows were bedeck- The food is then swallowed, and, on The intestinal fluids finish the pro- glance at the pilot's face. It was ed with glory. Tom, who had never been out of Lancashire before, could been out of Lancashire before, could been out of Lancashire before, could continues from twenty to thirty price from the standard lines that Itulas hinsh the pronot help being impressed with the continues from twenty to thirty min- sugars. beauty he saw everywhere. It was utes. If the food is carelessly chew- Digestion is a complex process, where him and that he did not burn to dashing back and forth across the fly-

Food Adjuncts

glory of green as he had never seen foods because they do not furnish before. By and by the train stop- nutrition, but rather act as a stimulant of the acid in the vinegar. ped at a little station, and then com- to the digestive organs and thus be-

"No," said Penrose, "I know almost Beverages.—The primary service of a porcelain preserving kettle. Add mies" should start over the top. beverages is to quench the thirst. one pint of good cider vinegar and "I saw you looking out of the train Thirst is nature's call for water. Wa- then boil for thirty minutes. Rub at a place we passed what they call ter constitutes the fifth class of food through a fine sieve and then add: one Godalming; you were looking at a big principles. It does not produce heat, tablespoonful of cayenne pepper, one denly, just after my partner had let en places. Somehow he brought the soon regains its normal tone, and can do its work alone without the doubtful aid the remaining months of the war, or building on the top of a hill there. and is therefore incombustible, but be- tablespoonful of mustard, one tea- go a rack of bombs, there was a ter- machine in, switched off his engine of artificial digestants. What was it?"

"It was my old school," said Penrose, "Charterhouse; the best school body it is an absolute necessity Water is the best known of all solvents.

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"It was sound be the best school body it is an absolute necessity Water is the best known of all solvents." in the world."

"Ay, did you go there?" asked Tom.

"Why, it was fair grand. How long body and assists in regulating the "Cabbage Catsup.—One large head of madly and we righted. A few more of the madly and we righted. A few more of the madly and we righted. A few more of the madly and we righted. A few more of the madly and we righted. A few more of the madly and we righted. A few more of the madly and we righted. A few more of the madly and we righted. A few more of the madly and we righted. The next day we were at it minutes, then hill into sternized botters as a carrier to all parts of the parowax. Store in a cool, dry place. The next day we were at it parowax. Store in a cool, dry place. The next day we were at it parowax. Suppose that the In the madly and we righted. A few more of the madly and we righted. A few more of the madly and we righted over the madly and we righted the madly and we righted the madly and we righted the madly and the madly an

"And to think of your becoming a tropical tree that bears fruit similar Chop very fine and cover well with about this.

that's all; and I made up my mind a pleasant stimulating constituent of spoonful of cinnamon, one tablespoon- One drum of our ammunition was pers. that I would learn what a private tea. It also contains tannin, which, ful of allspice, one tablespoonful of soldier's life was like before I took if allowed to develop by premitting cloves, one tablespoonful of mace, one "Well, you know now," said Tom, the tea to stand considerable time tablespoonful of celery seed, one table-"and you will be an officer soon, I ex- after brewing, is injurious to the stom- spoonful of cayenne pepper, one cupach. The use of fresh boiling water ful of brown sugar. Stir well and then "My uniform's ordered," said Pen- when making tea is a necessity. Do cook gently for one-half hour. Bottle

into sterilized bottles and cork. Seal not boil tea. Chocolate and cocoa have a re- by dipping the tops of the bottles in "I suppose you won't be friends cognized food value, whether they are melted parowax. Store in a cool dry all the blemishes and then cut into to hold the particles in solution.

Catsup and Pickles Great care must be taken if you thick. Then store in glasses and jars.

spoonful of ginger one-half table-

spoonful of mace. Tie the spices in a

piece of cheesecloth and cook until

(To be continued.)

y, she's a grand lass," he said surroundings. He found that in this for the man who does not have to buy

Over No Man's Land.

he was glad of it. Polly Powell's The growth of the human body is | When starchy foods are chewed mander's pistel we darted forward, spell was strong upon him, and he said likened to that of a tree. In order well, the starches have been partly going ever higher and higher, while already used up. My partner whirled repeatedly that Alice Lister was not that we may know just what foods are acted upon by the saliva in the mouth, the cheers of the mechanicians and around on his stool—a sort of piano stool, which always made me think into the glucose state, the action is Across our own trenches we sailed of the tuneless, tin-panny instrument

least one night, but only two hours have good teeth. If the teeth are de- verted into a thick fluid, consisting of There was another signal from the for the Prussians, for the commander were allowed between the time they cayed or gone the food will not be solids and undigested particles, sus- commander. Down we swooped. The was just signalling to retire. reached Euston from the time the thoroughly chewed; if this i the case, pended in a yellowish liquid called bomb racks rattled as hundreds of My partner lurched forward. He

the journey, and when at length Tom adult with good teeth will secrete for further digestion in the intestinal sions over the heads of the Boches in I raced westward, the air whistling through the bullet holes in the wings their trenches. ed that many of the men were worse The purpose of the saliva is two- In the intestines this liquid food be- Lower and lower we flew. We skim- of the machine and my partner lean-

had been hit. I hope the fall killed I took the ground. Ambulances were Makes Digestion Painless.

made. It was a German squadron, another recall. I walked to quarters oxides, citrates, carbonates, sulphates, watery catsup, etc. Do not use alum- The Archies had not bothered us ill-ill at heart, at stomach, at mind. etc., the most suitable and efficient, and inum, copper or tinware in making much while we were spraying the I'll never know a better pal than was is bisurated magnesia, a teaspoonful of catsup or pickling, owing to the action Prussian trenches, but now we had Tom. that other squadron to take care of. On the way I managed to help with the acid, stop fermentation, and thus en- Last March the Fate of Democracy Cucumber Catsup.—Six cucumbers, Our orders were to bomb the trenches. a machine that had just landed. A big sure painless normal digestion. Care menced the march to the camp for which they were bound. Penrose and Tom walked side by side.

To

A Parting Message. I don't know what it was, but sud- was dead. The pilot was hit in a doz- relieved of the irritating acid and gas.

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BATTLE OF

An officer of the Royal Canadian Flying Corps tells the following

We had gone out early in the morning, fifty of us, from the Royal Canadian Flying Corps barracks, back of the lines, when the sun was low and my courage lower, to bomb the Prussian trenches before the infantry

Our machines were stretched out

At last we all climbed into our machines. All along the line engines began to roar and sputter. Here was a 300 h.p. Rolls-Royce, with a mighty, throbbing voice; over there a \$10,000 Larone rotary engine vying with the others in making a noise. Then there were the little fellows, humming and spitting, the "vipers" or "maggots," as they are known in the service. At last the squadron commander

took his place in his machine and rose with a whirr. The rest of us rose and circled round, getting our formation. Crack! At the signal from the com-

was ordered south, and amidst much Chewing or mastication of food is continued by acid fluids in the stom- and out over No Man's Land, like a back in quarters—grabbed another huge, eyeless, pock-scarred earth face drum and slammed it into the machine gun. It was to be a parting message

train was due to leave Waterloo. Dis- then a large portion of saliva which chyme. This is the food now prepar- bombs were let loose, and a second la- was hit. A thin red stream trickled cipline was somewhat relaxed during the mouth secretes will be lost. The ed by the saliva and stomach ferments ter came the crackle of their explo- down his face.

"You might have been an officer if to our common cherry. It acts as a salt. Stand aside over night. In There was no longer any chance to and trickiness can play but little part. corn. to our common cherry. It acts as a salt. Stand aside over night. In stimulant to the nerves, relieves fati- the morning drain well and add en- worry about flying position. There is in the lone adventure that stunt hears is easily provented. He would probably be a the berry after it has been roasted Place in a porcelain preserving kettle attention-that line of gray down "It was just grand of you." the berry after it has been roasted and cook until soft enough to rub there that we were trying to erase and they could hardly hope for decisive through a fine sieve, then add: One- the Boche squadron thrumming down trimmer, operated with both hands, heap well and as fresh material is

2 and 5 lb. Cartons— 10, 20, 50 and 100 lb. Bags.

IF ALL THE SKIES.

If all the skies were sunshine Our faces would be fain To feel once more upon them The cooling splash of rain.

Our hearts would often long For one sweet strain of silence To break the endless song.

If life were always merry Our souls would seek relief And rest from weary laughter In the quiet arms of grief. -Henry Van Dyke.

Prussian trench some Scotch were

and dyspeptics who follow this plan and Just by the aerodrome another bi-plane fluttered down. The observer mints, drugs and medicines are invari-ably astonished to find that the stomach,

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Redpath in the original Cartons or Bags.

If all the world were music

other leguminous crops in the silo had triumphed over the Russian peo-

which greatly resembles horse clip- plied up sprinkle it, and the flies will scale against them. be prevented from breeding.

KING JAMES L TRAVELLED IN SUB

FIRST SUBMARINE WAS MADE AND LAUNCHED IN 1620.

Was Propelled by Oars, But Secret of Obtaining Pure Air Died With

The submarine is much older than the German Empire, and the credit of being the first sovereign to make a trip in one is given to James I. of England, a monarch who has generally been represented as a man of more than ordinary timidity. Doubt has been cast on the story, but whether it is true or not, that James actually made a trip in a submarine, it is interesting to recall that one James' friends did undoubtedly construct the first practical submersible boat recorded in history. At Siege of Tyre.

Alexander the Great is said to have employed diving bells at the siege of Tyre, 332 B.C. An Arabian historian named Bohaddin, who lived about 1150 A.D., relates that a diver entered Ptomlemais during a siege by means of a submarine apparatus. An invention for descending into the sea was heard of at Toledo in 1538, and Charles V. is said to have interested himself in it. Forty-two years later an Englishman, William Boone, was credited with inventing a "plunging apparatus" similar to a device produced nearly 200 years later by one Symons, which was galley shaped with a dome-like roof, but differing in the manner of submersion. Boone's plunger was submerged by contraction of the hull through the instrumentality of hand vises, which reduced its volume, while Symons made use of leather bottles, which he filled with water. Magnus Pegelius in 1605 made a similar device which was regarded as a marve of its time.

Van Drebel's Device. According to Allan H. Burgoyne, F.R.G.S., "the honor of having constructed the first submarine boat undoubtedly belongs to Cornelius van Drebel, a Dutch physician. His first submarine was made in 1620, when he built and launched a navigable submersible boat, and so successful did it prove that he had two others constructed on the same plans, in the larger of which James I., of whom van Drebel was an intimate friend, made a lengthy trip. Those early craft were built of wood and rendered watertight by stretching greased leather all over the hull. The following is from a description of the largest. She carried twelve rowers. sides passengers, and made a journey of several hours at a depth of from twelve to fifteen feet. The holes for the oars were made to hold water by leather joints. Van Drebei accounted his chief secret to be the composition of a liquid that would speedily restore to the troubled air such a proportion of vital parts as would make it again for a good while fit for respiration. The composition of this liquid for en-

A NARROW ESCAPE.

days when we could get no news from Russia," says the London Independe even whether an attempt is made See that the climbing roses and restore Czardom, matters comparatively little since the critical moment

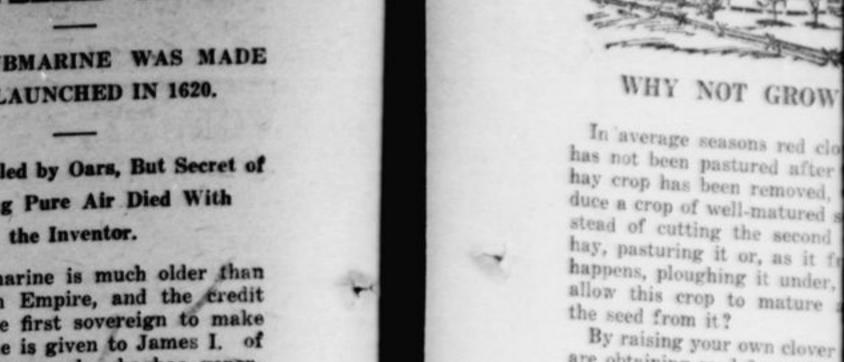
Suppose that the Imperial Court cabbage Catsup.—One large head of cabbage Catsup.—One large head of cabbage, three large onions, four cabbage, three cabbage, three large onions, four cabbage, three cabbage escape with your life. Flying ability universally satisfactory for silage as a speedy peace with the Central Powheaps is easily prevented. Use carbo- match for the Central Powers, but through a fine sieve, then add: One- the Boche squadron thrumming down trimmer, operated with both hands, heap well and as fresh material is ern theatre of war thrown into the

When we see how nearly equal are Germany and Austria to all the forces which the rest of the world has yet been able to send against them, we can imagine what a menace they would be with the aid of hundreds of millions of Russians organized by Prussian system and dominated by Prussian diplomacy. Neither the Roman Caesars nor Napoleon at the height of his power could so subject the nations to their will as the rulers whose domains would stretch from the Arctic to the Persian Gulf and from Belgium to the Pacific

That this should not be was determined by God and Man when the red flag was raised above the palaces Petrograd.

In 1913, South Africa imported 21,-263,000 eggs. This year it will be found that over 2,000,000 have been exported, after local requirements had

The raising of cattle in Rhodesia has now reached the stage where meat canning plants must be provided to care for the excess output.



are obtaining seed from plan by their very existence, h monstrated their adaptation conditions prevailing on you and in your immediate localit seed, it is quite reasonable to will produce plants which are well adapted to local conditio this reason home grown clove really more valuable than mo seed obtainable through channels of commerce. Quite often very poor-looki of second growth red clover duce a profitable crop of se many cases fields where the

dred pounds of clean, wellseed per acre. Usually, how average second growth will anywhere from 150 to 250 p The red clover seed crop s cut when the heads are dark color, and contain hard, welled seed. In harvesting all sary handling should be Rough handling, frequent turn

quite thin and say only eigh

inches high, will yield over

When father lived here on the Oh, it was long ago!-Could he have had the fun I hi And known the things I known Why, I have seen a fox to-day Out on the pasture hill. And caught three minnows in the

That flows below the mill. And I know where wild cherrif And where the wood grapes And where the fern root is mo Than sugar is, by far.

And then I caught a firefly on And found what makes the I And once I heard an owl

Whoo!" Beside the road at night. I almost caught a turtle, too, Down by the lily pond; And, anyway, I saw a hawk

Fly from the woods beyond. When father lived here on the So very long ago,

I wonder if he had such fur And knew the things I know In having time I helped a lot! I helped to rake the hay,

And high among the rafters c

To tread the load away. Then once we thought a cow w But Scotty found her track, And how he ran! but it was day

I found a cave one day. I'm sure that pirates lived in I Or redskins hid away! Oh, every day brings something A thousand wondrous things to

A thousand things to see! Still, father only smiles and say That very long ago He had the selfsame fun I hav And knew the things I know.

-and some others. Good tres

The most important factor i production of high-grade butter proper cooling of the cream. make the best grades of butter cream should be separated from milk with a clean separator, kept rate from the cold cream and immediately to about 50 degrees

The use of hard floors in the barn suggests the use of a cister saving the liquid manure. good suggestion, too. Such a c can be built of concrete and cons with the gutters by means o cemented at the joints.

Butter should not come in less a half hour. When it comes too there is loss of fat in the butter When the weather is warm it is to lower the churning temper several degrees. The temper can be raised more easily than lor after the churning has been st

ONTARIO ARCHIVES TORONTO