DESERET EVENING NEWS: SATURDAY, JANUARY 18, 1902.

His Grandfather Tries to Tell a Little of What Marconi Has Done.

JAMES HENRY.

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EXPLAINED TO

James Henry is a boy who wants to know about things, Now, James Henry has a grandfather who is one of those men who alyays want to tell people things. So James Henry and his grandfather get on very well together, because James Henry wants to know about things and he is kind enough to his grandfather to let him tell him about them.

For instance, James Henry gave his grandfather a beautiful chance the other day. He owned right up to him that he didn't see how Mr. Marconi could telegraph without wires, especially across the Atlantic ocean. "Do you know just how they telegraph with wires?" has grandfather asked.

"No," said James Henry, "not quite, but I've always known, they could do that."

"Yes, you've known that a good while, haven't you?" said his grandfather. "Weil, the most of us are so used to seeing machines do things that we don't bother about just how they do them; we know that they do them, and that is enough for us. Now, do you know what ether is?"

"That stuff that puts you to sleep," said James Henry.

"I don't mean that kind. The kind I mean is quite different, and I don't think that anybody understands it very well. It is a substance which is everywhere; it is in the air and above the air, and it reaches to the sun and to the stars, and it is all through all other things, in the earth and the water and all solid bodies. When we move about and when the earth and the planets move they pass through it, as if it were a kind of jelly. No, of course, we don't understand it, but it is the only way that men of science can ac-

count for a good many things. "Well, Mr. Marconi has made a machine—I can't tell you all about it, and it isn't necessary—but the prettiest part of it is where he makes great electric sparks leap across from one brass know to another, with quite a display of fireworks. He can make the sparks jump or stop jumping by pressing a key or letting it go. And when the sparks come they set something to vi-brating, probably this same ether. "So the ether vibrates or pulsates or

"So the ether vibrates or pulsates, or waves-whatever you want to call it-and the waves of the ether spread out in all directions from Mr. Marconi's in all directions from MF. Marcon's machine, just as the waves spread out in all directions on a pond when you throw a stone into it." "But they don't spread in all direc-tions on the pond," said James Henry, "they only spread sideways, not up and down."

down

"James Henry," said his grandfath-er, "how do you know they don't spread down through the water from where the stone strikes it, and up from where it touches the bottom? Well, then, these waves from Mr. Marconi's machine spread out, not in a circle, but in the form of a ball. The first wave widens and widens in all directions, and while it is doing it another starte in the

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way, and so they all go out and out way, and so they all go out and out, and after another. There are a good many of them, too-pehaps 100 millions a minute, more or less. Now, remem-ber, whenever Mr. Marconi presses his key, off go these waves, and whenever he lets go the key they stop. Well, then, all that is needed, is some ma-chine which can feel these vibrations a long way off, when they come, and make a record of them, and then M1. Marconi can tick out any message he Marconi can tick out any message he likes, just as he would on an ordinary telegraph machine. "Now, attached to the machine which makes the sparks there is a wire, which makes the sparks there is a wire, which is hung as high up in the air as they can get if. I don't think that anybody knows, even Mr. Marconi himself, just how much his wire is good for, or just what it is good for, but it does seem somehow to help those waves to get off, and to help them to go further when they are off. Then, somewhere away off, there is another wire hung up, and that manages to gath the

"It says, 'lick, tick, tick,' and tells what Mr. Marconi has to say." "Mr. Marconi thought for a while that the higher he could hang his wire the further he could send his waves, but he about whet the other the further he could send his waves, but he about gave that up the other day, when he sent them right across the Atlantic. He used to think, too, that the waves went through the air, but he doubted that when he found that a few houses or even a big hill in the way did not seem to trouble his waves at all. So, perhaps they go through the earth instead of the air, And, then, when they sent the waves from Cornwall, in England, to News from Cornwall, in England, to New-foundland, and Mr. Marconi caught them on his kite string, the carth ourved so much that there was a piece of it more than a hundred miles thick between the two places. So as long as we don't know just what the wayes do to through, we say that they go through the ether."

up, and that manages to catch the

waves, and an instrument attacheed to

"You don't seem to know much about it, anyway, do you?" said James

Henry, "There is certainly a good deal of guess work about it." his grandfath-er answered. "I think that the men who have done all the work are a good hert suggled about a good many things. teal puzzled about a good many things. But they have found that they can do a great deal, and I am sure that they will soon do a great deal more."-Kan-ta* City Star.

A Fireman's Close Call

"I stuck to my engine, although every Joint ached and every nerve was racked with pain," writes C. W. Bellamy, a lo-comotive fireman, of Burlington, Iowa, "I was weak and pale, without any ap-petite and all run down. As I was about to give up, I got a bottle of Electric Bitters and after taking it, I felt as well as I ever did in my life." Weak, Bickly, run down people always gain acw life, strength and vigor from their me. Thus them. Sotiefaction success ase. Try them. Satisfaction guaran-teed by Z. C. M. I. Drug Dept. Price

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The first car eastbound leaves San Francisco Monday a. m., December joth, Salt Lake Wednesday p. m., ar-lving at St. Louis at 7:10 a. m. Friday, anuary 3rd.

These cars are first class tourist ars. Both first and second class tekets will be honored in these cars. Berth rate to Kansas City \$3.00, St. Louis \$4.00. Quick time. Dining car service will be inaugurat-d early in New Year.

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