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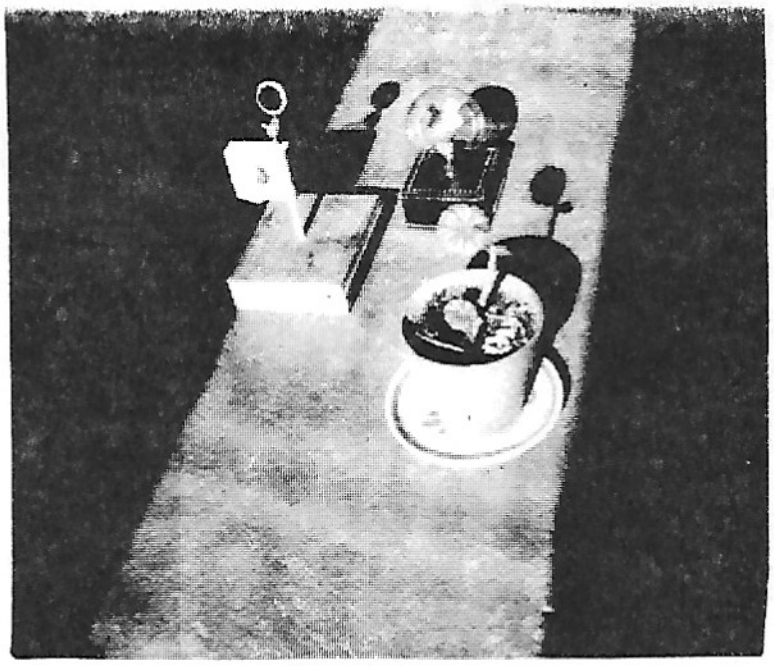

"Sunlight"

THE GULF STREAM

The sun does such enormous q uantities of heating each day that an owner of a piecd of land might exclaim at the enormous energy flows that occur to keep his night and day temperatures flowing normally. A farmer could talk about his 10,000 kilowatt production plant.

How much energy do you suppose is delivered by the Gulf Stream to England and northern Europe? The Carribean countries, from whose vicinity much of Europe's heat is drawn, cannot send a bill to Europe for this heat. People don't call sunny weather thermal pollution.

HOW MUCH IS ONE MAN WORTH

How much work can a man do? A man running up a flight of stairs can develop a couple of horse power. Let us say he weighs 200 lbs., then if he climbs 2 3/4 feet each second, this is one horsepower. For 200 lbs. x 2 3/4 equals 550 ft. lb. / second, or one horse power. A horse obviously can do much more than one horse power for a short time. 550 ft. lb./ sec. is the rate at which a horse can work continuously for one day - and a man can work at approximately 1/10 this rate.

BUBBLE WORK

In our table what does 1 cubic foot atmosphere mean? Why is this equivalent to an amount of energy? This is the work required to puff something out against the pressure of the earth's atmosphere to a volume of 1 foot cubed. You do not do this work when you breathe since the air flowing down your throat to fill your lungs is precisely as eager to do this as the air around your chest is reluctant to make room for your chest swelling.

If you breathe through a tube while you are under water, you can feel that it is a different matter. Your chest must push out against a higher pressure than supplies the incoming air from above the pool. You must do work to blow bubbles underneath water, but none to blow soap bubbles in the air except the slight amount you do in stretching the soapy film.

MEN EQUALING SUNLIGHT

If a man can do 1/10 horsepower work over a period of 8 hours and we wished to duplicate the heat the sun pours down on the ground bv men rubbing the ground with blocks to create heat, we would need at least 1 man for every square foot.

SUNLIGHT

The strength of sunlight is a variable. The closer the sun is to being directly overhead the warmer it is. The clearer the sky the warmer the sun. The closer the earth the warmer the sun. Sunlight is not a commodity although there is plenty of it. You can concentrate it with lenses, you can reflect it with mirrors or white paint, you can stop it dead with black paint or you can let it go to hit the trees, shrubs, weeds and dirt. At sea level the sun may give energy at a rate of 1.5 cal/square cm min which translates to 332.1 BTUs/square foot hour. - British thermal units per square foot each hour. To convert Langleys to BTUs per square foot, multiply by 3.69. One cal per square centimeter is called a Langley after an early investigator of solar radiation. The radiation recording stations use the Langley as their measure of radiation. On high mountains the radiation may be as strong as 1.75 Langleys per min, or 388.2 BTUs per square foot per hour

PORTRAIT OF A GASOLINE DRINKER

Jerry, small, quiet and apparently amiable fellow in his 20's, from Louisiana - lacked distinctive southern accent.

Boss at the service station on outskirts of large Midwestern city - at first liked him. Even in cold and wet weather Jerry needed no prompting to go out and man the pumps. He was naturally agreeable to this function.

Early in the morning they would find him at the station in the same soiled blue overalls - did he sleep there? He lacked the strong body odor of those who sleep in cars and never bathe. When he did not lock up he usually left with the words that he'd stop back by to pick something up.

Eventually the others at the station identified an occasional peculiar and vile odor in the restroom with Jerry, but it was only a suspicion.

It was several weeks before anyone noticed that Jerry, who seemed to subsist on an occasional chocolate bar and never bringing sandwiches or wasting quarters on the large soft drink machine, was actually drinking gasoline.

When one of the other attendants questioned him about this he replied that he "only liked the smell of it."

He generally fed a few times a week and, if he could arrange it, in the mid-afternoon before the 5 o'clock rush.

Large expensive new automobiles driven by the elderly - unlikely to get out of the car and chat or inspect their tires.