THE PICKING TABLE

FRANKLIN OGDENSBURG MINERALOGICAL SOCIETY, INC.

BOX 146

FRANKLIN, NEW JERSEY

VOLUME IV FEBRUARY 1963 NUMBER 1

CALENDAR OF EVENTS - 1963

March 17th* - Field trip and meeting. Details to be announced.

April 20th - Field Trip - Buckwheat Dump, Franklin, N. J. all day from 9:00 A.M.
Meeting - 2 P.M., American Legion Hall. Speaker and other details to be announced.

April 27th and 28th - 1963 Mineralogical Society of Pennsylvania Earth Science and Gem Show, Germantown Academy, School House Lane and Wayne Avenue, Philadelphia, Pa.

May 18th - Field trip and meeting. Details to be announced.

June 8th - Swap Session with North Jersey Mineralogical Society, 9:00 A.M. - 9:00 P.M., Munson Field, Franklin, N. J.

June 15th - Field trip and meeting. Details to be announced.

June 20th, 21st and 22nd - Eastern Federation Convention and Show, Olympic Arena, 216 Main Street, Lake Placid, New York.

September 21st - Field trip and meeting. Details to be announced.

October 12th and 13th - 7th Annual Mineral Show sponsored by the Franklin Kiwanis Club, Franklin Armory, Routes 23 and 517, Franklin, N. J.

October 19th - Field trip and meeting. Details to be announced.

November 17th* Field trip and meeting. Details to be announced.

* Dates are Sundays. All other meeting and field trip dates are the third Saturday of the month. All meetings are at 2:00 P.M., at the American Legion Hall, Route #23, Franklin, N.J., unless otherwise advised.

F.O.M.S. OFFICERS FOR THE YEAR 1963

President - William Spencer
Vice President - open
Secretary - Henry M. Althoen
Treasurer - John M. Butler

Trustees

John L. Baum — Frank Edwards
Paul Chorney — Ferd DeP. HasBrouck
Edward R. DeRoo — Alexander Knoll
Richard Hauck (alternate)

Committee Chairmen

Program - William Spencer
Field Trip - open
Display - Ewald Gerstmann
Nominating - Richard Hauck
Historical - Perry Armagnac and
Mrs. E. Packard Cook

Editor of The Picking Table - Frank Edwards
Mimeo and Typing - Louise W. Borgstrom

Vice President

Last Fall, Neil Wintringham was elected vice president of the F.O.M.S. for the year 1963. Recently Neil changed jobs and his new position involves considerable traveling and irregular hours. Because he felt he would be unable to do full justice to his duties as vice president, Neil has submitted his resignation to the Executive Board, which accepted it with genuine regret. A new vice president will be named shortly.

Calendar

Seven field trips and seven meetings are on the program for the year. Club members have indicated a decided preference for the scheduling of both events on the same date, and programming will be in accord with such preference. Regular events will be held on the third Saturday of the month, except for the first and last meetings, which will be held on the third Sunday. Some members find it difficult, if not impossible, to attend Saturday events and these two dates have been established for their benefit.

On April 20th the F.O.M.S. will again assist the New Jersey Audubon Society with a mineral field trip to Franklin. The first trip last year was so successful that Messrs. McLaughlin, Althoen and committee decided to schedule a second field trip with an expanded program. The N.J.A.S. will use the auditorium of the Franklin High School for lectures and exhibits from 9:00 A.M. to 10:00 P.M. The Buckwheat Dump will be open all day to both F.O.M.S. and N.J.A.S. members in a joint field trip. The regular meeting of the F.O.M.S. will be held the same day at the American Legion Hall, at 2:00 P.M. Members and guests of the N.J.A.S. have been invited to attend this meeting to see for themselves how we operate. For our speaker we hope to have Dr. Henry Millson, the popular authority on fluorescent minerals and materials.

Many of our new 1962 members became interested in minerals and our Society as a result of the first N.J.A.S. mineral field trip. Those who assisted on that gloomy, rainy day will always remember the enthusiasm of those neophytes. This year there will be a new group eager to discover the mineral world. Come out, help and work with them on that day. I am sure you will enjoy and remember the experience.

Another repeat performance by popular request is the joint Swap Session with the North Jersey Mineralogical Society on June 8th. There was so much talk about last year's event that it was decided to do it again and to also invite all other New Jersey mineral clubs to participate. This year the Swap Session will be held at Munson Field, Franklin. This is the Little League field adjacent to Franklin Lake directly across from the Buckwheat Dump. There will be no charge for participation. Drive up, open your trunk or lower the tailboard and you're in business. The site is convenient; plenty of parking room; the Buckwheat Dump will be open for collection to our members at no charge; refreshments will be available at nominal cost from one of the Franklin service clubs and if the weather cooperates, this again will be a time to remember.

All collectors are interested in Mineral Shows and three good ones are on the calendar for the year. On April 27th and 28th, our friends in the Mineralogical Society of Pennsylvania will hold their biennial Earth Science and Gem Show at the Germantown Academy gymnasium, Philadelphia, Pa. They will feature displays, talks and a large dealer area. Previous shows have been of high calibre and this one promises to be even better.

This year the Eastern Federation Convention and Show will be held at Lake Placid, N.Y. on June 20th, 21st and 22nd. This is always the biggest affair of the year in the East. For the first time in some years it will be held within reasonable driving distance and located in scenic vacation country. If the time and place are convenient, treat yourself and attend this Show.

The Franklin collector always looks forward to the Kiwanis Show. This year, the Seventh Annual Mineral Show of the Franklin Kiwanis Club will be held on October 12th and 13th at the Franklin Armory, Franklin, N.J. Mr. Edward Selems is in charge of the Show. Dealers and collectors interested in the event are invited to contact Mr. Selems for full particulars. Please note the show dates on your calendar. Additional details on this event will be given in the next Picking Table.

Dues

1963 dues of $2.00 per member are now payable and due. Please use the form on the last page of the Picking Table for mail remittances. Dues may also be paid to the Treasurer at any meeting. Club rules call for the removal from the mailing list of all members not paid up by June 30th, so please keep current by mailing your check now.

Financial Report

As of December 31st, 1962, cash balance was $1071.82. Total paid up members 337. Total income for 1962 - $682.03, of which $600.00 came from dues. Total expenses for 1962 - $514.21 consisting of $189.15 for field trip and meeting costs and $325.06 for printing and mailing costs. Difference between income and expenses $167.82. Net worth as of 12/31/62 - $1214.92.

New Jersey Zinc Company

On December 31st, 1962, Mr. Donald J. McKechnie retired after 43 years of service with the New Jersey Zinc Co. Mr. McKechnie worked his way up through the ranks to head mill, power shop and plant operations at Franklin before becoming Assistant Superintendent in 1954. In 1957, he succeeded Mr. Evans as Superintendent of operations at Franklin-Ogdensburg, the position he held until retirement.

Mr. S. S. Huyett, Assistant Manager of Mines, has succeeded Mr. Mc Kechnie as head of operations in this area. Mr. Huyett, who is responsible for company operations at Friedensville, Pa., will assume in addition Mr. Mc Kechnie's duties at Franklin-Ogdensburg.

Ore production at Sterling Hill continues at a high level and substantial progress has been made on the safety and maintenance program.

Recently two interesting inquiries were received by the Company. A terrazzo tile producer requested a bulk purchase of Sterling Hill ore. They felt the brown willemite and other minerals in the ore would be ideal components for their product. The U. S. Geological Survey has requested a quantity of powdered ore for use in studying stream currents and silt deposition. The fluorescent properties of the Sterling Hill minerals make such studies practical, accurate and economical.

Because of these and other industrial inquiries, the New Jersey Zinc Company is considering the establishment of a mineral sales office. If organized, such a department would deal in bulk sales (a ton minimum) of unsorted ore only. Collectors do not apply.

Sussex County Notes

Out of state visitors will be happy to learn that modern accomodations will be available in the Franklin area. Under construction, ready April 1st or sooner, is the Sussex Motel, Route #23, Sussex, N.J. , about five miles north of Franklin. According to the owners, this new 22 unit motel will be the finest and most luxurious in northern New Jersey. Nearby, also on Route #23, Sussex, competition already appears to be on the way. What looks to be a smaller motel is also under construction. This too should be ready in the spring. These units should answer for some time that old question "Where can I stay near Franklin?".

Recently, a bulldozer working on the hill below Madison Drive in Ogden Hill Estates, across the valley from Sterling Hill, uncovered a skull and several teeth believed to be those of an American Indian. According to old residents, that area was formerly the site of an ancient Indian cemetery. Sussex County has an active Archeological Society, whose members spend much time exploring for old Indian sites and relics.

On January 1st, a new municipal administration assumed office at Hamburg, Franklin's neighbor to the north. The new mayor, who surrendered his seat on the borough council to take that office, appointed Mr. John L. Baum to fill the vacant council seat. Everyone who has worked with Jack knows that the mayor made an excellent choice.

Gerstmann Collection

News was made last month when Ewald Gerstmann purchased the Lang collection. While small in quantity, the Lang collection was famous for the quality of the specimens, most of which were collected 50 to 60 years ago. It featured crystal groups of rhodonite, jeffersonite, franklinite; exceptional tourmalines and a roeblingite half the size of a grapefruit. With this addition, the Gerstmann collection, for quality and size, ranks among the best Franklin collections of all time. Fortunately, the collection is accessible to the serious student and professional upon application to Mr. Gerstmann, who, subject to his working hours and days, will arrange for showings by appointment.

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Earth Science Course

Mr. Robert W. Metsger, Resident Geologist of the New Jersey Zinc Company, is conducting a course on Earth Science at the Sparta Adult Education School in Sparta, New Jersey. One of the features of this course will be a study of the geology of Sussex County. A series of six lectures will be given on Wednesday evenings, 7:30 to 8:30, commencing March 6th.

Barylite - $BaBe_2Si_2O_7$ - Hey #14.3.8

A new occurrence of barylite from near Seal Lake, Labrador, Canada, has been reported by Messrs. E. W. Heinrich, R.W. Deane, E.H. Nickel and D.J. Charette in May-June issue, American Mineralogist, Vol. 47, Nos. 5-6, pages 758-768.

Barylite was originally described by D. W. Blomstrand in 1876 as an aluminum barium silicate from Langban, Sweden. In 1923, G. Aminoff corrected the analysis and showed barylite as a barium-beryllium silicate of simple composition. In 1929, barylite was found at Franklin, N. J. (Palache and Bauer, American Mineralogist January 1930.) In 1960, barylite was reported from Vishnevye Gory, U.S.S.R. by Zhabin and Kasakova in Russian publications. The Seal Lake occurrence is, therefore, the fourth recorded location for this mineral.

At Langban, barylite was reported associated with hedyphane in crystalline limestone, as groups of prismatic colorless crystals, more or less tabular in habit. At Franklin, the material originally described was of plates embedded in hedyphane with willemite. Specimens found later include massive and vein material, up to three inches wide. Associates include hedyphane, willemite, grossularite, garnet, axinite, native copper and highly fluorescent calcite. No crystals have been reported from Franklin.

The Seal Lake barylite occurs in two ways, - 1) as high grade barylite bearing veinlets cutting fenitic gneisses; and 2) as disseminated grains of barylite in fenitic gneisses. The Seal Lake barylite has been formed as a product of alkali metasomatism in fenitized amphibole gneisses, which have received Na, Nb, Th, RE, Zr, Ba, Be, P, Zn, Ga and doubtless other elements from solutions related genetically to crystallization of the alkali syenite. This occurrence is similar to that at Vishnevye Gory, where barylite is found in calcite veins that cut fenites. The geology of these two finds is completely different from the Langban and Franklin occurrences.

Heinrich and Deane report that they had considerable difficulty in making positive identification of the mineral as barylite.

"A specimen from the U. S. National Museum was labeled barylite with hedyphane and native copper from Franklin, N. J. According to Palache (1935) Franklin barylite is strongly fluorescent in vivid blue. One corner of the U. S. National Museum specimen showed such a fluorescent color, and this material was x-rayed. The powder pattern did not correspond to that of barylite isolated from the Seal Lake vein material, nor did these two patterns agree with those of other beryllium minerals. Finally, a specimen of barylite from Langban was received from Dr. Frans Wickman. Its x-ray powder pattern corresponded to that of the Seal Lake mineral. Subsequently, some barylite was also detected in the U.S. National Museum specimen, but it is impure, largely admixed with hedyphane. The x-ray powder data of Smith (1956) obtained on Franklin barylite are very similar to those from both the Seal Lake and Langban material."

There is considerable confusion as to the fluorescence of barylite. Palache says that attention was first called to the new mineral on the picking table at Franklin because of its vivid blue fluorescence in ultra violet light. Other specimens and descriptions of Franklin barylite are described as non-fluorescent. The Seal Lake barylite is non-fluorescent (private communication from E. H. Nickel). Fluorescent information on the Langban and Russian barylite is not available.

The answer may be found in a paper entitled "Barium Silicate Phosphors" by Keith H. Butler, Sylvania Electric Products, Inc., in Vol. 91, 1947 Transactions of the Electrochemical Society, pages 265-278. I quote the abstract and portions of the introduction:

"A new phosphor system, composed of barium silicates- lead activated is described. Phosphors in this system are excited by 2,537 A radiation with emission of blue and blue-green light. The effect of composition on the color of emission is discussed, with spectral energy, distribution curves and x-ray data being presented. It is shown that the output of these new phosphors is comparable with that of tungstates; they can be used to make white and daylight fluorescent lamps of excellent efficiency as well as blue lamps in more saturated colors than can be obtained with tungstates."

"This paper will describe certain barium silicate phosphors, activated by lead, which emit blue and blue-green light when excited by 2,537 A radiation. These phosphors have the following important characteristics: (a) the crystal structure of the barium silicate matrix has a considerable effect on the emission: (b) the lead concentration is very high, so that in some cases it is a major part of the matrix: (c) the lead acts to modify the color as well as being an activator of fluorescence."

At Franklin, barylite is one of the Parker Shaft minerals, that skarn formation so rich in lead silicates. Barylite specimens I have examined vary in short wave fluoresnce from bright blue to dull blue, both in hue and intensity. No doubt, as in the U. S. National Museum specimen described above, fluorescent barylite from Franklin is admixed with hedyphane or other lead bearing minerals, with the lead concentration affecting both the color and intensity of fluorescence. The absence of a lead activator in barylite from other areas results in non-fluorescence.

Barylite is colorless, white and light pink (reported from Seal Lake only), hardness 7, specific gravity 4.03 - 4.07, greasy in luster, infusible, insoluble in HCL, Orthorhombic, with two good cleavages, one basal and the other parallel to the macropinacoid, optically biaxial and negative. In the Seal Lake report, Mr. E. H. Nickel details a new staining procedure for distinguishing barylite from other white minerals. Franklin specimens of barylite are scarce.

Barysilite $(Mn, Pb)_3 Si_2 O_7$ - Hey #14.13.2

Because of the similarity of name and occurence, some collectors confuse this lead silicate with barylite.

Barysilite is white, usually tinted a faint pink at Franklin, hardness 3, specific gravity 6.11-6.72, luster glassy, pearly on cleavage surfaces, easily fusible (2.5), decomposes slowly in hot concentrated HCL with the separation of silica, hexagonal, with perfect basal cleavage, optically uniaxial and negative. It does not fluoresce.

Barysilite is another of the Franklin Parker shaft minerals. The original find was as thin films or veinlets in ore, associated with garnet, willemite, axinite and hardystonite. But in 1959, John Albanese found a number of later specimens in the Trofimuk collection. This barysilite was in masses up to 3 inches thick and a single 2 x 3 specimen contained more barysilite than the total amount in all previously known specimens combined. In most specimens, the barysilite was intergrown with nasonite. Others were associated with hedyphane, transparent green willemite and a few with nasonite in small striated crystals.

Barysilite was originally found at Langban, Sweden in 1888. There it occurred as small, embedded masses with curved lameller structure, scattered through iron ore with calcite, garnet, tephroite, and galena. No other locations for barysilite have been reported.

Data from 1850

Recently, I added to my library a volume entitled the "1850 Annual of Scientific Discovery." This "Year Book of Facts in Science and Art" was compiled and edited by George Bliss, Jr. and David A. Wells, of the Lawrence Scientific School, Cambridge, Mass. Other contributors from this school and Harvard University included Professors Louis Agassiz, E. N. Horsford, J. Wyman as well as other scientific luminaries of that time. The fields covered are "Mechanics, Useful Arts, Natural Philosophy, Chemistry, Astronomy, Meteorolgy, Zoology, Botany, Mineralogy, Geology, Geography and Antiquities." I believe several excerpts from this book will interest our members. I quote:

"M. Leclaire, a somewhat celebrated house-painter of Paris, after a series of difficult and unceasing experiments, has made a very important discovery in the art of mixing paints. It is an undisputed fact that white lead, which is by far the most important ingredient used in mixing colors, contains an active and very deadly poison, and persons who work with it are often subjected to what is termed the "painters' colic." The prevalence of this disease is shown by the fact that, in 1841, 302 persons affected with it were admitted to the hospitals of Paris, of whom 280 were cured, and 1 became insane.

M. Leclaire's attention having been directed to this subject, after years of labor he has succeeded in discovering a preventative for this disease. To show the problem he had to resolve, we enter somewhat into detail.

The fundamental colors in painting, those by means of which all possible tints are obtained are white, black, yellow, red and blue, and for greater facility green is added; gray is a mixture of black and white, green of yellow and blue, violet and indigo of red and blue, etc.

The most important of the primitive colors, that which it is the most essential to render perfectly innocuous and unchangeable, is white which enters into the composition of nearly all paints. The white exclusively employed is now the white oxide or carbonate of lead, of which that called the white of silver is only a more perfect variety. But the oxide of lead is at once violent poison and eminently subject to decomposition; it becomes dirty and black, and is destroyed by contact with sulphurous vapors, which are so abundant in nature that it is impossible with every imaginable care to protect it from their corroding influence. For the yellow, we have the chromes and orpines which, though durable, are very deleterious. The blues and the blacks are at once harmless and durable. The greens are either very expensive or deleterious, or subject to rapid decomposition.

All these defects, M. Leclaire has supplied. He produces a pure, dazzling and durable white, by means of the oxide of zinc; various tints of yellow from the same; an excellent red, having for its base sulphide of antimony; and a number of fine greens by means of oxide of zinc and sulphate of copper. He also prepares an oil to be used with these paints which is obtained by boiling 100 pounds of linseed oil with 5 pounds of peroxide of manganese.

Of the complete success of M. Leclaire's paints there is abundant evidence. He has painted over six thousand public and private establishments - the Departments of War and Public Works, the Bank of France, the Prefecture of Police, the railroad depots, etc. - and in every instance the fact is conclusively established, that the colors with their bases of zinc, manganese, etc. are by no means injurious to the health of the workmen engaged in their manufacture, to painters using them, or to the persons who may reside in houses freshly painted.

Of the correctness of this statement it is only to say that, under the old order of things, a dozen of M. Leclaire's workmen, on an average, were attacked yearly by this unpleasant disease; whereas now, not a single person in his employ has been poisoned. The new colors are infinitely more solid and durable than the old; they preserve everywhere and always their primitive tints, even in sulphuric bathrooms; and they have a property still more precious, namely, when they are cleansed by simple washing they resume their original brightness, while the old colors, when washed even in acids, which dissolve a portion, remain dull and spotted, and for the simple reason, that everything which decomposes stains them. The white of zinc is so much superior to the white of lead, that when the framing of a panel is painted with the best white lead and the centre with zinc-white, the contrast makes the framing look yellow and gray and offensive to the eye. In such a comparison even the Venetian white loses its purity. The white lead appears to absorb the light, while the white of zinc reflects it completely, and is brilliant and transparent. The new colors are much richer and brighter, are easily applied, and dry in a very short time. They are also more economical, for experience has fully proved that, if we compare the quality of white lead with the white of zinc, or the quantities of oil necessary to prepare these two substances,

the advantage of at least thirty per cent is in favor of the white of zinc, which covers better with equal weight.

M. Leclaire has received the Cross of the Legion of Honor as a reward for his discovery.

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"The Sussex Zinc and Copper Mining Company are now engaged in active mining operations in the town of Monroe, Sussex County, New Jersey. The mines owned by this company are among the most valuable and productive in this country, and are the only ones in the world where the red oxide of zinc is procured in quantity for practical purposes. The locality has been known for many years. It was opened by Lord Stirling who first worked the iron mines in Orange County, and constructed the first furnace there. He worked it probably for the copper it contained, so long ago that there are forest trees a foot in diameter growing on the debris thrown out then. As zinc was an article not much known at that time, and not in demand, the copper must have been the object. About ten years ago the United States government, under advice, worked these mines to obtain zinc to use in the composition of brass for construction of the standard weights and measures of the country. The zinc was known to be of such excellent quality, that it was procured without regard to expense for the purposes above mentioned. The ore found in New Jersey comes under the fourth species of Thompson, who calls it "Manganesian Oxide of Zinc," but it has lately been injudiciously proposed to give it a new name after Lord Stirling, who was the original patentee of the district of land where it is found. It was first noticed and analyzed by Dr. Bruce, who found it to contain zinc 76, oxygen 16, and oxides of manganese and iron 8; but according to Berthier it has oxide of zinc 88, and sesquioxide of manganese 12. Some recent examinations have, as it is said, detected cadmium in this ore. The mineral crops out at the summit of a ridge that is precipitous on either side, and about three eighths of a mile in length. The removal of a very slight covering of extraneous material lays open the ores. With this red oxide of zinc is found the mineral called franklinite, mingling chemically and mechanically. This franklinite is a species of iron ore which, as we found here, yields iron of the finest quality and fully equal in tenacity and fitness to the Swedish, from which the English manufacture their best steel.

It is in veins from eight to twenty-five feet wide, and lies between two veins of primary limestone, the average depth of which is reckoned by geologists about 2,000 feet. Taking the average of the ore, the zinc and iron are nearly equal in quantity. In some veins the zinc predominates, and in other veins the iron.

One difficulty which stood in the way of the reduction of zinc ore, has been overcome by the skill and perseverance of the present owners of this Sussex Mine; who, instead of separating the zinc from the iron with which it is combined, by calcination, have recourse to roasting, pounding, and sifting, which has the desired effect; the zinc being reduced by the two former operations to a red powder, and the iron being left in coarser imperfect crystals.

The zinc, when in this state, is capable of being reduced to an impalpable powder, and of being used as a paint for fences and out-houses for which, by its durability and cheapness, it is well calculated. But if it is required to produce the white oxide, it can be readily obtained by calcination, and in this state it promises to supersede the use of white lead as a pigment. But the beauty of the metal alloyed with a very small proportion of tin and lead, is its greatest characteristic. Dish-covers, forks, spoons, etc., made of this metal, are second in beauty to nothing but silver, and in this state it retains its lustre in an astonishing manner. A piece of the rolled zinc has been exposed to the action of the atmosphere for several months without being tarnished in the least degree. The metal also exhibits great ductility and tenacity, and is capable of being drawn to the finest wire and rolled to the thinnest plates. It has been suggested that this zinc would be better for pipes for conducting water than the leaden ones now in use, as a poisonous corrosive substance is never found on their interior, as in lead."

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To place these two quotes in proper perspective, other facts should be cited. Until 1852, the United States demand for zinc was entirely provided by imports, mainly from England, Belgium, Austria and Germany. The first recorded smelting of zinc in the United States was that by John Hitz at the government arsenal in Washington, D.C. in 1835-6. The ore was from Franklin and the zinc metal produced was alloyed to make brass from which the official U. S. standard weights and measures were fabricated. In 1848, the Sussex Zinc and Copper Mining and Manufacturing Co. erected a small smelter at Newark, N.J. It was this smelter that first commercially produced zinc oxide directly from ore four years later. In 1858, the Lehigh Zinc Co. erected a furnace at Friedensville, Pa. and in 1860, J. Wharton built another furnace at South Bethlehem, Pa.

The world demand for zinc in 1850 was 50,000 tons; that figure was doubled by 1865, spurred on by the demand for zinc oxide for use in paint. In 1864, zinc was first used in the United States to coat steel. The demand for zinc coated or galvanized products developed rapidly and in 1880, 13 smelters were in production. Statistics of primary smelter production collected annually since 1882 show a strong growing industry stimulated by the discovery of new rich ore bodies and by the demand for zinc in galvanizing, brass making and the rolling of sheet zinc.

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The next quote from the 1850 Annual will particularly interest our micro fans and collectors since it answers the state of our optical industry at that time:

"Mr. Spencer, of Western New York, has hitherto been almost the only person in this country who has turned his attention to the manufacture of microscopes, and he has succeeded in producing some instruments of great power and excellence. Most of those, however, at present in use in this

country are of foreign construction. About a year since, Mr. J.B. Allen, of Springfield, Mass., having had his attention called to the subject of microscopes, with true Yankee perseverance and ingenuity, set about the construction of one of these instruments. Although he had never seen but one microscope, and that for only a few minutes, and had never seen a piece of glass ground, he devised his own tools and processes, and in the course of a few months produced an instrument, which he exhibited to the American Association, at Cambridge, in September. The power of this instrument was about 1,300, and it received the most unqualified commendation of the distinguished men there assembled. Professor Agassiz, after careful examination of it, made a report, in which he spoke in the highest terms of its excellence. This instrument was purchased by Amos Lawrence, Esq. of Boston, who liberally presented it to the academy at Groton, Mass.

By the advice of Professor Agassiz, Mr. Allen immediately commenced the construction of another microscope, with some improvements suggested by Professor A. This new instrument he completed in about three months. It was submitted to the inspection of Professor Wyman of Harvard University, who carefully compared it with a similar microscope manufactured by the celebrated Oberhauser, and by him exhibited as one of his best instruments. The American specimen was found to be fully equal, if not superior, to the European, and there can be no doubt that it is the most excellent microscope ever produced in this country.

It may not be improper to mention that Mr. Clark of Boston, has succeeded in producing very fine telescopes, and that excellent chronometers are now manufactured in this country. Thus it appears that Americans have already made considerable progress in the manufacture of these delicate instruments."

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Finally, I call to the attention of Mr. Huyett, and other mine personnel faced with portal to portal problems, a novel method for bringing men to working areas:

"It is well known that vertical ladders for descending into deep mines are very fatiguing, so that the miners prefer to trust themselves to baskets suspended by ropes, and in many cases the baskets are the only means provided for descending and ascending. But accidents frequently occur from the breaking of ropes in spite of all the precautions that can be taken to prevent it. The Brussells Herald states that some experiments have lately been made on a large scale in Belgium with a contrivance intended to remedy this evil. The basket or cuffat is so made that, in case the rope breaks, it immediately springs open, forming a sort of parachute, which is held suspended in the air by means of the strong current which, it is well known, is always rushing up from the mines, owing to the temperature below being higher than that above. The effect of this apparatus was shown before a numerous company, several miners intrusting themselves to the basket, which was so arranged that at a certain point the rope broke; they were sustained in the air by the open basket, so that the experiments were entirely satisfactory."

There is no record of medals for these early test pilots.

STATE'S TERCENTENARY MEDALLION

Do you have a New Jersey relic of bronze, copper, silver or zinc stored away in your attic or cellar that you would care to share with all Jerseymen? It could be some copper from the Schuyler mine, which operated near Belleville in the 18th century, or some zinc once refined from the Franklin ore mined in Sussex County.

A bronze Tercentenary Medallion will soon be struck honoring New Jersey's 300th anniversary in 1964, and the New Jersey Tercentenary Commission is looking for items containing non-ferrous metal that can go into the melt for the commemorative medallion.

All Jerseymen were invited to join this search for a hunk of appropriate metal by Paul L. Troast, Chairman, New Jersey Tercentenary Commission. "The Tercentenary Medallion will be more than a souvenir of the State's 300th birthday in 1964," he said. "It will be a historic medallion for Jerseymen marking New Jersey's three centuries of people, purpose and progress."

The significance of the Tercentenary Medallion will be increased - especially for our young people - if the metal used in making it contains a fragment of some metal of significance in the growth of New Jersey. Anyone knowing where such a piece of non-ferrous metal can be obtained, is urged to report the information to the New Jersey Tercentenary Commission, State House, Trenton.