

The American Cereal Company estimates that the consumption of oats will be decreased 100,000,000 bushels, because of the displacement of horse power by bicycles and electricity.

Says the Boston Transcript: There is said to be no less than nine patents filed at the Patent Office for pneumatic shoes. In course of time it may be something more than a figure of speech to walk on air.

Pennsylvania now has a compulsory education law which requires the attendance of all children between the ages of eight and thirteen years at a school in which the common English branches are taught at least sixteen weeks in each year.

For the past twenty-five years there has been a gradual movement of tornadoes from the West to the East. They are now occasional in the South Atlantic States, and the Atlanta Constitution maintains that the recent cyclone in New Jersey shows the Northeast to be liable to these visitations.

Fusataro Tokano thinks the contentment of the lower classes of Japanese a great misfortune. Their artistic simplicity which foreigners admire he considers a great obstacle to progress, and he thinks it the imperative duty of Japanese friends of humanity to agitate until Japanese labor becomes as discontented as American.

There was one unusually interesting circumstance about the graduating exercises at Yale this year. "There was no valedictorian, no salutatorian and no speaking for the Townsend Prizes." The Louisville Courier-Journal thinks this must mean that the great American University is tired of boy orators and their oratory.

The Chicago Times-Herald observes: First the horses gave way to the cable for surface transportation. Now the cable is giving way to the trolley; and in due time the trolley will disappear under the force of popular condemnation. Underground wires must do the work heretofore done by horses and cables and now ill done by overhead wires.

The latest charge brought against the bicycle is that it injures the book-seller's trade. Books never have the same sale in summer as in winter, despite the fact that paper covered novels are in demand by the loungers on the seashore; but this year there is said to be a more than usual depression in trade. The wheelman is blamed for this, as it is logically argued that while indulging in his favorite pastime he cannot possibly be reading a book, and that when he gets home from his spin he is too tired to read. As the cycling craze is constantly increasing the result of its growth upon literature would make an interesting study.

The average newspaper correspondent in Europe is not a very big man, according to the Atlanta Constitution. At the opening of the Kiel Canal correspondents were present from all over the world. Many of them were men of culture and they were entitled to the most courteous treatment. But it seems that Emperor William has a very poor opinion of newspaper men. By his orders each correspondent was presented with a printed circular instructing him in regard to his dress and conduct. The correspondent was notified to eat at such and such hotels "at his own expense," wear clothes of a certain cut; "carry his overcoat on his left arm, and his high silk hat in his right hand," and he was furthermore told to look steadily at the ground whenever the Emperor or any of the nobility came around.

Nothing persists like the sea serpent, exclaims the New York World. The latest evidence of his existence is furnished by the Captain of the City of Lowell, and he is borne out in his statement by many of the passengers. Perhaps the most interesting thing relating to the sea serpent is admission tardily made by science within fifteen years that, after all, there is good reason for believing that some enormous reptiles of a former period have survived in the vast depths of the ocean. An enormous amount of speculation has been wasted on the behemoth of Job and the "great fish" of Jonah, and the opinion is slowly forming that those early chroniclers may have had glimpses of saurians and other monsters that were left over from the primeval ages. One thing is certain, the age of a true reptile is sometimes prodigious. They had at one time a sixty-foot boa in the London "Zoo," and after counting its rings, science calculated that he must be at least two thousand years old.

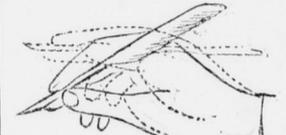
## MAKE LEGS AND ARMS

PEOPLE WHO SUBSTITUTE ARTIFICIAL FOR THE REAL.

The Industry, Owing to the Activity of Railroads, Buzz-Saws, and Fourths of July, Grows Yearly—Limbs Closely Counterfeit Nature.

Triumph of This Art. OLD BEN BATTLE, whose melancholy fate is sung by Tom Hood, might have found the means of retaining the affections of his Nellie Gray if he had lived in the year 1895. When Ben went off to the wars it is narrated that "a cannon ball took off his legs, so he laid down his arms." Upon his return to England the heartless Nellie looked upon him with disdain.

"Before you had those timber toes Your love I did allow;



But then, you know, you stand upon Another footing now."

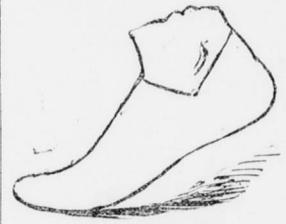
And poor Ben was so overcome by Nellie Gray's unkindness that, bold as he was, he lost all hope, and "round his melancholy neck a rope he did entwine."

"One end he tied around a beam And then removed his pegs; And, as his legs were off, of course He soon was off his legs."

All of these tragic occurrences might have been entirely prevented if the gallant Ben had been where he could visit one of the little workshops where wooden legs are whittled out. Had he taken such a precaution Nellie Gray might not have suspected that he had left his legs "in Badajos' breeches." For artificial limbs are made so perfectly in these days that they do almost as well as the originals.

Few persons have any idea to what an extent men are mended up after they have been mutilated by accidents. To see all the appliances that are used for piecing out the human anatomy a person would naturally suppose that it is not such a serious thing after all to lose a leg or an arm, an eye or a mouthful of teeth, or to become involuntarily bald or noseless or earless. All such trifling deficiencies can be easily supplied, and the patching can be so cunningly done that only a narrow observer can detect the artificial from the genuine.

The business of making artificial legs, arms, fingers, ears and noses, or, according to the generic classification of the trade, "artificial limbs," has grown to an extent which natural limbed people little realize. Seemingly the day isn't many months distant when simply the vital parts of some men—and women—will be strutting up and down this earth gilded as perfect and complete human beings, all as the result of the now swiftly soaring genius of body-



ELASTIC RUBBER FOOT.

part making. And the pitted unfortunate who have been able to take advantage of the result of this soaring will be able to tire out an infinite number of fellow beings who have missed the cruelty of buzz-saw, thrashing machine, and railway catastrophes. There's many a man to-day gracefully walking the streets whose real legs and feet, arms and hands were long ago left in the amputating chamber of horrors. So wonderfully far is this marvelous spirit of practical counterfeiting of human parts being developed that after all the mechanic may outdistance the alchemist toward the solving of perpetual life for mankind.

The making of artificial limbs has, in fact, become a fine art and a by no means inconsiderable industry. Every surgical instrument maker provides them, if not actually a manufacturer, and most of them retain men for altering and repairing. Many of them have the work done on the premises, a portion of it being performed by artists working at their own homes and receiving their orders from various employers in the trade. One curious fact is that this unique handicraft is often hereditary.

Much exquisite workmanship is exhibited in the making of the leg of the more expensive sort. The craft has derived its knowledge, of course, from surgery, so that the study of a limb is a study in anatomy. The action of the knee and the movements of the numerous joints in the foot are simulated by the skillful use of finely-tempered elastic cords. The movements of the natural joints are reproduced so faithfully that a very inappreciable halt, indeed, is all that can be observed in the gait of the wearer of a high-class artificial leg. The mechanism of a foot and leg is call-

ed upon to perform limited operations, but the operations demanded of the hand are almost infinite; and, however perfectly the wrist and finger joints may be imitated, they remain utterly inert unless supplied with and directed by a continuous impulse from without. Opening and closing the fingers is all that can be effected by simple pressure against another object or a general movement of the entire arm. A serviceable substitute for an arm and hand must, therefore, be sought for on other than an anatomical basis. To meet the case some very handsome and exceedingly ingenious contrivances are to be seen. One consists of a sheath, or "socket" as it is technically called, made of English willow, canvas, and leather, and lined with some warm fabric, into which the stump of the severed forearm is to be inserted, and the weight of which is distributed, by means of straps passing through a band on the upper arm and thence crosswise round the chest. A hollow screw or a catch-spring is let into the end of this socket, by means of which any one of a number of "roofs" can at will be attached, and with which the owner can substitute the more common purposes of daily life.

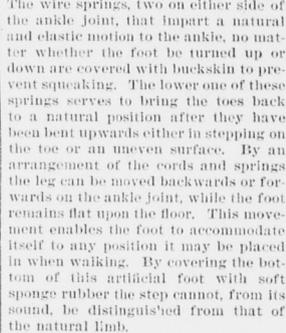
One of the commonest expressions heard regarding a person with an artificial lower limb is, "He's got a cork leg," the idea conveyed being that the person has an artificial limb made out of cork—at least so far as the knowledge of the manufacturers now living and the records of inventions now extant are concerned. The expression originated in this country by the shipment here of a stock of artificial legs made in Cork, Ireland, early in the present century. Were, however, the finer grades of artificial limbs produced to-day made solely of cork, they could scarcely be lighter. As it is they are made of English willow, steel, rawhide, and car-spring rubber, and weigh only 3½ to 4 pounds. They cost from \$40 to \$125, according to the purse and fastidiousness of the buyer, and are usually warranted for five years. The upper portion of the thigh socket is shaped and fitted to the stump so accurately that a bearing is obtained upon all sides alike, thus evenly distributing the weight of the body. In order to give additional strength and prevent their splitting or being damaged by water, these legs are covered with calfskin rawhide, so tightly and neatly drawn on as to resemble the natural limb. This rawhide is then covered with a flesh-colored waterproof cement which forms a hard, glassy surface, so they can be wiped off with a damp cloth

with holding the lines in driving. The hands are constructed with or without wrist movement, as desired, owing to the class of work that will be required of them.

The fact that a person can write with an artificial hand and arm furnishes a subject for thought that has been dwelt upon by the wisest, most thoughtful of men with only the result of utter bafflement. The fingers of an artificial hand are capable of but two general motions or actions—namely: that of closing upon the pen and of releasing it. Not at all are the artificial fingers capable of a single one of the many delicate and often almost imperceptible movements performed by the natural fingers, hand, and wrist every time a word, however short, is written. Any trick connection, whatever, between the three or four inches of stub of arm and the after all clumsy imitation of the human arm, hand and fingers, is totally impossible. And yet that man writes the moment he takes up the pen in the artificial fingers. This matter has now become so common among the craft as to attract no more attention.

The railroads of the country furnish 20,000 customers every year for artificial limb makers, while the other manufacturing agencies—sawmills, other mills, mines, factories, the Fourth of July, etc.—bring the number up to something frightful to everybody except, possibly, those engaged in this artificial business.

Two of the supremely triumphant instances of artificial limb furnishing are in Chicago. Whenever the weather is



KNIFE AND FORK FOR ONE-ARMED PEOPLE.

without injury. The best artificial limbs will easily sustain a weight of from 400 to 500 pounds.

There must be just a little mechanism as possible in order to lessen the chance of a hitch somewhere and the consequent mortification to the wearer. Every joint is tightened to a nicety. The wire springs, two on either side of the ankle joint, that impart a natural and elastic motion to the ankle, no matter whether the foot be turned up or down are covered with buckskin to prevent squeaking. The lower one of these springs serves to bring the toes back to a natural position after they have been bent upwards either in stepping on the toe or an uneven surface. By an arrangement of the cords and springs the leg can be moved backwards or forwards on the ankle joint, while the foot remains flat upon the floor. This movement enables the foot to accommodate itself to any position it may be placed in when walking. By covering the bottom of this artificial foot with soft sponge rubber the step cannot, from its sound, be distinguished from that of the natural limb.

It is far more difficult to construct an arm than a leg, owing to the manifold uses required. Manufacturers generally are inclined to furnish arms that are much too complicated, particularly for the laboring classes. The arm is constructed much after the principle of the leg, and is manufactured principally from leather and steel. It is held firmly on the stump by an improved form of shoulder cap so constructed that in carrying an object the weight is thrown wholly on the shoulder. Strong bands pass across to and connect with a smaller piece that encircles the opposite shoulder, passing under the arm, at which point it is well padded. The el-



ARTIFICIAL HAND AND FOOT.

bow may be swung freely or set at any angle. To accomplish the latter a small button is pressed after the limb has been flexed, when it will remain in that position until released. Movements of the fingers are effected by a pad on the inside of the arm. By pressing the arm against the side this pad is forced close to the arm, thus by a connecting of springs operating the fingers of the hand. The hand is manufactured so it will close by springs and be opened by the pad, or vice versa. For business men who wish an appliance for holding papers or documents an apparatus is constructed that is worked by the pad mechanism or a system of attachments. Such an arm can be fitted to those having three inches or more of stump, and provided it retain a healthy degree of force and rigidity it will enable the wearer to raise his hand to his mouth or forehead, and to take his hat off his head. These arms are made very stout, and can do service in carrying heavy valises, baskets, bundles, etc., together

the end to seriously impair the hearing. Other physical deficiencies are remedied by wigs, false teeth and glass eyes. The last are made most exclusively in Thuringia, Germany, and the workmen are marvelously expert.

IN THE ORCHARD.

A lengthening vista of yellow and green, With shafts of deep shadows and sunlight between;

The branches, wind-tossed, dappled, trock and ground, With ripples of light on the soft waves of sound.

The apple trees old, with arms gnarled and gray, Like sentinels grim stand in martial array,

Their armor of green disclosing o'erhead Rich treasures of fruit shining yellow and red.

The vanishing point is a crooked rail fence Where scampers a squirrel with malicious propensity;

A chattering robin diths hotly pursue The little red thief and chase him through, —B. E. Jacques, in American Agriculturist.

HUMOR OF THE DAY.

A war club—The triple alliance. It's all up with a man when he's turned down.

Some people can keep their minds on a mighty small object and not feel cramped for room.—Puck.

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Mrs. Peastraw—"How on earth did you get yourself so dirty?" Johnny—"I was in swimming!"—Truth.

You can salt down your money, but you cannot catch golden eagles by putting salt on their tails.—Truth.

It's the summer fly that busies, Till within the spider's gobs, And the spider never hustles, But he gets there while he waits.—Truth.

Too many men regard death as they do their banker, and expect ample notification when their time will be up.—Cleveland Plain Dealer.

Inventors of college-yells can find a mine of inspiration in sitting around listening to women talk baby-talk to their babies.—Acheson Glob.

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An Extra: Lady—"Your testimonials are satisfactory and I am willing to take you on the terms you ask, namely, thirty florins, only I expect that you will treat my children with affection." Nursery Maid—"Affection? Then I shall want five florins a month extra."—Der Floh.

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The South American Tea.

One of the principal products of Paraguay is the yerba mate, which is largely used as tea in South America. It was discovered recently that adulteration was practised in the plant, and the Minister of the Interior, at Asuncion, has recently taken severe measures to detect and punish those who practice adulteration.—New York Tribune.

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## HOW TO MARKET BEETS.

New beets for market should be clean, sound and even sized—large and very small ones should be kept for home use—and carefully tied in bunches of five. The tops should be kept on, as untrimmed beets look and sell better than the trimmed, and many people use the tops as spinach, for which they are a fair substitute.—New York World.

## SUCKERS ON CORN.

The practice of pulling off the suckers from growing corn is much less common than it used to be. The sucker cut while young is not worth anything as feed, and if left its leaves gather carbon from the air and make it valuable. The origin of the sucker is an injury to the original plant. If this occurs early enough the suckers will have more or less ears. They also help the ears on the main stalk to fill when a drought occurs, as the sucker is always later in blossoming and will furnish pollen after the blossom on the main stem has dried up.—Boston Cultivator.

## PLANTING APPLE ORCHARDS.

An agricultural contemporary finds fault because a large proportion of the apple orchards planted either die out or never yield any profit to their owners. This is no doubt true, but if all the trees planted lived and had good care the market would be glutted with fruit all the time and every season, and no grower could make a profit upon his investments. It is much better as it is, for now the industrious, intelligent fruit grower has a chance of securing something for his labor, because his competitors are so few and scattering. When all mankind becomes equally intelligent and industrious there will be much less incentive to labor than at the present time.—New York Sun.

## KEEP THEM RUNNING.

An observing farmer, while in conversation with the editor at a recent poultry show, remarked that it was due to the efforts of his ten-year-old son that the egg basket was kept heaping full by his chickens last summer and all fall. "The little fellow," remarked the farmer, "always paid great attention to everything he could read or hear about the keeping of chickens, and one of the things which impressed him strongly was the oft-repeated injunction to keep the hens at work if you want eggs. Well, the boy had charge of feeding the chickens, and he would get a heaping measure of grain and go down to the barnyard and call his pets. They would come on the run from all directions, and then the fun began. The lad would throw a couple of handfuls of grain first in one direction and then another, scattering it over a space fully fifty feet square, and much of it into the grass. The way the hens would sail around after the grain would remind you of a small riot, and after they got through feeding the barnyard would look as if some one had been over it with a small plow. We had plenty of eggs to use and sell, even through moulting time. The boy has since rigged up a henery in one corner of the barn and keeps his hens bustling about in hay, chaff and clover up to the knees hunting for their grain, and we get more eggs than for three neighbors combined."—Farm, Stock and Home.

## FARM AND GARDEN NOTES.

Watch for vermin and rout it at the first approach.

See that the fowls and chicks have a constant supply of water these days.

Keep ahead of the weeds in the onion beds by a free use of the wheel hoe.

So far this season we have had remarkably good success with our young chicks.

Keep the hen houses clean and sweet. Fresh earth bountifully spread under the roosts is a wonderful help towards the latter.

Try a tablespoonful of nitrate soda to each cabbage plant, scattering it well around.

Sharp teeth will cause the horse to form the habit of letting its tongue hang out of its mouth. Look out for them.

Do the flies bother the colts very much? Better keep them in during the day and put them out in the pasture at night.

Vaccination of the calves against "blackleg" and of the older cattle against anthrax is now advocated in some quarters.

Feed the little chicks what they will eat up clean. Do it as often as they will do their part—three, five or even seven times a day.

If farmers would keep a brood mare or two and raise a choice colt each year there would be more money in farming for them.

The shipping of pregnant animals to the stock yards is not profitable. It is unlawful, and the sooner farmers guard against it, the better for their purses.

With the good price of beef and hides it would seem good policy for the farmer to buy his harness soon before the inevitable high price of leather arrives.

Give the work horses a run in the pasture at night. It will do them a great deal of good, but you must feed them just the same. If you expect them to work don't take the grain away from them.

Brood sows properly managed determine the profit in the herd of swine. One-third should be over thirty months of age, one-third over twenty months, and the remainder over ten months of age to insure fair success.

Feed the feet out thoroughly with a foot-hook every day when the horses come in from work. Then when the horse is cool pat the feet in a pail of water and wash them. It will only take a few minutes and will keep the feet in good condition.

The proper rotation of crops is a necessity, mentions W. M. King. The seed producing ones should be alternated with the nitrogen-gathering ones. Rotation is valuable in aiding in the destruction of noxious weeds, but must be varied to be effective. For instance, two years or more of