

"She's a marvel!" exclaimed the little maid, with conviction, fiercely blacking the kitchen stove. "I dun' no that I know a better eddicated young lady—except you, miss. Now don't you think it's a good letter, miss?"

"A remarkably well written letter, Louisa. But, tell me, why does your friend always put a small 'i' for the personal pronoun 'I'?"

For a moment the little maid hesitated.

"I'll tell you, miss," she cried. "Winnie is very hard worked. She must have been in a 'urry. When she 'as plenty o' time she puts a capital letter to every word!"

CLEVER LITTLE CHAP.

With an uncomfortable feeling in their heads, the juvenile class awaited the advent of the school inspector. They had had it well drummed into them that this was to be a new departure in examinations. Bland and expansive, the inspector sauntered into the school-room and, walking past the school teacher, addressed the class.

"Observation of little things," he commented, "has made some of our greatest men of to-day." With his coat thrown back and his thumbs in his trouser-pockets, Mr. Inspector displayed, stretched across his ample dimensions, a heavy gold watch-chain and a gold-topped fountain-pen peeping from his watch-pocket.

"Now," he went on, "I will test your powers, and will re-enter the room, and you shall tell me what I have forgotten."

Leaving the room, he abstracted his fountain-pen from his pocket, and returned, standing before the class in the same attitude.

"Now, what have I forgotten?" he beamed.

All the kiddies sat dumb; they didn't quite understand this rigmarole. Suddenly a little chap in the front piped:—

"Please, sir, you forgot to say 'Excuse me' when you walked in front of teacher!"

THE LAST STRAW.

"Yes," said the man from New York, who stood on the deck of a Cunarder leaving Liverpool, "England is the most awful corner for tips I ever struck. I've been rooked at every turn for the last month, but," he added savagely, "the last try-on was a bit more than I could stand."

"What was that?" inquired the man to whom the remark was addressed.

"Well," said the tourist, "I had tipped every man from the Captain of the House of Lords down to the man that gummed the wrong labels on my luggage, and I went into the waiting-room on the landing-stage to wash my hands of everything English, and what do you thing stared me in the face when I was finished but 'Please Tip the Basin.' I'm hanged if I did!"

SMILE RAISERS.

Young Lady: "You say you were on a raft for six weeks after you were torpedoed, and had nothing to eat but mutton. Where did you get the mutton from?"

Bored Sailor: "Well, you see, miss, the sea was very choppy."

An amateur authoress who had submitted a story to a magazine, after waiting several weeks without hearing from the editor concerning it, finally sent him a note requesting an early decision, as she stated "she had other irons in the fire."

Shortly after came the editor's reply: "Dear madam,—I have read your story, and I should advise you to put it with the other irons."

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SCIENCE SIFTINGS

(By "VOLT.")

World's Fastest Submarine.

The fastest submarine vessels in the world were designed and constructed for the British Navy during the war. They were evolved in response to the demand for submersible craft which could keep station with the fleet when cruising, and also undertake long voyages without the aid of "mother craft." Many new features were embodied in this class, which has proved itself a conspicuous triumph of British engineering. Unlike other submarines, they are fitted with steam turbines, which are used during operations at a high speed on the surface. Secondary propelling power is obtained from a heavy-oil engine of 800 brake horse-power, which drives a dynamo supplying electricity either to electric motors geared to the propeller shafts (for surface cruising at moderate speeds), or to electric batteries which store energy for propulsion under water. When submerged, these vessels have a displacement of 2570 tons. They are nearly 340ft long, and have a double hull except at the ends. An exceptionally powerful wireless telegraph installation is fitted for long-distance work; the aerials are carried on long telescopic masts operated by a telemotor system. Electricity is also used for driving the air compressors and bilge pumps, while the steering gear and the hydroplane driving gears are controlled by a special hydro-electric system.

Examining Metals by X-Rays.

The rapid development of electric welding in Great Britain, fostered by the Admiralty for ship construction and other purposes, has led to some highly important improvements in this useful means of forming a close union between plates and other sections of iron or steel. The British experts who carried out successful work of a novel kind have made excellent use of "flux-covered" metal electrodes. In this system the metal electrodes between which the arc for melting purposes is struck are covered with certain materials which flow under the heat of the arc and protect the metal from oxidation during the process. In welding steels alloyed with special substances, a flux can be used containing the alloys, thus supplying them to the weld as it is being made. By this means the weld is made uniform in composition with the remainder of the metal. Special attention is also being given by British engineers to the testing of welds by "radio-metallography." The weld is examined under the X-rays much as a portion of the human body might be, and internal imperfections are thereby revealed, although they may be covered by a solid close-grained surface. Many British men of science are devoting themselves to research in this direction, which is calculated to be of great practical value to all users of metals. It may be recalled that Great Britain led the way in the microscopic study of the structure of metals—a study which laid the foundations of modern scientific metallurgy.

A SHORTHAND REVOLUTION.

Mr. Wm. Wheatcroft, one of the foremost authorities on PITMAN'S Shorthand, Editor and Author of the new editions of the "Teacher," the "Primers," etc., after a close study of

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and writing 80 words a minute after less than 6 weeks' study, writes:—

"GREGG is as SUPERIOR to PITMAN as the modern Aeroplane is to the Gas Balloon."

WRITE for his article, "A Shorthand Revolution," and particulars of our

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