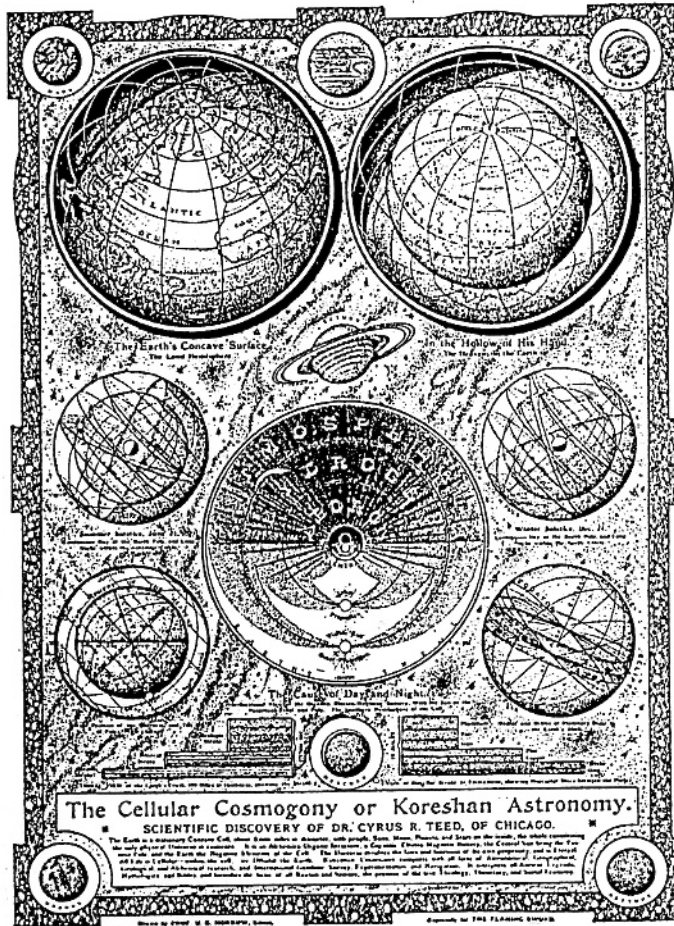


# THE RECTILINEATOR

KORESHAN EFFORTS  
TO PROVE THE  
EARTH IS CONCAVE



The Cellular Cosmogony or Koreshan Astronomy.

SCIENTIFIC DISCOVERY OF DR. CYRUS S. TEED, OF CHICAGO.

Chart of the Koreshan Cosmogony.  
Showing the Principal Astronomical Features, in Explanation of the  
Phenomena of the Heavens.  
Etching No. 8.

KORESHAN STATE HISTORIC SITE  
and  
KORESHAN UNITY ALLIANCE  
Estero, Florida

[Bk-000128]

AC-0131

## FOREWORD

The occasion to prepare this paper on the Koreshan Rectilineator came about because of my volunteer assignment during the winter of 1994 at the Florida State Historic Site at Estero, Florida. One of the original Rectilineator segments, and a model in 1 1/2"-1' scale is owned by the State. The model, probably made by Alfred Christensen, was being handled by instructors and docents as explanations of the original survey were being presented to visiting groups.

Assistant Manager Cathy Close asked if a reproduction of the model could be made that then could be handled. This would then preserve the original as a true artifact should be. With the original available to measure, the reproduction was a straightforward task of assembling the necessary materials and constructing the three Rectilineator segments and four sets of support stanchions. This was the complement of equipment used in the 1897 survey conducted on Naples Beach by the original survey party.

Examining the model opened a new avenue for research and inquiry. Why did the Koreshans conduct the survey? How was the survey conducted? What were the results or conclusions?

The Koreshan State Historic Site has a sizable collection of reference material available for staff and volunteer use. So the task of reading all available material about the Rectilineator and the survey became a self-imposed assignment. Materials included an architect's design report of the proposed use of the site, two masters theses, each relying on interviews with Miss Hedwig Michel then president of the Koreshan Unity, Inc. Miss Michel was the last living Koreshan, but had not joined the society until nearly fifty years after the survey. There were also several newspaper articles from various time periods and events. The problem which became evident was that there were several contradictions and inconsistencies in the materials. Miss Michel's statements were what she remembered she had been told, often by people who were not involved with the conduct of the survey or even members at that time.

One day Park Ranger and historian Peter Hicks handed what I needed. This was an original 1905 copy of "The Cellular Cosmogony or the Earth a Concave Sphere". Part I, The Universology of Koreshanity was authored by Koresh or Dr Cyrus Teed. Part II, The New Geodesy was authored by Professor Ulysses Grant Morrow who designed the Rectilineator, and was in charge of the survey. This was straight information right from the source with all of the documentation and details one could ask for. Professor U.G. Morrow denies the Copernican Theory of the universe as only a theory never proven, and details the survey and its results as proof positive that the earth is indeed a concave sphere, and we live on the inside. With such indisputable proof, and thanks to Ranger Peter Hicks for providing the obvious, all of the following is based on information provided in this 1905 publication of the Guiding Star Publishing House, Estero, Fl.

Any graphic material used are reduced reproductions of the etchings or diagrams used in the original document. Reprints of the whole publication are available from The Koreshan Unity Foundation, Estero, Florida.

I trust that the following may clarify and perhaps simplify the questions one might have about The Koreshan experiment of 1897.

G. Earl Hay ,Volunteer,  
Koreshan SHS  
Estero,Fl.



*In the name of humanity,  
Koresh,  
(Copied from book.)*

THE  
CELLULAR COSMOGONY

THE EARTH A CONCAVE SPHERE

PART I  
The Universology of Koreshanity  
(WITH ADDENDUM: "ASTRONOMY'S FALSE FOUNDATION,"  
BY KORESH  
THE FOUNDER OF THE KORESHAN SYSTEM OF RELIGIO-SCIENCE; AUTHOR  
OF VOLUMES OF KORESHAN LITERATURE.

PART II  
The New Geodesy  
BY PROFESSOR U. G. MORROW  
ASTRONOMER AND GEODESIST FOR THE KORESHAN UNITY, AND EDITOR OF  
THE FLAMING SWORD.

THE GUIDING STAR PUBLISHING HOUSE,  
ESTERO, FLORIDA.  
1905. A. K. 65.

Copyright applied for

## INTRODUCTION

Dr Cyrus Teed, or Koresh as he became known experienced his great illumination in October 1869. In this illumination he was instructed in the basics of his new faith and the elements of cellular cosmogony. This denied any acceptance of infinity of space or time. Everything was contained in a cell. The earth did not revolve around the sun, but encased the sun and all the planets and stars. Koresh was informed that the earth was a hollow shell and all life was contained therein. The outer shell was composed of multiple layers of minerals and metals. If the earth was a hollow shell then everything existed on the inside.

The size of the earth was accepted as approximately 25,000 miles in circumference and therefore there would be a definite ratio of curvation. The curvature was calculated to be 8 inches for the first mile. For the second mile it would be 32 inches, and the third mile 72 inches. This was figured as the square of the distance in miles multiplied by the 8 inches. This rate of curvation would be consistent whether the curvation was inward or outward.

The challenge to Dr. Teed and the Koreshans was to prove their theory to critics and skeptics. The illusion of convexity was well illustrated as ship sailed out to sea and progressively first the hull, then the sails, then the masts disappeared over the horizon. The process was reversed when ships were first sighted on the horizon as the mast, sails, then hull appeared. And as everyone has observed as objects get closer they appear larger. If the world was concave the Koreshans needed a counter explanation which they illustrated as The laws of Visual Impression. Yes there was a vanishing point for objects on the sea, or the optical illusion of the convergence of railroad tracks meeting at a distance. Anyone observing this knows that when one proceeds down the tracks they do not converge, and the ship has not disappeared over the horizon. Both are the result of optical foreshortening.

What was needed was a way of proving their beliefs by some indisputable measurement, and therefore discrediting the theory put forth by the Polish astronomer, Capercinus in ancient times.

## KORESHAN EXPERIMENTS

The rest of this narrative shifts to a new character. Ulysses Grant Morrow, professor in the Koreshan University in Chicago was tapped by Dr. Teed to develop methods of measuring the earth's concavity. Professor Morrow, a geodesist, headed the expedition of 1897 on the Naples beach which proved to the Koreshan's satisfaction that the curvature of the earth was indeed inward.

There is considerable information about Cyrus Teed or Koresh. But there is relatively little in the records about

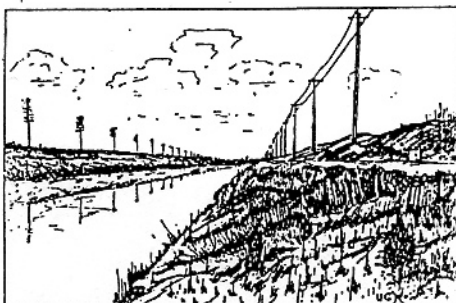
Ulysses Grant Morrow. The following is as he listed himself in Division A of the staff assignments in "The New Geodesy":

"Prof. U.G. Morrow, Geodesist, head of the Expedition, Inventor of the Rectineator; in charge of the Field Operations, Experiments, and Observations; director of Hypsometric Operations; special Newspaper Correspondent; directed and tested every Adjustment and Measurement of the entire Survey, and personally checked same in Record Books"

He was born on October 26, 1864 in Kentucky. As a boy he moved with his family to Unionville, Missouri. By 1885, he had a PhD from the College of Higher Science in Chicago. He withdrew from the Koreshan Unity on January 31, 1909. He died September 11, 1950 in New Orleans. Morrow was editor of "The Flaming Sword", the newspaper published at Estero. Ulysses and Rosa had one daughter and a son, Harry. Eva left after many years to marry Louis Cole. Harry was one of the fisherman at Mound Key after he grew up. Most of the rest known about Professor U.G. Morrow is from his writings. His style of writing of Part II, The New Geodesy is definite and leaves little room for anyone to challenge his statements without admitting to ignorance or lack of thought.

### OPTICAL OBSERVATIONS

The actual investigations or experiments of trying to prove the earth's concavity started while the Koreshans were still headquartered in Chicago. These were optical experiments where they were attempting to justify the concept of perspective foreshortening. Some observations were on the Old Illinois Drainage Canal on July 25, 1896. A paper target 22 inches in diameter was fastened on a post with the center of the disc 18 inches from the surface of the water. When a boat was rowed three miles down the canal the whole disc was plainly visible through a telescope. According the accredited convexity of the earth, with the telescope 12 inches above the water, only 5 inches of the target should have been visible. At a distance of 5 miles, with the telescope lowered to 6 inches above the water the target was still visible. According the accepted curvature of the earth the target should have been over 9 feet below the line of vision.



Old Illinois and Michigan Drainage Canal.—Site of Experiments, July 25, 1896.

### PLATE No. I.

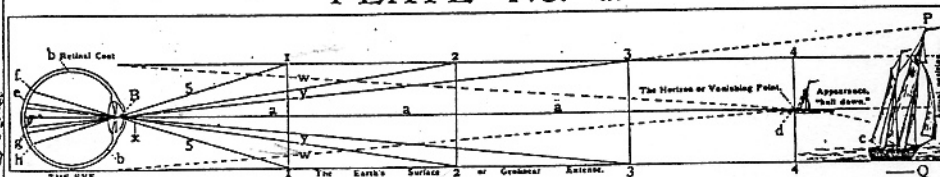


DIAGRAM No. 1.—Illustrating "The Laws of Visual Impression," Pages 32-34.

This Diagram illustrates a principle, not measurements true to Scale; the height of the objects is not proportioned to the distance.

Several like experiments were conducted using different sized targets and the telescope at varying heights above the water, all with similar results. Which was quoted as "the most unmistakable evidence of the water's non-convexity".

Several more sightings were made on August 16, 1896 from the shore of Lake Michigan, World's Fair Grounds by the experimenting staff. Several sloop yachts were observed at a distance of 12 miles, from a pier extending 10 feet above the water. Here the hulls and about one half of the height of the masts were invisible to the unaided eye. Through an opera glass about all of the surface of the sails and the full height of the masts were visible, with the hulls still out of sight. But with a telescope of about 40 powers the hull of each vessel was brought into clear view. Several more sightings were recorded from the beach with the point of view 30 inches above the water. Calculations were made, that if the conventional curvature were applied the hull of each boat would be 60 feet below the horizon.

Professor Morrow details seven specific sightings on August 23, 1896 from the lake shore at Roby, Illinois. Results were similar. These experiments were perhaps more to disprove the earth's convexity than to try to prove its concavity.

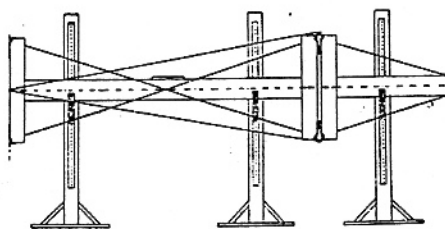
#### OBSERVATIONS ON SOUTHERN WATERS

The scene now shifts to the southern waters of the Gulf of Mexico at Naples Beach where the true Geodetic Expedition would be sufficient to overthrow the old system of astronomy, and to establish the Cellular Cosmogony of Koreshanity. About 75 observations were made from Naples Beach as preparations were underway for the final experiment using the newly developed rectilineator. Several of these observations are detailed by Professor Morrow, with similar conclusions.

The Mechanical Survey employed different principles. Dr. Teed had instructed Professor Morrow to develop an instrument to measure the curvature of the earth and prove the Koreshan belief of concavity. Distances were being accurately measured by the U.S. Geodetic Coast Survey using an invention of a Professor A.D. Bache which consisted of compound metal bars of iron and brass to compensate for expansion and contraction with one point of contact for accurate measurement. Professor Morrow went beyond the one point contact of that implement to develop a double T square device which would use the principles of geometry which is the science of earth measurement. He used the premise that angles perpendicular to the horizontal are equal. Briefly, a square is constructed with all four sides and angles equal. If similar squares are placed edge to edge they will force a straight line. This can be shown with a series of builders squares with their respective blades placed together. Or if two plates placed edge to edge will form a straight line, then ten

thousand plates joined would form a rectiline. A straight line would be forced.

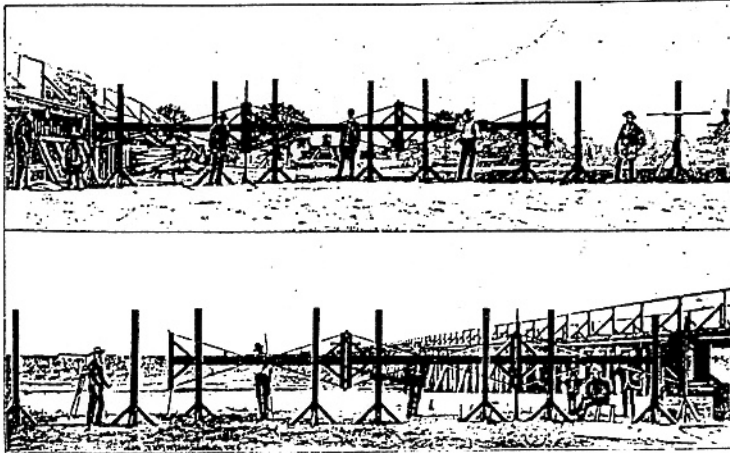
The Koreshan Rectilineator ( from *rectus*,right and *lina*,line) was invented in 1896 by Professor Morrow at the insistence of the founder of Koreshanity , for the purpose of demonstrating the premise of the Koreshan Cosmogony. The instrument must have consistency, be convenient to operate, and have precision of adjustment. One remaining segment of the original Rectilineator still exists and is on display in the Art Hall of the Koreshan Unity Community at the State Historic Site in Estero, Florida. The Rectilineator, as constructed was of three sections in the form of double T squares, each 12 feet long,with braced and tensioned cross arms 4 feet in length. The Rectilineators were made of one inch thick mahogany which had been seasoned twelve years in the shops of the Pullman Palace Car Company, Pullman Ill. The horizontal bar was eight inches in width while the vertical cross arms were five inches in width. Steel tension rods were crossed from corner to corner ending in brass castings finely machined to act as adjusting and clamping surfaces.



Cross-arms of the Rectilineator in Accurate Adjustment.

In use, each section was to be supported by two strongly built platformed standards, with adjustable castings, to support the beams. Set screws were provided for fine adjustments, and heavy bolts for fastening the sections together when final adjustments were precise.

The method of operation was to accurately position the first segment in an absolutely level or horizontal position. This was accomplished using three methods, a plumb bob and line, a very accurate spirit level, and a twelve foot mercury level perfected by Prof. Morrow. A sighting was also made with the horizon of the Gulf waters over the body beam , viewed from a distance of three or four rods from the apparatus. One crew of the survey party had been dispatched to survey a straight line south on the beach at Naples, and level and prepare placements for all of the support standards as the survey progressed by moving the sections down the beach in leap-frog fashion. This line extended 2.5 miles south on the beach to the entrance of Gordon Pass.



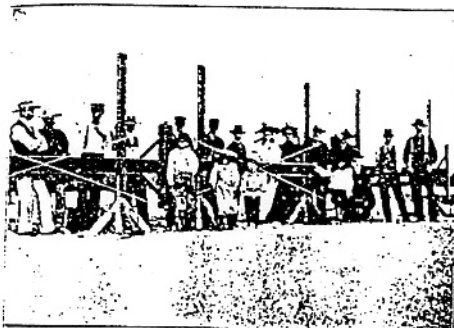
Beginning of the Air Line.

It was now necessary to establish a constant datum line to be used to measure any deviation in height of the Rectilineator segments. The accepted laws of hydrostatics acknowledges that the water's surface conforms to the general contour of the earth's surface. Tide staffs were placed every one eighth of a mile on the beach, twenty five in all.

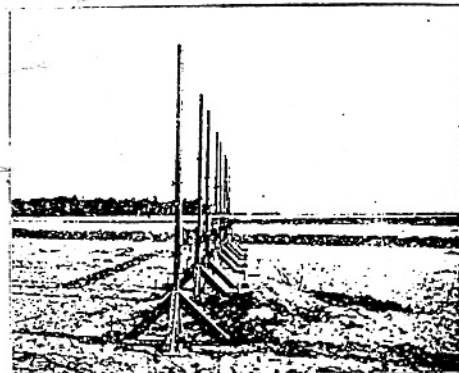
The tide varies about 3.5 feet on the west coast of Florida. The mean tide level is a point half way between high and low tide. To establish this point with accuracy, perforated caissons were placed in the gulf waters with the bottoms below low tide levels and the tops projecting above high tide levels.. A calibrated float buoy was in each caisson which raised and lowered with the tide. When the mean tide level was established on the first caisson float and transferred to the onshore tide staff it established the fixed point to which all other measurements of water level would be referred. A point was marked 128 inches above mean tide level on the beach. This level was projected to each of the other tide staffs with reference to the floating staff in the caisson at time with the stationary tide register of the first tide staff. These points constituted an air line along the entire line of progression.

### THE SURVEY

There had been considerable practice with the equipment to ascertain that the staff was well trained in each activity to which they were assigned. The staff had arrived at Naples Beach in early January. All preparations were finally made and the first section was pronounced perfect at 8:50 on the morning of March 18, 1897.



5

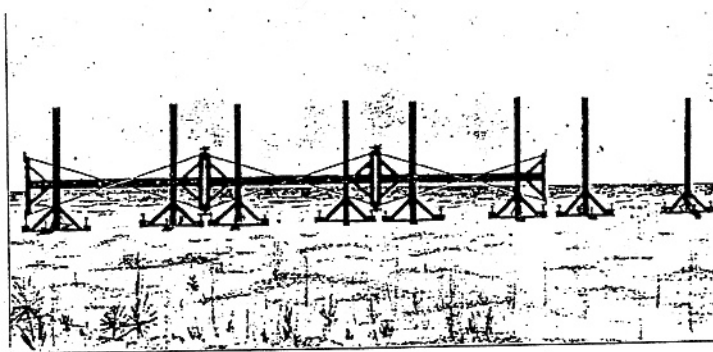


At Gordon's Pass.  
Group of Witnesses and Position of Apparatus at Farthest Point South.  
Etchings Nos. 5 and 6.



From that time and point the line was projected as planned. All recordings of measurements were made by Morrow. Other equipment needed was in a chest containing a thermometer, microscope, calipers, rules, compass, spirit level, triangles, protractor, telescope, thumb bolts, adjusting gauges, celluloid test card, etc. All observations and measurements were made and recorded in the presence of all the invited witnesses. Beside the two divisions of staff members there was an official Visiting and Investigating Committee To assure that all procedures were carried out in a uniform manor. Several other people including scientists, the news media, and towns people were also invited to observe.

The actual survey started on March 18, 1897, and progressed day by day until May 8 when the survey came to the end of the beach. At this point the Rectilineators had been moved 15,840 feet, or 3 miles. At this point the height of the Rectinineator had dropped to 53 inches from the starting point of 128 inches. This was a difference of 75 inches. This conforms closely to the projected figure of 8 inch curvature of the earth times the square of the miles, or  $8 \times 9 (3 \text{ sq}) = 72$ .



Away Down on the Standards.  
At Gordon's Pass, 2½ miles south of Naples: 4 feet nearer the water than at beginning; the Straight-edges and the Horizon.  
Etching No. 7.

From this point at Gordon's Pass a visual projection had to be made. Using the telescope with the cross hair lined up on metal bands placed on the last two tide staffs, the Koreshan sloop Ada was sailed in toward the survey party until the line where the hull met the water was in line with the horizontal cross hair. This distance was estimated to be 4 1/8 miles.

To check the accuracy of the measurements, the process was reversed or backed up repeating the same adjustments for a distance of a half mile. Each measurement corresponded closely to those made in the forward motion, proving the repeatability of the process. By this process the survey staff under Professor U.G. Morrow used the arc of the cord to prove without question that the earth's surface was concave. Had it been convex the air line would have risen above the 128 inch datum line established.

Critics were quick to try to discredit the process, but most of the questions raised after the survey were already taken into consideration before the process started. The question of

thermal expansion and contraction was addressed by a method devised by Rev. E.M. Castle of Division A to reverse top to bottom each segment as it was moved to its next location. Alignment of the sections was addressed by using first a bristol board feeler gauge of .015", then a celluloid card of .001" to test the contact of the brass ends before the sections were firmly bolted together. Alignment of the witness marks on the horizontal brass bands was checked with a microscope. Every precaution was made to assure accuracy and consistency. Each staff member initialed the recordings as they were made in the record book, and was observed by one of the visiting committee.

The scientists of the world were challenged to disprove by any measurement any inaccuracy in the findings. This was the first time that the shape of the earth was proven by a measuring process which was indisputable. It is reported that Koresh offered a \$10,000 reward for anyone who could prove the findings false. The reward stands unclaimed.

### POSTSCRIPT

The thrust of Professor Morrow's whole thesis was that the Copernican Theory, accepted by most astronomers of the day was just that, an unproven theory. They held that the earth rotated 360 degrees each day, and that the earth rotated around the sun once a year. The galaxy of stars was at an almost infinite distance. There is more, but the Koreshans had proved by a measured device that the earth was a concave sphere. It is possible that Columbus could have sailed to India of the waters which conformed to the inside surface. Magellan could have sailed around the world, again on the inside. But it is doubtful if NASA would have received its funding for space exploration if the Koreshan theory, now proved, had predominated in our time. Perhaps we are all glad the Koreshan influence was limited and short lived.

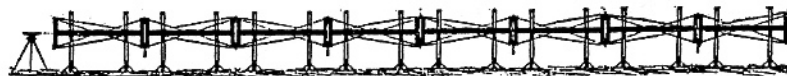


DIAGRAM No. 2.—The Rectilinator used in the Koreshan Geodetic Survey. Pages 26-39, 95-100.

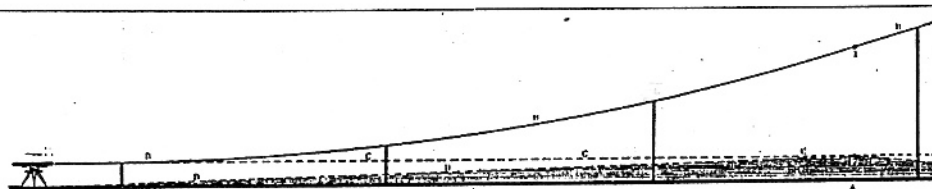


DIAGRAM No. 3.—Illustrating the Illusions of Optical Phenomena. Page 37.

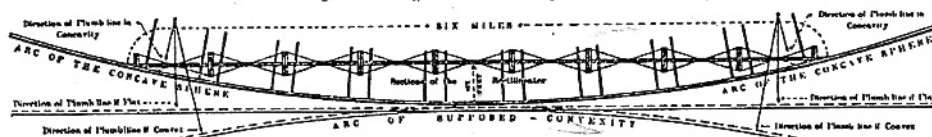


DIAGRAM No. 4.—Comprehensive View of the Air Line, showing use of the Rectilinator in Survey of Chord of Arc by the Koreshan Geodetic Staff at Naples, Fla. Pages 37, 109, 110, 129-130.

apparatus or its adjustments. In the list of the Operating Staff, we briefly mention the position each occupied, and the class of work to which each was assigned:

#### DIVISION A.

PROF. U. G. MORROW, Geodesist, head of the Expedition; Inventor of the Rectilineator; in charge of the Field Operations, Experiments, and Observations; director of Hypsometric Operations; special Newspaper Correspondent; directed and tested every Adjustment and Measurement of the entire Survey, and personally checked same in the Record Books.

\*L. M. BOOMER, General Manager.

REV. E. M. CASTLE, of the University System of the Koreshan Unity; inventor of the System of Reversals of sections of the Rectilineator, and witness of important operations.

GEORGE T. ORDWAY, Operator; manipulated Set Screw No. 1; detached each rear section, and transferred same for forward adjustment; made reversals in accordance with the Formula of the Castle System; signaled tide measures from Stationary Caisson.

J. JACKSON WILLIAMSON, Assistant Operator; manipulated Set Screw No. 2; assisted in detachment of each rear section, and in the reversals; Watchman.

\*H. B. BOOMER, Secretary.

#### DIVISION B.

GEORGE W. HUNT, Engineer; in charge of Division B, operating in advance of Division A; directed emplacement of the 8-foot platformed standards, and adjustment of castings which received the sections of the Rectilineator; in charge of all excavations, and setting of Tide Staffs.

P. W. CAMPBELL, Mechanic and First Assistant Engineer; Assistant Watchman.

ALLEN H. ANDREWS, Second Assistant Engineer; Assistant Watchman.

#### CORPS OF STAFF ASSISTANTS.

|                |                   |
|----------------|-------------------|
| Gustave Fabre. | Leroy L'Amoreaux. |
| Charles Mealy. | Laurence Bubbett. |

#### VISITING AND INVESTIGATING COMMITTEE.

VICTORIA GRATIA, Pre-Eminent of the Koreshan Unity.  
 Rev. E. M. Castle, of the Koreshan University, Estero, Fla.  
 Prof. O. F. L'Amoreaux, A. M., Ph. D., 31 years in Chair of Languages, Wheaton College, Wheaton, Ill.

C. Sterling Baldwin, M. D.  
 Mrs. Ada Welton.  
 T. R. Elney, Postmaster at Naples, Fla.  
 W. D. Puerifoy, Naples, Fla.  
 S. L. Green, M. D., Marco, Fla.

#### OTHER WITNESSES AND VISITORS.

Hugh McDonald, Covington, Ky.  
 Mrs. Hugh McDonald, Covington, Ky.  
 Miss Ann Haldeman, Louisville, Ky.  
 Miss Lucy Lemon, Louisville, Ky.  
 Miss Elsie Frederickson, Louisville, Ky.  
 J. T. Smith, Springfield, Ill.  
 Mr. Strauss, of Louisville *Courier-Journal*.  
 Capt. Robert Gilbert, Estero, Fla.  
 Richard Gilbert, Punta Rassa, Fla.  
 Mrs. Elizabeth Robinson, Chicago, Ill.  
 R. B. Gilbert, Punta Rassa, Fla.  
 Mrs. Esther Stotler, Estero, Fla.  
 Miss Rose Welton, Estero, Fla.  
 Carl Leutich, Estero, Fla.  
 Lester Wintersgill, Estero, Fla.  
 G. R. Calhoun, Plant City, Fla.  
 Thos. E. Hart, Marco, Fla.  
 D. N. Walker, Marco, Fla.  
 N. Walker, Marco, Fla.  
 Miss K. M. Large, Naples, Fla.  
 Neal Harris, Marco, Fla.

\*Called to Chicago by telegram announcing the death of Mr. L. S. Boomer before Survey began; assisted in preparations.

## Results and Inevitable Conclusions.

### Details of Measurements and Extension of the Air Line Into the Water.

"Hew to the line, let the chips fall where they may."

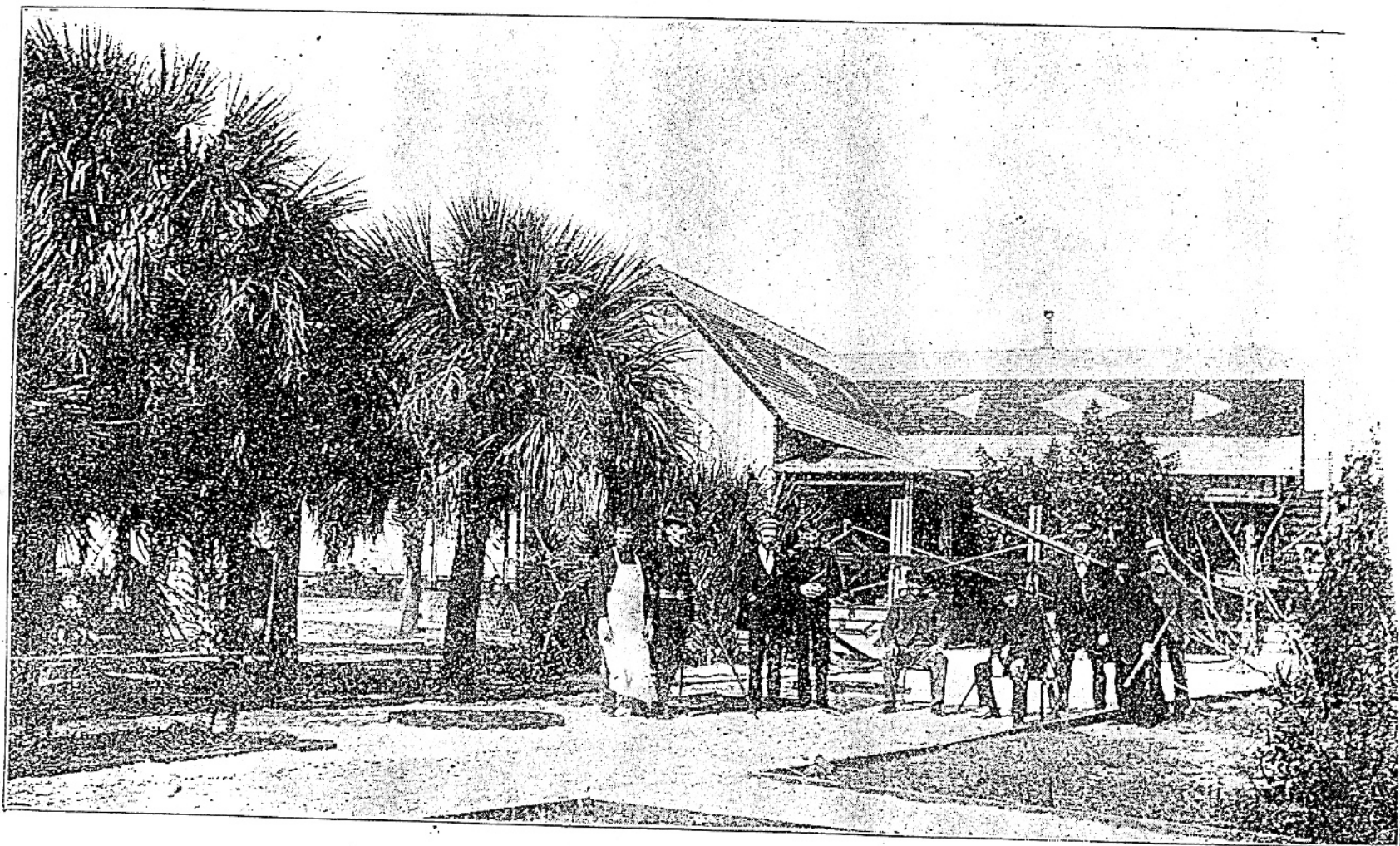
WHEN we suspended the plumb-line at the first adjustment of the Geodetic Apparatus, we established beyond all doubt the direction of the earth's radius, or the perpendicular at the initial station. Poised upon the pivot of adjustment, the bubble in the graduated vial of the spirit

line of the sections would have fallen about .125 of an inch above the 128-inch altitude. The tide staffs marked

TABLE SHOWING ALTITUDE OF AIR LINE ABOVE DATUM LINE AT EVERY STATION OF SURVEY, WITH THE MEASURES COMPARED WITH THE CALCULATED CURVATURE.

| Dates of Measurements on Tide Staffs. | Distance in Feet. From Beginning. | Distance in Miles. | Number of Adjustments. | Number of Tide Staff on Beach. | Inches Altitude of Air Line Above Fixed Datum Line. | Distance of Air Line Below Secondary Datum Line, inches. | Calculated Ratio of Concave Curvature, inches. | Difference Between the Ratios, inches. |
|---------------------------------------|-----------------------------------|--------------------|------------------------|--------------------------------|---|--|--|--|
| March 18                              | 0                                 | 0                  | 0                      | 1                              | 128   | 0.   | 0.   | 0.                                     |
| " 19                                  | 660                               | 1/8                | 55                     | 2                              | 127.85  | .15  | .125   | .025                                   |
| " 23                                  | 1,320                             | 1/4                | 110                    | 3                              | 127.74  | .26  | .5   | .24                                    |
| " 24                                  | 1,980                             | 3/8                | 165                    | 4                              | 126.625   | 1.375  | 1.125  | .25                                    |
| " 25                                  | 2,640                             | 1/2                | 220                    | 5                              | 126.125   | 1.875  | 2.   | .125                                   |
| " 27                                  | 3,300                             | 5/8                | 275                    | 6                              | 124.125   | 3.875  | 3.125  | .75                                    |
| " 30                                  | 3,960                             | 1 1/8              | 330                    | 7                              | 123.675   | 4.375  | 4.5  | .125                                   |
| " 31                                  | 4,620                             | 1 1/4              | 385                    | 8                              | 121.57  | 6.43   | 6.125  | .305                                   |
| April 1                               | 5,280                             | 1 1/2              | 440                    | 9                              | 119.98  | 8.02   | 8.   | .02                                    |
| " 2                                   | 5,940                             | 1 3/4              | 495                    | 10                             | 117.875   | 10.125   | 10.125   | .0                                     |
| " 8                                   | 6,600                             | 1 7/8              | 550                    | 11                             | 116.44  | 11.56  | 12.5   | .94                                    |
| " 9                                   | 7,260                             | 2                  | 605                    | 12                             | 113.69  | 14.31  | 15.125   | .815                                   |
| " 13                                  | 7,920                             | 2 1/8              | 660                    | 13                             | 111.07  | 16.93  | 18.  | 1.07                                   |
| " 14                                  | 8,580                             | 2 1/4              | 715                    | 14                             | 107.19  | 20.81  | 21.125   | .315                                   |
| " 14                                  | 9,240                             | 2 1/2              | 770                    | 15                             | 104.69  | 23.31  | 24.5   | 1.19                                   |
| " 15                                  | 9,900                             | 2 3/8              | 825                    | 16                             | 101.69  | 26.31  | 28.125   | 1.825                                  |
| " 16                                  | 10,560                            | 2 1/2              | 880                    | 17                             | 97.38   | 30.62  | 32.  | 1.38                                   |
| " 24                                  | 11,220                            | 2 3/4              | 935                    | 18                             | 93.44   | 34.56  | 36.125   | 1.565                                  |
| " 26                                  | 11,880                            | 2 7/8              | 990                    | 19                             | 85.32   | 42.68  | 40.5   | 2.18                                   |
| " 27                                  | 12,540                            | 3                  | 1,045                  | 20                             | 79.75   | 48.25  | 45.125   | 3.125                                  |
| May 8                                 | 13,200                            | 3 1/8              |                        | 21                             | 74.   | 54.  | 50.  | 4.                                     |
| " 8                                   | 13,860                            | 3 1/4              |                        | 22                             | 68.   | 60.  | 55.125   | 4.875                                  |
| " 8                                   | 14,520                            | 3 1/2              |                        | 23                             | 63.   | 65.  | 60.5   | 4.5                                    |
| " 8                                   | 15,840                            | 3 3/4              |                        | 24                             | 53.   | 75.  | 72.  | 3.                                     |
| " 8                                   | 21,780                            | 4 1/2              |                        | 25                             | 0.  | 128.   | 136.125  | 8.125                                  |
| RETURN SURVEY.                        |                                   |                    |                        |                                |   |  |  |  |
| " 6                                   | 12,540                            | 2 3/4              | 1,084                  | 20                             | 79.75   | 48.25  | 45.125   | 3.125                                  |
| " 11                                  | 11,880                            | 2 1/2              | 1,140                  | 19                             | 85.47   | 42.53  | 40.5   | 2.03                                   |
| " 11                                  | 11,220                            | 2 1/4              | 1,194                  | 18                             | 93.68   | 34.32  | 36.125   | 1.805                                  |
| " 11                                  | 10,560                            | 2                  | 1,250                  | 17                             | 97.13   | 30.87  | 32.  | 1.13                                   |

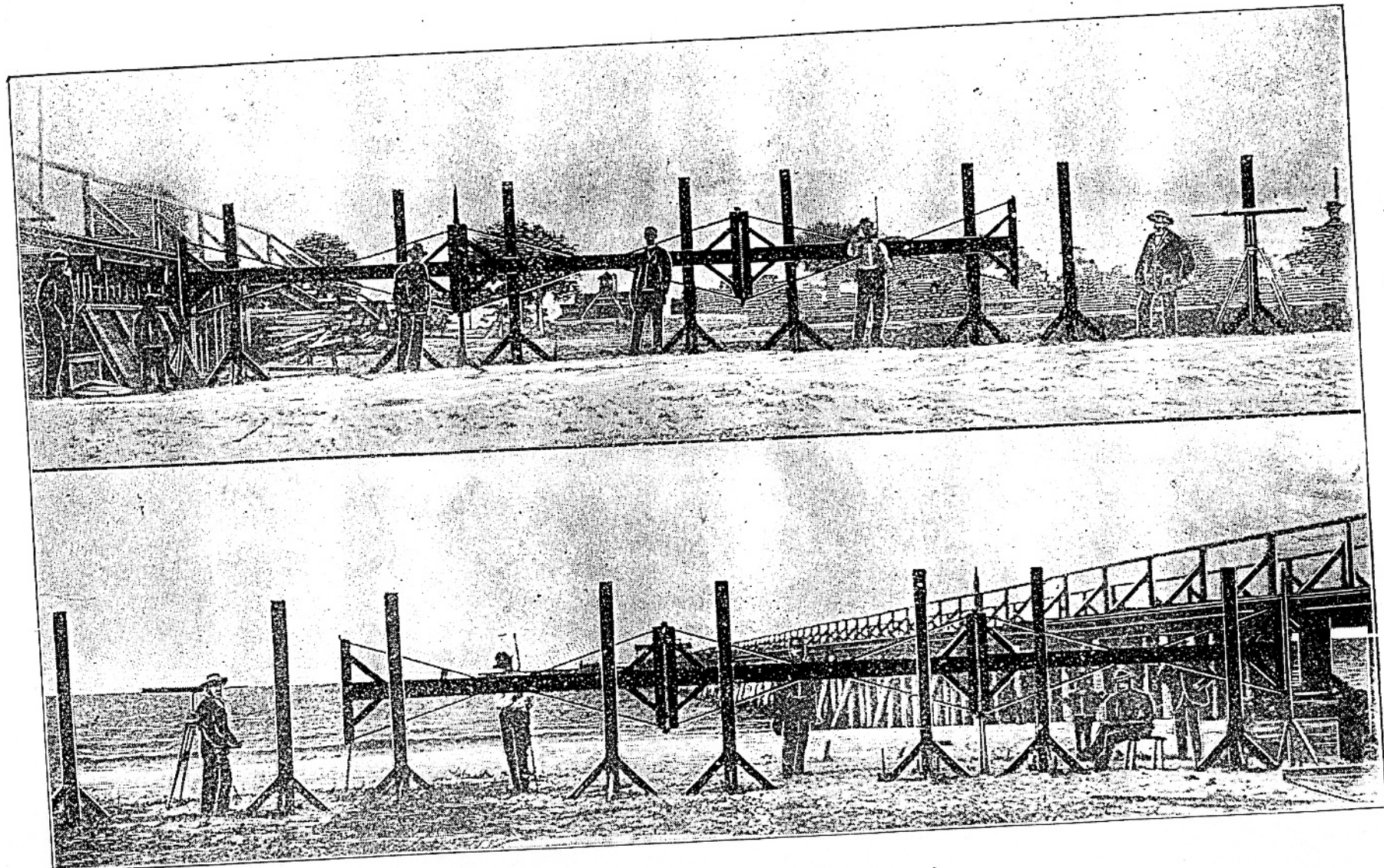
brilliant points of interest throughout the survey ; for each



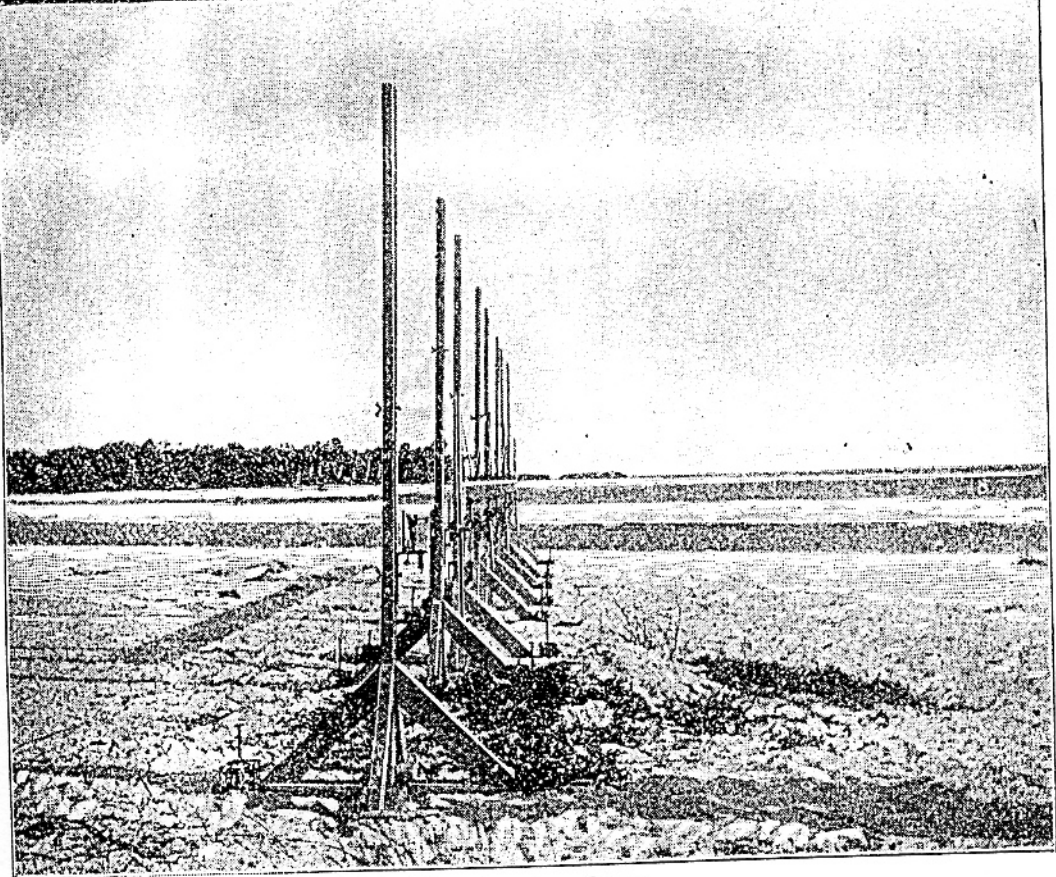
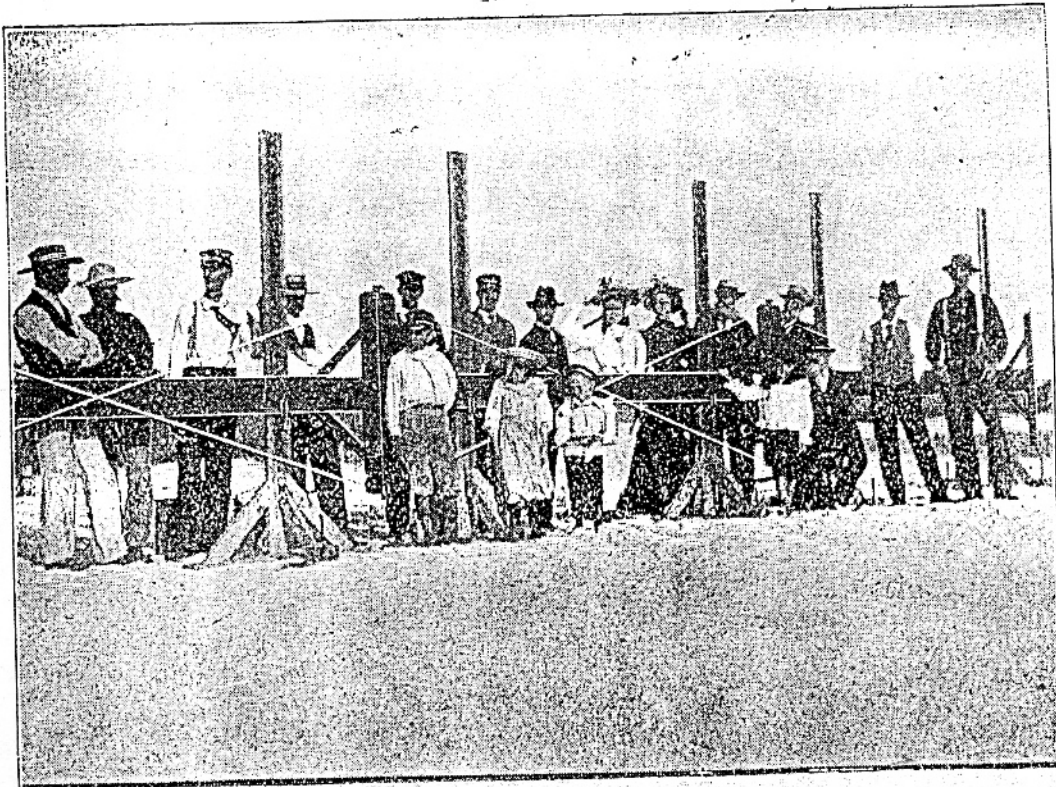
Staff Headquarters, Operating Station.

Property of Col. W. N. Haldeman, of Louisville COURIER-JOURNAL, owner of Naples, Fla., a beautiful Winter Resort.

Etching No. 2.



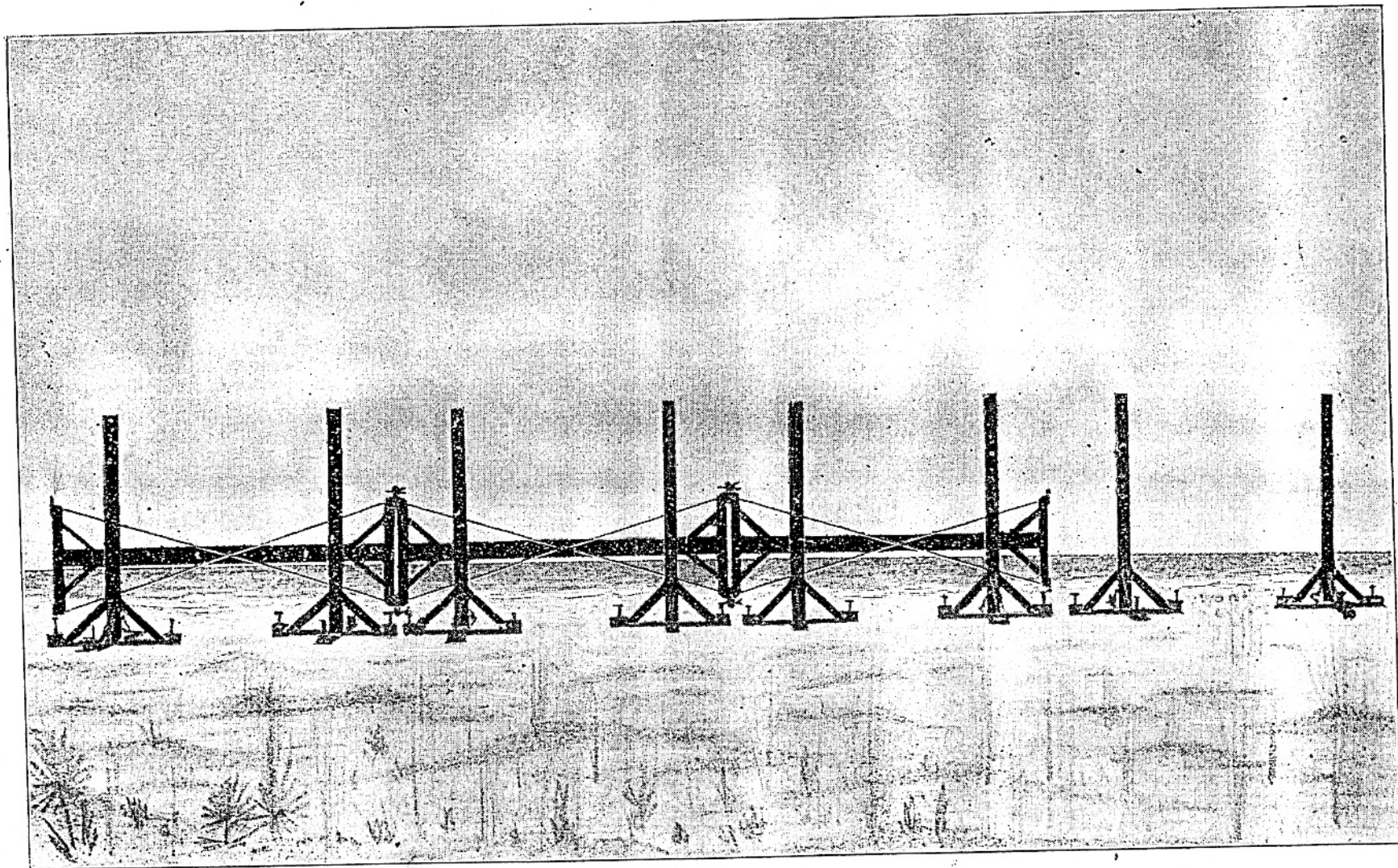
Beginning of the Air Line.  
St. Charles Dock, going South along the Gulf Coast. Upper View, looking East; lower view looking West.



**At Gordon's Pass.**

Group of Witnesses and Position of Apparatus at Farthest Point South.

Etchings Nos. 5 and 6.



Away Down on the Standards.

At Gordon's Pass,  $2\frac{1}{2}$  miles south of Naples: 4 feet nearer the water than at beginning; the Straight-edges and the Horizon.  
Etching No. 7.



WHAT DO WE KNOW ABOUT  
ULYSSES GRANT MORROW

Born -October 26, 1864 in Kentucky, moved with family' to Unionville, Missouri.

By 1885 had a PhD from College of Higher Science, in Chicago.

Married Rosa Melissa Watterberger. Had two children, Eva, a daughter, and Harry a son two years younger. Rosa was born in Sullivan County, Missouri, December 30, 1886. 1866

Ulysses and Rosa left Unity January 31, 1909, after Koresh's death. Possibly because of struggle over power and accention.

Returned to writing for college. Moved to New Orleans and worked as a linotype operator.

Ulysses sported a mustache and Van Dyke goatee

Rosa died 1946.

Ulysses died September 11, 1950 in New Orleans.

Morrow was editor of the "Flaming Sword" at Estero. Had been publisher and editor of a paper in Allegheny region of Pennsylvania before joining Koreshans in Chicago.

He was the inventor of the Rectilineator, and in charge of the 1897 survey on Naples Beach where they proved to their satisfaction that the curvature of the earth was concave.

He authored part II of Cellular Cosmogony, entitled "The New Geodesy" The following is how he listed himself in the list of staff of the survey:

Prof. U.G.Morrow, Geodist, head of the expedition; Inventor of the Rectilineator; in charge of the Field Operations, Experiments, and Observations; director of Hypsometric Operations; special Newspaper Correspondent; directed and tested every Adjustment and Measurement of the entire Survey, and personally checked same in Record Books.

Eva, his daughter stayed in Estero until she left to marry Louis Cole in Ft. Myers.

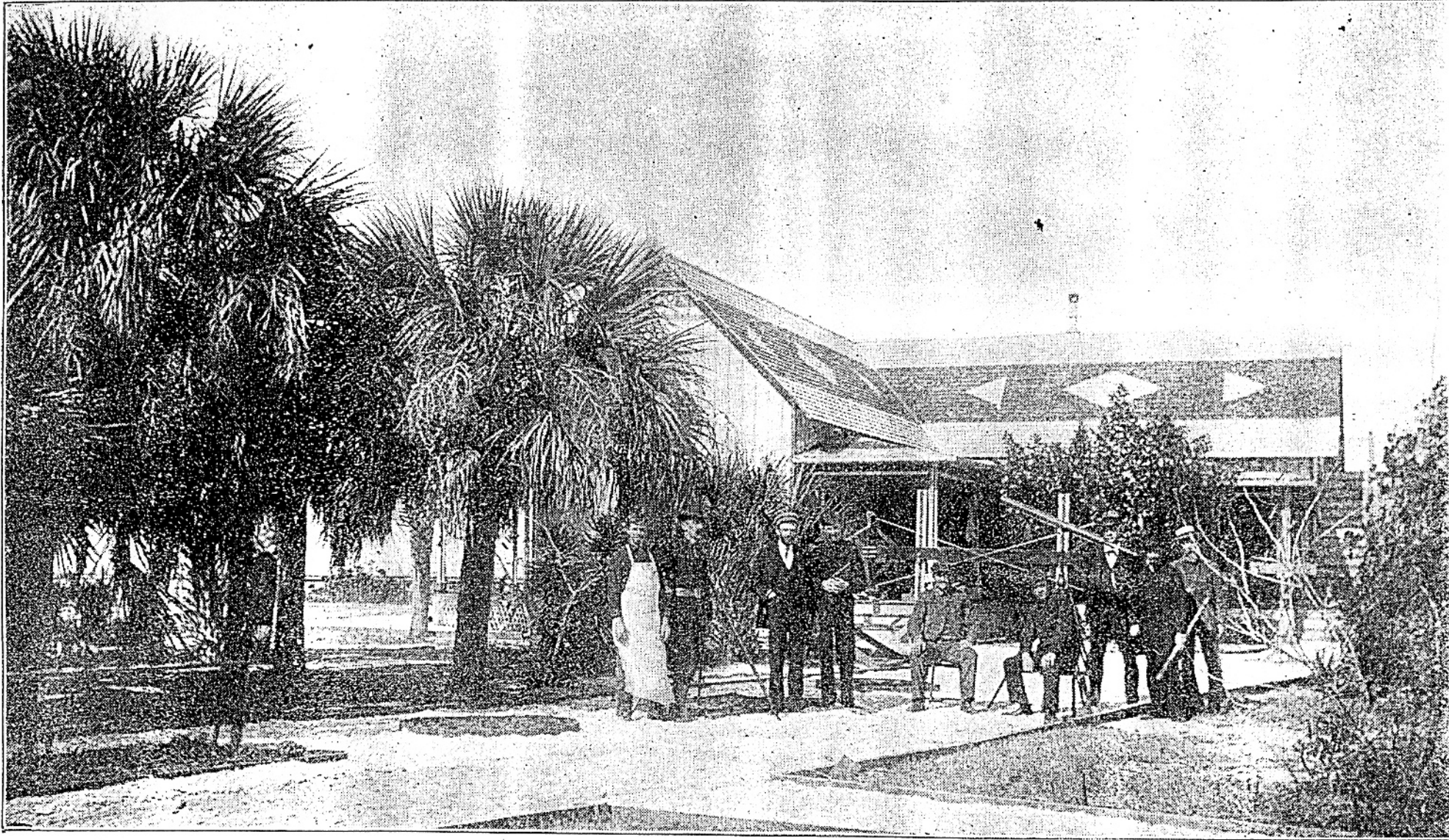
Harry was a fisherman at Mound Key. Played drum and other instruments in the Unity band and Ft. Myers symphony. Enlisted in army in World War I. Married Ethel Sherouse in Ft. Myers on the Edison winter home property where her father was grounds keeper. Harry and Ethel had one daughter, Lorraine. ( Lorraine Norton is now working at the Unity Foundation. Harry was nicknamed "Chick". In a parade he crowed like a rooster and lost voice because he crowed so much. Loraine says she remembers her grandfather, Ulysses as being very jovial. All the letters she received from him were typed with a purple ribbon.

A note in the McCready papers states "Professor Morrow was the first person I ever saw using a typewriter, and it seemed impossible that he could hit the keys so fast and know what he was doing".



Earl Hay  
from  
Medicine

Prof. G. G. Morrow



**Staff Headquarters, Operating Station.**

Property of Col. W. N. Haldeman, of Louisville COURIER-JOURNAL, owner of Naples, Fla., a beautiful Winter Resort.

Etching No. 2.

*W. N. H.*



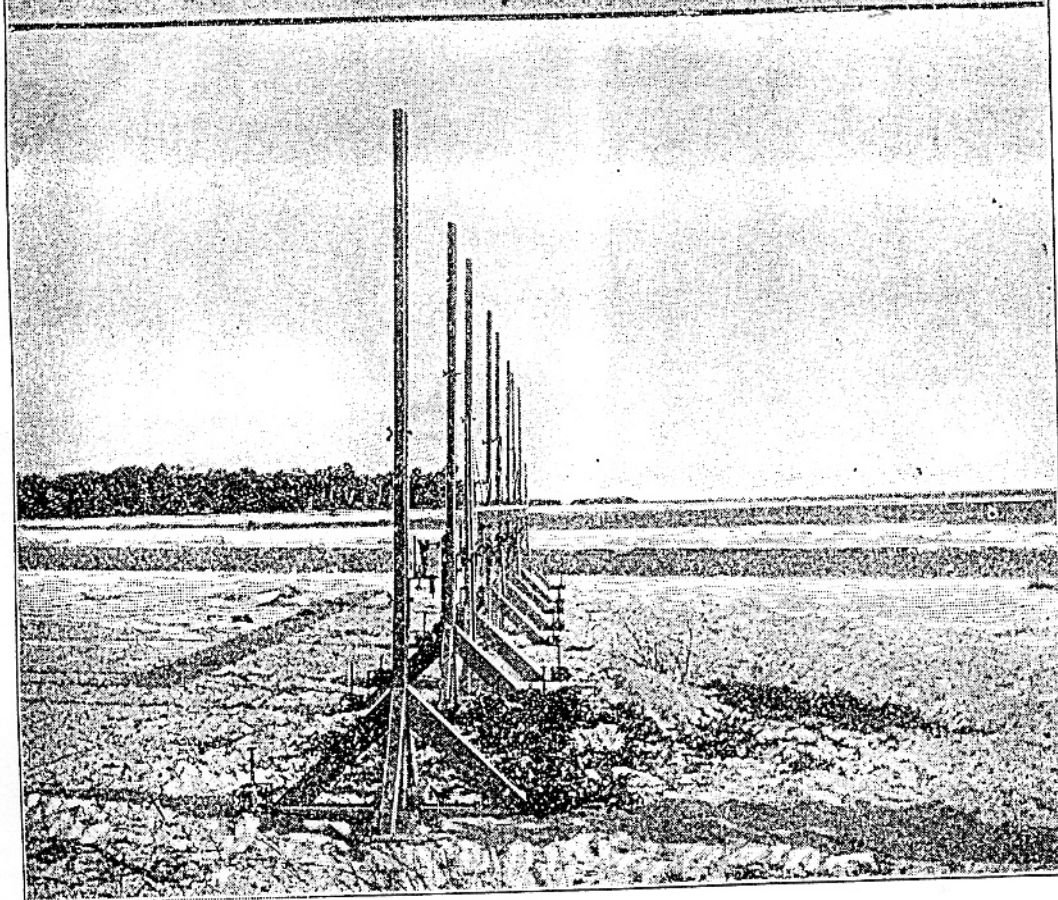
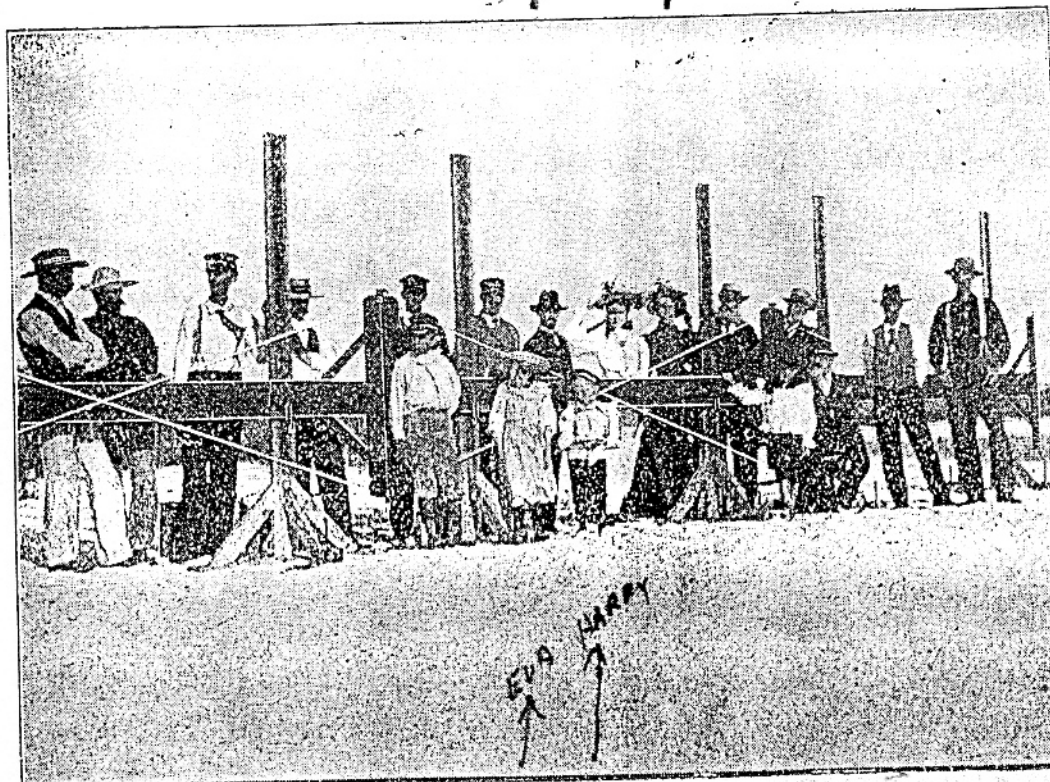
Rare photograph of the Guiding Star Publishing House Staff, circa 1907-1909 (left to right). Back row: Junius Van Duzee; Hattie Englert; Walter Bartsch; George Sandler. Third row: Mr. Benson; Annie Ray Andrews — 1870-??; Rosa Morrow — 1866-1946; Imogene Bubbett Rahn — 1881-1932; Etta Silverfriend — 1866-1944; Allen Andrews — 1873-1951; James H. Bubbett — 1844-1924; Robert Graham — 1885-1951. Seated: Lydia Gray; Isabelle Van Duzee; Ulysses S. Morrow — 1864-1950; Barbara Ehrisman — 1858-1939; Ella Graham — 1860-1945. Front row: Winfield Boulus; Claude Rahn — 1885-1973; DeCoursey Clinchy; Richard Jentsch — 1883-1915.



An interior view of the first Koreshan store (originally built in 1894 and expanded in 1902-03 to receive Estero River traffic at its loading dock)

- 20 U.G. MORROW
- 23 ROSA MORROW
- 29 LOUIS COLE - MARRIED EVA MORROW





At Gordon's Pass.

Group of Witnesses and Position of Apparatus at Farthest Point South.

Etchings Nos. 5 and 6.