

## METALLURGY

## Why Metals Make Good Bearings Told in Tests

► WHY A bearing runs smoothly without "freezing" or welding to the journal that revolves in it has been puzzled out scientifically by a research team at the General Motors Research Laboratories in Detroit.

It is a matter of how much iron of the revolving shaft is dissolved in the bearing metal at its melting point, which is reached at the bearing surface when the bearing heats up. Those metals with extremely limited or negligible solubilities in iron, such as lead, tin, indium, thallium and cadmium, have good score resistance, as the property of resistance to such welding is called.

The scientists, Arvid E. Roach, Carl L. Goodzeit and Paul A. Totta, reporting in *Nature* (Aug. 15), find that the more dissimilar two metals are, the greater will be their score resistance when rubbed together.

Films of compounds such as oxides, chlorides, sulfides, selenides and the like have good score resistance.

Science News Letter, September 5, 1953

Belgian Congo natives reverently refer to the *helicopter* as "the ventilator."

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America's Cherubim

► FROM BISON to bodiless child-angels may seem a very far cry, yet there does seem to be a fairly continuous chain of descent.

The majestic winged human-faced bulls that guarded the gates of palaces and temples in ancient Mesopotamia were known by the Semitic name from which our word "cherubim" is derived. Because of their bellowing voices, thunderclouds were imagined by the ancients as flying bulls, the steeds of the highest of the gods.

Originally, these winged bulls were the old-world species of bison, or wisent, now all but extinct. Known in the earliest

times in the Tigris-Euphrates valley, they had disappeared long before Babylon grew great. Hence the conventional representations had bodies more like those of domestic cattle. Yet their origin is traceable in their curved horns, symbols of power, and in their beards.

How these fabulous cloud-bulls were transformed into the second-highest order in the angelic hierarchy might be a long story. Sufficient to suggest here that the "cherubims" (a false plural by the way) described with meticulous detail in the 25th chapter of Exodus are believed by some archaeologists to have been images much like those surviving in the Mesopotamian ruins—proper seat for the God who was above all gods. And since images must not be made of Him, soon images were no longer attempted of them.

The puckish mischance by which the cherubim, after they had become very great angels, were further transmogrified by modern fancy into the littlest of angels—often consisting of head and wings only—is still another story. But from the mighty cherubim of antiquity to the "sweet little cherubs" of modern picture cards is surely a strange evolution!

Yet you can catch a far glimpse of how it all started, the next time you visit the zoo, or better yet, ride through Yellowstone National Park. Just wait until one of the majestic old bison lifts his head and looks at you. Isn't there something hauntingly near-human in the look of that horn-crowned, bearded face?

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## GERONTOLOGY

## Retirement Activity Plans

► ABOUT 80% of successful executives, the bosses of most of us, need help in answering the question, "What shall I do after I retire?"

Even those with enough money and much experience in planning and directing the activities and energies of others are likely to flounder in planning for their own retirement. From long interviews with more than 500 such men, H. R. Hall, consultant on executive retirement of Wellesley Hills, Mass., and formerly on the faculty of the Harvard Graduate School of Business Administration, has drawn up 15 guidance suggestions. He reported them to the Gerontological Society meeting in San Francisco. Some of them follow:

Guard and nourish your health and get your wife to do likewise.

Consult with your wife from the start and during retirement planning.

If you want to take a "long trip" or "deserved and desired rest" at the start of retirement, be sure important elements of your activity program are tied down beforehand.

Plan an active life both physically and mentally. Include some work that brings

pressure and resulting tension. The need for a minimum of tension when he retires remains in the executive's system.

Most men do not find hobbies alone bring enough satisfaction for retirement time, though they should be included in the retirement program.

The program should include at least one job, done wholly without monetary return, which includes the satisfaction of doing for others.

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## GERONTOLOGY

## Dangerous Age for Men Set Between 50 and 65

► The DANGEROUS age for men in this country comes between 50 and 65 years, Dr. W. H. Lewis, Jr., of New York stated at the meeting of the Gerontological Society.

It is at this age that high blood pressure and diseases of the heart's arteries prevail. It is the most "significant mortality period" for men, while the most significant age of illness and mortality is after 50 years.

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