

MOTOR-  
CYCLE

WIRELESS  
SETS

MODEL  
MONOPLANES

GRAMO-  
PHONES

See Offer!  
on page 23.

# *The* **MODERN BOY**

EVERY MONDAY.  
Week Ending November 17th, 1928.

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29



**THE DESERT LINER!** See page 3.



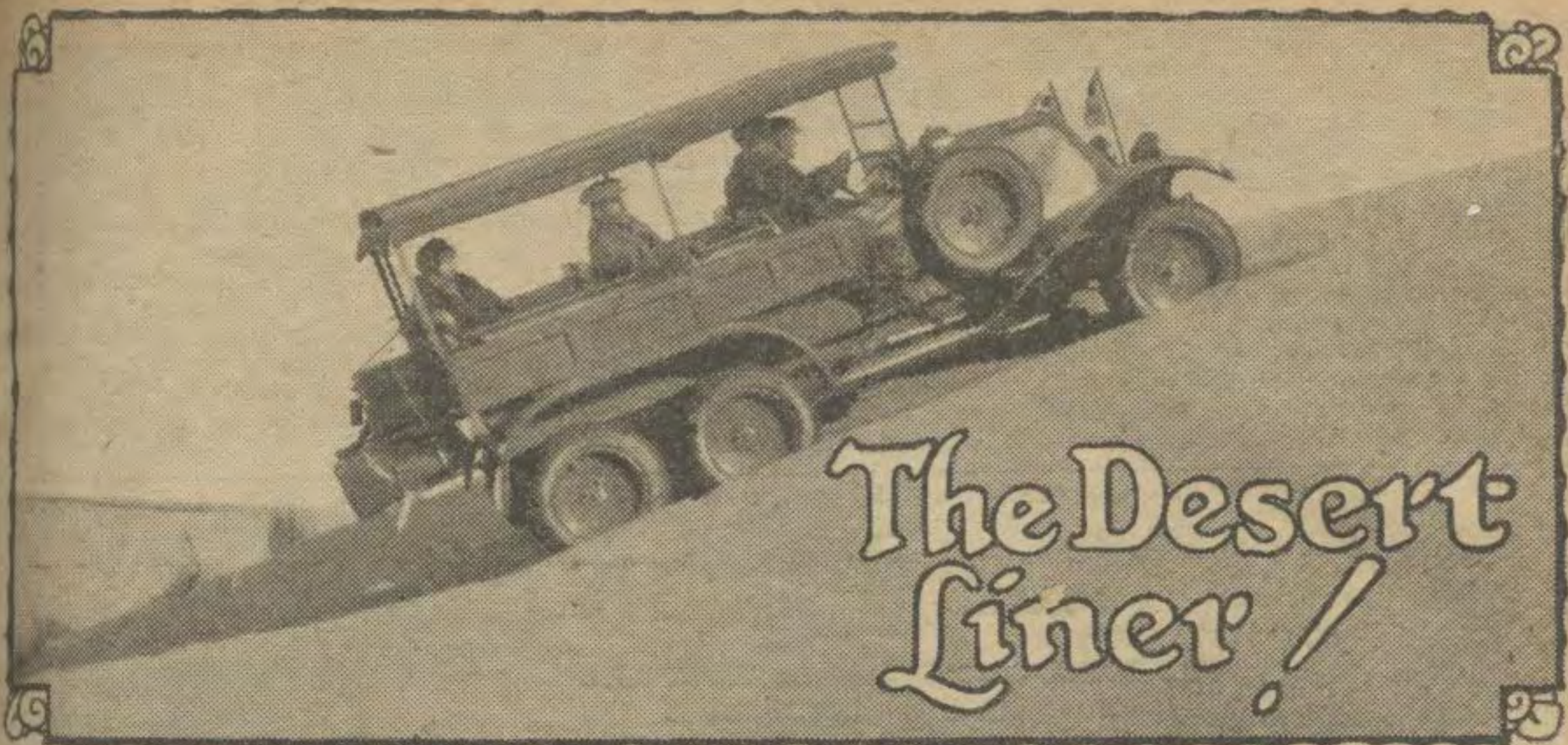
# AIR FLIGHTS BY CABLE!



Imagine yourself travelling in a small cage suspended from a thin cable over deep ravines and steep forests and then up a mountainside to the height of 3,500 feet above sea level! You can do it if you go to Pfander, in Austria, and make use of the wonderful new cable railway there—the up and down cars of which are seen in the photograph passing one another in mid-air. This railway is the outcome of nearly two years' strenuous work, and

cost about £20,000 to build. The cable is two miles long and can carry a load of 100 tons. The journey, besides being very exciting, is well worth while, for from the top of Pfander Mountain you get a really amazing view over 120 square miles of Switzerland, Bavaria, and the Tyrol. The sensation of being whirled through the air in one of these small cages is only to be compared with that experienced during an aeroplane flight!





# The Desert Liner!

*A ride in a motor-car across the great Sahara is as dangerous as it is exciting—with the prospect of the party dying of thirst!*

THE patient camel is to be finally discarded as "the ship of the desert." Its place will be taken by a gigantic motor for use in desert travel, now being constructed by a clever engineer, Dr. Bischoff, of Kiel.

It will carry passengers across the dreaded Sahara Desert with the same comfort and luxury that they now enjoy on an ocean liner!

This desert liner will have its dining saloon, recreation-room, look-out deck, state-rooms, and other comforts, and a fleet of them is to be built. The first, now in course of construction, is 130 ft. long, 42 ft. high from the bottom of the wheels to the top of the upper deck, and 26 ft. wide.

### 450-HORSE-POWER ENGINES.

In general arrangement it closely resembles a passenger steamship, with the exception that it runs on wheels of colossal dimensions. They measure 39 ft. in diameter. By the employment of an ingenious compensating mechanism they hold closely to the sand and soil in every position, so that the hull of the ship is kept always at a comfortable level.

The conquest of the Sahara Desert—there are 4,000,000 square miles of it—is one of the most difficult and fascinating problems in the world. At last its terrors are to be conquered, by a colossal, self-propelled vehicle in the form of a land-ship carrying 150 persons! This week's cover is our artist's impression of the new monster in full career.

Whatever the relative position of the wheels may be, the hull remains steady.

It is to be driven by two Diesel motors of 450 horse-power, of which the second is kept in reserve. Two dynamos furnish light and electro-motive force. Steering is effected by means of hydraulic apparatus.

The machine is built to ascend grades of 30 degrees, for steep hills are very numerous in the Sahara Desert. Great speed has not been aimed at because the friction of the sand on the wheels would generate tremendous heat. It will be able to travel at about nineteen miles an hour.

The new desert ship will carry 150 persons, including passengers and members of the crew, and 200 tons of merchandise, in addition to oil and water.

*A gallant attempt by a native driver to get his "creeper-track" motor-car and trailer across an African river.*

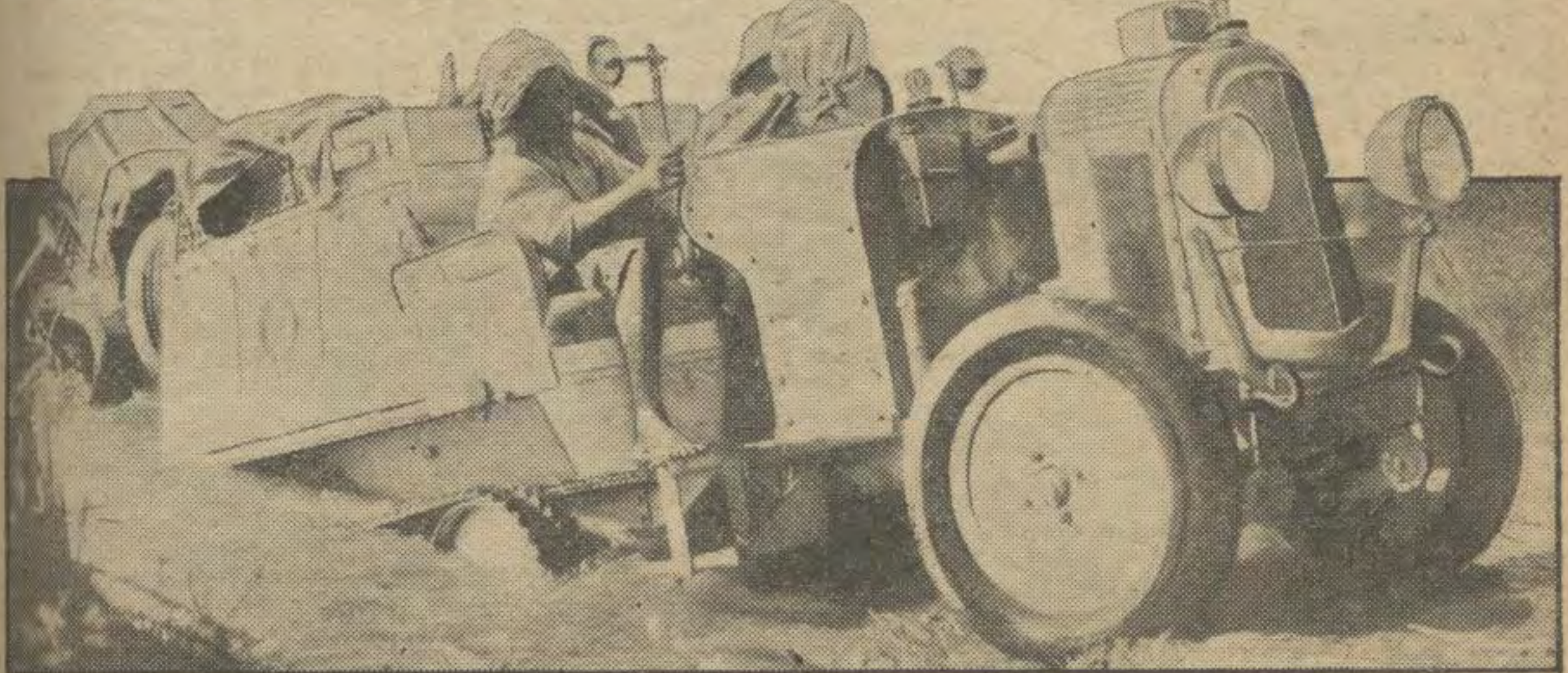
The supply of fuel will be sufficient for a journey of 10,000 to 12,000 miles without replenishment, so the enormous vehicle will be amply equipped to cover the greatest desert surface in the world.

Inside the desert liner will be four decks. On the upper deck is the control cabin, the wireless cabin, the cabins of the commander and three officers, and four cabins de luxe for passengers, built for two persons each.

### THE COOLING ROOM.

On this deck also are the wash-rooms, an office, a baggage-room, and a large space for promenade sheltered by a roof from the burning rays of the sun. The two intermediate decks are occupied by cabins, the dining saloon, the kitchen, the reading-room, the smoking-room, and more baggage-rooms. Two derricks, weighing 2,000 pounds each, will be fitted on either side for the loading and unloading of baggage.

A novel and important feature of the land-ship will be the cooling-room, where a low temperature will always be





# The Desert Liner!

maintained by artificial means. Here passengers who have been overcome by the desert heat can rest and recover. The extreme clearness of the desert air causes the sun's rays to be very penetrating, and exposure to them is, of course, dangerous, as they can penetrate the brain and spinal cord. That is why the Arabs of the desert have from time immemorial worn heavy turbans over their heads and necks.

On the lowest deck are the compartments for merchandise, the helmsman's cabin, the motor-room, the repair-room, the water and fuel reservoirs, and so on.

A discussion naturally has arisen as to the merits of a small motor vehicle and this great desert liner in conquering sandy wastes. It has been proved that specially constructed small cars can cross the desert, but they are subjected to great dangers. The Government of the Soudan recently forbade all traffic in desert regions, after a motor party had died of thirst!

## FIGHTING DESERT TRIBES.

The superiority of the desert liner over the desert motor-car is strongly asserted by champions of the former type. A freight desert liner weighing 350 tons would cost about £26,000,

some £6,000 more than forty motor-trucks.

But the running expenses of the forty motor-trucks on a course without tank stations would be considerably higher than that of the desert liner. Each truck would require at least two chauffeurs, which means a staff of eighty men, while a crew of twenty is sufficient to run and man the desert liner.

Motor-truck crews would be forced to pitch camp at night, and perhaps fight with desert tribes (the population of wild men is reckoned to be 3,500,000) and wild beasts, whereas the desert liner can go ploughing on day and night without a halt.

# ALL ABOUT Railway Engines

## This Week: THE SANDING GEAR, BUFFERS and SCREW COUPLING.

IN wet and frosty weather there is a strong tendency for a railway engine's wheels to slip, and, consequently, they are unable to secure the grip necessary to enable them to draw the train along. To prevent this slipping, sand-boxes and sanding gear, as shown below, are fitted to all locomotives.

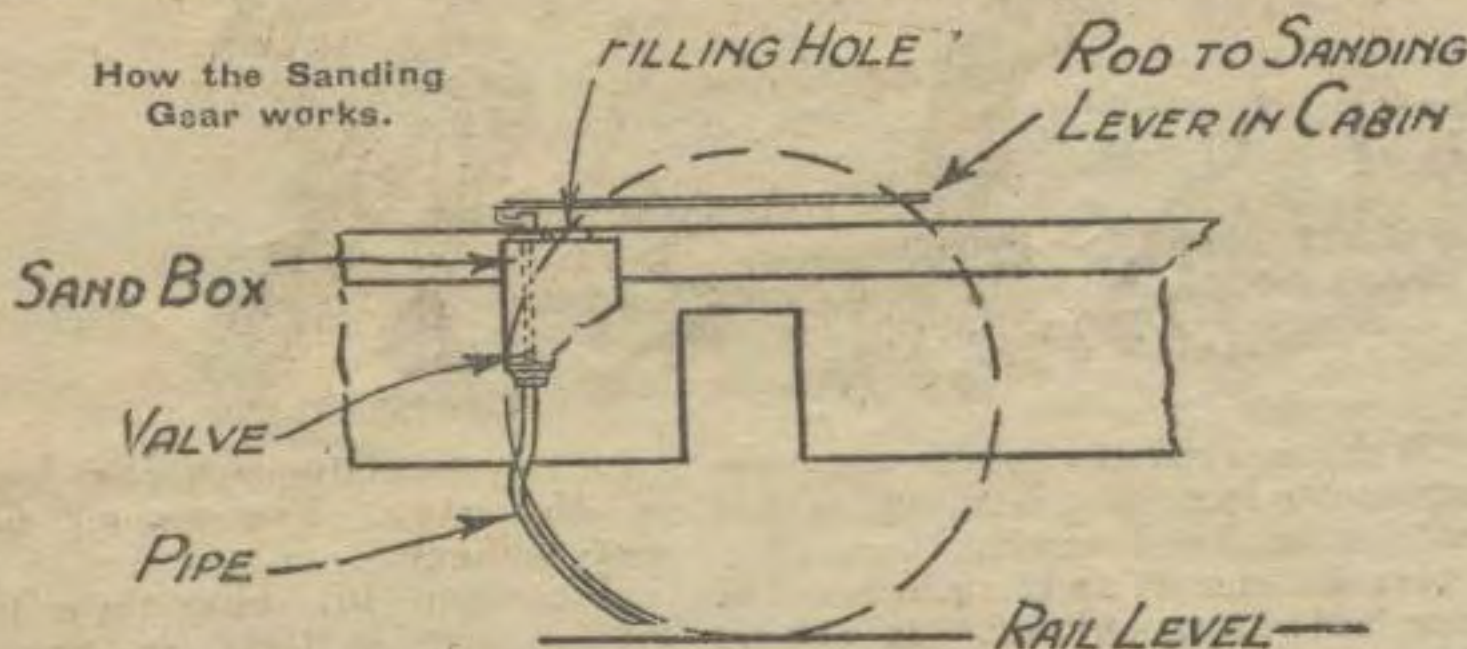
the rails—and this is often necessary at starting, irrespective of the weather—he pulls over the sanding gear lever in the cab. This is connected by a rod to a valve underneath the sand-box, which uncovers two small holes over the sand pipe and allows sand to fall down on to the rails. The same lever operates



The device consists of a hollow plunger fitting into an outside casing. A centre pin runs from the head of the plunger through a block of teak, or some other hard wood, and a coiled steel spring. It then passes through a hole in the back plate and is secured by a cotter, after the spring has been partly compressed in order to give it resistance to commence with.

When the buffer receives a shock, the head is pushed back and takes with it the block of wood. This presses against the steel spring, which compresses and resists, and absorbs the shock. The beam on which the buffers are fixed also accommodates the screw couplings.

Any form of connection between engine and train must be both easy to work and secure when fastened, and the screw coupling has been adopted as the best method.



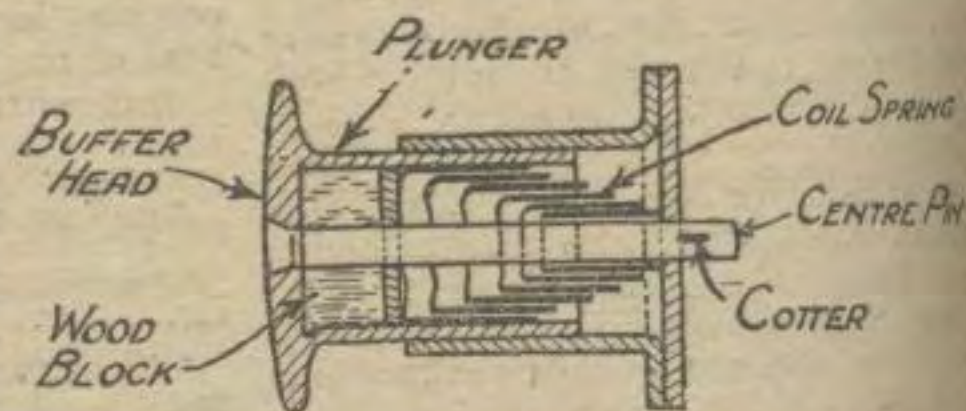
The apparatus, fitted in front of the leading and behind the trailing coupled wheels—the latter arrangement being necessary for use when the engine is running backwards—consists of a box into which the sand is filled, and a pipe running down beside the flange of the wheel and terminating close to the rail.

When the driver wishes to sand

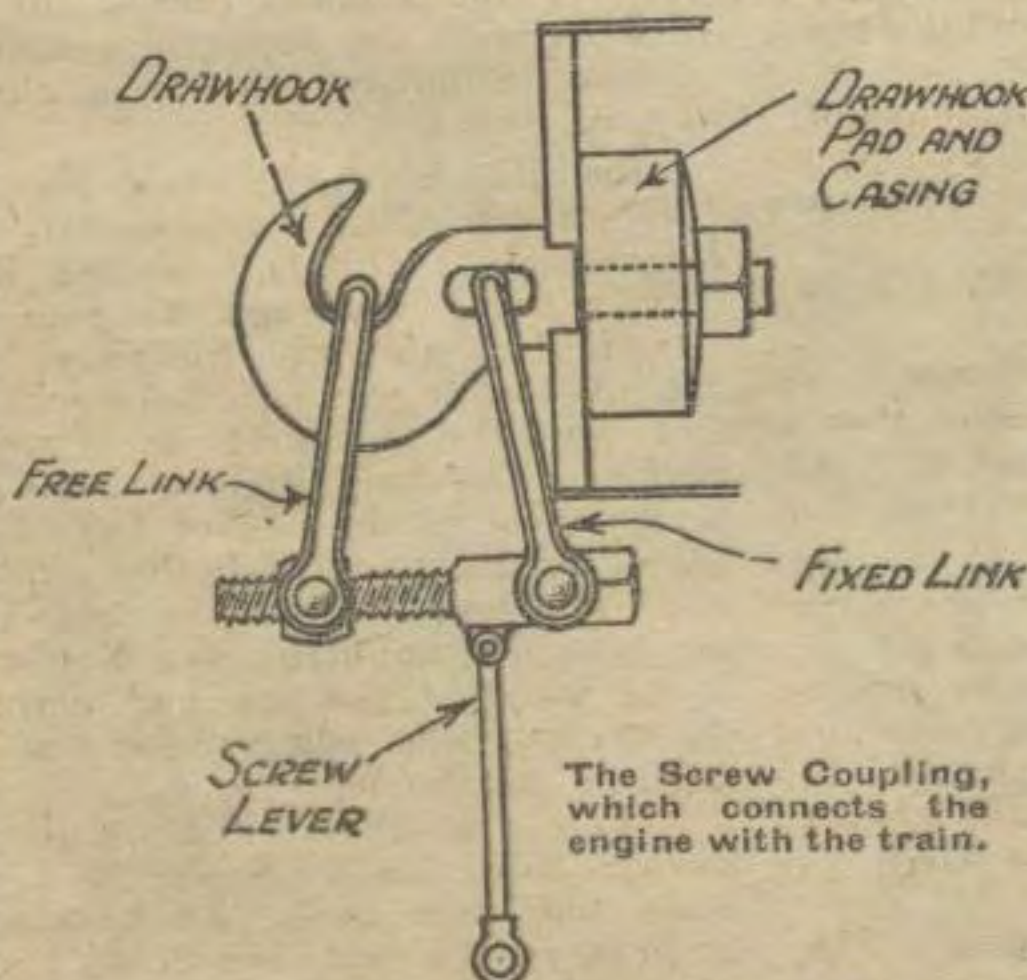
the boxes on each side of the engine, so that sand is dropped on both rails at once.

Great care is taken over the sand used. It is first baked in a kiln, then thoroughly sifted through a screen with a mesh smaller than the holes through which the sand must pass on its way from the sand-box to the pipe. This ensures that there will be no blockage and consequent failure of the apparatus. Each locomotive uses about five tons of sand annually!

The buffers are familiar to every fellow, but how many of you know what they are like inside? It is obvious that, if they are to be at all effective, buffers must be fitted with some shock-absorbing device. The diagram on right shows a common type in which a coiled spring takes the shock.



This section of an Engine-Buffer shows you the shock-absorbing device inside.



The Screw Coupling, which connects the engine with the train.

It consists of a pair of very strong links with one flat end each, joined by a centre turning lever with a thread which screws into the flat ends of the links. As you will see from the sketch on left, one of the links is fixed to the shank of a drawbar hook projecting from the buffer beam.

To connect vehicles, the loose end of one coupling is looped over the drawbar hook of the other; the lever is then turned until the coupling is taut and there is a slight pressure between the buffers of both vehicles.

Thus the whole train is set in motion almost instantly, and without any sudden jerking, as soon as the engine commences to move.



# Salvaging the Sunabaya

Complete in  
This Issue.

A Fine KING OF THE ISLANDS yarn . . . a pulse-quickenning story of the South Seas.

By  
**CHARLES  
HAMILTON.**

## The Reef of Luka-Lu.

"FELLER schooner he stop along reef!"

Ken King, steadying himself with a foot jammed against the cabin skylight, drank steaming coffee from a tin pannikin. His ketch Dawn was pitching wildly on a tumbling sea. All through the night a squall had roared on the Pacific. It had roared itself out by break of day, leaving behind it, when it went, a sea running in mountainous waves and a grey, grim sky through which the early sun-rays glimmered palely. Hardly for a moment had either Ken or Kit Hudson, his young Australian mate, left the deck, and morning found them wet and weary. Danny, the cooky-boy, came along with the steaming coffee that put new life into the shipmates.

Kaio-lalulalonga, the Kanaka bo'sun, commonly known as Koko, wiping salt spray from his eyes, peered through the dawning light over a wild grey sea. A grey blur in tumbling grey water, the reef of Luka-Lu showed to the west; beyond it a darker blur that was Luka-Lu itself. Only the eyes of an albatross, or of Kaio-lalulalonga, could have picked up the ragged masts that showed over the roaring reef.

King of the Islands—as Ken was known throughout the South Seas—finished his coffee, handed the pannikin back to Danny, and glanced round.

"What's that, Koko?"

"Feller schooner, sar," said Kaio-lalulalonga. "He stop along feller reef; he one feller wreck, my word!"



"We're in luck that we're not stopping along reef, too, Ken, after that blow," said Kit Hudson.

King of the Islands smiled. The ketch had ridden out the squall under close-reefed canvas, as she had ridden out weather as rough, or rougher, many a time before. On the deck of his ketch King of the Islands feared no wind or weather.

But through the darkness of the night the boom of breakers on the reef had come with a hollow sound of boding. Ken was glad to see the daylight creeping over the tossing sea. More than one island trader, he could guess, had found trouble during that wild night.

"We're well away from the reef," he said. "But some unlucky skipper has hit it, if Koko's right. Where's that schooner, Koko?"

The Kanaka pointed with a brown finger.

Ken strained his eyes through the glimmering twilight of dawn. Dimly, through shadows and masses of spray, he sighted the topmasts that had caught Koko's keen eye.

"A wreck!" he said.

"Abandoned?" asked Hudson.

"Looks like it. Anyone aboard could see us, and there's no signal flying. I reckon the crew took to the boat when she struck, and tried to make Luka-Lu. I hope they got through."

Ken's eyes met his shipmate's. The first thought of sailormen was concern

for the crew of the ship that had gone on the reef. The second thought was—salvage!

Ken fixed his binoculars on the reef. The twilight of dawn was giving place to full day, with the swiftness of the tropics. From the grey sky, banked with clouds, a golden gleam of sun came through a cloud-rift. It brought a comforting light and warmth to the spray-drenched, storm-weary crew of the ketch; and it told, too, that a blazing day was to follow the stormy night. In the strengthening light King of the Islands picked up the schooner with the powerful glasses.

"The Sunabaya—Griffin's ship!" he said.

"Just like his luck!" said Hudson.

"Poor old Griffin always hits the rough end of things," replied Ken.

Only three days ago King of the Islands had seen the Sunabaya sail out of the lagoon at Lalinge, and had waved a farewell to Captain Griffin. Now the handsome schooner lay jammed in the reef of Luka-Lu—evidently deserted. Whether captain and crew had reached the island in the boat was doubtful, and Ken wondered whether the sea had claimed the skipper who was reputed the unluckiest in the Islands.

"There's a chance he's still on board," said Ken. "So far as I can make out from here, the schooner's jammed in the reef, and doesn't look like sinking. If Griffin's on board



## Salving the Sunabaya!

we'll help him out of this; but if not—"

"If not, it's salvage."

"That's it! The Pacific Company can afford to pay," said King of the Islands. "This may mean a thousand pounds, and more, if we can salvage her. I'd rather see old Griffin standing on her deck, though."

"Same here! But if he's gone, salvage is salvage," said Hudson. "Looks to me as if they were in rather too much of a hurry to quit her. But I dare say it seemed different when she struck, with the breakers howling round her."

"No doubt of that," said Ken.

But his glance was thoughtful as he regarded the distant wreck. So far as he could see, the Sunabaya was jammed in a crevice of the reef, on an even keel. The teeth of the coral might have torn out her timbers below; but, at all events, she had not sunk, and the wild waters that broke around her left her unmoved.

A blaze of sunlight came as the clouds rolled away. The sea was still running high, but going down perceptibly. King of the Islands turned away from scanning the wreck at last.

"She's safe enough there," he said. "We'll stand by till the sea's gone down, and then edge in to the reef and get out the whaleboat. If we can get her off, we'll tow her into Lalinge."

It was ruin to Captain Griffin, if he still lived. But it was the luck of the sea. It was something like a fortune to the shipmates of the Dawn if the Sunabaya could be salvaged. Ken had spoken sincerely when he said that he would rather have seen Captain Griffin standing on his own deck. But Captain Griffin was not there—and salvage was salvage!

### Salvage!

THE sea was still rough, breaking on the Luka-Lu reef with a hollow boom. But the ketch had edged in close, and now lay hove to, and the whaleboat had pulled in to the wreck. Leaving the Kanaka seamen in the boat, King of the Islands and Kit Hudson swung themselves on board.

Not a sign of life had been seen on the Sunabaya from a distance. And when they trod her deck, it was evident to the shipmates that she was deserted.

The deck was awash and cluttered with spars and torn rigging. The fore-castle was heaped with the wreckage of the fore-topmast and its ropes, and the whole scene was one of ruin and desolation. Yet in the crevice of the reef the Sunabaya lay on an even keel, jammed in the coral. It was easy to picture the wild alarm of the crew when she had struck and the topmast had come crashing down and the wild breakers were roaring and lashing round. Yet that alarm had been unfounded, as it proved, for the schooner, stranded as she was, was safer than any open boat could have been in the squall.

King of the Islands went below, followed by the Australian. The in-

terior of the schooner was in a clutter of disorder. There was a wash of water, but so little that it was plain that it had come from the breaking seas, not from a leak.

"Poor old Griffin!" said Ken. "He's said to be the unluckiest skipper in the Islands, and it looks like it! If he'd stood by the Sunabaya, Kit, he would have been all right."

"But he couldn't have known," said Hudson. "It's next door to a miracle that the schooner has jammed into the reef like this. It was a chance in a thousand."

When the shipmates proceeded to examine the hold, the escape of the Sunabaya seemed even more miraculous. Not a timber had been stove; the hull of the schooner was intact.

King of the Islands swung from the schooner to the coral rock. Except astern, where the water dashed against the schooner, it was possible to walk all round the Sunabaya on the coral, in shallow water.

By one of the strange chances of the sea—a chance in a thousand, as Kit Hudson had said—the Sunabaya had struck at the only point on the reef where she would not have been pounded to fragments in the breakers.

There she lay—almost intact. The bowsprit hung like a bird's wounded wing—the fore-topmast had gone by the board; but for the rest the schooner was as seaworthy as when she had sailed out of Lalinge.

"We can get her off, Kit!" said King of the Islands at last. "She'll float like a cork! She wants a tow out of this—and a jury topmast—and she'll follow in our wake to Lalinge like a towed boat. Kit, old man, this is a stroke of luck we shall never see twice."

"You bet!" agreed Hudson.

King of the Islands climbed back on the Sunabaya. Standing on the cluttered fore-castle, he looked away across the lagoon to the beach of Luka-Lu.

Outside the reef the sea was still tumbling; but within the reef the wide lagoon was almost calm. There was half a mile of glistening water inside the reef, and then the beach—sand and powdered coral, dazzling to the eye in the sunshine. Beyond the beach was a fringe of palms, and farther on dense bush. It was upon the bush that Ken's eyes rested in keen scrutiny.

He knew Luka-Lu. No white man dwelt on Luka-Lu. Plantations had been attempted on the island more than once, but the ferocity of the natives in the bush had driven away the planters. More than one white man's head smoked in the grass huts in the interior. Ken's brow was thoughtful as he looked. The salving of the Sunabaya was a matter of patience and labour, and that depended on whether he was left free to carry out the task.

Once the natives of Luka-Lu got wind of a wreck on the reef the lagoon would be alive with canoes seeking plunder.

Once afloat, King of the Islands would have laughed at any fleet of cannibal war-canoes. But with the Sunabaya jammed in the reef the

matter was different. Until she was got off she was open to attack; and that the savages would attack if they got wind of it was a certainty.

In the first flush of the discovery it had seemed to the comrades of the Dawn that they had found a fortune. But they realised now very clearly that they might have to fight for the fortune—a desperate fight against overwhelming odds!

There was no time to lose. The hope was faint that the schooner might be got off before it was discovered by the natives. But there was a good chance of getting it off before the blacks gathered in strong force.

King of the Islands turned his glance on the reef. The tide was running out of the lagoon, and far and wide the coral rocks were exposed above the water. Between the Sunabaya and the lagoon was an extent of thirty feet of rough reef, broken and jagged, with little channels running through here and there. No canoe could come within that distance of the wreck till the tide was in. On the other hand, the wreck could not be dragged from the rift in the reef till the tide was high enough to float her. The sinking tide left more and more of the hull exposed; and only the rocks where she was embedded saved the schooner from pitching over on her beam-ends.

But for the danger of the natives, all was favourable. The wind had changed with the new day, and was blowing stiffly off shore—the wind that was needed for extracting the schooner from her strange resting-place.

There was much to be done while King of the Islands waited for the turn of the tide.

The Dawn lay at anchor outside the reef, with only Lompo in charge. The four others of the Hiva-Oa crew were at work on the schooner. Lompo kept guard on the ketch, with a rifle under his arm, though at the distance the Dawn was in little danger from natives. On the schooner, loaded rifles were placed in readiness to be grasped at the first sign of danger; and watchful eyes glanced incessantly across the lagoon to the beach while the work proceeded.

The wreckage was cut away and the Sunabaya restored to a more seaman-like condition. The labour went on till the sun of noon was blazing down on Luka-Lu. Then in the heat of the day there was a spell of rest. By that time all traces of the storm were gone, save for a swell on the open sea. A sky of almost cloudless blue stretched over the shining Pacific, and the sun was a glowing ball of fire.

"Feller canoe he comey!"

King of the Islands made a spring to his rifle, and turned his glance on the bright lagoon.

A long black canoe, with a high carved bow, manned by twenty savages, was paddling swiftly out to the reef. Some watchful eyes had seen the wreck from the bush, and the news had spread. This was the first canoe to appear—it was not likely to be the last. King of the Islands, standing on the fore-castle



of the Sunabaya, fixed his eyes on the approaching canoe, lifted his rifle to his shoulder, and shouted:

"You feller canoe, you stop along lagoon!"

The canoe shot on.

Bang! The boy trader fired a shot over the heads of the kneeling paddlers. There was a jabbering from the blacks, and the canoe lost way. The paddles ceased to flash, and the canoe hung off the reef like a bird of prey, uncertain whether to swoop.

### A Fight for Life!

**K**ING OF THE ISLANDS stood like a rock, the rifle to his shoulder, his eyes gleaming over it at the canoe. Beside him Kit Hudson stood, rifle in hand—behind him gathered Koko and the four Hiva-Oa boys. Ken was watching for a whizzing spear or knife, ready to

savvy Makatee wantee stop all along feller ship!"

"Feller ship he belong white master," answered Ken. "Makatee he stop along feller beach."

"Makatee comey along ship all same fliend!"

Ken smiled grimly. Makatee's offer of friendship was not likely to deceive the boy trader.

"No can," he answered. "Stop along beach!"

"What name you tellee black feller stop along beach?" demanded Makatee sulkily. "Feller island Luka-Lu belong Makatee; ship he comey along island belong Makatee all same feller island!"

"You washy-washy along beach plenty quick, or feller gun he speakee!" said Ken, making a gesture with his rifle. "White feller stop along ship. Black feller stop along beach. You savvy plenty!"

"Feller white master he talk plenty bad feller talk!" snarled Makatee.

From the whole crew of savages rose a yell of rage. Makatee howled to his crew, the paddles flashed and splashed, and the canoe shot on like an arrow to the reef. A moment more and the blacks were out of it, leaping like goats to the rugged reef, now high above the water.

With wild yelling and brandished spears, they rushed and scrambled across the reef towards the schooner.

"Fire!" roared King of the Islands.

Crack! Crack! Crack!

As she lay embedded in the fissure, the bulwarks of the Sunabaya were only a few feet above the level of the rugged reef. It was a terrible moment for King of the Islands and his comrades, as twenty yelling savages rushed down on the wreck, their spears flashing in the blaze of the sun, their faces almost demoniac with ferocity. They were seeking plunder, but still more they were



pull trigger in an instant. But for the moment the blacks seemed daunted by the ready rifles, and the canoe hung back uncertain.

In the bows a wild and fierce figure stood—the Luka-Lu chief, his black eyes fixed on King of the Islands, his hand held up in sign of peace. He was a tall, powerful man, clad in a loin-cloth and necklaces of coral and cartridge-clips, with a clay pipe stuck in the lobe of one ear and a brass matchbox in the other, and a great brass ring hanging from his nose. He waved his hand and shouted in the Melanesian dialect of Luka-Lu. Ken shook his head, and the savage broke suddenly into *beche-de-mer* English.

"Makatee comey all same fliend!" he called out. "Feller white master

**Makatee sprang on King of the Islands. With a yell that was as fierce and wild as the cannibal's own, Koko hurled himself on Makatee and rolled over on the deck with him in desperate fight!**

"Head belong him smoke along fire belong Makatee!"

From among the savages behind the chief a hand was suddenly lifted, with a gleam of flashing steel in the sun. Even at the distance, and with a throw so sudden as to elude the eye, a Luka-Lu savage was capable of transfixing the white man with a whizzing knife. But King of the Islands was watching, and as the black hand went up he fired.

There was a fearful yell from the canoe as the black hand was shattered by the bullet, the knife dropping into the water.

seeking victims for *kai-kai* and heads to be smoked as trophies. For the moment it seemed that that fierce rush must carry all before it.

But the rifles rang sharply, and no bullet from King of the Islands missed its aim. Hudson pumped out bullets with cool precision. The Kanakas fired more wildly, but they fired fast, and at such close range it was almost as easy to hit as to miss. Yelling savage after savage went spinning over, and of the score who rushed from the canoe, not ten reached the sides of the schooner.

Fierce fire met the yelling, clambering savages. The Hiva-Oa boys, with rifles clubbed, beat back the savages striving to clamber on board. Makatee came sprawling on the deck, leaped up, and sprang on King of



## Salving the Sunabaya!

the Islands. For a second Ken's life trembled in the balance; but in that second Kaio-lalulalonga acted. With a yell that was as fierce and wild as the cannibal's own, Koko hurled himself upon Makatee, gripped him, and rolled over on the deck with him, in desperate fight.

Five or six screaming cannibals backed away from the schooner, scarce one of them unwounded. Bullets whizzed after them as they fled for the canoe.

King of the Islands, panting, stared round him. Koko and Makatee, in a grasp of mutual fury, were rolling over and over, fighting like wild-cats. But the attack on the schooner had ended. What remained of the crew of cannibals were running.

And the desperate struggle on the deck of the Sunabaya ended suddenly. Powerful savage as Makatee was, the mighty Koko was too strong for him. He went over on his back, a sinewy knee was planted on him, and Koko's face glared down at him in ruthless menace as he tore the knife from his belt and flung it up to strike.

A second more and the chief would have been pinned to the planks by the long Malaita knife.

Ken caught the Kanaka's arm in time.

"Stop!" he panted.

For once Kaio-lalulalonga was deaf to the voice of his white master. He dragged furiously to free his arm.

"Koko!" roared Ken. "No kill-dead feller Makatee—feller fight he no stop!"

"Kill um dead!" yelled Koko. "What name you say no kill um dead?"

King of the Islands tightened his grip on the Kanaka's arm. For a moment more Kaio-lalulalonga resisted; then he seemed to remember and submitted. He dropped the knife, released Makatee, and stepped back, sullenly silent. The savage was struggling to his feet, exhausted by the fierce wrestle, when he was grasped, and at a sign from King of the Islands, Lufu and Danny roped his powerful limbs with tapa cord.

Makatee, jabbering with rage and hate, lay bound on the deck—a prisoner. King of the Islands looked towards the canoe. With such of the cannibals as survived, it was fleeing across the lagoon for the beach.

### The Trump Card!

KOKO, the Kanaka, turned to his work with a brow that was grimly clouded. His brown face, always happy and contented, bright with good-humour, was now overcast. He laboured none the less vigorously at the work of clearing the wreckage; indeed, he worked harder than ever, as if his resentment gave his efforts an added vim. Kaio-lalulalonga, for the first time since he had followed the fortunes of King of the Islands, was angry with his white master.

He could not forgive the intervention that had saved the life of Makatee. In that fierce fight the fiery blood of Koko's savage ancestors

had boiled up in his veins. But it was not only that. It was that the savage chief had menaced the life of the little white master—that only Koko's grip in time had prevented the cannibal's axe from crashing into the boy trader's skull; and the narrow escape of King of the Islands had made Koko see red. As he went about his work he was silent, sullen, morose.

King of the Islands did not heed it. He was too busy to note just then that there was anything the matter with Kaio-lalulalonga. Ken's eyes scanned the lagoon searchingly. He knew that it could not be long before many more canoes appeared. Makatee had rushed in for the first plunder, probably expecting little or no resistance on a wreck; but the news carried by the survivors of the cannibal crew would rouse all the island and bring savages swarming to the spot.

All that the salvage crew could do had now been done on the schooner. All was ready for the effort to drag her from her resting-place when the tide served. From the Sunabaya a strong cable ran to the Dawn, secured to the stern of the ketch. With the wind that was now blowing strongly off shore, in the ketch's sails, Ken had little doubt of dragging off the schooner, once the tide served. The ebbing of the tide had left the Sunabaya high; but already the returning sea was washing round her hull.

If the attack came, in force that could not be resisted, there was nothing for it but to retreat in the whaleboat to the ketch, cut the cable, and run out to sea, leaving the Sunabaya to be plundered by the cannibals. But that was the very last resource.

In the distance, under the sun that was now crimsoning the west, a long line of canoes appeared on the gleaming lagoon. Ken, with a grim eye, counted ten of them. Every one of the ten was crowded with blacks, fighting-men and paddlers; and they swept down the lagoon in regular array.

"How many of them, Koko?" asked Ken.

"No savvy, sar," said Koko glumly.

The canoes were still far distant, but to Ken's eyes it looked as if the enemy numbered at least a hundred. For the first time he noted the morose sulkiness in his faithful follower's brown face.

"Feller Koko he plenty mad along white master?" asked King of the Islands.

"Koko 'bey little white master," answered the boatswain coldly. "What Koko tinkee, head belong him, belong Koko." By which Kaio-lalulalonga implied that his thoughts were his own.

"You lubber," said Ken. "What name you mad along me? No good killy black man after fight he no stop."

"Plenty good killy black man, along black man wantee killy feller white master," answered Koko sullenly. And stepped back, saying no more.

"Koko's got his back up, Ken," said Hudson. "First time I've seen the old coffee-bean ratty."

"He wanted to finish Makatee—and I dare say he was right, so far as he could see," answered Ken. "Sparing an enemy is a new idea to a South Sea Islander. But Makatee has his uses for me, I reckon, brute as he is."

King of the Islands stepped to the bound chief, and called an order to the Hiva-Oa boys. With evident dread in their looks, as if the mere glare of the ferocious cannibal daunted them, the Polynesian seamen approached him and lifted him from the deck, holding him so that he faced the advancing array of canoes.

At the sight of them, and the swarm of warriors they bore, Makatee's eyes gleamed with savage joy. The glutting of his savage vengeance was at hand.

King of the Islands pointed to the canoes. He could easily read the thoughts in the black man's savage mind.

"Feller canoe he come, Makatee," said Ken. "Plenty black feller he come. Plenty soon feller black man he hear, ear belong him," went on Ken. "You talk along black feller, mouth belong you, savvy?"

Makatee gave him a savage, inquiring glare.

"You give black feller good feller talk," said King of the Islands. "You tell black feller he go stop along beach, savvy? Black feller he no stop along beach, you feller Makatee kill-dead along rifle, savvy?"

The savage started. The sight of his warriors swarming to the attack had brought only thoughts of vengeance and ruthless bloodshed to his fuzzy mind. But Ken was making his meaning clear to the savage's slow brain.

At a sign from King of the Islands, Kit Hudson lifted his rifle. The muzzle touched the glistening black skin of Makatee's bull-neck. A shiver ran through the savage.

"You savvy?" asked King of the Islands. "You sing out along black feller, he stop along beach, no come along schooner. S'pose you no sing out, s'pose black feller he no stop along beach, you dead feller."

There was no doubting the boy trader's meaning, and no doubting his earnestness. If the salvage crew had to fight again for their lives, and this time against overpowering odds—if the cannibals succeeded, as looked only too likely, in gaining the schooner—it did not mean freedom to Makatee and vengeance and prisoners for kai-kai. It meant that the fate he deserved a hundred times over would fall upon him short and sharp.

For a full minute he remained silent, grinding his teeth with fury. One fierce, herculean effort he made to wrench loose his bonds. But he made the effort in vain. Hudson's rifle-muzzle scored into his black, shiny skin. Closer came the long array of war-canoes, and the yelling of the savages rang shrilly on the wind sweeping off shore.

"Makatee he talk good feller talk along black feller," he gasped at last, almost inarticulate with fury.

"You talk good feller talk plenty quick," said Ken coolly. "Canoe he

(Continued on page 10.)



# SHOOTING TO SAVE LIVES!



Above: A shipwrecked sailor travelling to shore—secure in a sling supported from the hawser which has been sent out from land by means of the life-saving pistol.

Right: The rope has been attached to the rocket, and the pistol is all ready to despatch it to the ship in distress.

An old sea-dog has invented a pistol designed to save lives instead of taking them—a new form of weapon to cheat the sea! This article tells you all about it and how it works.



EVER seen a real storm on the coast? When jagged lightning slits black clouds, when there's a wind that a man can barely brace himself against, and when the sea smashes itself to foam on the rocks? Not much chance for a ship when it's wrecked amidst that!

There's still less chance if she's driven close inshore among those rocks, where even a lifeboat can't go because it would be smashed to matchwood on the rocks of which the bigger vessel has fallen foul. And if the ship is more than a hundred yards from the rocky shore, no life-saving rocket apparatus can reach her, because the limit of a rocket's range is about that distance—or it was until this new pistol came along.

They call it the "Schermuly Pistol Rocket Apparatus" and its inventor is old Bill Schermuly, a real sea-dog. Old Bill's roved all the Seven Seas in his time, and he's got two husky sons who are as keen as he is on this thing that he has fashioned to save shipwrecked men from the relentless maw of an angry sea.

The pistol is—well, just a pistol, except that the barrel is fat and rather long. Instead of bullets it fires rockets which bridge the rock-strewn gap between ship and shore, carrying a line with them.

By the way, do you know how the ordinary life-saving rocket apparatus works? It is usually carried on a handcart. When it has to be used, as many volunteers as can be got together haul the thing up the cliffs to the place from which the rocket is to be fired.

Getting the weighty gear to the spot takes time and needs sound muscles.

When it is in position, the rocket is fired, carrying a slender line to the ship, the sailors aboard which pull on the third line and haul in another line—an endless one called a "whip." They pull on this again, and it brings a hawser. From the hawser is slung the travelling sling by which the sailors can be drawn up the hawser to the safety of dry land.

### A ONE-MAN OUTFIT.

That's the ordinary rocket apparatus, and it has saved about 12,500 lives since it was installed around our shores over fifty years ago.

The new life-saving pistol does all this, but claims to do it in better fashion. One man can carry the whole of the necessary apparatus, which consists simply of a long tin box containing the pistol and its rockets, and another one holding the line. The thin, white line which is attached to the stick of the rocket when it is fired is folded in a special way in the box. Its two ends lie loose in one corner; one of the ends goes on the "stick" and the

other to the heavier line which is to be sent out to the ship.

On the lid of the line box is fitted a brass rail, which carries a sort of sheath and through which the pistol is thrust. This sheath can be adjusted to any angle, giving the right elevation to the rocket. A cartridge is slipped into the breech of the pistol. The rocket itself is then dropped into the barrel, with the stick running over the top. The trigger is pressed—and away she goes.

And she goes for 150 yards! The present rocket apparatus only travels two-thirds that distance. The extra fifty yards may mean all the difference between life and death to a shipwrecked crew.

But that's not all. This pistol has two rockets—a small one and a large one. It's the small one that does the 150 yards, and the inventor says that the large rocket will carry the lifeline not less than 350 yards—that's well over three times the distance of the ordinary apparatus.

The great thing about it all is its simplicity. [One man can carry the whole of the outfit—no handcart, no team of striving, straining men on a narrow cliff-path fighting in the teeth of a storm, and no seeing the hissing rocket fall short of the ship that's being pounded to fragments under the feet of the wrecked crew.

Fixing the rope to the bottom of the rocket ready for the word "Fire!"



By the way, these life-saving rockets are really two in one. The first compartment carries the rocket to its full elevation, then the second compartment comes into action, lending additional impetus which gives the rocket an increase of range.

There are now 350 stations with rocket life-saving apparatus around the British Isles.



## Salving the Sunabaya!

(Continued from page 8.)

comey plenty too close altogether. S'pose black feller he comey along reef, you dead feller."

From the Luka-Lu chief burst a torrent of words, in his own Melanesian dialect. Of that dialect Ken understood but few words. But if he could not follow the speech of the island chief, he could see its effect. The savage array came to a sudden stop, and a babel of voices rose from the crowded canoes.

Makatee's harsh, strident voice rose louder, and the babel died down. His speech ran on, incomprehensible to the salvage crew, but obviously effective with the Luka-Lu cannibals. There was rage and disappointment in the savage faces; here and there a hint of angry rebelliousness. But it was plain that the authority of Makatee was unquestioned.

The paddles splashed again, and the long line of canoes, wheeling in perfect order, swept round.

Never had King of the Islands been so glad to see a swarm of black backs. As swiftly as they had come, the canoes paddled away up the lagoon, and disappeared round a curve of the beach whence they had emerged.

There was a cackle of joy and relief from the Hiva-Oa boys. They seemed hardly able to believe their eyes as the war-canoes vanished from sight.

King of the Islands turned to Makatee. The chief stood gnashing his teeth with rage.

"You feller Makatee, you go along beach bimeby," said Ken; and he gave no further heed to the enraged savage. Makatee squatted on the deck, his eyes on the white men, burning with fury, unheeded.

"Little white master!"

It was Koko's voice, humble and abashed. King of the Islands turned to the Kanaka with a smile.

"Well, old coffee-bean?"

"Koko plenty solly, sar! Koko no savvy! Feller brain belong head belong Koko he no walk about any more! Koko he plenty fool!"

"You old swab!" answered Ken, grinning. "Now you savvy plenty what name no good kill-dead feller Makatee."

"Savvy plenty, sar!" said Koko humbly. "No good kill-dead Makatee—plenty good he stop. Me no savvy he sing out along black feller, makee black feller stop along beach. Me plenty fool! Feller brain belong Koko he no walk about."

Ken chuckled. The Kanaka, filled with admiration for the strategy of his little white master, took it for granted that Ken's only reason for sparing the life of Makatee was to make use of him in warding off the attack of the cannibals. King of the Islands let it go at that.

The little cloud had rolled by; Kaio-lalulalonga was once more the cheery, loyal Koko, grinning with glee at the success of his master's strategy.

The tide was coming in strongly now, foaming on the reef as it met the wind off shore. There was a slight movement of the deck under

the feet of the savage crew. It was time to act. Kit Hudson and Koko remained on the schooner, and King of the Islands pulled back to the ketch, with the Hiva-Oa boys, in the whaleboat.

### The Fellowship of the Sea!

**U**NDER a cloud of canvas, the Dawn leaned before the wind, and the tow-rope stretched astern was taut as a fiddle-string. From her bed in the sand, in the fissure of the reef, the Sunabaya came slowly, steadily, and then with a rush, almost like a cork from a bottle.

Following the tow-rope, she floated off from the reef, under the crimson blaze of the setting sun.

Then, for a moment, Ken's face was set, intent, anxious. So far as his careful examination had told him, the timbers of the schooner were undamaged, but as she glided into deep water, he had a moment of anxiety.

But it was only a moment. The schooner floated on an even keel and Kit Hudson waved his hat joyously to the boy trader on the ketch.

The ketch hove to, the tow-rope was coiled in. King of the Islands returned to the schooner. Hudson slapped him on the shoulder.

"She's right as rain, old man! Right as a trivet! With three men, leave her to me to sail into Lalinge, you keeping company in the ketch. She'll sail like a duck when we get canvas on her."

"We're in luck!" said Ken.

He stepped to Makatee and cut through his bonds. The chief of Luka-Lu stood free.

The schooner was already a little distance from the reef, and Ken intended to send the savage chief ashore in the whaleboat. But Makatee did not give him time. Whether he thought that he was being loosed as a preliminary to execution, or whether he would not chance giving the white masters time to change their minds, was not clear; but as soon as he was free of his bonds, Makatee made one desperate spring to the side and leaped into the sea.

"My sainted Sam!" ejaculated Ken.

He ran to the side, staring after the chief. Makatee was swimming with powerful strokes for the reef. The thought of sharks was in Ken's mind, and he was glad to see the savage swim across the now submerged reef and into the lagoon. There he vanished from sight, swimming for the beach.

Ken dismissed him from his mind. He had much more agreeable matters to think of.

The schooner was seaworthy, that was proved now. It was a good run to Lalinge, but since the squall the weather promised to be fair, and the wind was favourable. With three of the Hiva-Oa boys as crew, Hudson could sail her; and Ken could handle the ketch with the other two and Koko. It would be double watches and hard work for the shipmates till Lalinge was raised; but the salvage ahead more than compensated for that. The Pacific Trading Company had a handsome sum to pay for the salvage of the Sunabaya; a sum that

meant such profits on the trip as King of the Islands had never handled before. Fortune had favoured the comrades in every way.

But a turn in the tide of fortune was coming. Such a run of good luck was, perhaps, too good to last.

"Feller boat he come!" called out Koko.

"A boat!" repeated Ken. The brightness of his face died out as if with a premonition of what was coming. He stared grimly in the direction of Koko's pointing finger.

A whaleboat, with two white men sitting in the stern and a dozen Kanakas and Lascars pulling, was coming down towards the schooner. Where it had suddenly appeared from Ken did not know, but he guessed that it had come out of the lagoon farther along the shore. Grimly he watched the advancing boat, recognising Captain Griffin—the unluckiest skipper in the island trade—as one of the white men.

"Ken, it's our salvage," said Hudson. "Griffin's not the man to dispute a plain fact. But if he does—"

"I know."

The whaleboat ranged alongside the schooner. Captain Griffin stood up, his bronzed face pale and set, his lips set hard to keep them from trembling.

King of the Islands looked down at him. His own face was a little pale.

"Ahoy, the schooner!" Captain Griffin spoke in a steady voice. "You, King of the Islands! I reckoned I knew the cut of your jib. You're in luck, shipmate!"

"Ay, ay!" said Ken.

"I'd have sworn she was going to pieces under my feet when I left her," said Griffin. "And you found her on the reef and got her off—while I've been hunting round this island of demons for a place to land without falling into the claws of cannibals!" He gave a bitter laugh. "Will you give a shipwrecked crew a free passage? We'll work our way. And you'll be short-handed, too. Don't you get the idea that I'm disputing your rights! I know the law of the sea as well as you do, King of the Islands! I'm glad you've salved her. No worse for me, I reckon, than if I had piled her up as I thought I had. Your good luck don't make mine any the worse!"

"And to think," he went on, with uncontrollable bitterness and despair, "if I'd known—if I'd known—I could have got back. Only, the squall blew us far past the island in this dashed boat, and when we got a chance to head back we were on the other side—"

He broke off.

"No good grousing!" he said. "It's your luck, King of the Islands. You'll give us a passage, I suppose? I won't offer to pay you for it—but I'll remember you kindly in the workhouse at Sydney!"

There was a struggle in the boy trader's breast. It was brief. Without a word, he turned and looked his shipmate in the face. Kit Hudson met his eyes—in grim silence. In Hudson's breast there was also a

(Continued on page 20.)



# Two New Chums

# DOWN UNDER!

Told by

**TOM ROGERS.**

*The whole country as far as we could see was charred black. It seemed a world of the dead, for there was no sign of any living thing either on the earth or in the sky. . . . A terrible experience, never forgotten—fire in the great Australian Bush!*

## Just About All-In!

FIRST to his feet was the wiry squatter we called Smiler Scarface. He exploded into a biting speech about mules in general and his own fractious team in particular. His remarks were punctuated by the savage yappings of Mark, the kelpie dog, which was struggling to get clear of a prickly bush. The two raised a terrific din!

It seemed as though Scarface forgot the presence of Pud and me entirely, for a moment later he plunged on among the scattered gum-trees in chase of the runaway animals.

Bruised and shaken though I was, I scrambled up and went to Pud's help, the fear of the raging bush fires deeper within me than at any time previously.

"J-jumpin' jupiter!" panted Pud. "What the thump's up?" His smoke-reddened eyes blinked at the smashed wagon, and realising what had happened, he mumbled: "Where's old Scarface?"

"Gone chasing after his giddy mules," I panted. "And unless you're keen to be roasted, you'd better hop along with me after him!"

I dragged him to his feet, and Mark, the dog, came whining up to us, one paw upheld. Pud, puffing hard in the stifling air, stooped down and took a thorn from the paw, and Mark rubbed his nose against him in gratitude.

"Look here, Tommy," grunted Pud, as we set off, "you go ahead, old man, and help Scarface to catch those mules, if it's possible. Take Mark with you, if you like, and I'll worry on at my own pace."

"Don't be an ass!" I implored. "There's no sense in our separating. We'll sink or swim together!"

Several times we heard the sharp crack of the squatter's stockwhip as we stumbled on; but we saw nothing more of either him or the mules—which was not surprising, as the smoke of the fires screened everything farther away than about a couple of hundred yards.

Both of us were black with the

**TOM ROGERS and Pud Drummond, two chums trying their luck in Australia, granted a holiday from the up-country farm where they are employed by Henry Cluff, go off into the Bush, with Mark, the farm dog, for company, Cluff lending them a horse and gun apiece. Calling at Andy Jarrett's farm-house for supper, they are caught in a raging Bush fire and flee from it with the farmer and his men. Their horses crock up, and they are given a lift in his cart by "Smiler Scarface," another farmer. The mules pulling them bolt, the cart overturns, and they are left helpless in the path of the fire!**

smoke. Our clothes had been scorched and burnt into holes during our fight for Jarrett's farm. We suffered severely in our eyes, throats, and lungs from the heat and smoke, and, worst of all, were so dog-weary that we were forced to take rests, when every minute was precious. Only the terror of the destroying fires roar-

ing along some miles behind us kept us going at all. Once I must have become a bit delirious, for I started cackling with laughter. It scared Pud so badly that he pushed me down on to a tree-stump, and fetched a handful of eucalyptus leaves, which he crushed under my nose.

"Pack it up, old man!" I croaked. "I was only thinking what a giddy holiday we're having!"

"Phew! I thought you'd gone off your rocker!" Pud replied. "How far d'you think it is to a town?"

"Not the foggiest. But it isn't a town we want—it's a river or a lake of water."

"Water?" echoed Pud wildly. "I'd give all the money I've earned in this country for one mouthful of it!"

Poor old Mark trotted gamely along beside us, his red ribbon of a tongue hanging out and his black-and-tan flanks heaving convulsively to his heavy breathing.

Believing that the supply of water that Andy Jarrett had in the buck-board would be available for us, we had used up the little in our flasks early on the trail. And what with our exertions and the heat, our thirst grew greater with every passing minute, until our tongues and throats felt as though made of dry blotting paper. Within half an hour after losing sight of Scarface we found that we were completely "bushed." Experienced Aussies might have kept to the track taken by the mules, but we lost all sign of them and their master, and merely staggered along blindly in a general direction away from the fires.

Hoof-beats sounded behind us, and looking back we were bucked to see my horse, which had been out-distanced after I had been forced to cut it adrift from the wagon. Apparently the animal had sensed our presence, and as though in need of



## Two New Chums Down Under!

company in this smoke-filled wilderness, came trotting smartly along to us.

"Well, here's one bit of luck, Pud!" I crowed. "He's fresher than he was, and we'll take it in turns to ride him. Get aboard!"

"We'll draw for it, old chum."

He turned away, picked up two twigs, and remarked that if I drew the longer one I should have first ride. As it happened, I took the shorter, and gave Pud a bunk up into the saddle.

The ground rose gradually for about two miles, and from the top of the hill we had an amazing view of a sea of fire a few miles behind us.

What we badly needed was a view of the country ahead to enable us to choose a sanctuary; but it was impossible to get this owing to the smoke.

The one thing we were absolutely sure about was that this area of scrub and gum-trees was a death-trap, and after a brief pause we rode on again, Pud clinging to the stirrup while I took a turn in the saddle.

The heat grew more scorching on our backs, and a tree burst into flames a hundred yards to our right—a further warning that at any time now the country through which we were passing might run with flame.

The horse neighed with fright and struggled madly on.

Pud, with the perspiration streaming down his red face, waddled alongside, gasping that he could stick it no longer.

"There's only one thing for it," I panted. "Climb up behind me, and we'll give the hoss his head. If there's any water at all in the forsaken place, he'll make for it!"

Sheer panic spurred on the horse, notwithstanding the double weight. Mark, fearful of being left alone, raced alongside. The sky above us was now a fiery red with the branches and tree foliage of the gum-trees like black lacework against it. Neither Pud nor I spoke again; we knew by the heat and volumes of smoke and sparks that the fire was fast overtaking us. All we could do was ride on until the horse dropped under us!

Gamely he struggled out from among the gum-trees and through some undulating grassland. What at first looked like a road cutting through the country showed not far ahead of us. As we drew quite close to it, we whooped with joy to find it was a great gully. Our frenzied mount scrambled down into it, but our satisfaction grew less as we saw no signs of water anywhere. The banks, however, rose higher to our left hand, and I turned the horse along parallel with one of them to get some little shelter from the shrivelling heat.

Then, where the bank was fully thirty feet high, we saw there was a small wooden bridge flung across the creek bed, and as we exclaimed at the sight of it the horse splashed into a pool of water.

With one accord my pal and I slipped to the creek bed and dipped our faces into the pool, which was not more than four feet across. The water was foul, but we cared nothing about that. It was deliciously wet, and we drank greedily while the horse and dog, their heads close to ours, did the same.

"Thank goodness!" breathed Pud, as he came up to breathe. "I was just about all-in."

I looked up and saw the flames of the bush fires reflected in the sky, more awe-inspiring than the aurora borealis itself. I noticed, too, that these shafts of orange light were reflected in more water nearer to the bridge. We led the horse on towards it, while the roaring sound of fire grew louder in our ears. Burning fragments had set the wooded area through which we had passed ablaze, and the flames were racing on through the grass towards the gully.

As we plunged on over the stones we felt the fierce breath descending upon us, blistering our flesh. Pud crashed headlong, and I kicked him to his feet again.

"The water!" I gasped. "Into the water, you idiot!"

The horse and dog broke away and plunged into the pool which was fully fifty feet long and more than four feet deep in parts—and with a great final effort my pal and I splashed madly in after them.

The water was lukewarm, but it was a huge relief to our bodies after the flaming heat that was pouring over the gully edge.

We stood together in the deepest part, and heard the fire advancing.



Over 28,000 signalmen and 1,500 signal-box lads are employed on our railways to see to the safe working of the trains, and the number of "marks" they make run into millions each week!

**H**AVE you ever wondered how the railway companies manage to estimate the value of the work each day of the men and boys who have to manipulate the signals, open and close level-crossing gates, and do the other numerous jobs that fall to the lot of the signal-box operators?

For, of course, this work is much harder on some railways and sections of line than on others—some being extremely busy, and some having so few trains passing through the station that you could count a day's total on the fingers of one hand!

Where the signalmen have to deal with many trains each day, the signal-boxes are officially classified as first or second class. Signal-boxes buried in the heart of the country, where life is quite leisurely, rank next. So in order to give fair payment to the men and boys in *all* signal-boxes—the hardest-worked getting most pay—a cut-and-dried system of classifying the different jobs has come into being.

Every signal-box along a railway line is graded, or classified, according to the number of marks earned by the signalmen in that box during the course of their day's work.

On a selected day, all movements made by the signalmen are recorded on a special form provided for that purpose. Six marks are awarded for each train signalled through from a signal-box, and half a mark is given for every bell signal given or acknowledged.

Opening and closing level-crossing gates works out at ten marks each time to the signal-box's credit. And every time a lever is pulled, pushed, or replaced in the box, one mark is counted. For written messages by telegraph received and forwarded, twenty marks are awarded.

So you see that in a really busy signal-box, where trains are passing every few minutes, the total of 400 marks for a first-grade is quickly reached. Most of the lonely country station signal-boxes come within the one hundred marks, whilst on sleepy branch lines perhaps a mere thirty marks are all that the signalman can hope for!

Testing the signal-box levers and bell signals is not counted, but all emergency signals and movements of levers are credited in a space on the special chart which must be filled up by the signalman in charge of the box.

Where there are busy and slack days alternating on the one section of line, the total number of marks due to that signal-box is arrived at by striking an average. A record of the number of trains signalled during a week or a month is taken, and a fair average arrived at by dividing the total number of marks by the number of days covered.



We saw a myriad feathers of flame leap out from the high bank overhead, saw the bridge run red with them—and, unable to bear the agony of heat, we plunged our heads under the water of the pool.

When more than half a minute later we came up to breathe, the grass had been swept clear on the bank over us; but the bridge was aflame, and the fire was making inroads into the country beyond the gully. Instinct had made the horse and dog keep well under the water against the bank; but both were terrified, and, although the heat grew considerably less, refused to leave the pool.

The bridge crashed down in burning fragments some little distance from us, and Pud and I dragged ourselves out of the water. Neither of us spoke a word; we were too dazed by the narrowness of our escape.

For more than an hour we remained in the shelter provided by the creek which cut through the blackened and smouldering country. The wind which hitherto had fanned the flames died away, and for the sake of any others whose farms might lie beyond the creek we felt thankful that the fires would be checked. Owing to a good deal of smoke still rising in the burnt-out country behind us, it was not possible to see the stars. And we had to wait until the first glimmer of dawn in the east to get our bearings.

When we got on the move, leading the horse and followed by Mark, the dog, we kept along the creek bed until we came to a place where the banks were not so steep, and we were able to get out on the far side.

On the bank we paused and gazed about us, awed and stupefied at the sight that met our eyes. It was as though we had emerged upon another world—a world of black desolation. Instead of the yellow of grass, the green of foliage, and white of the gum-tree trunks and branches, the whole country as far as eye could see from where we stood was charred black. Indeed, this seemed a world of the dead, for there was no sign of any living thing either on the earth or in the sky.

Now and again there rose a sudden burst of flame and smoke from the thicker bush country we had passed through on our way from Jarrett's farm, half-burnt stumps of trees bursting out anew as the fire reached some pocket of gum or resin. How many men, horses, sheep, or wild creatures had met their end in that devastated area we could not even guess.

The creek turned away towards the south-east, and Pud and I decided to make tracks parallel with it so that we might have the advantage of water, for washing and drinking, in the pools that dotted it. On we tramped through the ashes of the burnt-out grass until we were like sweeps from the dust. The only sign of civilisation we saw was a fire-twisted vermin fence and the charred stumps of posts.

"I say, Tommy," remarked Pud, in a hoarse whisper, after we had gone four or five miles, "how'd you like a big plate of cold roast beef just now?"

"Don't!" I implored.

Both of us tightened our belts. Neither of us had had anything to eat for some hours, and we were weak almost to the point of collapse with our fast travelling before the fiery heat of the bush fires and the need of food. Before noon our thirst was tormenting us again, and I led the way into the creek bed in search of another pool. As I did so I saw an object lying on the stones which I firmly believe to this day proved to be the salvation of us.

"Pud," I panted, "how'd you like some cold roast mutton?"

"Don't!" feebly implored Pud in his turn.

You should have seen the change of expression on his plump, grimy face when I pointed out a sheep almost ready cooked. It had been destroyed in the heat and smoke, and afterwards partially roasted, this part of the creek being more open to the furnace of flame that had swept the grassland than the deeper gully where we had taken shelter.

The unfortunate animal had not been wholly roasted, but the wool had been singed from it, and some of the outer flesh had been sufficiently well cooked to provide us with an excellent and much-needed meal. Afterwards we rested for a couple of hours, and then took

## THE CONQUERING LION OF JUDAH.

By F. J. MELVILLE,

President of the Junior Philatelic Society.

AS you will have seen from the newspapers there is a new king in Ethiopia, or, as the stamp catalogues and albums name the country, Abyssinia.

Ras Tafari Makonen has been elevated to the exalted position of king, and will henceforth rule in Abyssinia along with his aged aunt the Empress Zeditu, which is the Ethiopian equivalent for "Judith."

No doubt you all took special interest in the newspaper descriptions of the magnificent ceremony of the coronation, for both the Empress and the new king are familiar on the Abyssinian stamps, and even the historic throne of Solomon was pictured on the stamps of 1909.

The new king has succeeded to the throne of Solomon and the Queen of Sheba, and among his grand titles are King of Kings of Ethiopia and the Conquering Lion of Judah.

The lion, crowned and bearing a pennon, figured on the first stamps of Abyssinia issued in 1894, and of which specimens are found in most collections. On the first issue also appeared the picture of the famous Emperor Menelik II.

The new



Left:—Tafari, the newly-crowned King of Abyssinia.



Right:—The Conquering Lion of Judah.

king came to England four years ago on a visit and proved himself a most popular and picturesque visitor. When he departed our King George gave him an historic gift to take back to his aunt, the Empress. This was the wonderful jewelled crown of Abyssinia, which had been taken by the British Army at Magdala on April 13th, 1868, and which was for many years on exhibition at the Victoria and Albert Museum, South Kensington, London.

It was this crown, said to be worth £100,000, that was used in crowning Tafari recently. It had been kept overnight in the great Church of the Trinity, at Addis Ababa (the capital), a church which is pictured on the 6 guerche stamp of 1919, and priests spent the night invoking blessings upon it.

We may expect a new set of stamps from Abyssinia very shortly now. There has been a set in preparation in Paris for a long time, and this was to have been issued on the occasion of the opening of the new post office at Addis Ababa. The office has been open and in use for some time, and I suspect the new stamps have been withheld for issue during or soon after the coronation.

The Abyssinian stamps bear inscriptions in Amharic, but most of them also bear the name of the country in French—"Ethiopie"—so they are easily recognised.

the best of what remained of the mutton on the horse, and continued our journey until we came to a part of the country which had escaped the flames.

Here we made camp among some trees and bracken, and had hardly done so when we heard movements in the bush and began to get that unpleasant feeling that we were being furtively watched.

(Have the chums emerged from one trouble only to stumble into another? You will find the answer in next Monday's MODERN BOY!)



## TORNADO TERRORS.

1,500 Lives and £20,000,000  
Damage!

**T**HIRTY-FOOT-HIGH waves, a mad wind roaring along at one hundred miles an hour, floods that swamp whole towns—those are a few of the terrors of a tornado, such as swept through the West Indies and the Florida Coast recently.

Nothing can stand in a tornado's path—not even a building of reinforced concrete. Whole sides of buildings are ripped away, and roofs, stripped clean off, are hurled far distant by the awful wind. During the recent storm a branch of a tree was blown with such force against a house-side that it went clean through—driven solely by the power of the tempest!

But the damage a tornado can do on land is mild compared with its ravages at sea. Waves that can tear away solid concrete blocks from the promenades at sea-fronts make short work of deck-cabins of liners, and on one occasion a big gun, weighing many tons, was torn from its bedding on a great battle-cruiser as though it had been dynamited!

## MOTOR-CYCLE-CAR.

Comfort—and 75 m.p.h.!

**T**HE wonderful motor-cycle shown at foot of page—known as the Ascot-Pullin, because it was designed by Cyril Pullin, the famous racer—is really a car on two wheels.

It is fitted with a windscreen and leg-shields, but the latter were removed when the photograph was taken to enable you to see more of the machine. A big mattress-top saddle, large tyres, and an effective spring fork protect the rider from road shocks. To prevent wet and dirt from marring the efficiency of the power unit, this is enclosed in the frame, which is not made of tubes brazed into lugs, as are all other motor-cycles, but of steel pressings welded together.

On the handlebars, behind the wind-screen, is a small dashboard, on which is mounted a clock, speedometer, oil gauge, and the lighting switch. Driven from the engine is a small dynamo which generates electricity for the powerful headlamp and the electric horn. The brakes are operated hydraulically, so that only the slightest pressure on the pedal is needed to bring the machine to rest.

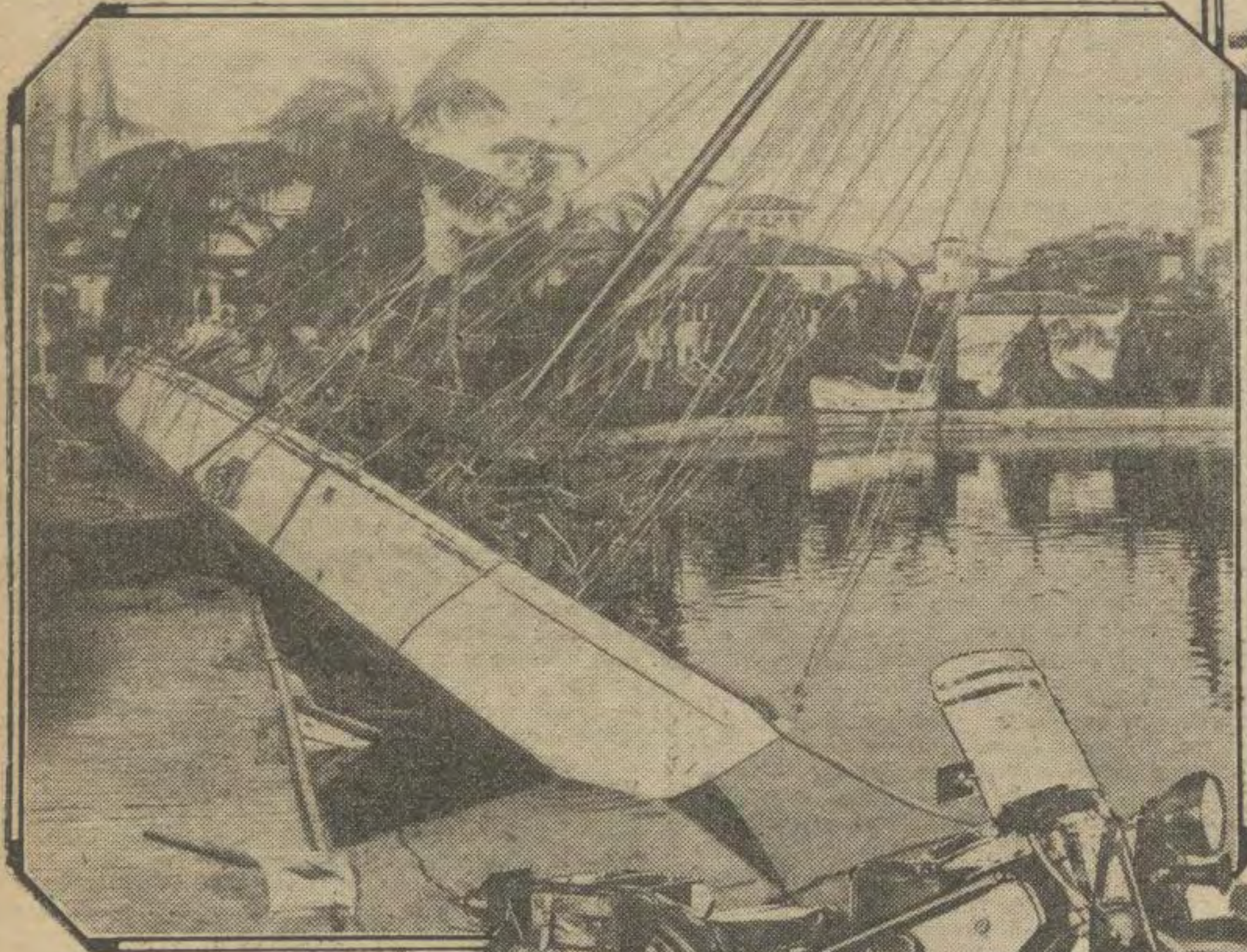
## OUR PICTORIAL

### BOYS LEARNING TO

Swinging the

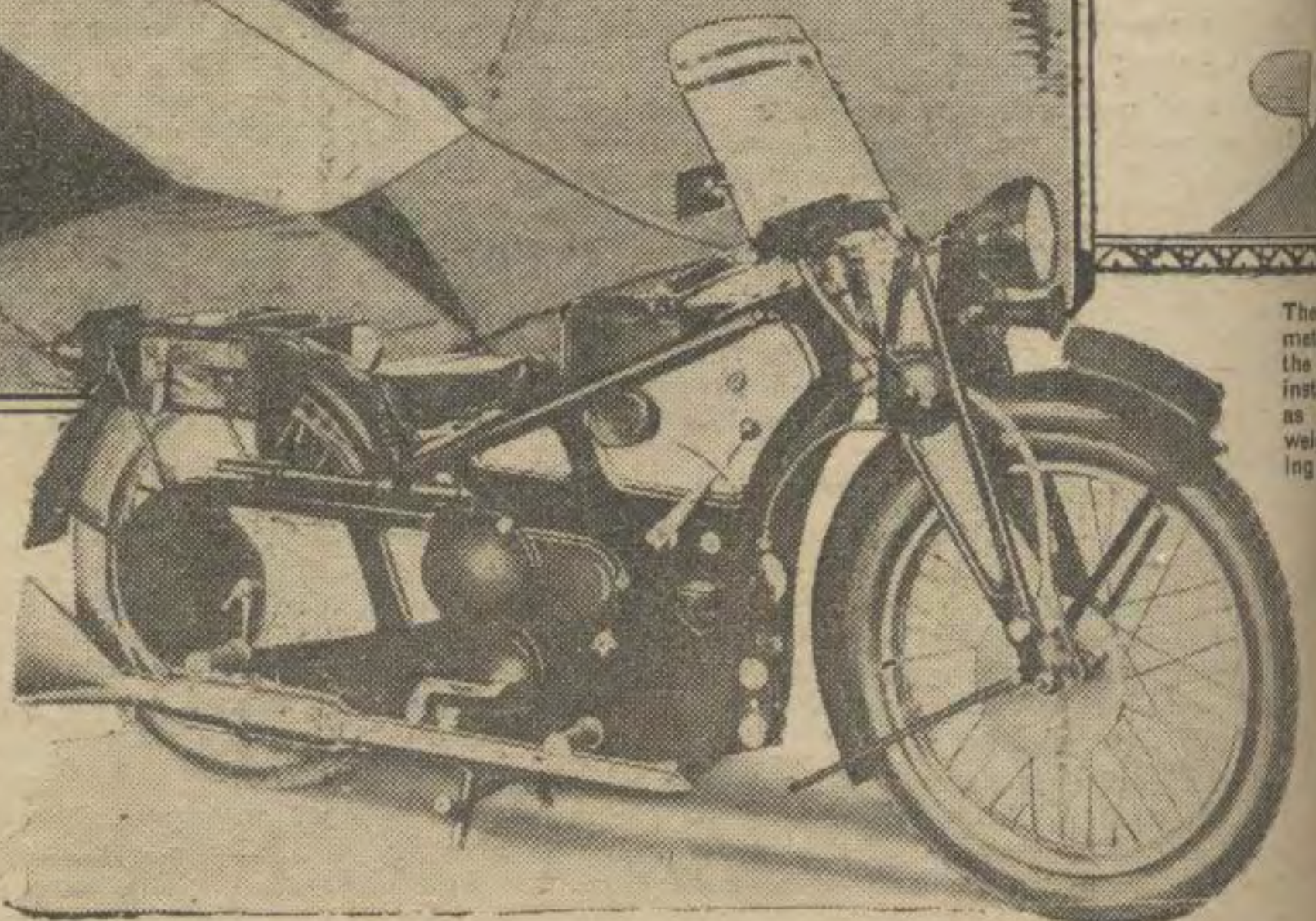
**A** SCHOOL in the heart of Buckinghamshire in which it is a punishment to be deprived of lessons! Sounds fantastic, doesn't it? But it isn't. Ask any of the fellows at the Halton Royal Air Force Training Camp. Here three thousand boys are learning to become aircraft apprentices, and our photograph shows one of the lessons in full swing.

The boys are trained in general educational subjects, of course—history, arithmetic, and so forth. It wouldn't perhaps be much of a punishment to be deprived of those! But also they are trained in airmen's lessons—how to



This big yacht—one of many with which the great storm played pranks—was hurled ashore like a cork during the terrific tornado which recently swept over Florida.

Right: In this new motor-cycle-car the power unit is enclosed in the frame, with an instrument board mounted on the handlebars behind a wind-screen.



The new motor-cycle-car is equipped with a 150 model engine instead of on the as hitherto. More weight on the front axle and it is not a shock.



# NEWS PAGES.

## TO BECOME AIRMEN.

the "Prop."

an aeroplane, and how to fit an engine. (Remember, you never "put together" or "assemble" an aeroplane engine; you "rig" one and "fit" the other!) And a few of the lucky, best-behaved ones "go up."

In the photograph you see them being taught how to swing a propeller to start the engine. This is not so easy as it sounds, for you cannot start an aeroplane engine like a car just by pressing a button; you must swing the propeller round by hand—and jump out of the way pretty quickly! Sometimes the engine is so big that two or three have to link hands to start it.

If you are ever near an aeroplane when it is being started, you will hear the mechanic mutter three mysterious phrases, which are repeated by the pilot—"Switch off," "Suck in," and "Contact." The first two show that while the rich mixture is being sucked into the engine, the switch is off so that it cannot start suddenly while the mechanic is turning it.

"Contact" means that the switch is on, and the mechanic must go carefully. ("Switch on" is never said, because it might be confused with "Switch off.") Then the mechanic gives a jerk to the propeller and springs away.

## THE NEW SPEEDOMETER.

### Faster and Safer Riding.

ONE of the very latest ideas in mechanical gadgets is the new gear-driven speedometer that is being fitted to many machines—including the new Raleigh, shown below. This device, which replaces the unsatisfactory front-wheel-drive instrument used at present, is driven by a mechanism within the gearbox, which protects it

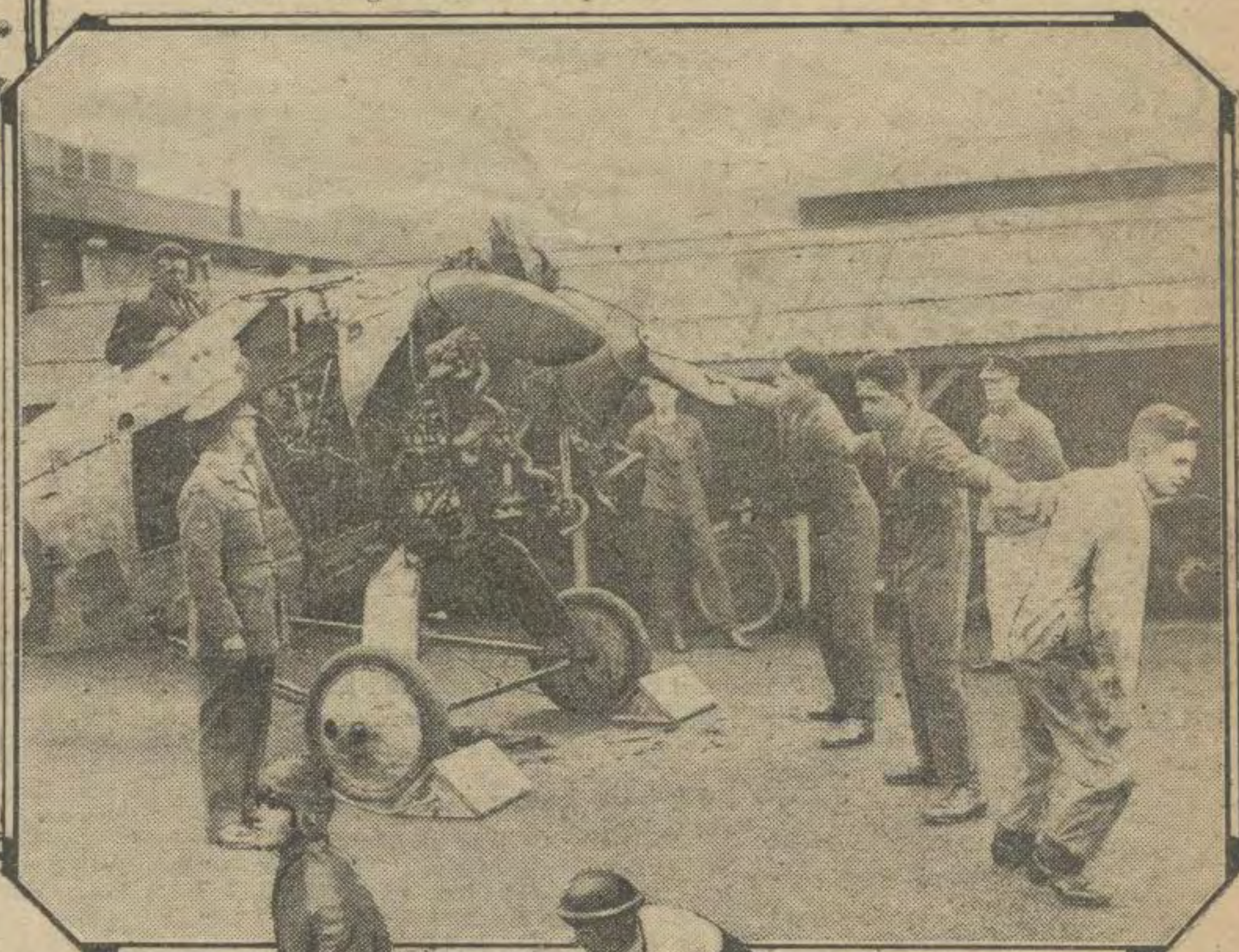
from dirt and mud, and, incidentally, lubricates it.

In the past a great deal of trouble has been caused by the fact that the speedometer head was mounted on the handlebar, where its weight affected the steering at high speeds and the bumping of the front wheel caused the needle to vibrate and jump about. Now it is placed in the top of the tank right in the centre of the machine, where it is protected from jarring and does not affect balance and steering.

## CYCLIST'S AMAZING PERFORMANCE!

A REALLY astonishing ride has just been taken by a Belgian cyclist at an almost unbelievable speed—over seventy-eight miles in sixty minutes! He is Leon Vanderstuyft, and in performing that wonderful feat he has smashed the one-hour pedal cycle record for paced machines, after the world record (held by France—just over seventy-five miles in the hour) had stood for three years.

Part of the time Vanderstuyft was moving at over eighty miles an hour—as fast as a racing-car!



gear-driven speedometer mounted on the tank of motor-cycles, not on the handlebars as is usually done, so its weight does not affect the steering.



Young fellows training to be airmen, at the Royal Air Force Camp at Halton, are here seen learning how to swing the "prop."

Left: Riding behind a motor-cycle for one hour, this push-bike champion covered in that time over seventy-eight miles—easily a world record.



# The Plot at Primrose Farm!

COMPLETE IN  
THIS ISSUE.



Mr. Drudge was on his knees by Porson's basket. On the floor beside him lay an axe!

"Beware of Drudge!"

"GARGE!"  
"Yes, Gaffer?"  
"Telephone be ringin' tar'ble loud, lad!"

"Right-ho, Gaffer, I'll attend to it," replied George Porson, dropping to the ground from the engine of his old Maurice Farman biplane. Wiping his hands on a piece of oily waste he set off for the cottage whence came the persistent trilling of a telephone bell.

"Hallo!" he called, unhooking the receiver.

"Hallo!" came a squeaky sort of voice over the wire. "I say, I want to speak to this fellow Porson!"

"Porson speaking!"

"Oh, good!" squeaked the voice. "Are you the Porson—the aeroplane proprietor, I mean?"

Porson had never been thus addressed before. He felt vaguely flattered.

"Yes, that's me!" he replied. "I have an aeroplane!"

"You carry passengers, don't you?" demanded the voice. "Well, look here, my name is Muggeridge—Mr. Muggeridge, of Little Wappington. Have you got that?"

"Yes, you're Mr. Muggeridge of Little Wappington."

"That's right!" squeaked Mr. Muggeridge. "Now then, if I bring my Winnie over to you some time this afternoon, can you take her to Hooperton in your aeroplane? I want her to be there for to-morrow!"

"Yes, certainly, I can take her!" replied Porson.

"That's good—that's fine!" squeaked Mr. Muggeridge delightedly. "You'll be awfully careful with her, won't you? You mustn't let her out of your sight for a moment," went on Mr. Muggeridge. "Not for a moment! There's half a dozen black-

guards in this county waiting for a chance to wring her neck!"

"I—I—" stuttered Porson. "Hallo! What did you say?"

"I said that there's half a dozen unprincipled scoundrels in this county who'll wring her neck if they get hold of her!" repeated Mr. Muggeridge.

"Great Scott!" ejaculated Porson. "What on earth for?"

"To annoy me, that's what for!" squeaked Mr. Muggeridge indignantly. "You wouldn't believe it, would you?"

"I—I wouldn't!" replied Porson weakly.

## GEORGE E. ROCHESTER

never had a better "thriller"—with a big twist of fun in it—to tell than this yarn, wherein happy George Porson takes aboard his battered old £10 plane a most unusual kind of passenger, and finds himself landed in the midst of exciting events in the dead o' night in a lonely farmhouse!

"Oh, well, it's true all the same!" sniffed Mr. Muggeridge. "But I've got her insured for a thousand pounds, so if anybody does wring her neck I'll get the insurance money. That's something!"

"Is it?" said Porson dazedly.

"Yes, of course it is!" replied Mr. Muggeridge. "A thousand pounds is a thousand pounds, isn't it? But there's another thing: She's off her feed a bit, so you'll have to be awfully careful when you feed her—"

"Feed her?" echoed Porson, goggling. "D'you want me to feed her?"

"Of course!" snapped Mr. Muggeridge. "Somebody's got to feed her, haven't they? She'll be in your charge, so you'll have to do it!"

"But can't she feed herself?" protested Porson.

"No, she can't!" snapped Mr. Muggeridge. "The poor thing's been very upset since a dog bit her on the beak and—"

"On the what?" gasped Porson.

"On the beak!" repeated Mr. Muggeridge testily. "You're not deaf, by any chance, are you? A nasty brute of a dog bit her on the beak. But that's not all!"

"Isn't it?"

"No, it isn't! A boy, armed with a catapult, hit her a terrific smack on the neck. Nearly broke it!"

"But what for?" demanded Porson wildly. "What did he want to do that for?"

"To annoy me, of course!" snapped Mr. Muggeridge. "They do these things just to annoy me!"

"She—she does seem to have a rotten time of it, doesn't she?" said Porson.

"A perfectly putrid time!"

"She does!" squeaked Mr. Muggeridge. "Oh, she does, and that's why I want you to take especial care of her. I'll bring her along some time this afternoon. Do you know a man named

Drudge?"

"Drudge?" repeated Porson. "No, I don't know him!"

"Ah!" Mr. Muggeridge's words came in a hiss. "He's the biggest villain of the lot. He'll have her blood if he can. Beware of Drudge!"

He rang off. Dazedly, Porson laid down the receiver and, like one in a dream, set off for the field in search of Gaffer, his near neighbour and good friend.

### Poor Winnie!

HE found Gaffer sitting on an upturned petrol tin in front of the old barn in the field at the rear of the cottage. Gaffer's gnarled hands were resting on the top of his stick, and he was gazing



thoughtfully at the ancient Maurice Farman biplane.

"Gaffer!" said Porson, a trifle wildly. "I've been talking over the phone to a man named Muggeridge, and either he's mad or—or I'm mad."

"What did he say, Garge?"

"He says he's going to bring some female, called Winnie, over here this afternoon! I've got to take her to Hooperton. I suppose it's his daughter. If it had been his wife he'd have referred to her as Mrs. Muggeridge, wouldn't he?"

"He surely would, Garge!" opinionated Gaffer.

"Well, he's been telling me the most extraordinary things about this Winnie," went on Porson. "He says that there are six scoundrels waiting for an opportunity to wring her neck. Not, apparently, because they dislike her, but just to annoy this fellow Muggeridge. And he says a dog has bitten her on the nose and a beastly kid has hit her a frightful wallop on the neck with a pebble from a catapult—and I've to feed her because she can't jolly well feed herself!"

Gaffer's blue eyes opened wide.

"She's had a tar'ble rough time, poor lass!" he piped. "But what did ye say them six villuns want to murder her for, lad?"

"Just to annoy this man Muggeridge!" replied Porson excitedly. "At least, that's what he says. Dash it! It sounds a bit weird, doesn't it?"

"I ain't never heered nuthin' like it," pronounced Gaffer emphatically — "no, never!"

"He ought to get police protection for the girl!" went on Porson warmly.

"Unless, of course, he's a lunatic. He may be a lunatic, Gaffer. Dodged his keepers and got hold of the phone, you know. Dash it! If he doesn't show up here this afternoon, I'll find out from the exchange where that call was put through from. If he is a lunatic, he'll have to be under better control. He might call out the fire-engines or something some time."

Then, until tea, Porson overhauled the old thirty-five horse-power Green engine of his biplane, the gibberish of Mr. Muggeridge providing him and Gaffer with an inexhaustible topic for conversation.

It was whilst they were sitting at tea in the little front parlour of the cottage that an old Ford car came rushing along the dusty road which ran past the foot of the garden and drew up at the garden gate with a screech of hastily applied brakes.

"This'll be Muggeridge!" said Porson, and, rising to his feet, crossed to the window.

A little man, with a large, drooping moustache, drooping shoulders, but a certain air of perkiness about him, was ambling up the path to the cottage. He carried in one hand a



"I've got Winnie here!" said Mr. Muggeridge. "In the basket!" Gaffer's mouth opened, and he took a firmer grip on the poker, the while he stared nervously at Mr. Muggeridge.

square basket fitted with a lid, which was closed.

"I can handle him," remarked Porson confidently, "even if he is dotty. But I don't see any sign of this Winnie person. Perhaps she's still in the car."

He went to the front door to meet the newcomer, whilst in the little parlour Gaffer possessed himself of the poker, in case the visitor displayed violent tendencies.

"I want to see Mr. Porson!" squeaked the little man, as Porson confronted him at the door. "I am Mr. Muggeridge. He is expecting me."

"Er—I'm Porson, don't you know!" said that youth.

"You?" squeaked Mr. Muggeridge, in surprise. "Why, you're only a mere boy!"

"Dash it! I'm seventeen!" interposed Porson.

"But are you the Porson—the passenger-carrying Porson?" persisted Mr. Muggeridge.

"I am!" replied Porson. "Will you come in?"

"Oh, yes, I'll come in!" squeaked

Mr. Muggeridge, and followed Porson into the little parlour. He stared with unpardonable curiosity at the white-smocked Gaffer standing with his back against Porson's bookcase, poker in hand. Then, with loving care, he deposited his basket on the tablecloth.

"I've brought Winnie," he said. "Poor thing! I told you about her getting a bite on the beak, didn't I?"

"Yes, you did," replied Porson. "It must have been jolly painful for her. She's in the car, I suppose?"

"Of course she's not in the car!" snapped Mr. Muggeridge. "You don't think I'd leave her in the car with that villain Drudge prowling about, do you?"

"Oh, that's the rotter that's going to—to—" began Porson.

"To wring her neck!" cut in Mr. Muggeridge. "Yes, that's him, the scoundrel! No, I've got Winnie here!"

"Here?" echoed Porson.

"Yes. In that basket!" squeaked Mr. Muggeridge. "Safe and sound in that basket!"



## The Plot at Primrose Farm!

Gaffer's mouth opened and stayed like that. He took a firmer grip on the poker, the while he stared nervously at Mr. Muggeridge.

"Do—do you mean to say you've got her in that basket?" demanded Porson weakly.

"Yes. She's in there!" replied Mr. Muggeridge. "And never you let her out for an instant till you get safely to Hooperton. She's in most frightful danger. It's a bit cramped for her, maybe, in that basket—but it's a strong one!"

Porson drew a deep breath.

"Who, exactly," he demanded steadily, "is this Winnie?"

"D'you mean to say you don't know?" squeaked Mr. Muggeridge, in astonishment. "Why, she's my prize Wyandotte hen, and she's going to win the gold medal at the Hooperton Poultry Show to-morrow!"

There came a clatter from close by the bookcase as the poker dropped from Gaffer's nerveless hand!

### Porson's Cargo.

"YOU see," went on Mr. Muggeridge warmly, "this scoundrel Drudge, who lives at Snorem, is entering his hen Jennie for the gold medal at the poultry show. That beastly bird has been second to my hen Winnie on four occasions. So, you see, if Winnie was safely out of the way, Drudge's confounded hen would win! D'you follow me?"

"Yes!" said Porson, in a faint voice, resolutely avoiding Gaffer's gaze.

"Well, then, I'm sending Winnie over to Hooperton by aeroplane," continued Mr. Muggeridge, "because she can't stand the jolting of a sixty-miles train journey. And, another thing! Drudge might interfere with her between here and Hooperton if she goes by train. The villain will stick at nothing!"

"You said there were half a dozen men who'd like a chance of wringing her neck," remarked Porson.

"So there are—so there are!" replied Mr. Muggeridge, with an airy wave of the hand. "Lesser breeders, you know—men in a small way—jealousy—pooh! It's Drudge whom we've got to be on our guard against!"

"I'll be very careful!" promised Porson.

"Yes, you must be—you must be!" replied Mr. Muggeridge, in an impressive squeak. "I wouldn't for the world that anything happened to Winnie. I want that gold medal, and I want to see Drudge's face when I win again. He, he, he! This'll be the fifth time I've won!"

"But you haven't won yet, you know!" pointed out Porson bluntly.

"I know I haven't. But I'm going to!" Mr. Muggeridge's voice was almost a snarl. "You get my hen safely to Hooperton. That's your job. And it's a job you'll get well paid for!"

"Good!" said Porson heartily. "Will you have a cup of tea?"

"No!" refused Mr. Muggeridge churlishly. "I won't!"

"Oh, well, then you'd better come and see the aeroplane," replied Porson. "And after you've given me your instructions, I'll shove off to Hooperton!"

"Yes, get off as soon as you can," said Mr. Muggeridge, clutching the basket containing the precious Winnie. "I'll never rest till I know she's safely in the nestbox reserved for her at the poultry show! You must ring me up as soon as you reach Hooperton. I shall go on to Hooperton by train to-morrow."

"Why can't you take the hen with you when you go?" asked Porson.

"Impossible!" snapped Mr. Muggeridge. "The poor thing must have a good night's rest in order to be at her best for the judging to-morrow. Come on, let's see your aeroplane!"

Porson led the way to the field at the rear of the house.

"There it is!" he said proudly, indicating the ancient Farman biplane.

Mr. Muggeridge might have known a lot about hens, but he certainly didn't know anything about aeroplanes. Otherwise it is doubtful if he would have trusted the priceless Winnie to make the journey to Hooperton aboard the flat-winged, rickety-looking biplane which was more like a glider fitted with a low-powered engine than anything else.

"You're sure you'll get there safely?" he squeaked, after a prolonged stare at the Maurice Farman. "It's sixty miles away, you know."

"It wouldn't matter if it was six hundred!" replied Porson proudly. "No, nor six thousand. I'd get there all right. 'By Air to Anywhere'—that's my motto."

"Well, get to Hooperton—that's all I'm worrying about!" said Mr. Muggeridge. "Now listen to me."

He thereupon gave Porson detailed instructions as to what to do with Winnie when he got her to Hooperton. He talked earnestly, squeakily, and fluently; and equally earnestly did Porson listen. Then, with loving and tender hands, Mr. Muggeridge stowed the basket containing Winnie away beneath the low rear seat in the canvas-sided, box-like cockpit.

Porson turned to Gaffer, who was an interested spectator.

"I'm shoving off now, Gaffer!" he said, drawing on his flying gloves. "I'll be back some time to-night, all being well. You'll look after Bill for me till I get back, won't you? Poor little doggie, I'm sorry he can't come with me, but he'll be fit for flying again in a few days."

"I'll look arter him, Garge!" replied Gaffer.

"Then good-bye, Mr. Muggeridge!" said Porson, and held out his hand.

Mr. Muggeridge shook it limply.

"Good-bye—oh, good-bye!" he bleated. "How nervous I am! But this mode of transit is safer than the train under the circumstances—and quicker. If you crash, your first thought will be of Winnie, won't it? You'll open the basket and let her fly out, won't you?"

"I—I'll do my best!" gasped Porson, somewhat taken aback by the startling cheek of the suggestion.

With that he released his hand from the limp clasp of Mr. Muggeridge, and, switching on, swung the heavy, four-bladed pusher propeller. The ancient Green engine picked up with a banging clatter which caused Mr. Muggeridge to leap hastily backwards.

Porson mounted to the front seat, shoved his feet on to the rickety rudder-bar, and grasped the control-stick. He opened up the throttle, and slowly the Maurice Farman commenced to lumber forward. Jolting and swaying, it turned into wind, then, with ever increasing impetus, went careering across the field for the take-off.

As Porson pulled on the control-stick the Farman lumbered up into the air, to bump heavily.

"Help!" yelled Mr. Muggeridge, waching with protruding eyes.

Again Porson pulled on the control-stick. Lazily, reluctantly, the biplane rose for the second time. The Green engine, clattering at full revolutions, kept her up and, slowly gaining height, the old Farman headed away towards distant Hooperton.

"Am I right," Mr. Muggeridge communed wildly with himself in audible tones, "or am I wrong? I have done it for the best! You!"

He wheeled suddenly on Gaffer.

"I'm listenin'!" said Gaffer laconically.

"Do you know the man Drudge?"

"Nay, that I don't!" replied Gaffer.

"A villain!" hissed Mr. Muggeridge dramatically. "A hen-killer, if ever there was one!"

### The Plotters.

MR. DRUDGE was leaning moodily against the wire fence which encircled his chicken farm, chewing reflectively at a wisp of straw. His sombre and slightly bloodshot eyes were fixed on nothing in particular; certainly not on the beauty of the sun sinking in a blaze of vivid red and burnished gold beyond Hooperton Woods.

He was a long, thin individual, sallow and sunken of cheek. His suit can best be described as roomy. His scraggy neck reared itself from an encircling band of dirty linen collar, around which was an aged black tie which would have given excellent service as a bootlace.

"Swab!" said Mr. Drudge, with sudden venom.

He rolled the straw savagely to the other side of his mouth.

"Insufferable little prig!" he snarled.

Certainly Mr. Drudge was not in merry mood. He didn't as a rule converse thus with himself, but he was thinking about the morrow—and Mr. Muggeridge. Four times in poultry shows he had suffered defeat—had had to be content with second place to the rump-ridden, crop-bound Winnie. And the morrow would bring a further defeat at the Hooperton show. Oh, galling thought! Mr. Drudge snorted.

Suddenly into his eyes crept a look of interest. Progressing towards him with elephantine gambol was a little, stout, farmerish sort of man,



the redness of whose waistcoat vied with the redness of his fat, perspiring face.

Reaching Mr. Drudge, this individual cavorted gaily, snapping joyous fingers above his head. Mr. Drudge watched this exhibition in startled silence for a moment, then said severely:

"You've been drinking, Mr. Primrose!"

"Better than that—better than that!" chortled Mr. Primrose.

He ceased to cavort, and jabbed a fat thumb into Mr. Drudge's ribs.

"Got it!" he said, in deep, husky voice. "In my 'ouse!"

"What," demanded Mr. Drudge, "are you talking about?"

"Winnie!" replied Mr. Primrose, his fat face oozing perspiration and excitement. "Muggeridge's Wappington Winnie!"

"What!" exclaimed Mr. Drudge, straightening up with a jerk.

distance, "to see Muggeridge win the gold medal to-morrow. That 'en of 'is isn't a patch on your Jennie. I want you to stay at my 'ouse to-night. I can lend you an axe!"

Mr. Drudge's eyes closed ecstatically. His lips moved.

"I'll come!" he said, with simple fervour.

"Mind you," said Mr. Primrose warningly, "it'll 'ave to be done cunning like."

He didn't say just what would have to be done cunning like. But apparently Mr. Drudge understood. For he replied grimly:

"It shall be! It shall be done most cunningly, Primrose!"

#### Someone Has Blundered.

HAVING finished supper at Primrose Farm, and his host being still absent, Porson rang up Mr. Muggeridge in order to acquaint that gentleman with the fact that

Porson. "I can jolly well look after myself!"

"But Winnie?"

"Yes, and I can jolly well look after her as well!" responded Porson cheerily. "Don't you worry, sir. We'll be all right!"

"You won't!" howled Mr. Muggeridge. "You don't know what you're talking about, and——"

Porson rang off abruptly. Carrying Winnie in her basket, he walked thoughtfully from the house to make sure that his machine was safely picketed down for the night. It was half an hour later that he returned. Messrs. Primrose and Drudge had arrived in his absence and were seated in the front room, each puffing away at a big cigar.

"Come in, my boy! Come in!" said Mr. Primrose heartily, as Porson appeared in the doorway. "This"—he indicated Mr. Drudge—"is a

## THE GREAT IDEA—

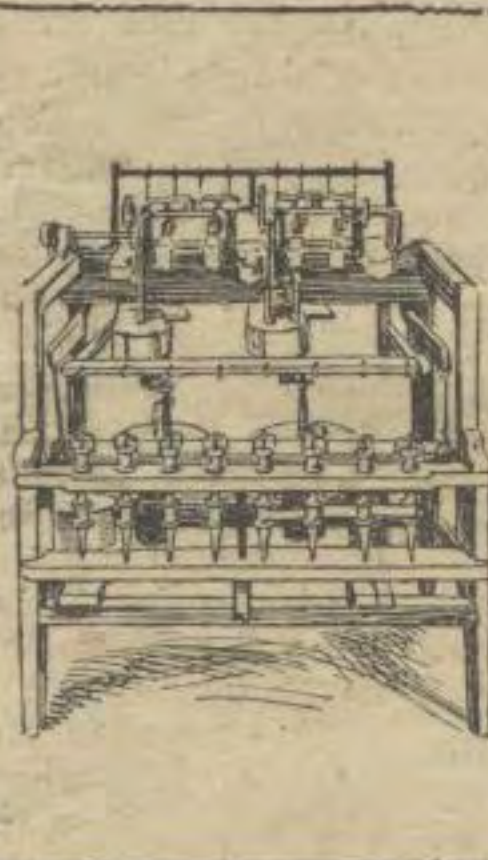
Stories of Inventions that Changed the World.  
No. 13.—WEAVING.



Weaving—the intertwining of threads of cotton or wool—is one of the oldest of industries. Hand looms were used by the earliest Egyptians, as the picture above shows. Before the introduction of machinery in the seventeenth century nearly every cottage in Lancashire had its hand loom, and the county still depends on the industry.



Richard Arkwright was a pioneer of machine-weaving. His first invention was the carding machine, shown above, on which the raw flax was prepared. Lancashire folk feared that the introduction of machinery would take away their livelihood, and mills where it was set up were raided, burned down, and the looms destroyed.



Above is shown Arkwright's next invention, a spinning frame, set up in 1768, known as the "water frame" because water was the motive power. On it the prepared cotton or wool was combined into a continuous yarn. The material passed through pairs of rollers, each pair revolving faster than the preceding ones.



Modern looms are wonderful power-driven machines capable of turning out extremely fine work, from the daintiest of linen goods to the heaviest of carpets. Of course, the looms differ according to the article to be produced. The man above is weaving a carpet in which are a multitude of coloured threads forming the design.

"True as true!" chuckled Mr. Primrose. "At this very minute she's a-sitting in 'er basket on my supper table as snug as could be!"

Mr. Drudge grasped him by the arm.

"Explain!" he said thickly. "How did she come there?"

"It's like this," Mr. Primrose proceeded to explain. "Muggeridge sends 'er to 'Ooperton by airyplane. Well, that airyplane 'ad a forced landing in one of my fields. The pilot—a kid called Porson—can't get off again till the morning. 'E's staying with me overnight. 'E's got Winnie with 'im. She's staying as well. I leaves Porson tucking into a good supper and comes for you!"

"Why—why did you come for me?" asked Mr. Drudge.

"I should 'ate," said Mr. Primrose, staring steadily away into the

Winnie would not reach Hooperton that night.

"I'm awfully sorry," he said over the phone, "but my engine was heating up badly, and I had to land. I'll be off again first thing in the morning and have your bird at the show in plenty of time for the judging."

"But where are you speaking from?" demanded Mr. Muggeridge.

"Primrose Farm," replied Porson. "I'm staying here overnight."

"Primrose Farm?" yelped Mr. Muggeridge. "Did you say Primrose Farm? Oh dear, oh dear!"

"Great pip!" ejaculated Porson. "What's wrong?"

"Everything's wrong!" howled Mr. Muggeridge. "That villain Primrose is a scoundrel of the deepest dye! D'you mean to say he has you and Winnie in his clutches?"

"No, of course he hasn't!" snapped

friend of mine by name of—of—Smith."

The pseudo Mr. Smith extended a limp hand in greeting, a bloodshot eye on the basket Porson was carrying. He continued to keep his eye on the basket in a fascinated sort of manner whilst he, Mr. Primrose, and Porson sat chatting. The conversation, engineered by the guile of Mr. Primrose, ran for the most part on flying. Hens weren't mentioned until at length, encouraged by sundry rustlings from the interior of the basket, Mr. Drudge blurted:

"What have you in there, my boy?"

"'E 'as a 'en in there!" said Mr. Primrose hastily, with a scowl at the impetuous Drudge.

It had been arranged that hens as a topic of conversation should be taboo.

"Let's have her out!" said Mr.



## The Plot at Primrose Farm!

Drudge, with a ghastly attempt at joviality.

"No, sir! I'm sorry, replied Porson firmly.

"Quite right! Quite right!" said Mr. Primrose, rising quickly to his feet. "That's a vallyble 'en for the 'Ooperton show to-morrow. Wouldn't interest you, Smith; wouldn't interest you. About time you were turning in, my boy," he went on to Porson. "You know your room, but I'll take you up so's you won't mistake it."

"Thanks awfully!" said Porson.

Bidding Mr. Drudge, alias Smith, good-night, he was piloted by Mr. Primrose to a bed-room. Carefully he placed the basket containing the valuable Winnie at the foot of the bed.

"Are you going to keep her there?" inquired Mr. Primrose casually.

"Yes. I haven't got to let her out of my sight for a moment, you know," replied Porson. "Mr. Muggeridge was very emphatic."

"Ay, you've got to be careful with a vallyble 'en!" nodded Mr. Primrose. "I only wish there was a lock on your door, but there isn't. Still, she'll be safe enough in 'ere with you. Good-night, lad!"

"Good-night, sir," replied Porson. "And thanks awfully for putting me up for the night!"

"Don't mention it!" said Mr. Primrose, and trod heavily away. Downstairs in the front room he dug Mr. Drudge joyfully in the ribs.

"Give 'im three hours and 'e'll be sound asleep!" he chuckled.

"You're sure he doesn't suspect anything?" inquired Mr. Drudge.

"No, of course 'e doesn't!" snorted Mr. Primrose. "'Ow should 'e? The 'en basket is at the foot of the bed!"

"All right. You go to bed," said Drudge. "It doesn't want two of us to do it. You have the other hen ready?"

"Yes. She's in the kitchen," re-

plied Mr. Primrose. "Well, I'm off to bed."

Off to bed he went, and for the next three hours Mr. Drudge sat smoking in the front room. At the end of that time he consulted his watch, then, turning out the light, went stealthily upstairs. He paused outside Porson's room, then gently opened the door. He smiled as a muffled snore came to his ears.

Stealthily he crossed the floor, groped for and found the basket containing Mr. Muggeridge's hen, then retreated. But scarcely had he gone than the muffled snore ceased abruptly and Porson sat up in bed.

"Ah!" murmured Porson. "The plot thickens!"

Scrambling into his flannel bags and school blazer, he crept from the room. Down the stairs he went and silently approached the kitchen.

Porson peered round the door. Mr. Drudge was on his knees by Porson's basket. On the floor beside him lay an axe. Opening the lid of the basket, Mr. Drudge drew forth a plump and struggling hen. With one hand he gripped it, with the other groped for the axe.

The fell deed done, Mr. Drudge rose to his feet. From a ventilated box on the table he withdrew a skinny black hen, and, thrusting it into Porson's basket, closed the lid. Porson lingered no longer. Silently he streaked along the passageway and upstairs to his room. He had been in bed but a minute, and had scarce switched on the muffled snore, when Mr. Drudge's step was heard outside. Cautiously Mr. Drudge entered the room, replaced the basket at the foot of the bed, and retreated. . . .

Ten o'clock next morning, and the poultry show in full swing. Porson, carrying basket and attended by Messrs. Drudge and Primrose, standing by the judging benches awaiting Mr. Muggeridge.

A squeaky voice makes itself heard and Mr. Muggeridge dashes up, pale with foreboding at the sight of Messrs. Drudge and Primrose.

to your next port. I reckon I shall get back to Sydney on a free ticket as a shipwrecked mariner."

"What the thump are you talking about?" growled King of the Islands. "Get on board your ship, Captain Griffin! I reckon we've only been taking charge till you came along! Come aboard and take over!"

Griffin stared at him. For a full minute he could not speak.

"You don't mean that, Ken King?" said Captain Griffin at last hoarsely. "You can't mean it?"

"Stow the jawing-tackle," said Ken. "Get aboard, I tell you, man. We've got to get back to the ketch. We've put in a whole day here, and we're due at Ita."

In silence, the unluckiest skipper in the Islands clambered aboard, followed by his mate and his crew. He had a dazed look. It seemed that he could not believe till Koko stepped into the Dawn's boat and Kit Hudson followed him and Ken was following.

"King of the Islands"—Griffin's

"You—you have my Winnie?" he bleats, grabbing the basket.

"Yes, here she is," replied Porson, and hands over the basket.

Messrs. Drudge and Primrose are all ready to laugh. But they don't laugh. Instead, with goggling eyes, they watch Mr. Muggeridge withdraw the plump and beautiful Winnie from the basket.

"Oh, good!" bleats Mr. Muggeridge. "Clever lad! Square up with you later. Will pay handsomely. Oh, good!"

With a glare at the petrified Drudge and Primrose he dashes off, Winnie under his arm. Those two gentlemen exchange stricken glances and prepare to move off. They wish to consult together in private. Someone has blundered!

"One moment!"

Porson's dreamy voice brings them up short.

"Yes?" says Mr. Drudge thickly.

"You owe me a pound!"

"A pound?" echoes Mr. Drudge. "What for?"

"For killing my hen, which I bought for a pound at a cottage near Primrose Farm," replied Porson. "I bought it after supper last night when I went out to have a look at my machine. I didn't want to carry two hens about, so after I went to bed the man I'd bought the hen from brought it along below my bed-room window in a basket.

"I let down a couple of sheets tied together and pulled it up. I thought Winnie must be wanting a change of quarters by that time, so I put her in the new basket and shoved her under the bed. I put *my* hen in *her* basket, and you chopped its head off. It was a Wyandotte, just like Winnie by moonlight. Anyway, you owe me a pound. Do you follow me?"

"Yes," says Mr. Drudge huskily. "I do!"

*(George Porson meets a most amazing youth next week, whom he promptly dubs "The Missing Link!" It makes a ripping story, and it will be a star feature in next Monday's MODERN BOY!)*

## Salving the Sunabaya!

*(Continued from page 10.)*

struggle. But he read Ken's thoughts, and his own thoughts were the same. The shipmates of the Dawn had found a fortune, and they had worked hard and risked their lives for it. But the utter ruin of a fellow-skipper was too high a price to pay even for a fortune.

For a long moment King of the Islands and Kit Hudson looked into one another's eyes. Then the Australian made a gesture of resignation.

"Have it your own way, Ken!"

"Not unless you agree."

"Rot! I agree all right."

King of the Islands turned back to the waiting boat. Captain Griffin, with a face set like stone, stared at the schooner—his schooner—with a hungry yearning in his eyes. But he pulled himself together as he met Ken's glance from above.

"I ain't grousing, King," he said quietly. "I'm only asking a passage

voice was husky and broken—"mean to say you mean it—you're abandoning the salvage?" He choked.

Ken smiled faintly.

"No case of salvage," he said. "We've helped a sailorman in distress, that's all. No need to talk about it in Sydney. Good-bye, and best of luck, old man!"

Captain Griffin gripped his hand in a silence that was more eloquent than words. Ken went down the side.

"What price us for a pair of fools?" said Kit Hudson, as the ketch ran before the wind and the Sunabaya grew dim on the sea-line.

King of the Islands laughed.

A fortune had been found—and lost! But neither he nor his comrade had any regret for the unexpected outcome of the Salving of the Sunabaya!

*(Another tale of the South Seas and Ken King in next Monday's MODERN BOY. It's far too good to miss, so make sure of it by ordering your copy to-day!)*



# The ISLE OF PERIL!

OUR GREAT SERIAL

by

STACEY BLAKE.

## THE STORY COMMENCES

CAP'N SKEWTON, a tough old salt with a wooden leg, offers to guide Professor Meredith, a great scholar with a passion for discovering the remains of prehistoric animals, to a volcanic island in the Antarctic—2,000 miles off the track of ordinary ships—on which gigantic creatures, believed to be long since extinct, still exist. The professor equips the *Harvester* as an expedition ship. Among the crew are his nephew, Tom Meredith, and Billy Edgecumbe, Tom's chum.

Meanwhile, Julius Harpstein, an unscrupulous scientist, steals one of Cap'n Skewton's maps and starts a rival expedition. Tom and Billy are on the island when they are suddenly ordered to put up their hands, and Harpstein confronts them with a revolver!

Now Read On.



### The Clutching Hand!

NEXT instant half a dozen men broke through the cover and came threateningly on Tommy and Billy. This was a reversal of fortune with a vengeance! Quite how far Julian Harpstein's malice would have expressed itself cannot be told, for it never had a chance to extend. There came a diversion from another source.

From out of the wall of greenery on one side, twenty feet from the ground, suddenly shot a gnarled, horny, and scale-covered paw that had remarkable likeness to a human hand, save for its monstrous size, and for the fact that the finger-nails were huge, curving claws. There were four fingers and a thumb. It was thrust out with so little noise that those who were not looking that way did not see it. But the shriek of the man whom the reptilian hand closed over was sufficient signal to drag every eye in that direction.

The man never had a fraction of a chance. His shriek subsided while he was in mid-air, where the reptilian

hand lifted him. Then he was dragged into the thicket out of sight, and the bamboos closed in again.

There was no attempt at rescue. Indeed, it was doubtful whether any such attempt could have been successful. The total result was a swift panic, lest another clutching hand came out of the jungle. Harpstein was one of the first to rush away. His five men followed in a frantic rush. Tom and Billy were left alone.

"It's for us to bang off as well," Billy gasped. "And I hope you've had your lesson."

They both legged it down to the beach, with terror giving them speed.

John Meredith had developed his snapshots and was jubilant about them.

"They will be quite unique in the history of science," he said. "They will make my book not only the most important contribution to contemporary paleozoology, but they will insure its popular appeal."

"What about the moving picture camera, uncle?" asked Tom.

"That in due course, yes. The attack of that dimetrodon on us when we were inside the iguanodon's skeleton would have been of peculiar interest."

"My notion, sir, is to consolidate our discoveries," said Captain Skewton. "My science isn't worth tuppence, but I can see that if the world's museums are willing to fight each other to secure such specimens as these, then there's big money going round that I'm, for one, open to pick up. I'm calculating on giving up the sea after this voyage and settling on a hen farm where I can go egg-collecting every hour of the day and night. So I want all the profit I can get out of this voyage."

John Meredith nodded in a far-away manner.

"And with such pictures my lecture will be of world-wide demand," he murmured.

"Yes, sir, but what are pictures compared with the real thing?" demanded Captain Skewton. "You'll get that ig—what do you call-um's



## The Isle of Peril!

skeleton on a platform, and you'll get people tumbling over themselves to see it. Now, we ought to get that aboard and stowed safely down the hold. And we ought to put that other beast in pickle—at least salt it down and dry it like bacon, maybe. Anyhow, it's the specimens we want, and plenty of them. And we ought to get them in hand before we tackle any more of these insects."

"Quite right!" said Professor Meredith. "We'll get to work."

This handling of the specimens proved to be heavy work. Even the conveying aboard of the dimetrodon, which was, as those creatures went, of comparatively small size, strained their resources. They roped it and got every available man aboard harnessed to it. It was dragged down to the beach and floated out to the ship, where it was dealt with and ultimately stored away in the hold. As for the huge skeleton of the iguanodon, there was nothing to do but to dismember it and bring it down bone by bone.

"This is dull work," said Tom one evening, when he had been perspiring with Billy at the job for two days. Give me something with a bit more pep in it. Things are unaccountable. We could hardly put our faces ashore without finding trouble before and now we've had two whole days on this bone-shifting job, with not enough excitement to make a grandmother look up from her knitting."

They were sitting on a coil of rope on the fore-castle, with their eyes directed on the gloom-shrouded beach. Always night seemed to hide dreadful things. The island, of which they knew so little, with its colossal forms of life that had been so strangely preserved from past ages, seemed to stir up to fuller wakefulness with the darkness. From over the forest came the

hoarse shrieks that they knew to be the voices of the dreadful flying lizards, and there were other noises that they could not identify—the rushing of unknown creatures on the surface of the water, scraping sounds on the shingle of the beach, weird shrieks up among the primæval growth. "There's more doing at night," said Billy. "Things get busy ashore when the darkness falls. Here comes a pterodactyl."

They saw a black shadowy thing winging over the ship. It came so close that they could hear the dry rustle of its wings. It flew once round the ship, a monstrous evil form, and then flapped shoreward again. They did not fear again the attack they had suffered that day in the mist, for Captain Skewton had arranged over the deck a rough net-

work of ropes, depending from the spars and stretching from stem to stern, which was protection enough against the twenty-foot wings of the creatures. As though they had sensed the risk of entanglement they had given the ship a wide berth ever since.

"Nasty things! There's something weird about them. I never liked bats, but those brutes——"

"My notion is that there's more weird stuff ashore than we've ever dreamed about. I'd like a night on the beach. But, of course, it might be more than we bargained for."

"I wonder whether it has struck you that we—the two of us—aren't making anything out of this trip?" Tom said thoughtfully. "I mean, there's uncle with his lecture and

don't have to help the professor and the rest of them all we can, but we've got to look out for little expeditions of our own. Now, a night on the beach would be pretty useful."

"To-morrow we'll look round. There ought to be some sort of shelter to be found among those rocks where the cliffs begin along the beach—I don't mean shelter from the weather, but a bit of a hole to pop into in case we get chased by some of the awful things that scratch around there."

"Of course, your uncle won't give us permission if we ask him, his notion being that we are just out of the preparatory school."

"That's so. And as we don't want to be disobedient we'll not mention it. Now let's turn in and dream about it."

It was queer that at breakfast the next morning John Meredith should mention the very same project.

"Some time later, when we know a little bit more about conditions, I should like to spend a night ashore," he said—"perhaps several nights, so that I may observe the nocturnal life of the island. But to do that with a reasonable amount of safety it is necessary to have some sort of a bolt-hole, or safety spot, to be able to get into quickly. I must think about it."

"We are thinking about it," said Tom under his breath to Billy. "And don't forget to stuff your pockets with biscuits—just in case."

Captain Skewton answered the professor with not too much encouragement.

"It would be running silly risks, sir. There are things moving about at night-time that aren't fit to see. And, anyhow, I'm seeing work suspended for a day or two if the fall in the glass tells me anything. I believe there's a lump of wind coming, and in that case we've got to shift our anchorage. We can't risk being piled up on a lee shore. We'll have to find sea-room."

But by midday there was still no sign of a break in the weather, although the significant fall of the barometer still persisted. And at nightfall, when they went on board, the sunset was as usual. To all appearance the weather was unchanged. But the skipper shook his head.

"We may have to move at short notice," he said.

The day had not been idly spent by Tom and Billy. They had discovered a dry cave in the cliff face, with an entrance sufficiently small to keep out any of the larger reptiles they had seen. They felt that they would be quite safe there, while, at the same time, from it, providing there were light enough, they would have under observation a wide

(Continued on page 25.)

## NEXT WEEK'S SPECIAL FEATURES!

### FOLLOW-MY-LEADER IN THE AIR.

British air-pilots are famous the world over for their wonderful formation flying. No other Air Force executes such complicated manoeuvres so smartly, and in this article the secret of the British pilots' success is revealed to you. A special photographic feature!

### THE GREAT PEARL OF GOLA!

Young Ken King—King of the Islands—and his chum, Kit Hudson, gazed dumbfounded at the largest pearl that eye had ever seen, glimmering with a thousand lights as it lay in the rough palm of the pearly. . . . But there is great trouble in that magnificent sphere as well as beauty, and the telling of this long complete yarn makes a truly enthralling South Seas adventure story! By Charles Hamilton.

### AFTER THE LAUNCH.

The writer of this special article has several surprises up his sleeve for you fellows who imagine that directly a great liner is launched from the shipyard she is ready to traverse the oceans. He takes us step by step with the new liner from the day of launching to the first trial trip.

### THE MISSING LINK!

George Porson—the bright young fellow who is determined to build up a great Air Passenger Service with the aid of his rickety old aeroplane (it cost him £10, secondhand)—shows he has tremendous pluck as well as determination in a very fine complete story by George E. Rochester.

### THE WORLD'S CHAMPION LION.

The MODERN BOY special representative has just returned from a visit to the amazing lion-farm where Numa—the famous £2,000-a-year lion which figures in Charlie Chaplin's great film, "The Circus"—was trained. You'll be intensely interested in this unique wild-animal farm.

### SHARP-TUNING DODGES.

Our Wireless Page, conducted by the Editor of "Popular Wireless," has some novel and most helpful hints for you on the important subject of cutting out unwanted signals without using a wave-trap.

Etc., etc., etc.

the big book he's projecting, and the skipper, who's going to get his share of the profits for selling specimens to museums. But what are we getting?"

"We have board and lodging free, as you might say," said Billy, who was perfectly satisfied.

"But what about a book by Thomas Meredith and William Edgecumbe, our noble selves, leaving out the science and shoving in all the lively stuff?"

"That seems sensible. I'm your partner," said Billy, with enthusiasm.

"Well, in that case we've both got to start keeping notebooks and then afterwards we'll boil the stuff down and put the best of it in the book."

"Right-ho! That means we've got to do a bit of original work ourselves," Billy said. "I don't mean that we



# Topping Prizes You May Win!

**FIRST—**  
1929 Model  
Twin  
"Douglas"  
MOTOR-CYCLE.

**—PRIZE**

To be Tuned, Tested,  
and Presented by  
"SMILING"  
JIM KEMPSTER,  
Britain's Speed-  
way Champion.



**5 ONE-VALVE  
WIRELESS SETS**  
(Complete with Accessories.)



**100 "WARNEFORD" MODEL  
MONOPLANES.**



**5 PORTABLE  
PERFECTONE  
"JUNOPHONE"  
GRAMOPHONES**  
(With 12 Records Each.)

## OUR LATEST AND GREATEST FREE CONTEST!

This is the Fourth Week of our fine new competition, the novelty in which is that we ask you interesting questions, the answers to which can be discovered by studying the pictures beneath them.

Now, I don't want you to run away with the idea that this is a difficult competition. The questions asked are on topics which interest you in your spare time and are not in the least reminiscent of the classroom. More, to jog your memory and to help you to find the correct answers, we have already given a full list for use throughout the competition. In that list the answer to every question can be found.

All you have to do is to read the question above each picture carefully, study the picture beneath it, and then write your answer **IN INK** in the space provided.

When you have filled-in all your answers, cut out this picture-set and keep it with the previous sets until next week, when the fifth set will be given, and so on for **ONLY SIX WEEKS**. With the final set, full instructions will be given for the sending in of efforts, and the necessary coupon. The rules governing this contest will be printed again with the final pictures.

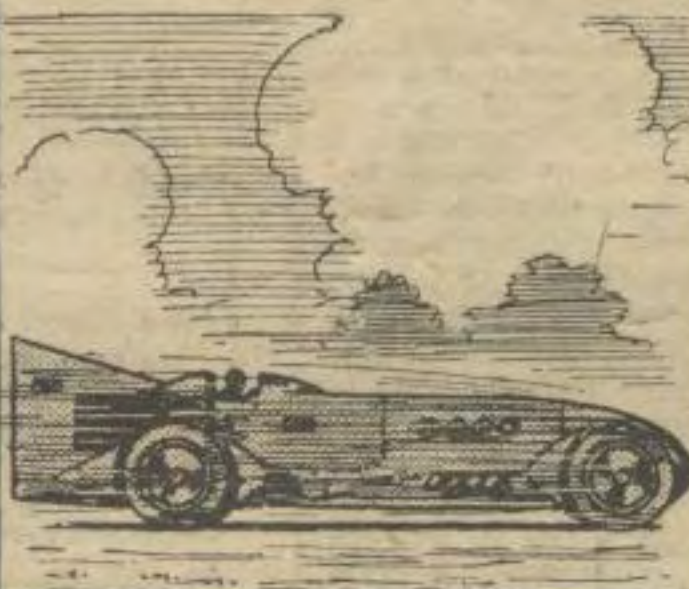
### "QUESTIONPICS" SET 4.

Who founded the association whose badge this is?



19

On what beach did Captain Campbell race this car?



20

Which well-known football ground's name is represented here?



21

From where is this message being broadcast?



22

Who advertises model aeroplanes in this journal?



23

A famous professional footballer's name is depicted here. Who is he?



24

**NEW READERS**

by ordering from their newsagents copies of the last two issues of "Modern Boy," which between them contained the first three sets and the Full List, you

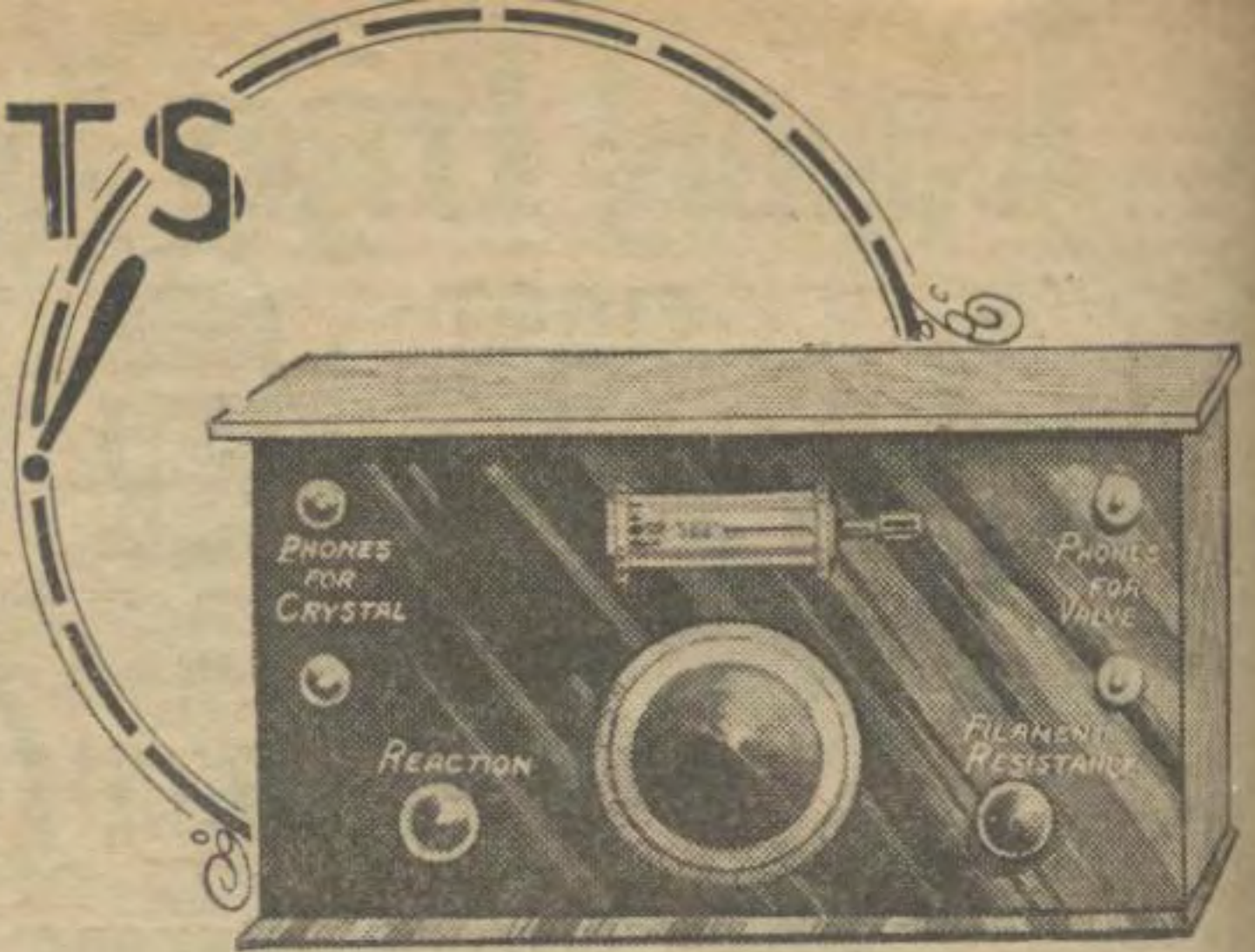
**—CAN START NOW!**



# TWO SETS IN ONE!

Our Wireless Page, conducted  
by the Editor of  
"POPULAR WIRELESS."

A novel Valve-or-Crystal Set for the fellow who is within Crystal range of a local broadcasting station but who needs a Valve to bring in an alternative programme.  
Simple to make—easy to handle.



THIS week's wireless set contains both a one-valve receiver and a crystal detector, and is so designed that in a matter of seconds you can change over from one to the other.

You might wonder perhaps why such a set is needed; surely when one possesses a one-valve set the crystal receiver is no longer satisfying?

It is needed, and there are certain cases where the crystal has the valve beaten absolutely; especially its power to work without "juice." This valve-or-crystal set is for the fellow who is within crystal range of his local station, but who needs a valve to bring in an alternative programme. The change-over needs no switches and everything is simple.

Looking at the circuit you will see that it is the usual type of one-valve set, but across the aerial coil is connected a crystal detector and a pair of terminals for the telephones. Looking at the front of the panel you will see two sets of terminals, left for crystal, right for valve.

### WASTE OF 'JUICE.'

To listen in to the local station on crystal, the phones go to the left hand terminals; the crystal detector is adjusted and the aerial coil is tuned by the variable condenser.

Then, when an uninteresting item comes on and we find our distant station is sending out something of more interest, phones are transferred to the right-hand side of the set, the valve is turned on, and tuning is accomplished on the same condenser, with the additional control of the reaction coil by the knob on the left-hand side of the set. When the valve is in use, the catswhisker should be lifted off the crystal.

The usefulness of the set can now be appreciated. When the crystal can give us such pure music at good strength, it is waste of juice to listen-in on valves. And, of course, when your accumulator is being charged you can still listen-in to the local station.

On the panel you have the variable condenser in the centre, with the crystal detector (glass enclosed) mounted immediately above it. On the left you have

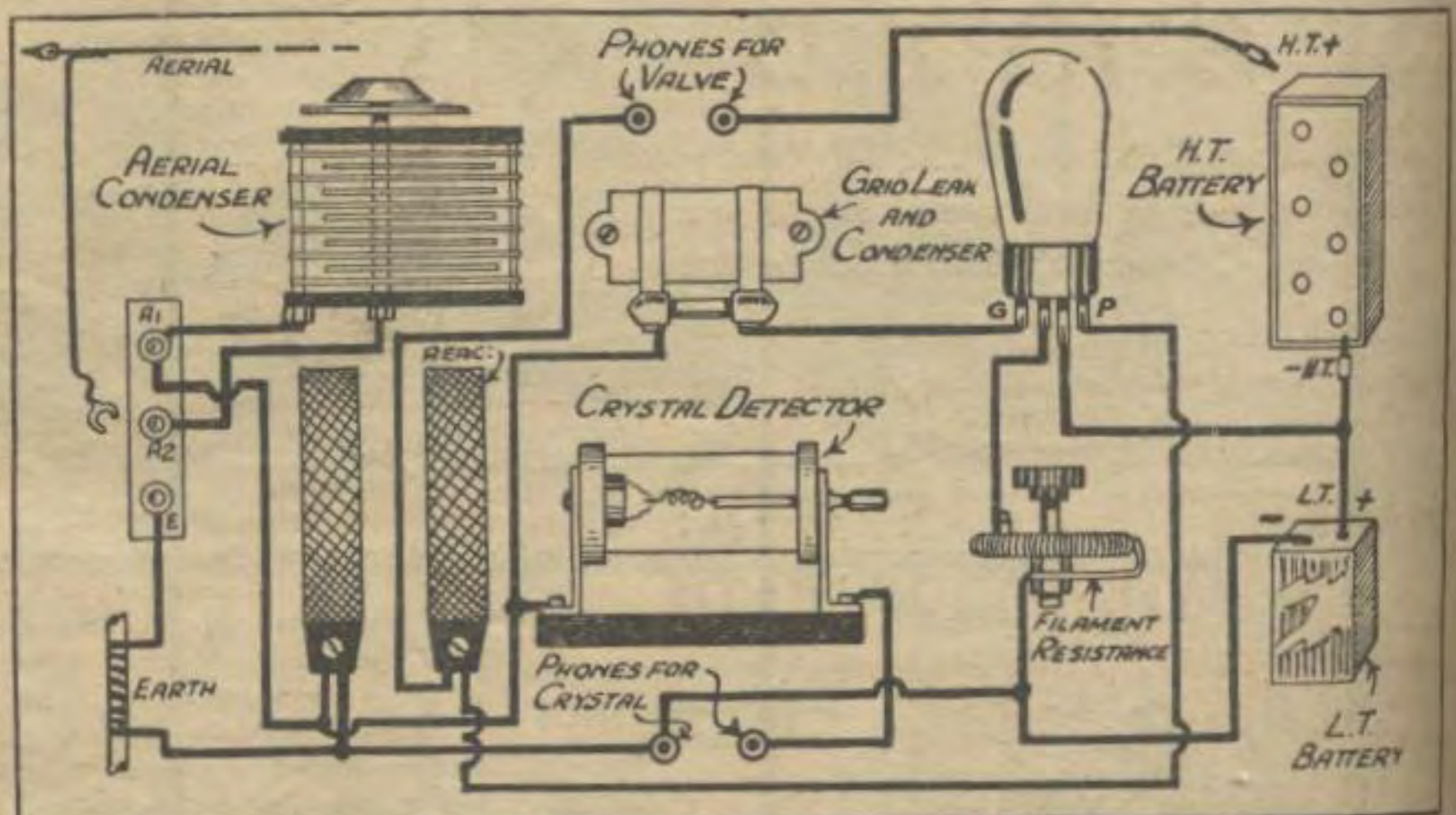
the crystal telephone terminals and knob of reaction control; on the right the valve telephone terminals and filament resistance.

The baseboard merely carries the valve holder, two-way coil holder, and grid leak and condenser. At the back of the set is the terminal strip with aerial and battery connecting terminals. The usual two terminals for the aerial (giving series and parallel condenser) are provided, an earth terminal, two for LT+ and LT-, and two for HT+ and HT-.

No particular components are specified. The capacity of the variable condenser is .0005 mfd. A two-volt valve will suit the set very well, with the necessary accumulator and about sixty volts of

possible results; that the reaction coil is doing its work efficiently in boosting up the signals without oscillating. The signals should get louder when the reaction coil is brought up against the aerial coil. If you get the reverse effect, then the connections to the reaction coil should be changed over.

The size of the reaction coil is best found by experiment, and although with a certain sized coil reaction effects may be obtained it is always advisable to try one size smaller. In this way it is possible to obtain smooth reaction effects without any tendency to "ploppiness." If you have a limited number of coils, increasing or decreasing the H.T. will give similar results.



The wiring of our Valve-or-Crystal Set can be followed easily from this pictorial diagram.

high tension. The ordinary type of plug-in coil is used. The grid-leak and condenser are of 2 megohm and .0003 mfd. respectively.

Those who already possess a one-valve receiver can adapt the instrument so as to receive on a crystal as well, merely by fixing on a crystal detector and two terminals, the connections being aerial end of coil to crystal detector and one phone terminal, the other phone terminal to earthed end of coil.

Make sure when listening-in on the valve set that you are getting the best

When listening on crystal alone, you should place the reaction coil in a position as far away as possible from the aerial coil. The reaction coil, although actually out of circuit, will tend to have a damping effect on the coil unless this is done.

This is easily proved by placing the reaction coil close up to the aerial coil and tuning the local station to its loudest on the crystal circuit alone. If the reaction coil is then placed as previously suggested and the circuit retuned, an increase in signal strength will at once be apparent.



## The Isle of Peril!

(Continued from page 22.)

stretch of beach. And they deposited there in a hole in the cave wall the biscuits they had scrounged at breakfast-time.

"Shall we hop it to-night?" asked Billy.

"Might as well," agreed Tom. "The skipper is wrong about the weather. There isn't a breath moving. It's a bit hotter and steamier than usual, that's all!"

Their project was easily accomplished. All, save the deck-watch, tired out with their day's labour, turned in early; and the watch was pretty somnolent, so it was easy to get one of the boats and to pull themselves shoreward without anyone being wiser. They had scarcely run ashore and pulled the boat up and anchored it with a sufficiently long line when their own opinions regarding the weather suffered a violent reverse. There came from northward in or beyond the belt of mist a roaring noise of wind. It gradually grew louder. And all at once lightning split the darkness, showing up for an instant the ship light against an inky sky.

"Well, that's pretty sudden!" commented Tom. "Do you want to go back?"

"I guess we'll stick it now we've come, though I hate rain, if that's coming."

"Everything's coming," said Tom, as a blast of wind with flying rain-

-drops in it smote them. "We'll scoot for our cave till the rain has gone."

They had scarcely got moving before the surf began to pound on the beach. By the time they had scrambled among the rocks the gale was smashing in heavily, with rain in the wind and heavy seas creaming up the beach.

"Well, we've got to stick it now, anyhow," said Billy, as they looked out from the cave. "We couldn't get back if we wanted. Hallo! Look!"

A lightning flash rippled over the sky. It remained long enough for them to see the stern of the Harvester as she slowly made out to sea against the gale.

"Yes, we've got to stop all right," replied Tom, feeling a little heart-sinking. "We're left. And no doubt the skipper reckons we are down in our bunks. Well, we aren't!"

They were not particularly happy. The rain poured down in sheets. If they had stepped out for a moment, they would have been soaked to the skin. And the night was so dark, save for the occasional flashes of lightning, that they could see nothing, while the perpetual noise of the surf blotted out any other sounds save that of the crashing thunder.

But after a while some extra sense, other than sight and hearing, made them conscious of an object moving near them.

"What is it?" whispered Billy. The next instant there was a

clattering on the stones near at hand. There came a flash of lightning, showing up the shape of a man. He came stumbling towards them. He had seen them as they saw him, and for a moment he came to a halt.

"Hallo! Are you friendly or not?" he demanded, as though he had cause to think they might not be. For a moment he was lost to sight, for he crouched down under a boulder till their answer came to him.

"We are friendly all right," said Tom, when the crash of thunder that followed the lightning had crashed away into the distance. "I suppose you are one of Harpstein's crew?"

"That's so," answered the man. "Our lot have been up against you, but we've only been earning our wages. Personally, I've no axe to grind in the affair, and I didn't have nowt to do with that attack on your ship or anything else."

"Come out, and let's have a look at you," said Tom.

The man crept into the cave, with the water pouring off him, and Billy directed a flashlight into the man's face for an instant. Neither recognised him.

"What are you doing here, anyhow?" asked Tom.

"I was left doing a job on shore. I'm carpenter on the Pole Star. The ship's broken her anchorage and gone out to sea till the gale's

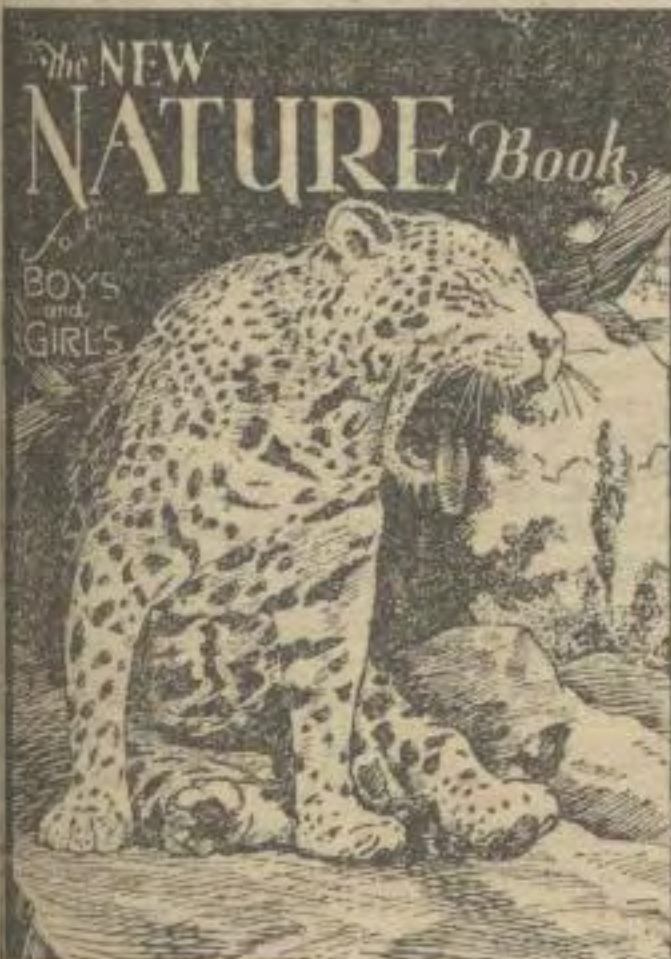
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## The Isle of Peril!

blown itself out. I'd spotted the cave beforehand, and I guess you had. It makes a decent shelter. Gosh, what a night!"

"Pretty rotten!" said Tom. "Our ship's gone to sea as well. We'd slipped ashore to make some observations, and here we are. Have a biscuit?"

The man was wet, but the night was hot enough to keep him from serious discomfort. He ate, and the two boys joined him in the meal.

"But we've got to go steady on the grub," Billy observed. "You can't quite tell how long we shall be here."

"And it's a deuce of a place to be in, anyhow!" said the carpenter. "I've heard things crawling among the rocks as I came along here that made me feel creepy. I fancy they were things that came out of the water."

"It's the land reptiles we have to keep out of the way of. The entrance to this cave is small enough to keep out any of those that matter!"

"That was my idea. I'm glad I've found you here. It's a bit

shuddery by yourself. What a night! And what a blooming island! I wish it was daylight!"

"You've got nerves," said Tom.

"Ay, maybe."

"The game is to go to sleep," observed Billy. "There's going to be nothing worth seeing to-night."

"Um, there's too much noise to sleep," said the carpenter. All the same, he was the first of the three to fall asleep. He ceased to contribute to the desultory conversation, and the next the two boys heard was a snore.

"We might as well do the same," Tom whispered. And he found a soft place on the sandy floor and lay down. Billy did likewise a little distance away. And presently their regular, slow breathing told of the gentle sleep that comes of good health and easy consciences.

Tom was the first to wake. In a pleasant, half-conscious condition, he turned over at some time of the night, and, in so doing, stretched out an arm. He withdrew it hastily, for his hand had suddenly come in contact with something strange that he could not give a name to—something that was cold and slimy and soft to the touch.

In the same instant, as he sat up with a curious sense of horror fastened on him, he thought he heard a sudden rustling, as though something were dragging itself, or was being dragged, over well-lubricated ground. Then he could not be sure, for the noise of the sea was overwhelming and absorbed all lesser sounds.

He switched on his light, but the flash was imperfect and snuffed out again, as lights do when you want them badly. But in the moment of illumination he saw nothing within the area of light but his two companions sleeping peacefully.

He turned into his sleeping-place again with the assurance that he had been only the victim of a bad dream, and pretty soon he was slumbering again, only to be sharply waked—this time by Billy's voice, with a note of alarm in it:

"What was that?"

*(This night of eerie happenings holds still more tense thrills for Tom and Billy, and the Isle of Peril more than upholds its reputation in next Monday's dramatic instalment. There's a danger that you may miss it if you neglect to order next week's MODERN BOY before it is too late. Be wise, and order it TO-DAY!)*



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**A** WORD in the car of every fellow who wants a 3.5 horse-power 1929 model "Douglas" Motor-Cycle! You see the fourth set of "Questionpics" on page 23 of this issue? If you are a fine competition—in other jolly nice prizes, in addition to the motor-bike, are offered—pull up your socks at once and tackle the present and the preceding three sets. By so doing you will be starting on even terms with readers who "got off the mark" three weeks ago.

"Where am I to get the three preceding sets?" you will ask. That's an easy one. Tell your newsagent to get for you the issues of MODERN BOY dated November 3rd and 10th. That will secure for you the preceding three sets of pictures, the November 3rd issue containing, in addition to Set Two, a reprint of Set One. Or you could get those numbers—if you look sharp about it—from MODERN BOY, Back Number Department, Bear Alley, Farringdon Street, London, E.C.4, at threepence each, which includes postage.

In my Chat last week I promised you a splendid new feature—All About Ju-Jitsu, the Japanese Art of Self-Defence. This will commence in next week's issue, and will be exclusive to MODERN BOY. The series, which will extend over several weeks, will be written by a famous exponent of the art, the founder of the British and Dominions Ju-Jitsu League; and the action-photographs accompanying each article will show you plainly how each lock and hold,

as practised by the Japanese champions, can be carried out by you.

I need not stress the great importance of every fellow being able to defend himself in the moment of need. With a knowledge of ju-jitsu you absolutely have

That scheme of mine of publishing each week a batch of my experts' replies to inquiries sent in by MODERN BOY readers seems to become more popular each week, and though I have not a great deal of space remaining, I am printing another brief selection for the benefit and interest of all of you.

**Who was the World's Worst Pirate?** Probably this was a very unpleasant pirate named L'Ollonais, S. Dunkley (Ashford). He was said to be "full of horrid, execrable, and enormous deeds," and eventually the Indians of Darien took him prisoner. They were as savage as L'Ollonais, "and they killed him very cruelly, burnt him, and scattered his ashes that no trace might remain of so infamous a man."

**What is the "Air Screw" on an Aeroplane?** This is the correct, technical name for the propeller, J. K. M. (Edgware), but the term is seldom used.

**How Many Gates had London?** Seven, P. R. (Rochdale), and they were: Billingsgate, Dowgate, Ludgate, Newgate, Aldersgate, Cripplegate, Aldgate. There were two other gates, the existence and location of which are rather uncertain, but the seven named above are quite definite and existed from Roman times.

**How Far Can a Rifle Shoot?** The extreme range of a British Army rifle, Geo. Lester (York), is about two and a quarter miles and the limit of the sights is one and three-quarter miles. These rifles weigh a shade under nine pounds.

**Where did Noah Land after the Flood?** This sounds like a conundrum, "Jacker" (Brechin). As a matter of fact, Noah is said to have landed on the top of Mount Ararat, in Armenia; and there is an Armenian postage stamp which portrays this mountain, possibly to celebrate the event!

**Has a Railway Train ever done 100 m.p.h.?** A train running between Plymouth and Bristol, in 1904, B. Reed (Wallasey), is said actually to have attained this speed.

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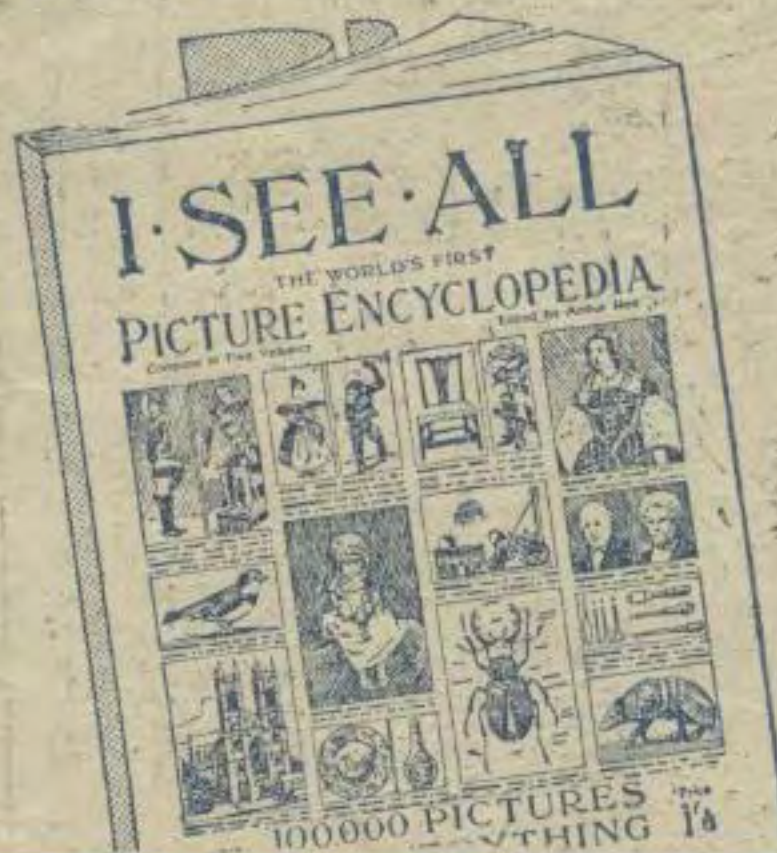
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