

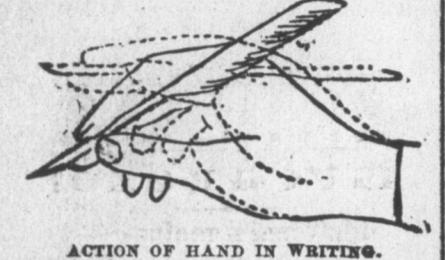
MAKE LEGS AND ARMS

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 BAT-
TLE, 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 1886. When Ben went off to the wars it is narrated that "a cannon ball took off his legs, so he laid down." 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 pogs;
And, as his legs were off, of course
He soon was off his legs."

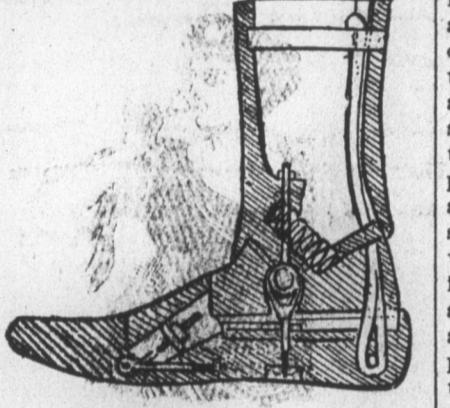
All of these tragic occurrences might have been entirely prevented if the gallant Ben had been where he could visit one of the little workshops where wooden legs are whittled out. Had he taken such a precaution Nellie Gray might not have suspected that he had left his legs "in Badajos' breeches." For 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

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 skilful 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 called 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 "tools" can at will be attached, and with which the owner can observe 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 knowl-



edge 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

tom of this artificial foot with soft sponge rubber the step cannot, as it sounds, 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 upon 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 elbow 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 strong, and can do service in carrying heavy valises, baskets, bundles, etc., together 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 30,000 customers every year for artificial limb makers, while the other mutilating agencies—sawmen, 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 fine and the pavements in good condition people residing on Grand boulevard may frequently see an unusually pretty, dashing young lady riding a wheel, generally at high speed, along the driveway. If now and then the buggies get too thick to suit her comfort she springs from her wheel and dashes aside to the walk with all the grace and agility of the best of them. She has worn an artificial leg from the thigh down for nearly three years. A member of the firm that furnished it is ready at any time to wager \$1,000 that no person can pick the young lady out in a party of young ladies walking or riding wheels. The other case is that of the son of a retired banker living on the North Side. A number of years ago the young man lost both hands and both feet by having them frozen. Artificial substitutes with marvelous capacity for action were procured for him—though in Europe. He is a fine horseman, and seldom a day passes that he is not seen out alone behind as high spirited a pair of steppers as ever rolled a road wagon along Lake Shore drive. He is a member of two or three clubs, frequents the theaters, and attends many receptions. He lifts his hat, removes his overcoat, uses his handkerchief and lights a cigar.

The making of artificial noses and ears has also become a good business within the last few years. A nose is first

plunged into the water, as shown in the cut.

The weight should be heavy enough to keep about three-fourths of the stick under water. Having done all this, get a half-ounce, an ounce and a two-ounce weight (you may borrow them from your druggist), and placing them, one at a time, upon the platform of your scale, carefully mark on the stick the water level in each case.

High Postage. The following were the rates of postage in this country in the year 1880: Every letter composed of a single sheet of paper conveyed not exceeding 40 miles, 8 cents; over 40 miles and not exceeding 150 miles, 12½ cents; over 150 and not exceeding 300 miles, 17 cents; over 200 miles and not exceeding 500 miles, 20 cents; over 500 miles, 25 cents. Every letter composed of two pieces of paper, double those rates; every letter composed of three pieces of paper, triple those rates; every letter composed of four pieces of paper weighing one ounce, quadruple those rates, and at the rate of four single letters for each ounce any letter or packet may weigh, every ship letter originally received at an office for delivery, with 6 cents. —New York Tribune.

Lace and Lacemaking. Brussels was the favorite lace at the court of the first empire, and when Napoleon and the Empress Marie Louise made their first entry into the Belgian capital they gave large orders for lace of the richest point. The city gave to the Empress a collection of its finest laces, also a curtain of Brussels point for draping the cradle of the King of Rome.

Lacemaking is a great source of national wealth to Belgians, over 300,000 women being thus employed. Lacemaking forms a part of female education since the mandate of Charles V. to that effect, and there are 1,500 lace schools in Brussels. The thread used in Brussels lace is of extraordinary fineness. The finest quality is spun in dark underground rooms, for contact with air causes the thread to break.

A fragment of lace in the collection at the World's Fair was worked with the needle upon muslin, leaving a few meshes unfinished. It is an heirloom of the Bonaparte family of Baltimore. Napoleon III. was a great lover of lace. The duchess in the trousseau of Eugenie, Empress of the French, was valued at 50,000 francs and took forty women eighteen months to complete. The Duchess of York is a great admirer and connoisseur of lace, using the pillow herself. One notable piece sent

in the trade. One curious fact is that this unique handicraft is often hereditary.

Spring 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 bot-

REVEALED IN A DREAM.

How a Doctor Diagnosed a Case and Cured His Patient.

One of the most unaccountable adventures in the phenomena of the lives of the physicians ever recorded was related by Dr. Charles Bockman, of Astoria, L. I., at a meeting of the American Medical Society in this city Tuesday afternoon. The scientific men present were much interested in the strange freak of nature the practitioner disclosed. They believe it new and valuable evidence regarding the much-disputed opinions on the conditions of the mind or brain in sleep, which is also a subject of strong human interest.

"It seems to me," said Dr. Bockman, after introducing the subject to his listeners in a formal manner, "that it is a truly remarkable occurrence when a physician makes a clear diagnosis of a mysterious malady in dreamland. Yet I have done so—and done so to my utter amazement. When, purely characteristic instinct, I examined into my dream and found it as a spokesman of fact, I was stricken speechless, but since I have come to the conclusion that the phenomenon is not mysterious or even strange. I was called to attend a little baby suffering the most rigid spasmodic convulsions, the cause for which I find impossible to discover. I first saw the poor little infant on Sunday and by Tuesday had become perfectly nonplussed as to what to do for it, further than to administer temporary relief. I thought of nothing else than the poor little one's sufferings all day Monday, and retired that night with the child's remarkable symptoms mentally photographed on my mind.

"Tuesday morning when I arose I had been to see the little patient in a dream; had discovered the trouble and conceived a simple treatment for its cure, which I had administered with entire success. Upon calling at Mrs. Lockwood's, the child's mother, this morning, I stepped to the corner of the room in which the cradle stood, and raising the infant's foot observed the little rose-colored spot I had seen in my dream. In an instant, almost before I knew what I was doing, I drew a slender pointed lancet from my pocket and quickly punctured the spot, when out came a needle three-fourths of an inch long, head first!"—New York Morning Journal.

TO WEIGH LETTERS.

A Broomstick, a Water Jar, and a Few Marks the Only Requisite.

A very good scale for weighing letters may be made by anyone without expense. Get the handle of a worn-out broom and cut off about 15 inches of it. Pour water into a wide-mouthed jar until it is nearly full, and, having attached a weight to one end of the stick and tacked a square of cardboard to the other, the latter to serve as a platform,

Opposite to the gates are holes that prevent excessive suction and permit the current to enter and assist in turning the wheel, but the holes on the end wheels have their outer sides partially covered by deflectors. The motor is well adapted to being placed in a stream where the force of the current is the only power. It is illustrated and described in the *Scientific American*.

A Dangerous Ice-Chest.

The northern fishing vessels are accustomed to rely for their supply of ice upon the icebergs themselves—dangerous, if convenient, resource. An iceberg is an uncertain quantity, and very narrow escapes are related by the crews returned from the fisheries. The schooner Elwood lately arrived from Alaska with twenty tons of halibut packed in ice. She sailed from Seattle northward, and went to the Muir Glacier for ice.

A big iceberg was encountered while passing through Icy Straits, and selected for service. Thirty tons of ice were whittled off the berg and transferred to the schooner during the day. As the tide fell, the berg began to roll, the reef forming a pivot on which it revolved. Then suddenly the vessel listed heavily to starboard, and it was discovered that it had been anchored over a spur of the iceberg. Night was coming and the situation grew more dangerous.

The crew were ordered into the boats. Resting on their oars at a safe distance, all hands watched the schooner, expecting every moment to see it roll over and disappear. As the tide fell, a small peak of ice showed itself on the other side of the vessel, and it was found that the berg had caught and hemmed the schooner in.

For three-quarters of an hour the fate of the schooner hung in the balance; then without any apparent reason, she plunged suddenly forward into the sea, came right side up, and anchored out of reach of the foe.

The crew rowed back to the vessel, and lost no time in getting away from the rolling mountain of ice. At midnight the spur which had so nearly caused the destruction of the Elwood was the highest peak of the berg which had performed a complete revolution.

The Bible and Big Sleeves.

A HOME-MADE SCALE.

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Thus saith the Lord: Woe to the women who sew pillows on all armors.—Ezekiel, xviii, 18.—Cincinnati Commercial Gazette.

Made Good His Statement.

In his class at Yale, says Dr. Spike, was a student who climbed street lamp posts and removed street signs for his room ornamentation. The chief of police at New Haven happened by accident one day to see the signs in his room, and after informing him that the fine for thus removing such articles was \$5 per sign, inquired how many he had. The youth replied, "Forty." The chief said if he would return them the mischief would be overlooked. On hunting up the signs the student discovered that he had but thirty-two, and that night he stole eight more in order to return, as he did next day, precisely forty signs.

It is much easier to pass a good resolution than to enact it.

Naughty Deacon.

Madge—"Have you seen much of Mrs. Gliddewin of late, deacon?"

Deacon—"Well, what I haven't seen of her at the opera I saw when she was bicycling down the avenue against a stiff breeze yesterday."—New York World.

Magistrate—"And why did you roam in the streets during the night?" Defendant—"I was afraid to go home." Magistrate—"Are you married?" Defendant (joyfully)—"Oh, your worship, I suppose you know what it is, too."—Tip-Off.

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Mrs. McSwat—"The reason I object to your spending so much time at that club of yours, Billiger, is that I am sure it is nothing but a resort for loafers. Mr. McSwat—"Great Scott, Maria! What's any club?"—Chicago Tribune.

OUR BUDGET OF FUN.

HUMOROUS SAYINGS AND DOINGS HERE AND THERE.

Jokes and Jokelets that Are Supposed to Have Been Recently Born—Sayings and Doings that Are Odd, Curious and Laughable—The Week's Humor.

Let Us All Laugh.

This world would land in glory yet
And make a lively stir,
If in these days we could forget
The mad thermometer!

—Atlanta Constitution.

The Wife—"It must be bedtime. Husband—Hardly; the baby hasn't waked up yet."—Life.

"Hi, Jimmy, wot's de matter?"
"Back's blistered." "Swimmin' or lickin'?" "Both."—Chicago Record.

"They say Hamsby is generous to a fault." "Yes, he is, if it happens to be one of his own faults."—Buffalo Express.

Host—"Never shall I forget the time when I first drew this sword." Chorus—"When was that?" Host—"At a ramble."—Firefly.

Young Man (in periodical store)—I want a Fireside Companion. Lady Clerk (archly)—How would I do?—TeXas Siftings.

A—I hear that your friend X has gone to South America. Was it upon his physician's advice? B—No; his lawyer's.—Tid-Bits.

The summer girl is great on changing her suit. She goes seaward with diamonds and returns home with hearts.—Yonkers Statesman.

Belle—Mr. Joliver is such a nice man. He said I had a voice like a bird. Nelly; he told me you sang like an owl.—Philadelphia Record.

Jagson—I see that your pretty typewriter is broken. What's the matter? Hogson—Married. Jagson—The girl! Hogson—No; I—I—Syracuse Post.

"Isn't he rather fast?" asked the anxious mother. "Yes, mamma, in one sense of the word. I don't think he can get away."—Indianapolis Journal.

How to make the new dress: Take the material for two skirts and make the sleeves, then take the material for one sleeve and make the skirt.—Nashville American.

Oh, sweetly tender was her look. Her hair was bright as gold; I bought three copies of her book.

And then her glance grew cold.—Chicago Times-Herald.

Patient—The heat is so oppressive, doctor, I feel like committing suicide. Doctor—Oh, that would never do. As I said before, my friend, what you need is a change.—Life.

"That woman dispenses a great deal of social lemonade." "What do you mean?" "Simply that she is always saying such things in sweet way."—Indianapolis Journal.

"Papa!" "What is it, Johnny?" "I read a poem in my school reader which spoke of 'dogs of high degree.'" "Well?" "Papa, does that mean sky-terriers?"—Pittsburgh Chronicle.

Nibbs—What a perfect poem the count's rich wife is! Dibbs—Yes; the count is the only man I know of who can make poetry pay him thirty thousand a year.—New York World.

Won't some inventor, sage or mentor, find that chief of boons, The wear-resisting, long-lasting, Non-bugging pantaloons?

New York Recorder.

She—Oh, my! there's something gone down my back! He—It's one of those thundering bugs, I suppose. To; I guess it's one of those lightning bugs, George.—Yonkers Statesman.