

SCIENCE AND INVENTION.

Work of the World's Busy Brains in Discovering, Inventing and Creating.

Inventors are still working at the fascinating problem of converting the heat of the sun into motive power, and a Pennsylvanian believes that he has successfully surmounted it. By his plan a box 60 feet long and 18 feet wide, made of planks, is placed in the ground. In it are laid coils of iron pipe painted black. The box is covered by two layers of ordinary glass, with a one-inch air space between them. The pipes are bolted to the heat of the sun sets to boiling to run an engine to pump water. After it has done its work in the cylinder the ether is condensed and used over again. A machine of this kind has been constructed, which works under a pressure of 120 pounds and pumps water from an artesian well. As the sun shines only eight hours a day and some days are cloudy, the inventor proposes to use the power while the sun is shining to liquefy air for running an automobile and other power purposes.

Gen. William Crozier, Chief of Ordnance, says that the life of the 12-inch gun under ordinary service conditions is but 60 rounds. Therefore, most of the guns now mounted on our fortifications would not live thru an engagement with a foreign fleet. He proposes to reduce the velocity of the 12-inch projectile to 2,250 feet a second, which would increase the life of the gun to 200 rounds. To do so would, however, greatly reduce the penetrating power of the projectile. The Ordnance Bureau has designed a 14-inch gun which will fire a 1,600-pound shot with a velocity of 2,100 feet a second. The 14-inch gun will have less initial energy than the 12-inch gun, but will last thru 240 rounds, or six and a half hours of continuous firing. It will cost about \$100 more to fire a shot from the 14-inch gun, without counting the deterioration of the gun.

A most important invention has recently developed in a method for brazing cast iron. Steel has been successfully brazed for years, but it is only recently that it has been discovered how to braze cast iron and this it is expected will be of the greatest importance in repairing automobile cylinders, broken typewriter frames, heavy axes and castings of all kinds. It is claimed that by a broken cylinder can be made as good as new for about \$5, whereas a new cylinder would cost \$20.

An enemy to beauty naps has appeared in the invention of a new alarm clock which has a noise producer on the same principle as the sounding disk of a telephone, and the only relief possible is to stuff a pillow in it and drown the noise. In addition, it has a disk against which a hammer strikes, producing a sound like a smith on his anvil.

In a new 10-story concrete building in Los Angeles are the longest reinforced concrete arches in the world. They have a span of 114 feet. The whole building, with its walls, floors, pillars, etc., is cast of concrete, and there is an overhanging gallery 26 feet wide.

A GERMAN UMBRELLA. It Leaves the Hands Free for Other Purposes.

In many parts of Germany, in the fields and along the roads, a new design in sunshades and umbrellas which fasten to the shoulders is being used. Especially adapted for people who must have their hands free while working or seeking pleasure in the hot sun or on



rainy days, the device has gained an almost instant popularity. The frame consists of a number of steel rods, hinged and jointed together, over which a square piece of cloth is stretched. This takes the form of a roof, open in front and rear. The device is fastened underneath the shoulder by means of straps and rubber bands. When not in use it can be folded into a neat, compact package.

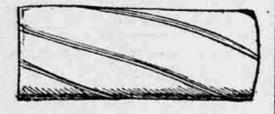
"THE HYDROCURVE." Novel Boat From Which Wonderful Things Are Expected.

A yachtsman at Pearl, Ill., has developed a unique and quite wonderful boat which in the first test made 35 miles an hour and in a later test approximately 45 miles an hour. He calls it the hydrocurve, and instead of plowing thru the water and displacing it to each side of the boat, displaces it from the surface downward, moving each pound of water in one direction only. The bottom is concave, both lengthwise and crosswise, and is wider and of least

draft at the bow, narrowing gradually to an apex at the stern, where it is of greatest draft. The sides of the hull are slightly convex, lengthwise and laterally. By this design every particle of water is set in motion gradually,

whereas with the prevailing type of boat the water is handled fastest at the point of its first contact with the hull. The boat which made this wonderful speed is 40 feet long, and is driven by an 80-horsepower engine.

Rifled Pipe Line for Oil. A singular discovery has been made that a pipe line for oil will deliver its product much more rapidly if it is lined with a gun. The Southern Pacific Railway Company is now expending between \$4,000,000 and \$5,000,000 in laying rifled pipe lines for conveying crude oil from Oil City to Fort Collins, Cal., a distance of 285 miles. Before the adoption of the rifled pipe various experiments were tried, all of which failed to beat the result. This helped its delivery for short distances, but on longer ones the oils cooled and became sluggish. It was also tried to pump water along with the oil, but it was found that the proportion of water was so high and the resulting emulsion of water and oil so difficult to separate that the plan did not pay. Next, it was tried to mix lighter oil with the heavy viscous product which has an asphalt base. The expense of pumping light



oil long distances from the other fields made this a failure. Now there has been adopted a rifled pipe line eight inches in diameter, with pumping stations only 1 1/2 miles apart. Water is introduced at the pumping stations, and the effect of the rifling is to produce a whirling motion of the liquid, which throws the water to the outer side to form a film enveloping the oil and reducing frictional resistance. The pipe is an eight-inch steel tube, tested to 100 pounds pressure per square inch, and rifled hot by rolling machinery. A complete turn is made in only 10 feet. The discharging pipes are automatically adjusted so that the delivery of oil is at a plane marking the division between it and the water, thus making the division of the two fluids easier.

THE TARANTULA. The Great Spider Not Nearly So Deadly as Represented.

Scientists are now taking up the defense of the tarantula against the slanderous accusations as to its extreme deadliness. The customary stories of old miners and prospectors about shaking the tarantula from the crevices of their blankets and boots are laughed at. While a tarantula's bite makes a painful wound, it is not dangerous, and never, so far as accurate records testify, fatal. It belongs to the family of large tar spiders, and has large, hard, polished fangs which strike down vertically to pin down its prey. The length of the tarantula is from 1 1/2 to 2 inches, with an extent of legs of four inches. They are mouse-colored above, with white sides with white dots and lines on the abdomen. Below they are blackish, with legs whitish and tipped with black.

The tarantula is quiet so long that it does not attract much food, and one good-sized insect serves it for nearly a week, according to C. E. Hutchinson. The male spiders fight most interesting battles, carrying with their leady weapons with the skill of fencers. The duel is always to the death, and the victor does not release his hold until he is sure of the death of his antagonist. The poison does its work in from 10 to 20 minutes. Each male has a flock of about seven or eight females, which live in burrows that other animals have made. These they line with silk for the reception of the young, and there they hibernate during the winter. Between 200 and 300 eggs are produced by each female, and each egg is enclosed in a silk bag, sufficiently large to allow it to turn freely. This bag is so closely woven that the insect does not breathe. Only two or three out of every hundred tarantulas arrive at maturity, and reach the allotted age of 25 or 30 years. The tarantula requires about 20 years in Midsummer of every year. The great mortality of the tarantulas is largely due to a large and conspicuous wasp, which attacks them when they are less than two inches long, with head, thorax, abdomen and long, spiny legs black and wings of reddish brown. It seeks out the tarantula, stings it, deposits an egg in the wound and then buries the spider in a hole about five inches deep after the manner of the digger wasps.

Science Notes. The French Government has adopted a method of treating road surfaces with roads with hot coal tar thinned with about 10 per cent of oil. The cost is said to work out at about four-tenths of a penny per square yard. The truckage of electric railways in the United States is 40,000 miles, as compared with 225,000 of single track of steam railways.

There are 25,000 gasoline motor boats, large and small, on the lakes and streams of the United States. Many of these are river frontiers.

Free Deafness Cure. A remarkable offer made by one of the leading eye specialists in this country. Dr. Brannaman offers to apply at once two to four months' medicine to prove his ability to cure permanently Deafness, Head Noises, and Catarrh in every stage. Address Dr. G. M. Brannaman, 1287 Walnut St., Kansas City, Mo.

WORK AND MORE WORK. (Continued from page one.) who by no means lacks natural shrewdness, cannot easily be convinced that a cross made by another man on a piece of paper, in even the drawing of which he has himself taken no part, is his act in any binding sense. But it is easy to see, in every gathering where Indians are called upon to impress their thumb prints opposite their written names, that they understand that here is something which commits them, and that there is no escape from the effect of a mark actually made by them and capable of comparison with marks similarly made at a later date. An eminent jurist once said of the oath administered in law courts to litigants and witnesses, that it is not designed so much to call the attention of the Deity to the act of his creature as it is to call the attention of the creature to the fact that there is a Deity who will judge him. So with the thumb print, the mere possibility of its use as a means of identification by officers of the Government in disputed cases is not more important after all, than the reminder it conveys to the Indian that he is taking upon himself certain obligations which he can not lightly throw off.

To Inspector McLaughlin belongs the credit of having made the first experiments with thumb-print signatures, says the Commissioner. He was selected for that purpose because of his knowledge of the Indian character and the assurance that he would impress the solemnity of such attestations upon the Indians in a dignified way. Now that he has demonstrated the wisdom of the idea, the Commissioner hopes to have other inspecting officers extend its application till it becomes substantially universal, and that the thousands of Indians who can read and write become equal to the corresponding proportion among our white population. Employment has been secured for Indians on ranches, farms and railroads and at any other occupation for which they were qualified. Such steady employment as wage-earners and conductors of the railroads, and the reservation not only bring to the Indians money returns for their labor, but also develop self-reliance and a capacity for looking after their own affairs and family interests. It is considered a wise policy to exercise no direct supervision over Indians who can manage their own affairs and find employment for themselves, even if some times less favorable results are obtained, for the best thing for them is to pick up experience as independent workers and thus acquire the habit of initiative, and the demand for Indian laborers has far exceeded the supply.

Where Indians Work. The work of controlling the inflow of the Colorado River to the Salton Sea was undertaken in July, 1905, with Mexican and other labor but by the 1st of August the company was glad to make arrangements to employ Indian labor, as in that climate no other certain supply could be depended upon. This work continued through the year and furnished employment to not less than 1,100 Indians, mostly Pimas and Papagos. Their average pay is \$1.24 per day of ten hours for ordinary labor, and \$2, or even \$2.25, for those showing any skill. Their commensurate deductions were small, as they received their wages in weekly checks and usually paid cash for whatever they bought. The Indians had their families with them, could board themselves at a low cost, and were free to accept of both ways for themselves and families, and suffered no hospital deductions. From August, 1906, through May, 1907, their gross earnings amounted to \$115,784.44, and after deducting the small commissary charges, etc., the net remainder was \$107,404.54. In October, as the work at the Salton Sea intake apparently need no continuation, work was found for the Indians on the Government dam at Yuma. But a break in the Salton Sea levee again created an urgent demand for available Indian laborers, and, as the wages there were better and the general conditions more satisfactory, the Indians preferred to remain at the dam, only about 100 went to work at the Government dam. Their gross earnings from October 27 to December 26 amounted to \$3,325. Their work, as a rule, was satisfactory, and the wages were wanted than could be furnished.

From 50 to 125 Indians also worked about four months as laborers and teamsters on the Colorado River at Yuma, receiving \$1.75 and \$2 a day. On the Roosevelt dam north of Phoenix, Ariz., Indians have been constantly engaged in road work under an Indian foreman and a few have been employed as mechanics and on the cement work. The number has averaged 60, and the wages have ranged from \$1.90 to \$2.50 a day. On the St. Mary's Canal on the Blackfoot Reservation in Montana from 100 to 225 Indians worked with their axes for several months. They were paid \$1.25 and \$2 a day as men laborers and \$3.50 and \$5 a day for men and team. Companies of Indians, mainly Hopis, Mohaves, Navahos, and Puchios, were kept at work on the Santa Fe Railroad until Feb. 12, when their services were discontinued on account of retrenchment by the railroad company. They were employed mostly in gangs, doing repair work and ballasting on the lines near Albuquerque. From April, 1905, through February, 1907, their gross earnings were \$25,101.61, of which they saved more than 72 per cent.

Farmers, Too. In the best fields 404 Indians were employed last year during the thinning season and 62 during the Fall harvesting. For the thinning season this year 1,000 were employed, 493 being schoolboys and 507 coming from the Hopi, Navaho, Pueblo, and Apache reservations. Their gross earnings amounted to \$23,000, from which \$6,000 was paid for board and clothing, and \$5,000 for board and clothing, and advances in cash, and the remaining \$12,000 was paid to the Indians in money when they were discharged and sent to the school superintendent. The most part of the work was done in Rocky Ford, Colo., this season being very satisfactory both to the Indians and the best growers, the Indians being well pleased with their earnings and their treatment. The sheep industry of the Southwest also has afforded employment to many Indians. They are considered by sheep growers desirable herd boys, and their wages have doubled in the last two years, being now about \$30 per month and board. Lumbering offers much employment for the Indians, and the growing cantaloupe industry around Mesa, Ariz., are this year making large use of Indian labor. Mr. Dagenet reports that in the Southwest generally work for the Indians is plentiful, wages are high, and the outlook is encouraging. On the Rosebud Reservation in South Dakota, an experiment in furnishing employment to girls and women is being made. Girls who return home after attendance at either reservation or nonreservation schools, find little occupation for minds or hands unless they drift back into the old life or marry Indians who have ambition and enterprise. On the Rosebud Reservation, arrangements have been made to employ educated girls as assistants in the schools of the day schools, and for that purpose the expenditure of \$3,000 has been authorized. This will help some of the girls over the roughest part of the in-

WORK AND MORE WORK.

(Continued from page one.)

evitable readjustment which comes when they exchange school life for Indian home surroundings.

To Find Employment for Women. Furthermore, on the recommendation of the agent, an attempt is being made whereby Indian women of the Rosebud Reservation can be employed under proper management to manufacture garments of various kinds, to be sold to traders and others. He has been allowed \$2,000 with which to make the venture, and he believes that the enterprise will eventually become self-supporting. This work was so recently begun, however, that the Commissioner cannot yet consider results.

Commissioner Leupp is "for" the present system of education for Indians. He considers it wasteful, illogical, and that it is not designed so much to call the attention of the Deity to the act of his creature as it is to call the attention of the creature to the fact that there is a Deity who will judge him. So with the thumb print, the mere possibility of its use as a means of identification by officers of the Government in disputed cases is not more important after all, than the reminder it conveys to the Indian that he is taking upon himself certain obligations which he can not lightly throw off.

To Inspector McLaughlin belongs the credit of having made the first experiments with thumb-print signatures, says the Commissioner. He was selected for that purpose because of his knowledge of the Indian character and the assurance that he would impress the solemnity of such attestations upon the Indians in a dignified way. Now that he has demonstrated the wisdom of the idea, the Commissioner hopes to have other inspecting officers extend its application till it becomes substantially universal, and that the thousands of Indians who can read and write become equal to the corresponding proportion among our white population. Employment has been secured for Indians on ranches, farms and railroads and at any other occupation for which they were qualified. Such steady employment as wage-earners and conductors of the railroads, and the reservation not only bring to the Indians money returns for their labor, but also develop self-reliance and a capacity for looking after their own affairs and family interests. It is considered a wise policy to exercise no direct supervision over Indians who can manage their own affairs and find employment for themselves, even if some times less favorable results are obtained, for the best thing for them is to pick up experience as independent workers and thus acquire the habit of initiative, and the demand for Indian laborers has far exceeded the supply.

Where Indians Work. The work of controlling the inflow of the Colorado River to the Salton Sea was undertaken in July, 1905, with Mexican and other labor but by the 1st of August the company was glad to make arrangements to employ Indian labor, as in that climate no other certain supply could be depended upon. This work continued through the year and furnished employment to not less than 1,100 Indians, mostly Pimas and Papagos. Their average pay is \$1.24 per day of ten hours for ordinary labor, and \$2, or even \$2.25, for those showing any skill. Their commensurate deductions were small, as they received their wages in weekly checks and usually paid cash for whatever they bought. The Indians had their families with them, could board themselves at a low cost, and were free to accept of both ways for themselves and families, and suffered no hospital deductions. From August, 1906, through May, 1907, their gross earnings amounted to \$115,784.44, and after deducting the small commissary charges, etc., the net remainder was \$107,404.54. In October, as the work at the Salton Sea intake apparently need no continuation, work was found for the Indians on the Government dam at Yuma. But a break in the Salton Sea levee again created an urgent demand for available Indian laborers, and, as the wages there were better and the general conditions more satisfactory, the Indians preferred to remain at the dam, only about 100 went to work at the Government dam. Their gross earnings from October 27 to December 26 amounted to \$3,325. Their work, as a rule, was satisfactory, and the wages were wanted than could be furnished.

From 50 to 125 Indians also worked about four months as laborers and teamsters on the Colorado River at Yuma, receiving \$1.75 and \$2 a day. On the Roosevelt dam north of Phoenix, Ariz., Indians have been constantly engaged in road work under an Indian foreman and a few have been employed as mechanics and on the cement work. The number has averaged 60, and the wages have ranged from \$1.90 to \$2.50 a day. On the St. Mary's Canal on the Blackfoot Reservation in Montana from 100 to 225 Indians worked with their axes for several months. They were paid \$1.25 and \$2 a day as men laborers and \$3.50 and \$5 a day for men and team.

Companies of Indians, mainly Hopis, Mohaves, Navahos, and Puchios, were kept at work on the Santa Fe Railroad until Feb. 12, when their services were discontinued on account of retrenchment by the railroad company. They were employed mostly in gangs, doing repair work and ballasting on the lines near Albuquerque. From April, 1905, through February, 1907, their gross earnings were \$25,101.61, of which they saved more than 72 per cent.

Farmers, Too. In the best fields 404 Indians were employed last year during the thinning season and 62 during the Fall harvesting. For the thinning season this year 1,000 were employed, 493 being schoolboys and 507 coming from the Hopi, Navaho, Pueblo, and Apache reservations. Their gross earnings amounted to \$23,000, from which \$6,000 was paid for board and clothing, and \$5,000 for board and clothing, and advances in cash, and the remaining \$12,000 was paid to the Indians in money when they were discharged and sent to the school superintendent. The most part of the work was done in Rocky Ford, Colo., this season being very satisfactory both to the Indians and the best growers, the Indians being well pleased with their earnings and their treatment. The sheep industry of the Southwest also has afforded employment to many Indians. They are considered by sheep growers desirable herd boys, and their wages have doubled in the last two years, being now about \$30 per month and board. Lumbering offers much employment for the Indians, and the growing cantaloupe industry around Mesa, Ariz., are this year making large use of Indian labor. Mr. Dagenet reports that in the Southwest generally work for the Indians is plentiful, wages are high, and the outlook is encouraging.

On the Rosebud Reservation in South Dakota, an experiment in furnishing employment to girls and women is being made. Girls who return home after attendance at either reservation or nonreservation schools, find little occupation for minds or hands unless they drift back into the old life or marry Indians who have ambition and enterprise. On the Rosebud Reservation, arrangements have been made to employ educated girls as assistants in the schools of the day schools, and for that purpose the expenditure of \$3,000 has been authorized. This will help some of the girls over the roughest part of the in-

evitable readjustment which comes when they exchange school life for Indian home surroundings.

To Find Employment for Women. Furthermore, on the recommendation of the agent, an attempt is being made whereby Indian women of the Rosebud Reservation can be employed under proper management to manufacture garments of various kinds, to be sold to traders and others. He has been allowed \$2,000 with which to make the venture, and he believes that the enterprise will eventually become self-supporting. This work was so recently begun, however, that the Commissioner cannot yet consider results.

Commissioner Leupp is "for" the present system of education for Indians. He considers it wasteful, illogical, and that it is not designed so much to call the attention of the Deity to the act of his creature as it is to call the attention of the creature to the fact that there is a Deity who will judge him. So with the thumb print, the mere possibility of its use as a means of identification by officers of the Government in disputed cases is not more important after all, than the reminder it conveys to the Indian that he is taking upon himself certain obligations which he can not lightly throw off.

To Inspector McLaughlin belongs the credit of having made the first experiments with thumb-print signatures, says the Commissioner. He was selected for that purpose because of his knowledge of the Indian character and the assurance that he would impress the solemnity of such attestations upon the Indians in a dignified way. Now that he has demonstrated the wisdom of the idea, the Commissioner hopes to have other inspecting officers extend its application till it becomes substantially universal, and that the thousands of Indians who can read and write become equal to the corresponding proportion among our white population. Employment has been secured for Indians on ranches, farms and railroads and at any other occupation for which they were qualified. Such steady employment as wage-earners and conductors of the railroads, and the reservation not only bring to the Indians money returns for their labor, but also develop self-reliance and a capacity for looking after their own affairs and family interests. It is considered a wise policy to exercise no direct supervision over Indians who can manage their own affairs and find employment for themselves, even if some times less favorable results are obtained, for the best thing for them is to pick up experience as independent workers and thus acquire the habit of initiative, and the demand for Indian laborers has far exceeded the supply.

Where Indians Work. The work of controlling the inflow of the Colorado River to the Salton Sea was undertaken in July, 1905, with Mexican and other labor but by the 1st of August the company was glad to make arrangements to employ Indian labor, as in that climate no other certain supply could be depended upon. This work continued through the year and furnished employment to not less than 1,100 Indians, mostly Pimas and Papagos. Their average pay is \$1.24 per day of ten hours for ordinary labor, and \$2, or even \$2.25, for those showing any skill. Their commensurate deductions were small, as they received their wages in weekly checks and usually paid cash for whatever they bought. The Indians had their families with them, could board themselves at a low cost, and were free to accept of both ways for themselves and families, and suffered no hospital deductions. From August, 1906, through May, 1907, their gross earnings amounted to \$115,784.44, and after deducting the small commissary charges, etc., the net remainder was \$107,404.54. In October, as the work at the Salton Sea intake apparently need no continuation, work was found for the Indians on the Government dam at Yuma. But a break in the Salton Sea levee again created an urgent demand for available Indian laborers, and, as the wages there were better and the general conditions more satisfactory, the Indians preferred to remain at the dam, only about 100 went to work at the Government dam. Their gross earnings from October 27 to December 26 amounted to \$3,325. Their work, as a rule, was satisfactory, and the wages were wanted than could be furnished.

From 50 to 125 Indians also worked about four months as laborers and teamsters on the Colorado River at Yuma, receiving \$1.75 and \$2 a day. On the Roosevelt dam north of Phoenix, Ariz., Indians have been constantly engaged in road work under an Indian foreman and a few have been employed as mechanics and on the cement work. The number has averaged 60, and the wages have ranged from \$1.90 to \$2.50 a day. On the St. Mary's Canal on the Blackfoot Reservation in Montana from 100 to 225 Indians worked with their axes for several months. They were paid \$1.25 and \$2 a day as men laborers and \$3.50 and \$5 a day for men and team.

Companies of Indians, mainly Hopis, Mohaves, Navahos, and Puchios, were kept at work on the Santa Fe Railroad until Feb. 12, when their services were discontinued on account of retrenchment by the railroad company. They were employed mostly in gangs, doing repair work and ballasting on the lines near Albuquerque. From April, 1905, through February, 1907, their gross earnings were \$25,101.61, of which they saved more than 72 per cent.

Farmers, Too. In the best fields 404 Indians were employed last year during the thinning season and 62 during the Fall harvesting. For the thinning season this year 1,000 were employed, 493 being schoolboys and 507 coming from the Hopi, Navaho, Pueblo, and Apache reservations. Their gross earnings amounted to \$23,000, from which \$6,000 was paid for board and clothing, and \$5,000 for board and clothing, and advances in cash, and the remaining \$12,000 was paid to the Indians in money when they were discharged and sent to the school superintendent. The most part of the work was done in Rocky Ford, Colo., this season being very satisfactory both to the Indians and the best growers, the Indians being well pleased with their earnings and their treatment. The sheep industry of the Southwest also has afforded employment to many Indians. They are considered by sheep growers desirable herd boys, and their wages have doubled in the last two years, being now about \$30 per month and board. Lumbering offers much employment for the Indians, and the growing cantaloupe industry around Mesa, Ariz., are this year making large use of Indian labor. Mr. Dagenet reports that in the Southwest generally work for the Indians is plentiful, wages are high, and the outlook is encouraging.

On the Rosebud Reservation in South Dakota, an experiment in furnishing employment to girls and women is being made. Girls who return home after attendance at either reservation or nonreservation schools, find little occupation for minds or hands unless they drift back into the old life or marry Indians who have ambition and enterprise. On the Rosebud Reservation, arrangements have been made to employ educated girls as assistants in the schools of the day schools, and for that purpose the expenditure of \$3,000 has been authorized. This will help some of the girls over the roughest part of the in-

Have You Ever Stopped to Think About Your Health?

Are you as well, strong and vigorous as you used to be?

Are you sometimes discouraged, and think you'll never be any better? Can you tell the cause of your trouble, or what makes you sick? Do you know that about nine-tenths of all sickness is caused by kidney trouble?

Have you ever stopped to think that your kidneys may be the cause of your poor health? Most people do not realize how much work the kidneys are required to do every day.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick?

If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick? If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free.

Have You Ever Stopped to Think About Your Health?

Are you as well, strong and vigorous as you used to be?

Are you sometimes discouraged, and think you'll never be any better? Can you tell the cause of your trouble, or what makes you sick? Do you know that about nine-tenths of all sickness is caused by kidney trouble?

Have you ever stopped to think that your kidneys may be the cause of your poor health? Most people do not realize how much work the kidneys are required to do every day.

Every drop of blood in the body must pass through and be filtered by the kidneys thousands of times a day. How can they do their work well if they are sick?

If your kidneys need treatment, Dr. Kilmor's Swamp-Root will prove to be just the medicine you need. If you will write to Dr. Kilmor & Co., Binghamton, N. Y., every reader of this paper who has not already tried Swamp-Root, the great Kidney, Liver and Bladder Remedy, may receive a sample bottle by mail, absolutely free