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Says Sir Wilfred Grenfell, K. C. M. G., Kinloch House, Charlotte, Vermont: "Your weekly publication is of the greatest interest to me and to the others to whom I have been forwarding my copies of the SCIENCE NEWS LETTER, after having read them." With his letter containing this statement he enclosed remittance for four annual subscriptions to be sent in his behalf as Christmas gifts.

METALLURGY

**Molecular Studies of Iron Bring New Types of Steel**

**A**merican industry is entering a new era in the manufacture and use of "tailor-made" steels adapted to a wide variety of purposes and made possible by scientists studying iron molecule by molecule, the Franklin Institute was told by Dr. John Johnston, director of research for the United States Steel Corporation.

Control of the heating and cooling of iron and steel during its manufacture so as to change the point at which iron changes from its "alpha" form to its "gamma" phase is making possible new types of material that can be fitted to new needs, he asserted.

"A generation ago," he stated, "the technical problems facing the steel industry were related mainly to increased production of a few kinds of steel, but today the object is to improve the fitness of steel at no greater over-all cost to the public."

Iron is now known to exist in two forms, the alpha and gamma types, he explained. These two types, which differ in physical properties sufficiently to enable engineers to adapt them to practical use, owe their existence to different arrangements of iron atoms in the iron molecule. And the change from one type to the other can be controlled by the processing which the iron receives.

The emphasis in the iron and steel business today is on producing corrosion-proof metals, he explained. Stainless steel, most prominent member of the corrosion-resistant family, is valuable among other things, because it does not rust and thin sheets can be used without the fear that they will be damaged by long exposure.

*Science News Letter, November 27, 1937*

A human being has 20 bones in his skull; a codfish has 68.

**● RADIO**

December 2, 4:15 p. m., E.S.T.  
KEEP WELL AT CHRISTMAS—Dr. John A. Skladowsky of the Baltimore Health Department.

December 9, 4:15 p. m., E.S.T.  
BIG GAME IN THE NATIONAL PARKS —Dr. H. C. Bryant of the National Park Service.

In the Science Service series of radio discussions led by Watson Davis, Director, over the Columbia Broadcasting System.

