

British Submarine Detector



The Views Herewith Show the "Hydrophone" Or Super-Sensitive Sound Detector Used by the British Navy in Clearing the Seas of U-Boats. The Left Hand Photo Shows the Device Being Demonstrated in a Museum, Where a Model "Sub" Lies in a Tank of Water. View at Right Shows a Close-Up of Microphone.

This invention was used extensively and successfully by the British Navy during the war. Wires lead to various stations on the ship, at which listeners are posted. By this means a steady watch is kept and the approach of every undersea craft is heralded. One of the photos shows a model submarine in an experimental tank, showing the hydrophone in the tank, while the man with the receivers listens to the sounds from the propeller which warn of the approaching submarine.

Practically all of the British ships were equip with the device, and it is acknowledged that many ships were saved by means of the instrument, which is somewhat like a dictagraph, i.e., a super-sensitive telephone transmitter connected with a low resistance telephone receiver. The sound detecting microphone is placed in a submerged part of the hull.

Electric Violin-Virtuoso a Marvel

One of the most wonderful musical instruments ever perfected is the electrically played violin-virtuoso shown herewith. Musicians said it could never be done—but it has been accomplished at last, with a range of action almost, if not, indeed, actually, miraculous.

The control of both speed and pressure of the bows of the self playing violin is said to be perfect. Regardless of how fast or slow the tempo the proper ratio of pressure is consistently maintained. This is accomplished by means of a small electric motor possessing a speed of from 200 to 6,000 (and any intermediate rate) revolutions per minute, and so constructed that the amount of pressure applied to the bows is automatically and accurately regulated by the speed. Thus even the softest notes are clear and sweet, while the loud are



The Electrically Played Violin is Truly a Wonder of Modern Science — It Was Long Predicted That Such a Device Could Not Be Built. But It Has — and Sixty Magnetically Operated Fingers Do the Work — and Play Better Than Most Human Violinists. Four magnets Operate the Bows.

rich and sonorous. Furthermore, one by one, there has been added to the Violino-Virtuoso various devices for producing not only the staccato, but the arpeggio, portamento, pizzicato, shake, trill—and all other musical variants peculiar to violin playing.

Sixty "fingers" perform the action. As the contact cylinder carrying the paper (fed by a secondary cylinder) revolves, and the perforations in the music roll pass given points, contact is made with one or more of the brushes and an electric current flows to finger magnets resting over the finger board. Each of these magnets attracts an armature connected with a finger operating rod acting upon the violin strings. The same current also acts simultaneously on the bow action magnets. Another magnet produces the "staccato" while the tremolo

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Push a Button--Get a Pig

The Federal Agricultural Agent up in Litchfield, Conn., being frequently called upon to help farmers find things they needed and having no definite means of knowing where they were to be had except for gossip heard on his rounds, conceived the idea of an agricultural survey. Now, if you want to locate a supply of seed corn or oats, a grain binder, a pure-bred bull, or some young pigs, in any community in five counties in that State, all you have to do is to walk into the office of the State Librarian at Hartford, run a series of cards thru an electric sorting machine, and, Presto! you have the information.

It may sound a little like the story of Aladdin's lamp, but it is only big business applied to farm affairs under war stress. The Council of Defense took up this plan and offered to back the farm bureaus to the limit in every county in the State. Five of the eight counties began surveys early in March, 1918. Forty questions, under the headings of area, crops harvested in 1917, crops planted to be harvested in 1918, live stock on hand, machinery on hand, and employes, were included in the survey, and a corps of volunteer farmer census enumerators got busy. When the survey was completed the farm bureaus had a stack of cards containing minute information as to the

resources and needs of every farm. An electric sorting machine was installed in the State Library, and any fact disclosed by the survey can be made available by throw-

ing on an electric switch. The survey has been invaluable by helping Connecticut to mobilize her agricultural forces for peace needs.



Push a Button—Get a Pig! Sounds Incredible, Does It Not? Yet Up in Connecticut They Have Such an Electric System in Operation. You Don't Exactly Get the Pig Or Cow by Pushing the Button, But You Do Obtain Data as to Where You Can Buy Them.