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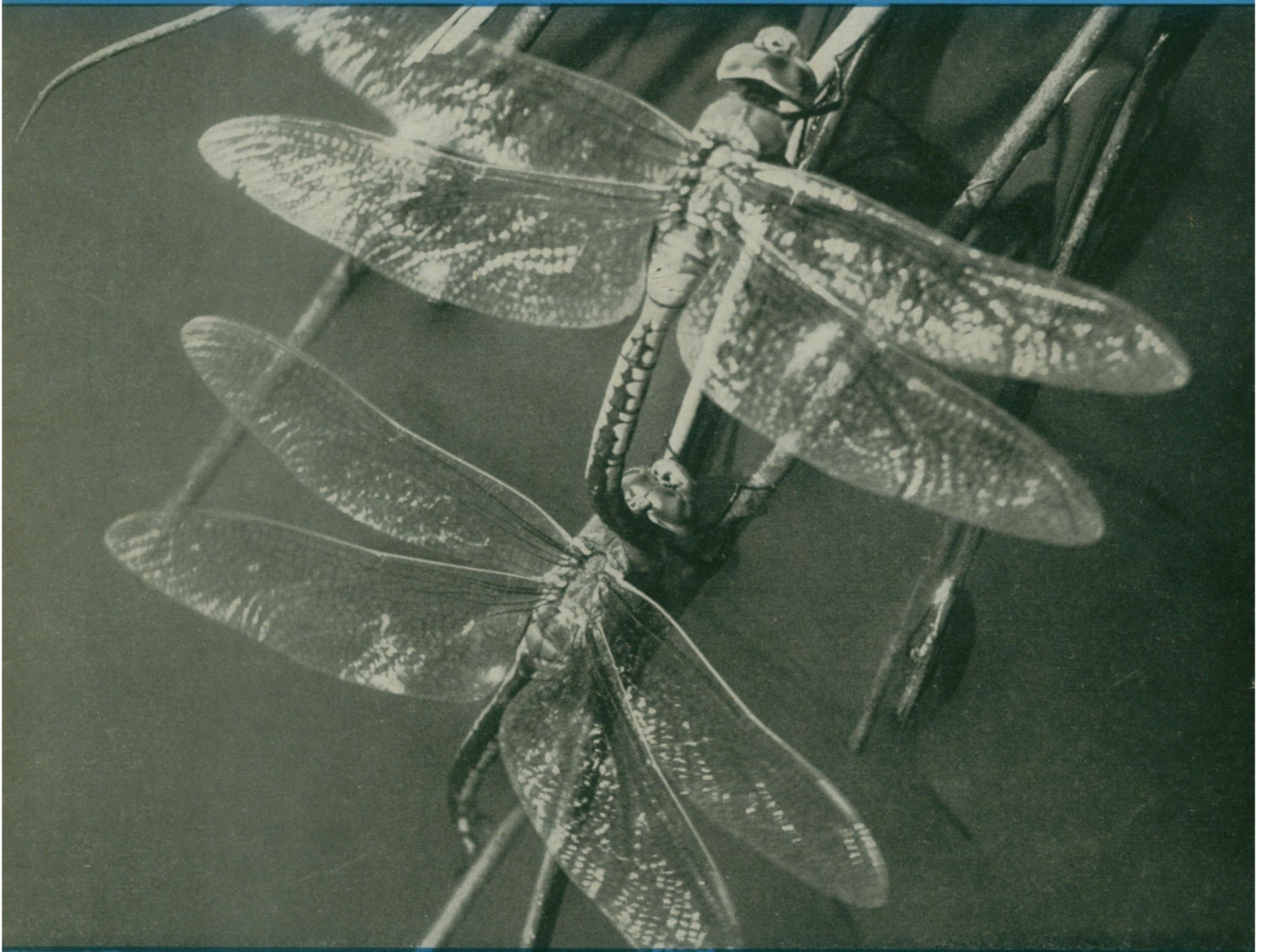
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SCIENCE NEWS LETTER

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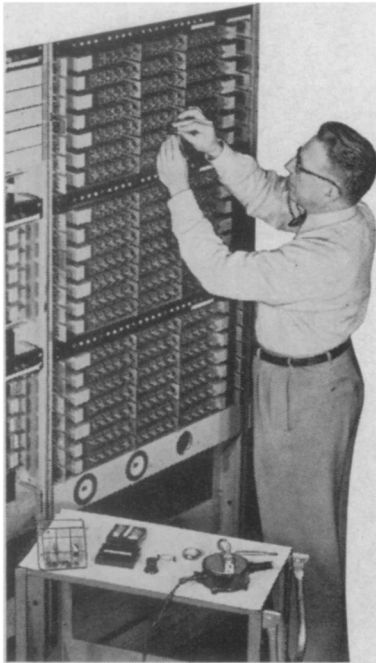
THE WEEKLY SUMMARY OF CURRENT SCIENCE



Dragonflies

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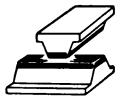


He's "fingerprinting" a relay contact

Bell Laboratories microchemists have perfected an ingenious new technique for "fingerprinting" relay contacts, the tiny switches on which a dial telephone system critically depends.

Using a portable test set, a chemist makes a plastic print of a contact. On-the-spot examination of the print with a microscope and chemical reagents quickly reveals the effects, if any, of arcing, friction, dust or corrosive vapors. While the chemist studies the print, urgently needed contacts continue in service. The findings point the way to improve relay performance.

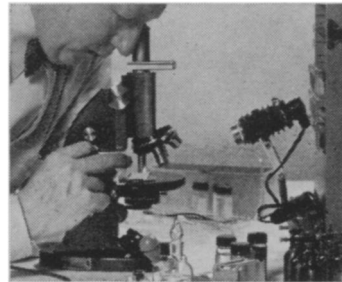
This is another example of how Bell Telephone Laboratories research helps to keep your telephone system the world's best.



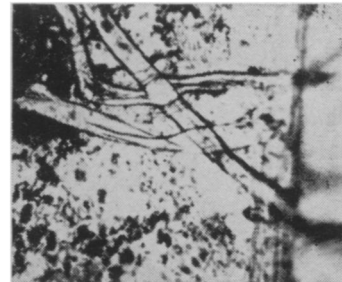
Above, Bell Laboratories microchemist applies plastic disc in heated clamp to relay contact. Imprint reveals contours of surface and picks up contaminants, if any. Part of portable test set is shown on table. Contacts, shown in small sketches, are of precious metal fused to base metal.



Preparing disc for microscopic examination. On-the-spot examination may reveal acid, alkali, sulfur, soot or other polluting agents peculiar to an area.



A microscopic look at disc often provides lead to nature of trouble. Unlike actual contact, print can be examined with transmitted light and high magnification.



Here the plastic disc has picked up microscopic lint that insulates contact, stops current. (Picture enlarged 200 times.) Traces of contaminants are identified in microgram quantities. Inert plastic resists test chemicals that would damage contact.

Bell Telephone Laboratories

*Improving telephone service for America provides careers
for creative men in scientific and technical fields*

