

inventions. It is reasonable to believe that without these inventions we should not have the industries they created.

The word invention means to many people simply a machine that reduces or wholly displaces manpower and by that reduction and displacement raises economic problems and difficulties.

This subject is too big for complete discussion here, but I can give a generalization. We are not yet blessed—or cursed—with machines that make themselves. Those now in service had to be constructed of raw materials which had to be produced and transported and

fashioned to requirements. All of these processes necessitated human effort.

In short, man is prior and indispensable to the machine. You can have man without a machine, but you can never have a machine without man.

The moral which this anniversary impresses on me is that patents have put a premium on genius, and all of us have shared the gains. Every successful invention becomes a new inspiration. While that impetus continues we may count on progressive improvement in our way of life.

*Science News Letter, April 6, 1940*

ANATOMY

## Human Embryo in Third Week Added to World's Collection

Minute Creature Only Sixtieth of Inch in Diameter Is Complex in Structure; Football Affects Blood

**A** HUMAN embryo in the third week of its prenatal existence has been added to the world's small collection of invaluable specimens showing earliest stages in development of the human body. Microscopic sections of it were shown to the meeting of the American Association of Anatomists in Louisville, Ky., by Prof. John S. Latta of the University of Nebraska.

The almost pinpoint sized embryo (it is only about a sixtieth of an inch in diameter) was embedded in tissue which had to be removed from a patient in a Nebraska hospital. Serial sectioning disclosed its presence, and showed a considerable complexity in structure despite its minute size and brief period of development.

*Science News Letter, April 6, 1940*

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## Football in the Blood

**F**OOTBALL "gets into the blood" of the players in a much more literal sense than the usual use of the phrase connotes, it was shown by studies of the blood of football men reported by Dr. Edmond J. Farris of the Wistar Institute of Anatomy and Biology, Philadelphia, to the American Association of Anatomists at Louisville, Ky.

Dr. Farris took samples of blood from a number of football players before and after games throughout a hard playing season and made comparative counts of the red corpuscles and of several types of the white corpuscles. He found definite changes every time a game was played.

Until mid-season, football had a destructive effect on the red corpuscles; there was an average drop of 822,000 cells per cubic millimeter following each game. From mid-season on, however, the picture reversed itself, with an average increase of 618,000 red cells per cubic millimeter until the end of the season.

Both physical exertion and emotional stress showed their effects in changes of white blood cell numbers. Dr. Farris suggested that white corpuscle counts might possibly be used to give a quantitative measurement of fatigue and exhaustion effects.

*Science News Letter, April 6, 1940*

Maine's trout fishing season legally opens "when the ice goes out."



INDIAN MYSTERY

ARCHAEOLOGY

## Mexico's Great Stone Heads Provide New Indian Mystery

**F**IVE great stone heads, each weighing more than 20 tons, are the newest ancient American mystery.

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