

EXCLUSIVE PM REPORT

FANTASTIC CONELESS

LOUDSPEAKER! Turns

doors into speakers!

Fills swimming pools

with sound...makes

desks into speakers...

washes your clothes!

COSTS 38¢

... AND THAT'S JUST A BEGINNING. One New York discotheque operator spotting the prize-winning device at the First International Inventor's Show said he could make good use of it to turn his dance floor into one gigantic speaker. In this way the dancers could feel the rhythm of the music while they danced.

A schoolteacher mentioned she had such a large class that she must use microphones, amplifiers and speakers so that all can hear her. She pointed out that with the present system students in the rear of the room hear only very distorted sound and often are not sure what is going on. So, the school intends to erect plywood panels around the sides and rear of the room at ear level and attach a coneless speaker to each panel, making a loudspeaker that encloses the entire room.

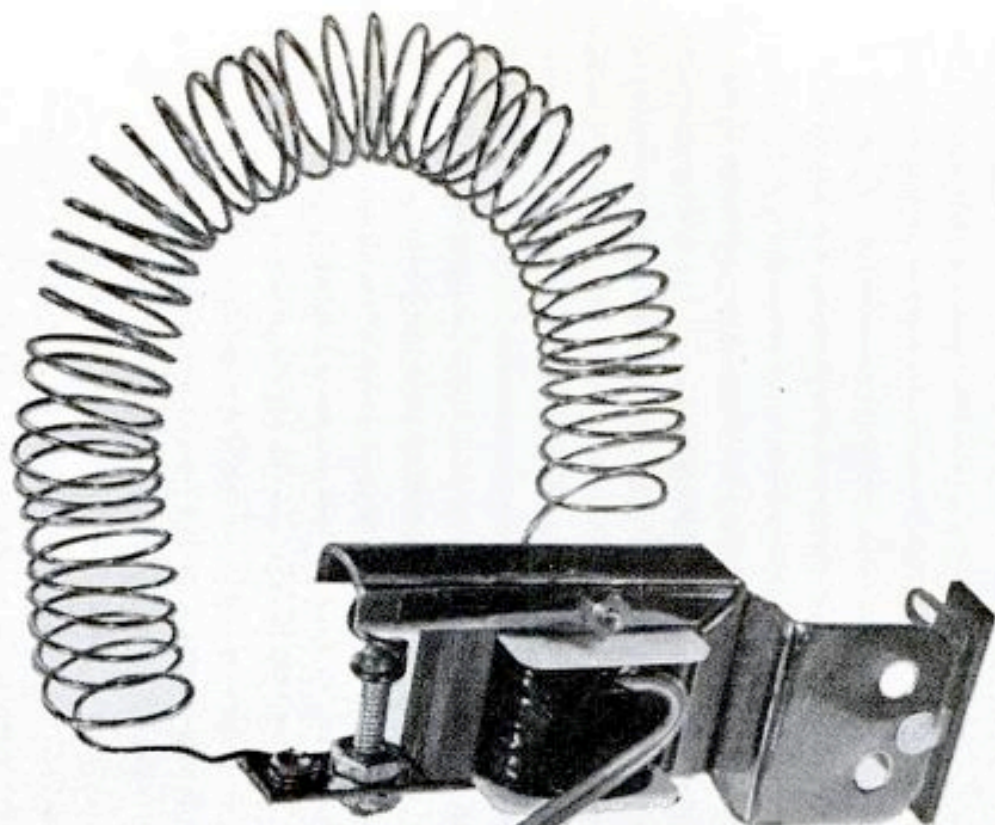
If you hold a unit in the palm of his hand, a deaf person can feel the vibrations of music and speech—a great help in teaching such people how to dance and talk.

What does a coneless speaker look like? Just glance at the facing page. The unit on the bottom is the speaker. It is a mere 2 by 2 by 2 inches in size and rather easy to construct. Complete details of how to build your own will appear early next year.

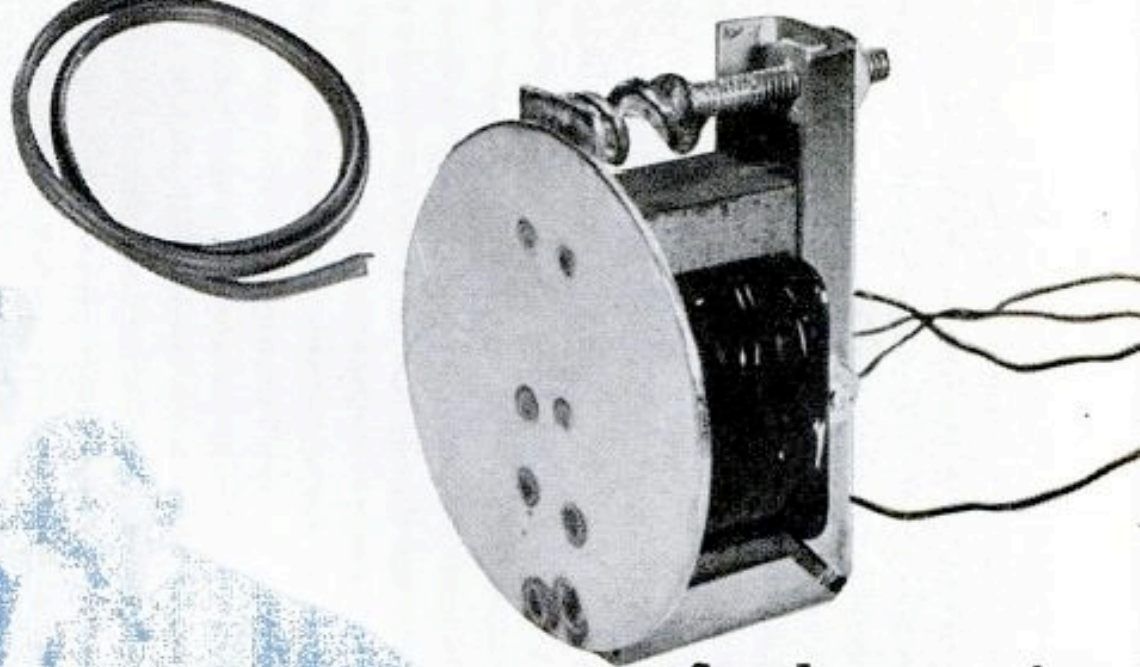
To prepare the speaker, cement the bottom of the round metal disc to the surface you want to become a speaker. This can be a door, mirror, window, phonograph lid or any firm panel of wood, plastic or metal. Once it's in place, connect the unit to your sound amplifiers just as you would any ordinary speaker. Soundwise there's a top frequency limit of about 6000 cycles, but this is more than ample for an AM radio, children's phonograph, intercom and most public address systems.

Used in a car, the coneless speaker can be fastened to the rear of an inside door panel; thus, the entire door becomes a speaker. It has another great advantage over conventional speakers in this application. You don't have to worry about

(Please turn to page 38)



Reverberation unit



Coneless speaker



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NEW 14-PIECE 3/8" DRILL KIT

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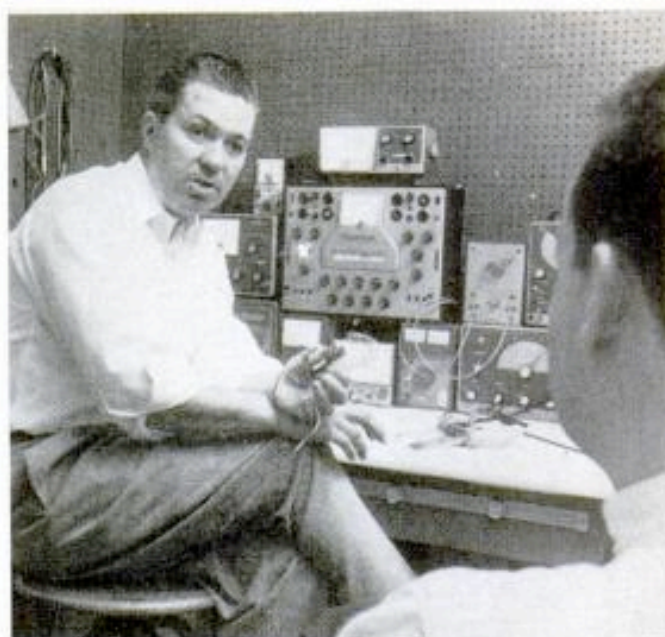
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CONELESS LOUDSPEAKER

(Continued from page 36)



MINIATURE REVERBERATION UNIT is in inventor William Ashworth's hand as he explains its use to PM editor. His automatic soldering iron is on table

moisture affecting the cone; there is none.

In fact, the unit is so waterproof that it can be operated under water as long as the connections to its coil are insulated. So fasten a coneless speaker to a board, connect it to an amplifier and submerge it in the nearest swimming pool, and you have an underwater sound system.

Washing clothes with sound is not new, but doing it with a coneless speaker is. Just cement the speaker to the side of an ordinary washbucket. Fill the bucket with water, soap and dirty clothes, and then feed low-frequency sound signals to the speaker. This agitates the water and gets the dirt out.

Who invented this amazing device? He's William Ashworth, born in Memphis and operating his lab in New Albany, Miss. Ashworth doesn't look or act very different from any other New Albany resident, but once you start talking with him you discover just how unusual a person he is. His lab is unusual too. It's not the ordinary corner of the basement affair that most inventors have. Instead it's a \$250,000 setup equipped with a machine shop for tool and die work, a woodworking shop, an elaborate electronics lab and a printing shop.

Reverberator That's Different

While the coneless speaker may be the most fantastic device Ashworth has developed, he has quite a respectable string of other achievements, including 25 patents. One is a simple reverberation unit for hi-fi (shown at the top of page 37)

which is but a fraction of the size of existing units and operates on an entirely different principle. When it is used in a stereo amplifier it is not necessary to hook it up to a separate amplifier as is done with existing reverberation units. Instead it is coupled between the two stereo channels.

Also in Ashworth's patent file is a built-in indicator for a typewriter to tell the user that he's nearing the bottom of a sheet of paper. When ten lines from this end, a blue light is illuminated on the front of the typewriter. When one line away, a red light is activated.

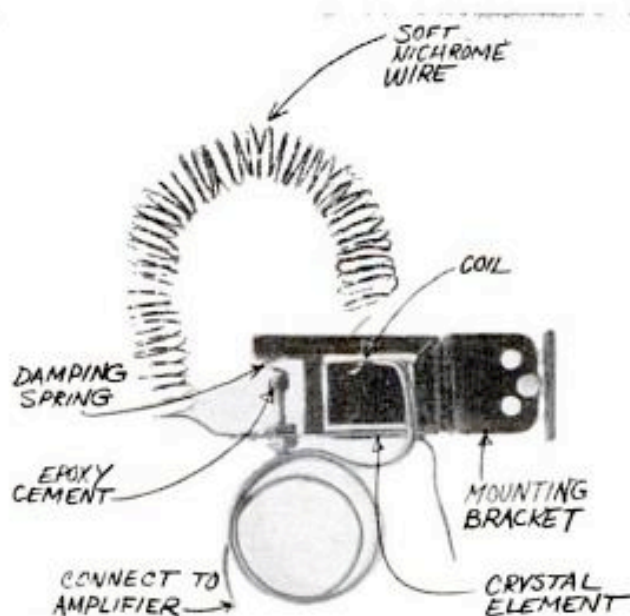
Next on the list is a soldering iron equipped to feed solder right to the point that needs it. This differs from similar types on the market in that it holds a full pound reel of solder and is practically jamproof. Since you need only one hand to operate it, your other hand remains free to hold the part being soldered.

Then there's a light-actuated system which makes it possible to operate a television receiver by remote control with an ordinary flashlight. And, of interest to the man with a power-tool-equipped shop, there's a device that permits the use of three-phase motors on an ordinary single-phase a.c. line.

What Comes Next?

Many new inventions are now being developed. Among those soon to emerge from the Ashworth lab is a telemetering device that automates meter-reading. The meter reader will no longer have to go from house to house. He simply drives down the block and reads the meters via radio waves.

For the automotive industry, there's a [\(Please turn to page 40\)](#)



MOST IMPORTANT PARTS of the reverberation unit are identified by inventor's notes in this close-up view. It's an uncomplicated, easy-to-make device

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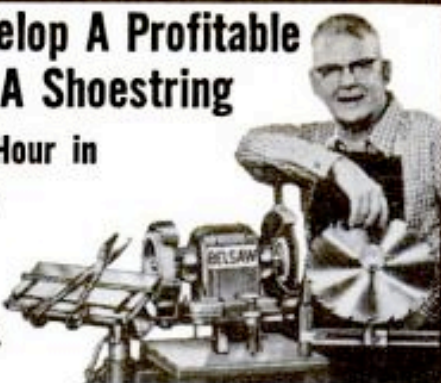
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CONELESS LOUDSPEAKER continued

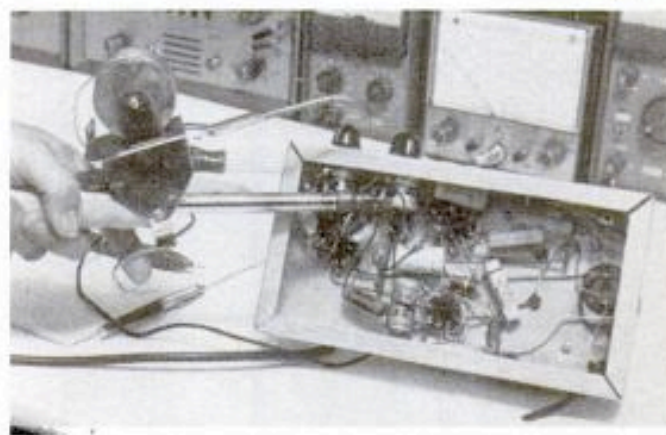
set of distributor points that can't drown out. The first time the points close, any moisture on them is burned off.

How does Ashworth get his ideas? "They just come to me," he says. "I often work out all details without even stepping over to a drawing board or workbench. Then I sit down and build the actual device."

The thing that makes his operation work so well, is that Ashworth, unlike most inventors, has no financial problems. He is backed by an unusually beneficial arrangement. The backer, who must remain anonymous, has financed the lab and pays operating expenses. When an invention is developed and sold or licensed, Ashworth and his backer share the proceeds on a 50-50 basis. More than one inventor has wished he could work in this fashion.

As a result of his experiences as an inventor, Ashworth has proposed that his state of Mississippi set up an inventors' council to solicit new inventions and ideas. He visualizes this organization as a clearing house to sift through ideas and inventions submitted to it and then attempt to interest manufacturers in any that are worthwhile. He also feels that the council should offer some reward to any person who produces a useful idea.

William Ashworth is a most unusual person. Yet he typifies that American ingenuity that has made the United States as great as it is.—Larry Steckler ★★



THIRD-HAND SOLDERING IRON in operation. As soon as the terminal reaches the proper temperature, a pull on the trigger will bring the solder into play