



VERTICAL SUN-DIAL, AND MODEL OF A TEMPLE PYLON

# A NEW LINK IN HISTORY BY RUSSELL WOODARD

SINCE the excavation in Crete, which changed the Minoan myths into historical fact and revealed the existence of a great island long before Greek civilization began, there have been few discoveries of greater interest and importance than those which have recently been made by Professor Garstang at Meroe, in the Sudan.

Professor Sayce in 1909 located the site of the city of Meroe on the east bank of the Nile, between the Fifth and Sixth Cataracts, and the excavations carried on by Professor Garstang at the end of 1909 enabled the details of the Ethiopian capital to become known. The Temple of Anka, where the Ethiopian Kings were crowned, was also discovered. Even more interesting is the excavation of the beautiful Sun Temple, which was discovered at the edge of the khor, or meadow, thus confirming the account of Herodotus, who tells us that Cambyses sent to the Ethiopian King to inquire about "the Table of the Sun" in a meadow "in the suburbs of the capital, where cooked meats were set each night." There is no doubt that this building is referred to in the Homeric legend that Zeus and the other gods feasted every year for twelve days among the blameless Ethiopians. Many other buildings were also explored, and the Temple of the Lion and the Kenisa were discovered. It may be noted that the lion emblem was of frequent occurrence, and may probably have been the totem of the district. Many beautiful objects were dug up by the expedition, in-



AN ETHIOPIAN KING FROM MEROE



THE SUN TEMPLE, WHICH HERODOTUS DESCRIBES AS "THE TABLE OF THE SUN."



STATUE OF AN ETHIOPIAN QUEEN



VOTIVE ALTAR FOUND AT MEROE.

cluding forty inscriptions in the hieroglyphics of Meroe, two royal statues, and a great many vases of a new kind of pottery, objects of wood and glass, tiles and pottery. Especially interesting was the pottery which is almost as thin as biscuit china, and gives evidence of Roman influence. Professor Sayce found Greek inscriptions showing how the city was destroyed at the end of the fourth century A. D., by a King of Axum, since which event the city was unoccupied.

Ethiopia was the name given by the Greeks to a country south of Egypt variously conceived as including only Nubia (Aethiopia Aegypti), or Nubia, Sennar, Kordofan and Abyssinia, or a region extending indefinitely east and west from the Upper Nile, but applied after the fall of Meroe more particularly to Abyssinia. The name is said to have had its origin from the fact that it was alluded to by the Greeks as a country of sunburned faces.

Historically there were three distinct kingdoms known as Ethiopia, those of Napata, Meroe and Askum. There is no definite evidence that either of these included at any time all the territory between the southern border of Egypt and Bab el Mandeb.

Already in the time of the old empire the Egyptians had relations with their southern neighbors. From the forests of Nubia they obtained a large proportion of their timber, and the city of Abu (Elephantine) derived its name from the ivory which found its way to this place from the interior of Africa. King Unas (c. 2296-2266 B. C.) employed warriors belonging to six Nubian tribes in his war upon the Bedonkos. The early pictorial representations of Nubian archers do not suggest that they were negroes. A regular conquest of the country south of Syene apparently was not undertaken until the twelfth dynasty (c. 2522-2323). The most powerful Nubian people at this time was Kash or Kosh, the Hebrew Kush. It is probable that the stock was originally Hamitic, though in course of time it absorbed various Negritic tribes. Usersten III (c. 2409-2372) established his frontier north of the second cataract and built for its protection two forts at Sennar and Kummeh on opposite sides of the river. Whether the Hyksos kings ever held possession of this territory is doubtful. At any rate it had to be reorganized by Aahmes (1575-1563), the founder of the eighteenth dynasty and his successors. Napata probably had been the capital of the independent kingdom, since it was made the residence of the viceroys, entitled prince of Kosh, who governed the new Egyptian province. In the time of Rameses II there was an unsuccessful rebellion. Pianchi, who seems to have reigned in Napata since 777, availed himself of the weakness of Egypt at the end of the reign of Usarek III to make an invasion of Egypt. He defeated twenty petty rulers and forced a treaty. Shabaka, a grandson of Pianchi, united all Egypt with Ethiopia under one crown. Napata was destroyed by Cambyses in 524.

A new kingdom gradually arose in the fifth and fourth centuries, conquered considerable territory south of Meroe in Sennar and Kordofan, and possibly in Abyssinia. While the suzerainty of the Ptolemies seems to have been recognized for religious reasons, King Ergamenes, by putting to death the priests who had demanded that he should abdicate in the time of Ptolemy IV Philopator (221-204), paved the way for independence. Ptolemy V Epiphanes (204-181) was able to resist his attack upon Egypt, but not able to prevent his asserting of sovereignty in Ethiopia. Queen Candace seems to have extended her power in the north, and twenty-five provinces are said to have been tributary to her. But her invasion of Egypt was successfully resisted by Caius Petronius in B. C. 24. Napata, that had been rebuilt, was destroyed by the Romans. Another Queen Candace is mentioned in Acts viii. But gradually Meroe itself fell into ruins. To guard against invasion by the Blennyanas, a people akin to the Bugatae, the modern Beja, Diocletian moved the Nobatae, negro tribes of the same stock as the population of Kordofan, from the oases of Khargeh into the Nile valley.

The mountain region of Abyssinia was probably inhabited in very early times by Semites as well as Hamites. Whether the original home of the former was in Africa or in Arabia the overflow population would naturally set in the direction of this Alpine country. As the native name shows, the Semitic Ethiopians were still in the nomadic state when they entered this territory, priding themselves on being wanderers, roaming freely wherever they liked. There were evidently successive waves of immigration. If the Egyptian Ihet is of Semitic origin, as can scarcely be doubted, they were apparently kinsmen of the Yeminites in Eritrea and on the Somali coast c. 1500 B. C. Sebaean inscriptions found in Yeha, the ancient Awa, may be as old as the seventh century B. C.

As long as the Ptolemies dominate the Erythraean coast from Adulis, Berenice and Arsinoe, a strong Abyssinian kingdom could not well develop. But in the reign of Augustus, when the Romans suffered serious reverses in Arabia, and were occupied in Africa with Queen Candace, while the Arsacid conquests in eastern Arabia forced the Yeminites States to seek compensation for their losses elsewhere, the Semitic element in Ethiopia seems to have been reinforced, and the kingdom of Askum founded. The "Periplus maris Erythraei," probably written by Basiles of Askum, probably of 75, refers to a king of Askum by the name of Zoscales, who controlled the coast from Massawa to Bab el Mandeb, and was a friend of Greek culture. It is possible that some of the Greek coins with Greek legends that have been preserved should be assigned to the second

and third centuries A. D.

On a marble throne in Adulis, Cosmas Indicopleustes found and copied in the sixth century an inscription commemorating the power of a great king whose name is not given. He is supposed by some scholars to be the founder of the Askumite kingdom, but it is more probable that he reigned at the end of the third century A. D. King Aizana is known to have reigned in the year A. D. 356. In his time Frumentius preached Christianity in the country. The political relations that had long existed between Askum and Rome were such as to favor his mission. In 378 Askum was reduced to its African territory. In A. D. 525 Eusebius, king of Askum, with the aid of the Sabaeans and Hadramautians, made an end to the Himyarite kingdom of Dhu Nuwas, and Ethiopia again controlled Arabian territory. Before the end of the century, however, the Askumites were driven back to Africa, and never again extended their conquests to Arabia. According to a letter addressed to a king of Nubia in the time of the Patriarch Philotheus of Alexandria (980-1002), preserved in the four-

teenth century "Life of the Patriarchs" and in the "Ethiopic Synaxar," a woman who reigned over the Beni el Hamuna had recently invaded the country, burned the churches and monasteries, and driven him from place to place. Marianus Victor speaks of this woman as the founder of a ruler of the province of Bugna, a name afterwards corrupted into Beni el Zague. Eleven kings of the so-called Zague dynasty reigned until 1270.

The earliest monuments of Semitic speech in Ethiopia are the inscriptions found at Yeha. These are written in the consonantal Sabaeen script and indicate that the writers used the Iesna Gees, the language of Semitic Ethiopia, as early as the seventh century B. C. Gees is today represented by two dialects, Tigre and Tigrar or Tigrina. The latter is spoken in Tigre, and the former is spoken in the districts north and northwest of Tigre, and shows great similarity to the old Gees.

## SILOS OF REINFORCED HOLLOW CLAY BLOCKS

Have Proven Extremely Satisfactory and Present Pleasing Appearance of Solidity, Durability and Permanency.

The use of hollow clay building blocks properly reinforced for silo construction have proven extremely satisfactory in every particular, and after extensive and thorough investigation and the building and testing of numerous silos, the agricultural engineering department of the Iowa experiment station heartily recommend their use.

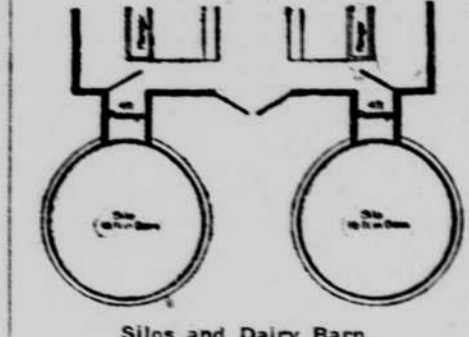
The fundamental principle involved in preservation of silage is the retention of moisture within the silage and

One common mistake met with in silo construction is that the door frame is made of material which will soon decay or rust and have to be replaced. The door frame of the Iowa silo is made of reinforced concrete, which, when properly constructed, should be as durable as the walls themselves.

The materials used in the Iowa silo will resist decaying disintegration, the action of frost, and any implied or real action of the acidity of the silage. Even the steel which is placed in the mortar joints and concrete door frame as reinforcement, is thoroughly protected from rust. So carefully has the matter of durability been considered in the design of the Iowa silo that it would be difficult to estimate its life. When carefully built it ought to last for several generations.

The doors of the Iowa silo are designed to be made of wood. They will decay and must be replaced after several years. The convenience and low cost of the wooden doors, which may be easily replaced, justifies their use.

The Iowa silo when properly constructed is practically free from any expense for repair and maintenance. The only possible expense may be the



Silos and Dairy Barn.

the exclusion of air. For this reason, the silo wall must be non-porous. Moisture must be prevented from passing out and air from passing in.

Hard burned hollow clay building blocks will not absorb a large amount of water. Moisture is not readily transferred through a wall of such material. It is recommended that only blocks which have a low absorption be used for silo construction. Blocks of this kind are more durable, and a silo built of them will preserve silage better.



Iowa Silo.

After due consideration to all other points of merit to be found in silos, the most desirable silo is the one that is the most durable and will give the longest term of service. The durability of a silo depends, first upon its strength, and second, the durability of the material used in its construction.

To be durable, any material must resist the action of the weather, the constant wetting and drying, freezing and thawing in the winter season, and any disintegrating action which may be due to the silage itself. Some material will disintegrate with age, and other materials suffer from rapid decay when subject to the warm, moist conditions which exist in the silo.

The walls of the Iowa silo are constructed of hollow, vitrified clay building blocks which, as far as weather



Form for Making Foundation.

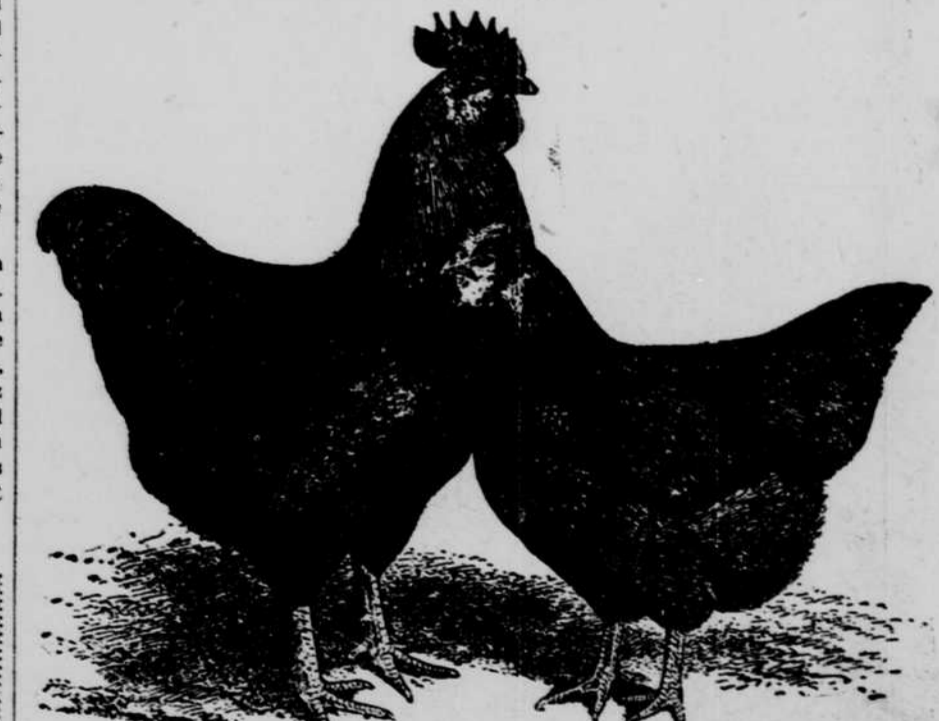
resistance is concerned, are as durable as any building material which can be obtained.

The roof of the Iowa silo, like the walls, is made of durable material. A cheaper roof may be used if desired, but it is strongly advised that the concrete roof be used where possible.

occasional washing of the inside of the silo at intervals of not less than five years, with a cement wash and the replacement of the doors after they have become rotten from use.

An ideal silo must have rigid walls. It must be strong enough to resist the bursting pressure of the silage. This acts outward in all directions as the silage settles. The friction of the silage against the wall, and the weight of the wall produce a crushing action which is great near the bottom of the silo. A silo when empty should be heavy enough to stand against heavy winds. The inside of a silo wall should be reasonably smooth to permit the silage to settle freely. If the wall is not smooth or if there are shoulders or offsets on the inside surface air pockets will be formed and a considerable loss of silage will result.

## SUSSEX BREEDS OF POULTRY



The Kent, Surrey and Sussex breeds of fowls in England occupy much the same relation to the industry of that country that the Rhode Island Reds did with us several years ago before the breed was perfected. In many respects they seem all closely allied to the Dorking, which at one time must have been the parent stock from which they have differentiated. There seem to be a disposition among British fanciers to improve the Sussex breed of fowls, of which there are four varieties. The Red and Brown,

Light and Speckled or Splashed. Of these the first seems to be growing in favor. In type, color of plumage and economic values it is not unlike our Rhode Island Reds. They are rated as good all-purpose birds, the hens laying a goodly number of medium-sized eggs; the chicks are hardy and easy to grow. Color qualifications for exhibition purposes are much the same as in the American Standard for Rhode Island Reds. The illustration is not without suggestiveness in form to our two popular American breeds.

**Eggs in Cold Storage.**  
A daily paper states that 45,000,000 eggs have been shipped into Newark, N. J., since April 1, and placed in cold storage by the warehousemen, to remain there until the high prices of last winter are duplicated. The eggs come from the western states. They were purchased at an average of 24 cents per dozen, says Kansas Farmer. Two cents per dozen is added to cover insurance, storage costs, etc., which brings the total cost to 26 cents a dozen. If the eggs can be retailed in New York next winter at 45 cents a dozen, which price they brought last winter, there will be a profit of 19 cents a dozen, or a total of something over \$700,000. When it is considered that this quantity is from but one of the large cities of the country the total amount of eggs in cold storage must be tremendous.

**Canadian Dairy Products.**  
According to testimony recently given before a committee of the Canadian parliament, the animal value of the milk and milk products of the

## Ways of Berlin Women

"I believe that the typical German hausfrau is a myth," said a New York woman who returned the other day from a year's residence in Germany. "I don't see how the average German woman finds any time to be a hausfrau. I sometimes wondered when the German woman found time to do anything at home."

"I spent eight months in Berlin with my daughter, who was studying music. From eleven to twelve in the morning the cafes were packed with German women, who go out to take their second breakfast in the public restaurants, a thing unknown in America."

"They take along their sewing or embroidery and sit an hour or two over their cup of coffee or glass of beer. At the concerts, too, they take their work and spend hours day after day listening to the music. You can spend an afternoon listening to beautiful music, a magnificent orchestra with fine vocal artists, for 16 cents. That is an illustration of some of the things that help to exile Americans."

"At three in the afternoon again you will see the cafe crowded with German women taking their afternoon tea. I think American women are more domestic than German, because I never heard of American women who left their homes in the evening to pass the

time at the club. A German friend took me one evening to the German women's club. The club has a magnificent suite of apartments, including auditorium, reading room, parlor, cafe and smoking room.

"When she took me into the last apartment it almost feazed me for a minute. It was blue with smoke. I had never before seen a room filled with elegantly gowned, cultivated women all smoking. These were the wealthy society women of Berlin, titled some of them."

"They were cosmopolitan in their dress and manners and did not present any striking points of difference from the American women except in the smoking. It made the occurrence of last summer, when our immigration officials detained a second class passenger, a woman art dealer, for inquiry into her sanity because she smoked cigarettes, appear very funny in retrospect."

"The German women's clubs, like those of the Englishwomen, are based on the same principle as men's clubs; these are places for social enjoyment and for the convenience of members in taking meals, entertaining friends and so on. They do not take up work in study, philanthropy, reform and so on, like the women's clubs in America."

**In the Home Atmosphere.**  
"I wonder why it is that men hate to see a woman cry?"  
"I suppose it is due to what you might call a matrimonial weather condition."  
"Weather condition?"  
"Yes, I could stand my wife's hot temper if it were not for the percentage of humidity it contains."  
**Mountain Air for Invalids.**  
Mountain air is inlaid for the use of invalids.

**Was Generous to a Fault**  
Story of Statesman Who Voted for Anything That Would Force Treasury to Pay.  
There are innumerable stories about Mr. Brownlow, who recently died, his manners and methods. His colleagues never the repeating his reply to the representative of an uplift magazine who was in Washington years ago interviewing members on the principles that actuated them in the performance of the public duties.  
"Mr. Brownlow," said this uplifter, "you have been in congress a good many years and are known as an organized, or machine, Republican. But have you no faith, no principle, no creed that guides your conduct outside of party lines?"  
"Young man," replied Mr. Brownlow in his rumbling voice, "I have the proud record of never having voted against any proposition to take money out of the federal treasury."  
The uplifter gasped, and Mr. Brownlow ambled on his way. His friends say his statement was almost literal at that.  
Ingratitude Mr. Brownlow considered the one inexcusable crime. He never was guilty of it himself. One day a man who had done a favor for Mr. Brownlow asked him to vote in committee for an increase in salary to an official in one of the government

departments. "Why, Mr. Brownlow," he said, "let me tell you something. This is the most meritorious case."  
Mr. Brownlow interrupted with a snort. "Do you want me to vote for an increase to this man?" he asked.  
"Indeed I do," said the friend.  
"Then," said Mr. Brownlow, "that's enough. Never mind about that meritorious business."  
Some people work for fame, and some work for money, and some get a job on a newspaper.

**Sheep on the Farm.**  
Every farm should keep a flock of sheep, for every farm has a place for sheep which nothing else can fill. The flock may be a small one. That depends on conditions; but the flock should be amply sufficient to supply the family with mutton.

**A Good Fleece.**  
Fleece should possess the properties of evenness and uniformity; this refers to covering density and quality. A good fleece should be as nearly uniform in all parts as practicable.