

additional colleges to the program in September.

More 17-year olds will be selected for scholarships by the next qualifying test to be given early in November. Designated as the Army Specialized Training Reserve Program, the plan will provide a continuous flow of specially qualified young men before they enter active military duty.

Three 12-week terms are scheduled, including studies in sciences, English, history, geography and mathematics. At the end of the term in which the trainee reaches his 18th birthday, he will be placed on active military duty. After completing his basic training he will be screened for continuation in the Army specialized training program.

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**MAKING NEW NICKEL**—*The photographs on this and the facing page show how that nickel in your pocket was made at the U. S. Mint in Philadelphia. First an artist makes the design in plaster about seven times the size of the finished coin. A negative cast is made from this original and this is copper plated (left) in an electrolytic bath. From the copper plate, a transfer engraving is made on a three-dimensional pantograph (center). The copper plate is then preserved carefully so that it may later be copied as many times as necessary. The transfer engraving first made by pantograph is about half the size of the original and is called an "intermediate." It must be touched up, smoothed and corrected (right).*

RADIO

## New Radio Station

**Ticks, hums and whistles will constitute only broadcasts from the National Bureau of Standards more powerful station.**

➤ A NEW, more powerful radio station has been opened by the National Bureau of Standards. No one will be able to tune in for entertaining programs, however, for its broadcasts are limited to ticks, hums and whistles which set the frequency standards for technical men in many industries.

The service has now been extended so that good reception is possible throughout the United States, the North Atlantic Ocean and, with fair reception, over most of the world. Broadcasts will be continuous night and day on five, ten and fifteen thousand kilocycles.

The radio and audio frequencies serve as standards used by radio engineers of the armed forces, commercial stations, and radio industry. It is by the National Bureau of Standards broadcasts that a station periodically checks to make sure that broadcasts are on the frequency prescribed by law and that the programs will come in where the listener expects them to be.

One of the audio frequencies used, 440 cycles per second, is the standard musical pitch corresponding to A above middle C. It is used by all musical instrument manufacturers, and many piano technicians and musicians. The broadcasts are helping to set up a uniform standard; for there has been some difference of opinion as to what the tone A really is.

Besides these frequencies there is a pulse every second heard as a faint tick when listening to the broadcast. These may be used as accurate time signals and their one-second spacing permits scientists to make accurate physical measurements.

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PSYCHOLOGY

## Three Persons Out of Four Don't Know Themselves

➤ DO YOU know yourself?

If you can recognize your own hands when seen in a photograph, your own handwriting, the silhouette of your own profile, you know yourself better than three-fourths of the persons tested by Dr. Werner Wolff, chairman of the department of psychology at Bard College, Columbia University, in an 18-year study of personality.

If you can recognize your own voice, you are one person in ten.

This failure of individuals to recognize themselves, Dr. Wolff, in an interview, attributed to an unconscious unwillingness to remember or realize what he is like.

"Man's own image," he said, "is for him taboo. He forgets it. If we show it to him he reacts with emotion."

Yet, surprisingly enough, although men seldom have a chance to observe

