

brings 'em back alive

Today's burning problem in space flight is how to ease a rocket safely back to earth, without being consumed by the metal-melting friction of our dense atmosphere. Design Engineer Carl J. Rauschenberger's ingenious suggestion is a pair of wings, locked forward at blast-off, later folded back into flying position (insert) by hydraulic cylinder controls for a slow, safe descent. Mr. Rauschenberger also envisions a retractable glass nose cone, heatproof to withstand the take-off, drawn back to admit air to a jet engine on the return flight.

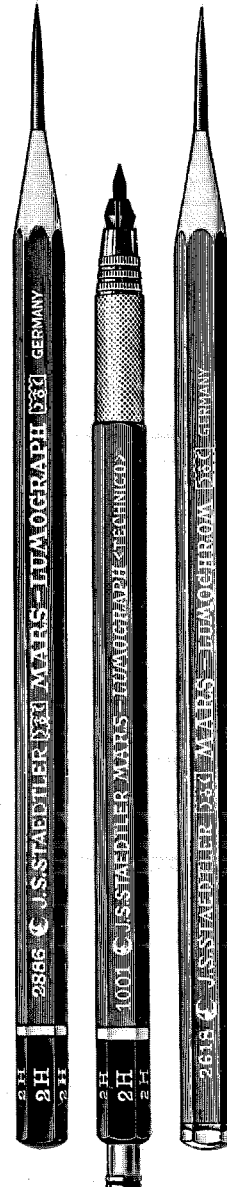
This outstanding solution to a timely design problem may already exist in working drawings on somebody's drafting board, or even in mock-up form. But whether a project is developed today, tomorrow or the year after next, it will always be important to shape ideas into realities with the best of drafting tools.

In pencils, of course, that means Mars, long the standard of professionals. Some outstanding new products have recently been added to the famous line of Mars-Technico push-button holders and leads, Lumograph pencils, and Tradition-Aquarell painting pencils. These include the Mars Pocket-Technico for field use; the efficient Mars lead sharpener and "Draftsman" pencil sharpener with the adjustable point-length feature; Mars Lumochrom, the color-drafting pencils and leads that make color-coding possible; the new Mars Non-Print pencils and leads that "drop out" your notes and sketches when drawings are reproduced.

The 2886 Mars-Lumograph drawing pencil, 19 degrees, EXEB to 9H. The 1001 Mars-Technico push-button lead holder. 1904 Mars-Lumograph imported leads, 18 degrees, EXB to 9H. Mars-Lumochrom color-drafting pencil, 24 colors.

J.S. STAEDTLER, INC.
HACKENSACK, NEW JERSEY

at all good engineering and drawing material suppliers



Lost Alumni

The Institute has no record of the present addresses of these alumni. If you know the current address of any of these men, please contact the Alumni Office, Caltech.

- | | |
|------------------------|-----------------------|
| 1906 | Downie, Arthur J. |
| Norton, Frank E. | Hsu, Chuen Chang |
| | Kitusda, Kaname |
| 1911 | Koch, A. Arthur |
| Lewis, Stanley M. | Larsen, William A. |
| | Lockhart, E. Ray |
| 1921 | Michal, Edwin B. |
| Arnold, Jesse | Murdock, Keith A. |
| Fletcher, Harold O. | Rice, Winston H. |
| | Shappell, Maple D. |
| | Smith, Warren H. |
| 1922 | |
| Cox, Edwin P. | 1934 |
| Cronin, John A. | Harshberger, John D. |
| | Liu, Yun Pu |
| 1923 | Lutes, David W. |
| Hickey, George I. | Radford, James C. |
| Skinner, Richmond H. | Read, John |
| 1924 | 1935 |
| McKaig, Archibald | Becker, Leon |
| Merceraeu, James T. | Bertram, Edward A. |
| Springer, Harold O. | Huang, Fun-Chang |
| Tracy, Willard H. | McNeal, Don |
| Sheffield, Harold C. | |
| | 1936 |
| 1926 | Chu, Djen-Yuen |
| Chang, Hung-Yuan | Creal, Albert |
| McCarter, Kenneth C. | Kelch, Maxwell |
| Yang, Kai Jin | Kurihara, Hisayuki |
| | Ohashi, George Y. |
| 1927 | 1937 |
| Evjen, Haakon M. | Axelrod, Joseph |
| Langer, R. Meyer | Burnight, Thomas R. |
| | Cheng, Ju-Yung |
| 1928 | Easton, Anthony |
| Chou, P'ei-Yuan | Fan, Hsu Tsi |
| Hicks, Hervey C. | Jones, Paul F. |
| Martin, Francis C. | Lotzkar, Harry |
| Morgan, Stanley C. | Maginnis, Jack |
| Wingfield, Baker | Moore, Charles K. |
| | Munier, Alfred E. |
| 1929 | Nojima, Noble |
| Briggs, Thomas H., Jr. | Penn, William L., Jr. |
| Burns, Martin C. | Rechif, Frank A. |
| Nelson, Julius | Servet, Abdurahim |
| Robinson, True W. | Shaw, Thomas N. |
| Sandberg, Edward C. | |
| Wolfe, Karl M. | 1938 |
| | Gershohn, Morris |
| 1930 | Goodman, Hyman D. |
| Chao, Chung-Yao | Kanemitsu, Sunao |
| Douglass, Paul W., Sr. | Lowe, Frank C. |
| Janssen, Philip | Ofstun, Sidney A. |
| Lea, William F. | Okun, Daniel A. |
| Shields, John C. | Rhett, William |
| White, Dudley | Tilker, Paul O. |
| | Tsao, Chi-Cheng |
| 1931 | Wang, Tsun-Kuei |
| Hall, Marvin W. | Watson, James W. |
| Ho, Tseng-Loh | |
| Voak, Alfred S. | 1939 |
| West, William T. | Asakawa, George |
| Woo, Sho-Chow | Brown, William Lowe |
| Yoshoka, Carl K. | Burns, Martin R. |
| | Easton, R. Loyal |
| 1932 | Liang, C. Chia-Chang |
| Patterson, J. W. | Neal, Wilson H. |
| Schroder, L. D. | Ortiz, Jose Pulido |
| Wright, Lowell J. | Robertson, Francis A. |
| | Tatom, John F. |
| 1933 | Tsien, Hsue-Shen |
| Applegate, Lindsay M. | Wilson, Harry D. |
| Ayers, John K. | |

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NEW!
NON-SLIP CHUCK
 holds lead firmly at any length you want. Lead can't be pushed back into barrel—and won't twist in sharpener.

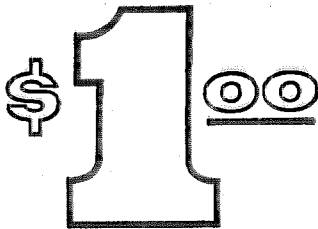
NEW!
SATIN-FINISH METAL GRIP is knurled for easier holding. Its extra length gives more accurate control, less finger tension.

THE ANODIZED ALUMINUM BARREL is unbreakable. And it can't roll off the board because it's hexagon-shaped.

NEW!
PUSH-BUTTON instantly releases the chuck's grip on the lead at the touch of the thumb. It's colored for quick identification of grade.

NEW!

This lifetime lead holder for just



All-metal construction makes it the buy of a lifetime.

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TURQUOISE

PENCILS, LEADS AND HOLDERS

EAGLE PENCIL COMPANY, DANBURY, CONN.

Lost Alumni... continued

1940

Batu, Buhtar
 Brasch, Martin F.
 Green, William J.
 Hsu, Chang-Pen
 Menis, Luigi
 Paul, Ralph G.
 Tajima, Yuji A.
 Tao, Shih Chen
 Torrey, Preston C.
 Ustel, Sabih A.
 Wang, Tsung-Su

1941

Arnold, John K.
 Clark, Morris R.
 Dieter, Darrell W.
 Easley, Samuel J.
 Geitz, Robert C.
 Green, Jerome
 Harvey, Donald L.
 Hubbard, Jack M.
 Kuo, I. Cheng
 Noland, Robert L.
 Robinson, Frederick G.
 Spitzer, Ralph W.
 Standridge, Clyde T.
 Taylor, D. Francis
 Tiemann, Cordes F.
 Waigand, LeRoy G.
 Whittfield, Hervey H.
 Yui, En-Ying

1942

Bebe, Mehmet F.
 Chastain, Alexander
 Curtis, Thomas G.
 Go, Chong-Hu
 Hughes, Vernon W.
 Johnston, William C.
 Levin, Daniel
 MacKenzie, Robert E.
 Martinez, Victor H.

1943

Angel, Edgar P.
 Bethel, Horace L.
 Bridgland, Edgar P.
 Brown, James M.
 Bryant, Eschol A.
 Burlington, William J.
 Carlson, Arthur V.
 Colvin, James H.
 Emmett, Glenn E.
 Hamilton, William M.
 Hillyard, Roy L.
 Hilsenrod, Arthur
 King, Edward G.
 Koch, Robert H.
 Kong, Robert W.
 LaForge, Gene R.
 Lee, Edwin S., Jr.
 Leeds, William L.
 Ling, Shih-Sang
 Lobban, William A.
 Lundquist, Roland E.
 Mampell, Klaus
 McNeil, Raymond F.
 Mixsell, Joseph W.
 Moore, Robert A.
 Nesley, William L.
 Neuschwander, Leo Z.
 Newton, Everett C.
 O'Brien, Robert E.
 Patterson, Charles M.
 Pearson, John E.
 Rambo, Lewis
 Rivers, Nairn E.
 Roberts, Fred B.
 Rupert, James W., Jr.
 Scholz, Dan R.
 Shannon, Leslie A.
 Smitherman, Thos. B.
 Tindle, Albert W., Jr.
 Vincente, Ernesto

Walsh, Joseph R.
 Washburn, C. L.
 Weis, William T.
 Wood, Stanley G.

1944

Alpan, Rasit H.
 Baranowski, John J.
 Barriga, Francisco D.
 Bell, William E.
 Benjamin, Donald G.
 Berkant, Mehmet N.
 Birlik, Ertugrul
 Budney, George S.
 Burch, Joseph E.
 Burke, William G.
 DeMedeiros, Carlos A.
 Fu, Cheng Yi
 Gray, J. Doyle
 Harrison, Charles P.
 Hu, Ning
 Johnson, William M.
 Kern, Jack C., Jr.
 Labanauskas, Paul J.
 Leenerts, Lester O.
 Marshall, John W.
 Nicholson, James C.
 Pi, Te-Hsien
 Rasof, Bernard
 Shults, Mayo G.
 Stanford, Harry W.
 Stein, Roberto L.
 Sullivan, Richard B.
 Sunalp, Halit
 Trimble, William M.
 Unayral, Nustafa A.
 Wadsworth, Jos. F., Jr.
 Williams, Robert S.
 Wolf, Paul L.
 Wrutt, John J.
 Yik, George

1945

Ari, Victor A.
 Arreguin-Lozano, B.
 Bunze, Harry F.
 Gibson, Charles E.
 Jenkins, Robert P.
 Kuo, Yung-Huai
 Levy, Charles N.
 Pooler, Louis G.
 Romney, Carl F.
 Tatlock, William S.
 Tseu, Payson S.

1946

Allison, Charles W., Jr.
 Barber, John H.
 Burger, Glenn W.
 Conradt, Robert H.
 Dethier, Bernard
 Dyson, Jerome P.
 Esner, David R.
 Foster, R. Bruce
 Hayne, Benj. S., III
 Huestis, Gerald S.
 KeYaun, Chen
 Lang, Serge
 Lewis, Frederick W.
 Maxwell, Frederick W.
 Parker, James F.
 Pollack, A. D.
 Prasad, K. V. Krishna
 Simmons, George F.
 Sledge, Edward C.
 Smith, Harvey F.
 Tung, Yu-Sin
 Uberoi, Mahinder S.
 Weldon, Thomas F.

1947

Atencio, Adolfo J.
 Clarke, Frederic B.
 Clements, Robert E.
 Clock, Raymond M.

Dagnall, Brian D.
 Darling, Donald A.
 Hsu, Chi-Nan
 Hsueh, Chi-Hsun
 Huang, Ea-Qua
 Leo, Fiorello R.
 MacAlister, Robert S.
 McClellan, Thomas R.
 Miller, Curtis E.
 Molloy, Michael K.
 Monoukian, John
 Moorehead, Basil E. A.
 Mowery, Irl H.
 Nelson, Conrad N.
 Orr, John L.
 Ramaswamy, Guruvayur S.
 Ruderman, Malvin A.
 Sanders, Lewis B.
 Sappington, Merrill H.
 Vanden Heuvel, G. R.
 Wan, Pao Kang
 Wellman, Alonzo H. Jr.
 Ying, Lai-Chao

1948

Agnew, Haddon W.
 Bingham, Andrew T.
 Blue, Douglas K.
 Bunce, James A.
 Burt, Frederick B.
 Collins, Burgess F.
 Cotton, Mitchell L.
 Crawford, William D.
 Garber, Max
 Hager, James W.
 Hoim, John D.
 Hsieh, Chia Lin
 Hsiao, Chien
 Latson, Harvey H., Jr.
 Lawton, Elmore G.
 Leavenworth, C. D.
 Mason, Herman A.
 McCollam, Albert E.
 Morehouse, Gilbert G.
 Oliver, Edward D.
 Rhynard, Wayne E.
 Swain, John Sabin
 Swank, Robert K.
 Winniford, Robert S.
 Woods, Marion C.
 Yanak, Joseph E.

1949

Barker, Edwin F., Jr.
 Bauman, John L., Jr.
 Baumann, Laurence L.
 Clancy, Albert H., Jr.
 Clendenning, H. C.
 Cooper, Harold D.
 Foster, Francis C.
 Galstan, Robert H.
 Heiman, Jarvin R.
 Krasin, Fred E.
 Laberge, Jerome G.
 Lowrey, Richard O.
 MacKinnon, Neil A.
 McElligott, R. H.
 Merrell, Richard L.
 Orme, Eric C.
 Petty, Charles C.
 Ringness, William M.
 Rudin, Marvin B.
 Stappler, Robert F.
 Weiss, Mitchell
 Yi, Sien-Chiue

1950

Bryan, William C.
 Edelstein, Leonard
 Hendrickson, James B.
 Li, Chung Hsien
 McDaniel, Edward F.
 McMillan, Robert
 Merrifield, Donald P.

Nelson, Robert C.
 Pao, W. K.
 Paulson, Robert W.
 Petzold, Robert F.
 Roberts, Morton S.
 Scherer, Lee R., Jr.
 Schneider, William
 Vivian, James A.
 Wright, Amos L.

1951

Arosemena, Ricardo M.
 Chong, Kwok-Ying
 Davison, Walter F.
 Denton, James Q.
 Hawk, Riddell L.
 Lafdjian, Jacob P.
 Li, Cheng-Wu
 Padgett, Joseph E., Jr.
 Pfeiffer, Walter F.
 St. Amand, Pierre
 Summers, Allan J.

1952

Abbott, John R.
 Arcoulis, Elias G.
 Gerington, Thomas E.
 Jepson, James O.
 Loftus, Joseph F.
 Long, Ralph F.
 Lunday, Adrian C.
 O'Brien, Joseph
 Primbs, Charles L.
 Robieux, Jean
 Schaufele, Roger D.
 Shelly, Thomas L.
 Weber, Ernesto J.
 Wiberg, Edgar
 Woods, Joseph F.
 Zacha, Richard B.

1953

Clark, David J.
 Fink, George B.
 Lennox, Stuart G.
 Mishaan, Alberto
 Vidal, Jean L.

1954

Mertz, Charles III
 Quiel, Norwald R.
 Sargent, H. L., Jr.
 Yin, Mih

1955

Benton, William C.
 Crowe, Thomas H.
 Lim, Macrobio
 Martin, Frederick
 Moore, William T.
 Muraru, Vasile
 Powell, Robert V.

1956

Hershberger, Edw. E.
 Herzog, Robert T.
 Hsu, Nan-Teh
 Marcy, William L.
 Spence, William N.
 Tang, Chung-Liang
 Witteborn, Fred

1957

Howie, Archibald
 Leader, Elliot
 Lee, Wonyong
 MacGillivray, A. D.
 Moore, Robert T.
 Stuteville, Joseph E.
 West, Clinton
 Wong, Chi-hsiang

1958

Schenter, Robert E.
 Schumann, Thomas G.