

# AMERICANS AT THE PYRAMIDS

HOW OUR GHOULISH ARCHAEOLOGISTS ARE  
UNEARTHING THE GRAVES OF FOUR  
THOUSAND YEARS AGO

(Copyright, 1907, by Frank G. Carpenter.)

CAIRO, 1907.—The most important archaeological work now going on in Egypt is in the hands of the Americans. Our scientists are making explorations in Nubia, away up the Nile, and they are opening up temples and tombs in the desert near Luxor. There is a rich Yankee, named Davis, who is carrying on a series of independent investigations not far from old Thebes. He has spent large sums and has discovered the tombs of several kings who reigned over 4,000 years ago. He recently unearthed the mummy of Queen Hatshepsut, which is now on view in the museum at Cairo, and he has made many other finds this past year.

Right here, under the shadow of the Pyramids, two American institutions have a large force of natives at work and have uncovered a cemetery of the time when the greatest of the Pyramids was built. This cemetery includes the tombs not only of the rich, but also of the poor, and the relics, statues and other things found in it enable one to reconstruct the lives of those who were buried here now more than 4,000 years ago.

## THE CEMETERY AT CHEOPS.

When I last visited Egypt, just after the assassination of Prest, Gardfield, the sands about the Pyramids were almost as smooth as those of the seashore. I walked on my donkey over them and had no idea that I was tramping down innumerable graves.

I walked over the same ground yesterday, picking my way in and out through a vast network of half-buried tombs, from which the sands had been shoveled, and climbed across piles of sun-dried brick which were made by the Egyptians at the time old King Cheops lived and reigned. In one place I saw a group of half-naked, brown-skinned fellows shoveling the earth into the cars in which it is carried far out in the desert, in order to unearth the tombs before. When the work is in full play an endless chain of cars of sand moves across this cemetery. There is a double track with turntables at each end, and the arrangements are such that the sand can be taken out at the rate of half a ton per minute. For a long time 72 men were employed, and the result is that some most interesting historical material has been collected. About one-half of this is now here in the museum at Cairo and the other half has gone to the Universities of California and Harvard.

## HARVARD COLLEGE AND BOSTON MUSEUM.

The excavations which are now being made near the great pyramid are in the interest of Harvard college and the Boston museum. The funds for the money and Dr. George Reisner, one of the most efficient archaeologists of the day, has charge of the work. Dr. Reisner came to Egypt about six years ago as the head of the Harvard expedition. He worked for it several years and made valuable explorations far up the Nile. He discovered there the flint-working camps of the people of the prehistoric period, and he explored quarries which date back to the time of the Ptolemies. He also unearthed the site of a large town which was in existence 1,500 years before Christ and excavated a mass of valuable material therefrom. He then came nearer Cairo

and there uncovered cemeteries of ancient times, which give us a new view of Egyptian civilization.

It was in connection with the Boston museum that he began his work at the pyramids, and, as it is now carried on, the museum gets all of the art discoveries, while Harvard receives everything found bearing upon history and ethnology. It should be said that one-half of all that is unearthed goes to the Egyptian government and the other half to the United States.

## UNCLE SAM'S SUCCESSFUL GAMBLE.

The story of the allotment of the archaeological territory about the pyramids is interesting. The government was anxious to have the country excavated, and there were three nations ready to do the work. These were Germany, Italy and the United States. Archaeologists representing each of these countries came here to see the pyramids and the valley of the Gizeh pyramid field was turned over to them with the understanding that Egypt was to have half of the discoveries.

Then the question came up as to how the field should be divided. As it was then, it was a great area of sand not far from the banks of the Nile with the big pyramid of Cheops and the smaller ones of Khafren and Mycerinus rising out of it, each being quite a distance apart from the others. Each nation wished to do independent work and the archaeologists finally agreed to divide the tract into three sections and cast lots for them. I am told that Mrs. Dr. Reisner held the straws. In the drawing the United States got the tract just north of the Great Pyramid and Germany and Italy those to the south of it. Our tract was thought to be the best of all and Uncle Sam's luck has been no better evidenced than right here. We are making more finds than both the other nations put together and are bringing new life to the pages of history.

## IN THE DESERT WITH AN AMERICAN EXCAVATOR.

I went out to the pyramids today and called upon the chief of the American excavation works. Dr. Reisner has built him a home under the shadow of old Cheops. He is beyond the greatest of the pyramids, with the sands reaching for miles away on the north, south and west of him. His house is built of stones which probably came from the pyramids. It is a long, one-story structure, not over 12 feet in height, but large enough to contain a laboratory, a photographic establishment and the necessary instruments of an archaeologist.

One part of it is the living quarters of Dr. Reisner and his family. He has his wife and baby with him, and as we chatted together his little daughter, a bright-eyed infant not more than a year or so old, played about our feet. The baby was born here on the edge of the Libyan desert, and her youth and the age of old Cheops, that great tomb of more than 4,000 years ago, were striking in contrast. As I looked over the little one I thought of the tombs of the babies of more than 40 centuries ago which her father is now excavating. During my stay we examined some photographs of Dr. Reisner's discoveries. One represented three statues of a well-to-do couple who lived here in those bygone ages. It was Tuti and his wife. The faces were life-like and I doubt not Mr. and Mrs. Tuti sat for these.

There were other photographs of objects found in the cemetery of the rich, and also some found in the cemetery of the poor. The higher classes of that time were buried nearer the pyramid, and beyond them, farther up the desert,

The Great Cemetery of Cheops and His Subjects and What Has Been Found in Them—The Paupers' Field and the Tombs of the Rich—Discoveries Made for Harvard College and the Boston Museum—To the Pyramids by Trolley—How Cheops Looks From the Top—It Has Been a Quarry for Ages, But Still Has Enough Rock to Flag a Pavement Around the Globe—A Look Into the Interior And a Suggestion as to Opening Up the Remainder By Diamond Drills.



RICH MAN'S CEMETERY NOW BEING EXCAVATED BY AMERICANS.

Photographed for the "News" by Frank G. Carpenter.

were the burial places of the poor. The latter are, I believe, the only graves of the time which have been found. Each poor person had a little coffin-like hole in the ground built round with stones. These holes were close together, making, as it were, a great series of stone boxes, reminding one of the compartments for eggs in a packing case.

## TO THE PYRAMIDS BY TROLLEY.

This is the third time that I have made lengthy visits to the Pyramids of Egypt. In 1882 I rode to them on a donkey. In 1889 I came out from Cairo in a comfortable carriage, and today I passed over the same route on an electric trolley, paying 72 cents for the trip. The street cars to the pyramids begin at the end of the bridge, opposite Cairo, and go along the side of a wide avenue, which is shaded by acacia trees. The cars are open and one can look out over the Nile valley as he goes. The tracks run along one of the main roads and we whizzed by caravans of donkeys, loaded with all sorts of farm products, and by camels, ridden by gowled men, who bobbed up and down in the saddle as they went. There were men, women and children on foot, and veiled women on donkeys.

The cars were filled with Egyptians. Two dark-faced men in black gowns and white turbans sat on the seat beside me. In front was a yellow-

skinned Arab dandy in a red fez cap and long gown, and just behind me sat a woman with a black veil fastened to her headpiece by a brass spool. As we neared the pyramids we stopped at a cafe where they sold American drinks, and a little further on was a great hotel, containing a telephone, electric lights and all modern improvements.

## FROM THE TOP OF CHEOPS.

I took a donkey for my ride to the great Pyramid of Cheops, and went clear around it, climbing up the stones here and there to see how it was made. I have gone to the top and made notes of the desert as it stretches out for miles on three sides, and also of the valley of the Nile, which with its teeming millions is in view not far away. The top of the Pyramid is about 30 feet square. It is as big as a good-sized parlor and is one of the most interesting roof gardens known to man. As I sat there, I could see the work going on in the sands below me, and I repeated with the men now being dug up under the superintendence of our American friends. As I sat there, I could see them dragging the great blocks over the road of polished stone, and loading the wagons for the purpose, and observe the sweat rolling down their dusty faces under this blazing sun of Egypt as, under the lashes of their taskmasters, the great

pile grew. There was an army of them. One hundred thousand men worked three months of every year for more than twenty years on this construction, and Herodotus says that the onions, garlic and radishes which the laborers ate cost \$1,750,000. If that was the price of relishes, what must the real food have cost? How much must have been spent on clothing and how much on tools?

## MILLIONS OF STONE BLOCKS.

The Great Pyramid was composed of 2,300,000 separate blocks of stone. It covered 12 acres and still contains more than 2,000,000 cubic yards of solid masonry, taking out the chambers within it. Its perpendicular height is now just above that of a 45-story flat, allowing 10 feet to each story. It is within 100 feet of the height of the Washington monument, provided you do not count the aluminum tip of the latter. The stones of which the pyramid is built are of different sizes. Some are as big as a flat-topped office desk and some are so high that you require two men to pull you upward as you climb from terrace to terrace. I am told that old Cheops weighs something like five million tons; so much that if the blocks were torn apart and loaded on wagons it would take something like ten million horses, or more than half of all the horses in the United States, to drag it off to the sea.

For such an undertaking the stones would have to be broken to pieces. There are few of them which do not weigh at least 20 tons and some of the large blocks which cover the king's chamber inside the structure weigh 60 tons. As measured in climbing up it there are about 20 courses and the blocks vary in height from two to five feet. It is estimated that the Great Pyramid contains, all told, almost ninety million cubic feet of limestone. This is so high that if it could be split into flags, four inches thick, it would furnish enough to make a pavement two feet wide reaching over sea and land clear around the globe.

## A QUARRY FOR AGES.

When Cheops completed this great structure he coated the outside with limestone and granite slabs. The sides were as smooth as glass; they met in a point at the top and the length of each side was 18 feet longer than it is now. The pyramid was a great deal higher and the bright sun played upon its polished surface it must have formed a magnificent sight. The outside coating has been long since torn away. Throughout the ages the people of the Nile valley have been getting their building stone from it. Many of the mosques of Cairo contain pieces of old Cheops and it has been the quarry of this part of the world for generation after generation these thousands of years.

As it is today when one views it from afar, the Great Pyramid still looks like a smooth block of stone. It is only when he comes closer that one sees that it is made of many blocks, and only when he stands beside it or attempts to climb it that he appreciates the enormous size of these blocks. The pyramid is built of yellow limestone and conglomerate. The stones are piled one on the other in regular layers. There is no cement between them, but they are chinked with a rough mortar which has withstood the weather for more than 4,000 years. I dug at some of this mortar with my knife, but could not loosen it, and went from block to block along the great structure on the side, facing the western desert, finding the mortar everywhere solid.

## NOT SO OLD AFTER ALL.

And this great structure was built over 4,000 years ago. It seems a long time, but when you figure out how many lives it means it is not so old after all. Every one of us knows 100 men who have reached 40 years. Their aggregate lives, if patched together, would go back to the beginning of this structure. In other words, if a man at 40 should have a child and that child should live to be 40 and then have a child, and the program of life should continue, it would take only 100 such generations to reach to the days when the breath from the garlic and onions eaten by those 100,000 men polluted this desert air.

Indeed, the world is not old, and it is not hard to realize that those people of the past had the same troubles, the same worries and the same tastes as we. I can take you through tombs not far from Cairo upon whose walls are painted the life work of the men of ancient Egypt. You may see them using the same farm tools that the farmers use now. They plow, they reap and they thresh. They drink wine and gorge themselves with food. In one of the tombs I saw the picture of a woman milking a cow while her daughter held the calf back by the knees to prevent it from sucking. In another painting I saw the method of cooking, and in another observed those old Egyptians stuffing live geese with food to enlarge their livers. They wore making pate de foie gras, just as the Germans stuff geese for the same purpose today.

Leaving the Pyramid of Cheops I

crossed over and took a look at the other two which form the rest of the great trio at Gizeh, and I have since been up to the site of old Memphis, where are the Pyramids of Sakara, 11 in number. Along this plateau, running up the Nile, are to be found the remains of a large number of pyramids. There are also some of the Pyramids of the Sudd, and others far up the Nile in ancient Ethiopia. The latter are taller in proportion to their base than the Egyptian pyramids, and they generally have a hall with sculptures facing the east to commemorate the dead.

The most of the stones of these pyramids here came from the plateau upon which they stand and from the Mokot, an old river, about 12 miles away on the other side of the Nile. There was an inclined plane leading to the river, and the rails in the stone road cut out by the hands of the slaves, carrying these great blocks are still to be seen. There are pictures on some of the monuments which show how the stones were drawn on sledges by oxen and men, and in one of the pictures a man is pouring oil on the roadbed. On the Island of Madeira, where the natives drag sleds by hand up and down the hills, they grease the Romans and the Arabs all tried to dig into them to find the valuables they were supposed to hold.

## INSIDE THE PYRAMIDS.

I was much interested in the interior of the Great Pyramid. The mighty structure is supposed to be solid, with the exception of three chambers, connected with the outside by passages, ways and ventilated by shafts. These chambers undoubtedly once contained great treasures of gold and silver, but they were robbed in the first instance by the Persians, the Romans and the Arabs all tried to dig into them to find the valuables they were supposed to hold.

It was with three half-naked Bedouins that I climbed up to the entrance which leads into old Cheops. There is a hole about 45 feet above the desert on the north side. Going in here, we came into a narrow stone passage, low that I had to crawl on my hands and knees. The passage first sloped downward and then up, and finally, pushed and pulled by my black guides, I got into a great narrow hall and after passing through it into the room where old Cheops, the king, rested undisturbed for a thousand years or so before the looters came. I had some matches and a piece of magnesium wire and by this means I was able to examine the interior. The masonry is wonderfully fine. The places where the stones are joined are almost imperceptible and you cannot put a knife blade between the cracks. The only thing left in this room is the great granite sarcophagus of King Cheops and the cover to it has disappeared.

By going back through the hall one reaches another passageway which slopes downward to the queen's chamber, which is much smaller than that of the king. Down below this, reached by another passage connecting with that which I first entered, there is a subterranean chamber which lies under the base of the pyramid itself. The whole structure is intensely interesting and if it could be explored by diamond drills or in some other way, other chambers might possibly be found in the parts now looked upon as solid.

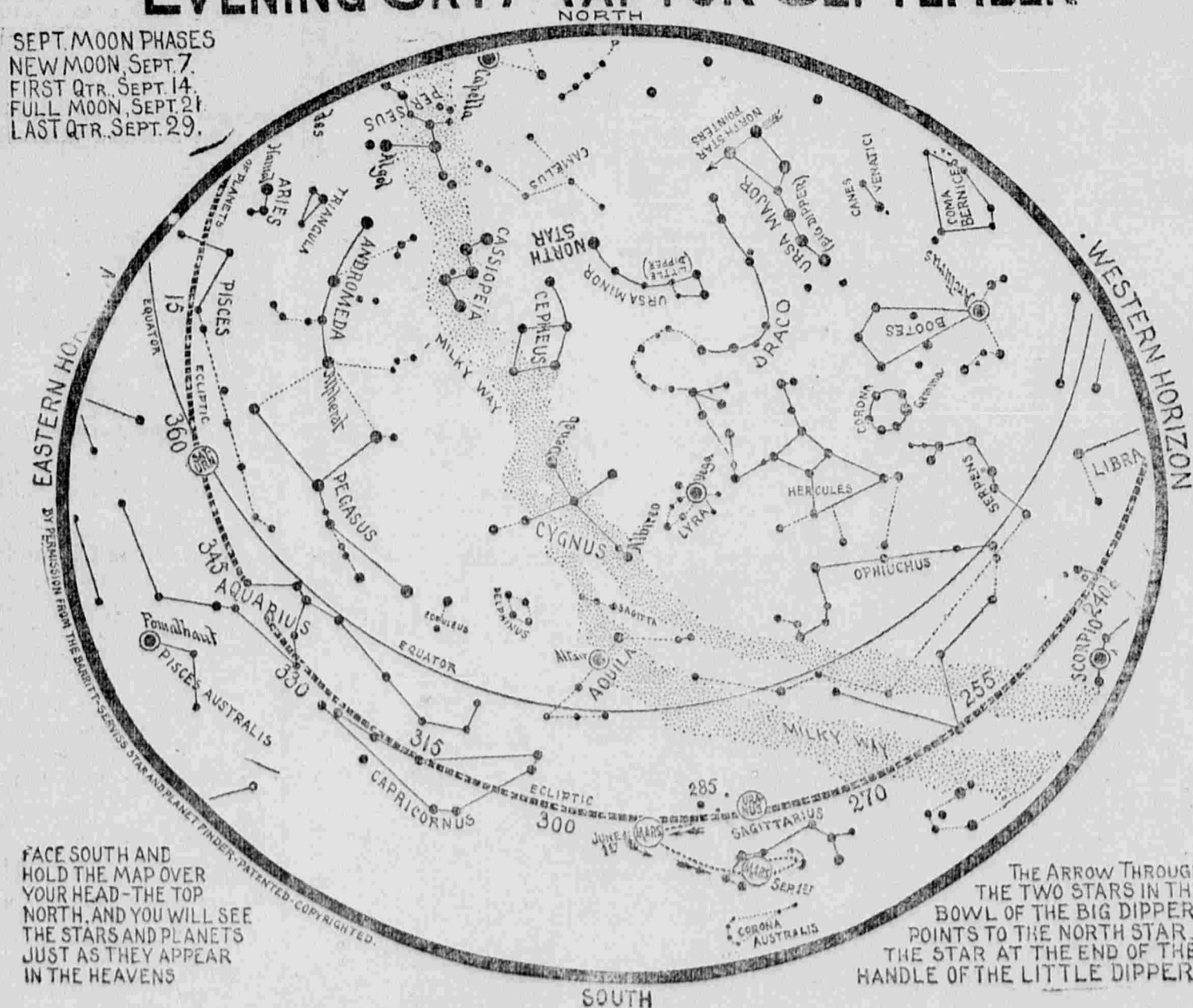
FRANK G. CARPENTER.

## WARNING.

If you have kidney and bladder trouble and do not use Foley's Kidney Cure, you will have only yourself to blame for results, as it positively cures all forms of kidney and bladder diseases. For sale by F. J. Hill Drug Co., "The never fails" cure.

# EVENING SKY MAP FOR SEPTEMBER

SEPT. MOON PHASES  
NEW MOON, SEPT. 7  
FIRST QTR., SEPT. 14  
FULL MOON, SEPT. 21  
LAST QTR., SEPT. 29.



FACE SOUTH AND  
HOLD THE MAP OVER  
YOUR HEAD—THE TOP  
NORTH, AND YOU WILL SEE  
THE STARS AND PLANETS  
JUST AS THEY APPEAR  
IN THE HEAVENS

THE ARROW THROUGH  
THE TWO STARS IN THE  
BOWL OF THE BIG DIPPER  
POINTS TO THE NORTH STAR—  
THE STAR AT THE END OF THE  
HANDLE OF THE LITTLE DIPPER.

THOSE who wish to see the planet Mars under the best conditions for observation in September will do well to begin as soon as the sky darkens after sunset, for the planet crosses the meridian near 8 o'clock and after that begins to decline into the mists of the horizon. In the chart, which represents the heavens as they appear about 9 o'clock in the middle of the month, Mars is seen far west of the meridian and low down on account of his great southern declination. Since the opening days of August Mars has ceased to retrograde, and is now once more traveling eastward in the sky. This tends to prolong his period of visibility in the evening, but he is so far west that he is no longer as conspicuous to the eye as he was in July. At the same time being now two months past opposition to the sun he is beginning perceptibly to increase his distance from the earth. His apparent diameter, which was nearly 23 seconds of arc early in July, is now only about 16 or 17 seconds. A telescope

magnifying 100 times gives him an apparent diameter of something less than half a degree, not quite as great as the diameter of the moon to the naked eye. At the same time the phenomena visible on his surface are increasing in interest for telescopic observers, because summer is advancing in his southern hemisphere, which is the hemisphere at present presented toward the earth. The sun crossed the equator of Mars into his southern hemisphere on June 3, and the summer solstice for that hemisphere will arrive on Oct. 28. It is after the summer solstice that the mysterious canals make their appearance in the greatest number and most distinctly, the supposed reason being, as already explained in preceding articles, that the melting of the south polar snows furnishes water to nourish the vegetation growing in the canal beds. The south polar snow cap is rapidly diminishing in extent.

The Planet Saturn, in the western part of Pisces, about 8 o'clock on the first of September, and in the chart is shown well up east below the "Great Square" in the constellation Pegasus. Saturn this year lacks the pleasure for the possessor of a small telescope to follow the course of the Milky Way throughout its whole visible extent, using the lowest magnifying powers with which the glass is

equipped. A power of 25 diameters on this star, which may be seen in the sky upon clouds of glittering stars so small and so innumerable that they resemble a diamond dust strewn upon a black background. Here and there the Milky Way gathers in knots and spirals which are wonderful to look upon.

The Milky Way may serve us on this occasion as a sort of highway dividing the visible constellations into two great fields. In the Milky Way itself, beginning at the southern horizon, lie Scorpio and a part of Sagittarius, Aquarius, Cygnus, a part of Cepheus, Cassiopeia and Perseus, the last named constellation being close to the northern horizon, with Capella, the chief star in Auriga glittering to the left of it. On the northwestern side of the great "road of the gods" as the Milky Way has been called, are grouped the constellations Lyra, Ophiuchus and Serpens, Hercules, Corona, Bootes, Draco, Ursa Minor and Ursa Major. On the southeastern side we find Delphinus, Pegasus, Capricornus, Aquarius, Pisces, Austris, Ursa Major, and Auriga. Five stars usually ranked as the first magnitude are visible, namely, Arcturus in Bootes, now low in the west; Vega in



NEW YORK'S NEW POSTMASTER.

Edward M. Morgan, just made by President Roosevelt postmaster of New York city, has been in the postal service for 24 years. Born in Marshall, Mich., in 1855, he became a letter carrier before he was 16 years old, working in New York city. He was steadily advanced and in 1899 became general superintendent of city delivery. When he entered the service New York had 400 carriers and 500 clerks; it now has 2,000 carriers and 4,000 clerks. His appointment was recommended by former Postmaster Willcox and heartily endorsed by Postmaster General George von L. Meyer.

ing the apparent path of the sun through the heavens the reader will notice that after passing the autumnal equinox his course will be constantly below or south of the equator, until he returns into the northern hemisphere after six months at the crossing point on the opposite side of the chart known as the vernal equinox. When the sun is at either of the two equinoxes day and night are of equal length all over the world. As he descends south of the equator the night begins to exceed the day in length in the northern hemisphere.

## DON'T BE BLUE.

And lose all interest when help is with- reach. Herbie will make that liver perform its duties properly. J. B. Vaughn, Elba, Ala., writes: "Being a constant sufferer from indigestion, I have found Herbie to be the best medicine for these troubles, and I have used it with the best results. I believe it to be the best medicine of its kind, and I wish all sufferers from these troubles to know the good Herbie has done me." For sale by M. D. Druggists, 112 and 114 South Main Street, N. J.

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