SCIENCE NEWS LETTER

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THE WEEKLY SUMMARY OF CURRENT SCIENCE

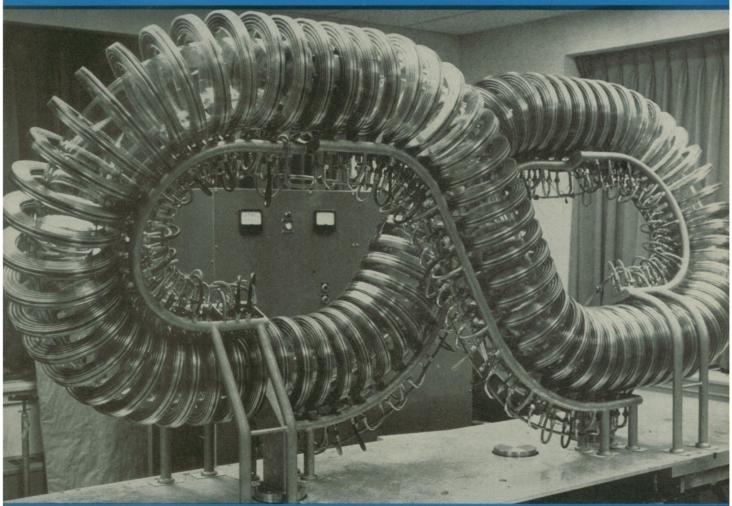


Figure Eight of Physics

See Page 231

A SCIENCE SERVICE PUBLICATION

JUST IMPORTED FROM ITALY!

WORLD'S FIRST PERSONAL SIZE DESK ADDING MACHINE!

Amazing Little Machine With Spinning Wheels and Trip Mechanism Adds Up To 9,999,999... Automatically!

Not a flat, vest pocket adder—not a gadget—no bewildering instructions to follow. Here for the first time is a real desk-type adding machine that works on the same scientific principle as electric office computing machines. but without electricity! It adds up bank statements, sales slips, inventories, expense accounts, super-market tapes, budgets, any adding jobs you have. within seconds of even \$200.00 office adding machines! And then, this amazing machine clears itself with just a flick of your finger on the clearing bar. Yea! Instantly all the wheels inside spin back to normal—7 zeros flash into the easy-to-read answer windows—and it is ready for the next time saving, money saving adding job!

END MENTAL ADDING—
FOREVER

No more adding figures in your head
... scribbling numbers on paper ...
making mistakes that cost you time ...
and cost you money! Simply press the
numbers down on this wonder-working
little machine. The automatic trip wheel
mechanism never makes a mistake. The
total appears in big, clear, easy to read
numbers in the answer windows—INSTANTLY and AUTOMATICALLY!
It keeps you within your budget ...

AN ITALIAN INVENTION

AN ITALIAN INVENTION

An eminent inventor in Italy discovered the secret of the fool-proof, non-electric, spinningwheel adding mechanism inside this machine. He had been trying for years to develop a real adding machine at a price for everyone. even in war-poor Europe. NOT another flat pocket adder that requires you to read long instructions before you can begin to operate it. Instead. he wanted a real, desk type adding machine. that anyone could operate, even a child. that would be automatic. fool proof. and, above all, within the pocket-book of everyone! He found the answer after studying the spinning wheels inside electric computing machine designed so that the gentless to the wheels. instead of electricity! Just imagine! He invented an adding machine designed so that the gentless touch makes the wheels inside turn!

FREE TRIAL OFFER

How would you like to try this amazing new gleaming metal adding machine in your home, your office or your store entirely without risking a penny? We want you to actually test it against automatic, electric adding machines. Compare it for speed, ease of use and accuracy. You must agree that it is almost as fast . . and just as easy to use . . you must agree that it will save you endless time, trouble, mistakles and money every week . . or it won't cost you a penny.

Just push the numbers down. See how the most gentle pressure of your hand turns the wheels inside. See how it adds up to 9,999,999 automatically. And see how just a flick of the clearing har on the side makes the numbers inside the answer window all whirl back to seven zeros . . instantly!

Put this anazing adding machine on your desk. See how instead of being too busy to add . . or in too much of a hurry to be bothered with a complicated pocket adder . . from now on you will check every calculation . . check all your bills, statements, estimates, inven

tories, budgets, reports . each in seconds . . . and never make costly mistakes again! If you are in business, see how this precision adding machine will save you its unbelievable low price a hundred times over. Give one to every secretary, every clerk, every person who ever adds. See how it cuts out trips to your book-keeper, saves time, improves the efficiency of your entire company, You must be convinced that ADDI-PRESTO is one of the most valuable and useful inventions you ever used or it won't cost you a penny.

Supply Still Very Limited Mail Free Trial Coupon TODAY

Yes, it is impossible for you to appreciate the beauty, speed and efficiency of ADDIPRESTO until you actually see it and use it. Let us send it to you for one week's completely free trial.

one week's completely free trai.

The price of ADDIPRESTO is only \$14.95. Remember, it is a real adding machine with spinning wheels and automatic mechanism . the same type as \$200.00 office computing machines. But ADDIPRESTO works from the pressure of your hand without electricity! It will save you its remarkable low cost many times over. Because you will USE it . over and over . day after day. Don't confuse it with flat, hard to use, complicated pocket adders.

However, the supply of genuine ADDI-PRESTO machines is strictly limited. The factory in Europe cannot meet the demand. You must mail the free trial coupon below at once. ADDIPRESTO is not yet sold in stores. Act now and get yours by mail.

ADDIPRESTO is shipped with protective plastic cover and GUARANTEE CERTIFICATE.

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GUARANTEE

This original ADDIPRESTO is precision-made from the finest quality materials, and will give you a lifetime of accurate, effective performance. Unconditionally Guaranteed against defects in material or workmanship.



FOR THE FIRST TIME -Your Own Personal **Desk Model Automatic** Adding Machine!

Now you can keep ADDIPRESTO on your desk at home or office and never add anything in your head again. In SECONDS... perform almost any adding chore. No more costly mistakes. ADDIPRESTO's spinning wheels and computer type mechanism do the 'figuring' automatically!

PROVEN IN USE

Don't confuse this desk-model real adding machine with flat pocket adders. ADDIPRESTO is used by offices, stores, institutions, for adding jobs that demand true speed and accuracy. Used by giant corporations. Saves time, saves mental work, saves money. A real adding machine.

MAIL THIS NO-RISK TRIAL COUPON

OLIVER GARFIELD CO., INC., Dept. SL-40-B 108 E. 16th St. New York 3, N. Y.

Yes, I want to try ADDIPRESTO, the new Italian Office Type Adding Machine. I will use the machine for one week without risk to me. It must be everything you say it is or I may return it and you will retund my money at once, no questions asked, and I will have used the machine entirely free.

- ☐ I enclose \$14.95 (check or money order) as payment in full. This way I save over \$1.00 in postage and handling charges. Same guarantee . . . same 7-day FREE trial.
- □ You may bill me for \$14.95 (plus postage and handling) after my 7-day FREE trial period.

CITY..... STATE..... STATE.....

□ QUANTITY BUYERS SAVE! 2 Machines only \$13.95 each.
3 to 5 Machines only \$12.95 each.

AGENTS! SALESMEN!



THE BIGGEST MONEY-MAKER YOU HAVE **EVER KNOWN!**

ADDIPRESTO is the greatest goldmine you ever saw. Simply show this beautiful, gleaming metal adding machine with spinning wheels and automatic trip mechanism... the same type as \$200.00 electric computers. Then make this eye opening demonstration: add a 6-INCH LONG COLUMN OF FIGURES in 30 SECONDS! After that there's no selling... no arguing. You can't keep people from buying! It's true. 8 out of 8 sales is nothing. Every home, every office, every store needs it. Send for yours today and get started to the biggest money you have ever known. There is no competition. There is no other machine like ADDIPRESTO.

MAIL COUPON NOW!



.. sunshine for the plastics man who worries ... a little

Infrared detectors for sale

Our involvement in infrared detectors has deepened.

Pictured at the top of this page are, respectively, the simplest kind of *Kodak Ektron Detector* with a rectangular sensitive area of any reasonable dimensions, available either in a 3-pin miniature cable socket or unmounted with resolderable leads; an "immersed" detector with detecting substance deposited on the plano surface of a radiation-collecting lens; a detector mounted in a Dewar for cooling by cryostat. We also deposit detecting substance in separated or intricate configurations as ingenuity, under necessity's goad, may provide.

Since any of these physical forms can now be provided with any of six different kinds of lead sulfide or lead selenide depositions, as governed by spectral sensitivity, response time, temperature, and ambient humidity, the print gets quite fine in a folder we are publishing this month to guide the selection of *Kodak Ektron Detectors*.

A free copy is available from Eastman Kodak Company, Apparatus and Optical Division, Rochester 4, N. Y. It is designed to make the sale with minimum further correspondence. To give you an idea, the off-the-shelf, one-only price scale starts from \$14.50.

Corruption can be arrested

$$\begin{array}{|c|c|c|c|c|c|}\hline & CH_3-N-CH_3 \\ \hline & CH_3-N-CH_3 \\ \hline & N-P=0 \\ \hline & CH_3-N-CH_3 \\$$

"You" are assumed to be a producer of compounds for molding or extrusion. This message is strictly private between you and us. As far as your customers, the molders and extruders, will ever know, the reason why your vinyls, cellulosics, polyesters, or polyolefins stand up so well to weathering is the integrity of your name. And as far as *their* customers will ever know, it is *their* integrity that explains why so little cracking, crazing, embrittlement, gumming, or discoloration with the passage of time and sunshine.

The concept of integrity is more readily grasped than is the principle that every C-C bond, every O-H bond, every C-Cl bond, every C=N bond, has its own price—a photon of ultraviolet radiation just right in energy to snap it. Thus corruption of plastics, a chain reaction like other corruptions, begins. A rival substance that grabs off the u-v photons first and degrades their energy will delay the corruption for a long time.

Other corruptions, initiated by atmospheric oxygen, can be delayed by compounds that stop the action by supplying hydrogen at a critical juncture. Of course, choice in inhibitors is greatly restricted by many considerations of physical and chemical compatibility.

Obviously, we think we have made a good choice in these new ones:

Eastman Inhibitor OPS (p-Octylphenyl Salicylate), at 1 to 5% levels, a preventive of the photo-oxidation that forms deleterious carbonyl groups in polyethylene and polypropylene. Eastman Inhibitor HPT (Hexamethylphosphoric Triamide), very pale, water-soluble, a liquid u-v inhibitor for use with a heat stabilizer in poly(vinyl chloride) at 1 to 2%.

Eastman Inhibitor RMB (Resorcinol Monobenzoate), a noncoloring u-v inhibitor at 1% levels for transparent cellulose acetate butyrate. Superior to phenyl salicylate. Also protects cellulose acetate, cellulose acetate propionate, polystyrene, poly(vinyl chloride), and ethylcellulose.

Eastman Inhibitor THBP (2,4,5-Trihydroxybutyrophenone), an antioxidant for polyolefins and various paraffin waxes. May be added in solid form directly during the milling process, or in solvent solutions to dry powders or melts, at 0.01 to 0.1% concentrations. Especially valuable for absence of stain at the low concentrations.

Isn't it fun how in the chemical industry practically everybody is simultaneously practically everybody else's customer, supplier, and competitor! Data sheets and development samples (for those in a position to evaluate them) from Eastman Chemical Products, Inc., Kingsport, Tenn. (Subsidiary of Eastman Kodak Company).

Metallography and other matters

You would think we had nothing better to do than write letters and be friendly, helpful, and cheerful.

Though this policy hasn't sunk us yet, we do go through motions to put the dispensing of technical photographic wisdom on a slightly self-sustaining basis. For those who have not yet delved deep enough to frame specific questions, we publish what we call *Kodak Data Books* and print on the cover a small cash price, like 50¢.

Just issued is a new one, "Photomicrography of Metals." It contains 13 pages on the metallographic microscope (unbiased toward any particular make of instrument, since we are not in that business), 3 pages on illumination, 5 on filters, 3 on photographic materials (which we do make), 5 on exposure determination, and 8 on processing and printing—just enough for thoughtful perusal between the evening paper and the 11 o'clock news. The pages are meaty; the illustrations are there to explain, not just fill space; the author (anonymous) is a photomicrographer, not an ad-writing back

Also just published is the 8th edition of one that has taught many thousands of people since 1933 the rock-bottom facts about the photographic emulsion as a scientific device. The title, "Kodak Photographic Films & Plates for Scientific and Technical Use," dissembles a wee bit. In the old days astronomy was regarded as too thin and unworldly a market to justify commercial literature; therefore the title was devised as a shield from the beady eyes of hard-headed accountants. They find it hard to understand that addressing ourselves to the needs of men with their minds inside stars strengthens the capabilities of photographic technology in general. Indeed, this new 8th edition contains some helpful hints from Mount Wilson and Palomar Observatories that could teach an amateur astronomer to think like a pro. The edition reveals some constriction from the sprawling diversity of Kodak "Spectroscopic" Plates and Films hitherto offered, and these pages show how the present lineup fills the bill.

Theoretically the purchase of these data books from your Kodak dealer draws him and you closer together. Those willing to forego the personal touch can obtain them from Special Sensitized Products Division, Eastman Kodak Company, Rochester 4, N. Y., which is also the place to address specific questions.

Price quoted is subject to change without notice.

This is another advertisement where Eastman Kodak Company probes at random for mutual interests and occasionally a little revenue from those whose work has something to do with science

Kodak