

The Soviet delegation reported plans for sending a group of leading Russian astronomers to America soon, preparatory to rebuilding Russian observatories destroyed by war. Dr. A. Mikhailov of Moscow was elected to the International Astronomical Union's Executive Committee. The other six members are from the United States, England, France, Holland, Italy, and Sweden.

The international astronomical bu-

reaus, suspended during the war, are being reestablished with much of the former German activities going to Russians.

The British astronomer royal, Spencer Jones, presided at the meetings, at which the American delegation consisted of Dr. Shapley, Dr. Otto Struve of Yerkes Observatory, and Dr. Joel Stebbins of Washburn Observatory.

*Science News Letter, March 30, 1946*

mechanical setup on which U. S. patent 2,397,029 has been issued to W. H. McLaughlin and G. H. Rendel of Gary, Ind., assignors to the Carnegie-Illinois Steel Corporation.

The big rolls of sheet metal, as they are delivered from the continuous-strip mill, are unreel first through two sets of rollers that stretch the web tightly, thus straightening it. Thence it goes through a trimming machine that crops its edges straight, then through another series of rollers that give it a final flattening. Finally a massive pair of shear blades cut it to the desired lengths.

*Science News Letter, March 30, 1946*

## PSYCHOLOGY

## "Lie Detector" Doesn't

Reportedly used at Oak Ridge to trap those stealing U-235 or telling atomic secrets, it is an instrument of third-degree, not scientific crime detection.

► THE SO-CALLED "lie detector", reportedly used to trap those stealing uranium 235 or selling atomic secrets, is an instrument of third-degree intimidation, not of scientific crime detection. Its evidence is not generally accepted in courts of law.

The "lie detector" does not detect lies. It only shows up the emotional excitement of the victim. This is done by measuring respiration, blood pressure and the electrical resistance of the skin.

When you are scared, or angry, or embarrassed, your heart beats faster, your breath is quickened and moisture is likely to break out on your forehead or the palms of your hands. And since the moisture of your perspiration changes the way in which your skin conducts an electric current, the "lie detector" tells your questioner all about your uncomfortable feelings. Although you may try to preserve a poker face, it is difficult to control heart rate and perspiration. So the questioners may literally "sweat it out" of the unhappy suspect.

Scientists do not rely on the evidence of the "lie detector," however, for the

obvious reason that not all persons frightened by third-degree questioning are liars or guilty of crime.

Any worker at Oak Ridge might very well be terrified at being accused of stealing U-235 in this day of spy scares. Or he might be violently angry at this accusation of dishonesty and traitorous behavior.

On the other hand, a psychopath or professional liar may feel no emotion at all at his own falsehoods and the "lie detector" would give such a person a perfect score for truth.

The instrument is not a product of the atomic age. Although it may have been modified during the years, the same sort of instrument has been known and in limited use for some twenty years or more. During that time it has not been established as generally useful.

Evidence obtained by the "lie detector" has never stood up in courts of law. In a few cases, it has been accepted by lower courts, but has not withstood appeal.

Chief usefulness of the gadget is as an aid to the police in scaring an ignorant or superstitious person into making a confession of crime. An empty black box, if it looks mysterious, would serve the same purpose—and has been used for it.

*Science News Letter, March 30, 1946*

## ENGINEERING

## Faster Production of Steel Sheets Contemplated

► FASTER production of the flat steel plates on which the automotive industry heavily depends is contemplated in a new

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