

**Pygmies, Real and Fictitious.**

In almost every country of the world, pygmies figure either in history or tradition; but tradition always has some foundation, man only weaves fiction from facts, and the best novelists are close observers of human nature. How many things long regarded as fables have been proved true? Herodotus, the father of history, who lived B.C. 484 years, was once called the father of lies, but we now know that he told only truth. Marco Polo, who in 1274 went with his father to Tartary, China, different parts of India, Persia, and Asia Minor, though an illustrious traveler and writer, was considered very untruthful, nevertheless the more we learn of those countries, the more truthful his accounts appear.

The stories of "little people," fairies, sprites, and elves, must have originated from the existence of an extremely diminutive race, a vague recollection of which has passed from generation to generation. Fables make the pygmies two feet high; the Greeks, having known of giants, as if to make a contrast pictured to themselves these pygmies, getting the idea from a certain people of Ethiopia, called Pechinies, who were very small. Swift made his Gulliver find men six inches high in the Isle of Lilliput; but Cyrano de Bergerac, in his imaginary voyage to the sun, found people not bigger than his thumb.

Among the many ludicrous stories told of pygmies, it is said that a certain King of Bavaria, at his wedding feast, was served with a pie from which a tiny dwarf, armed with lance and sword, jumped out on to the table, to the great astonishment of all the guests.

But apart from such extravagant tales, there are some proofs that very dwarfish people have lived in different places. Some years ago, on the banks of the river Merrimac, twenty miles from the Isle of St. Louis, a number of stone tombs were found arranged in symmetrical order; none of them were more than four feet long, and the human skeletons found in them only measured three feet, though the teeth showed that they were adults; the skulls were out of proportion with the rest of the body.

Aristotle, who was a great naturalist, said that trustworthy witnesses testified to the existence of minute men, and that they lived in caves washed by the waters of the Nile. Pliny even gives various details regarding their habits, and the geographical position of the places where they dwelt. On the banks of the upper Nile, where the Greeks placed the pygmies, modern travelers have found whole tribes of dwarfish men.

In Russia and Turkey, until quite lately, great sympathy was felt for dwarfs, they being generally considered keen witted and often talented. In Germany, in the eighteenth century, a dwarf was considered a necessary appendage to every noble family. In this present century there have been isolated cases of extremely small people, as, for instance, Richebourg, who died in Paris in 1858 at the age of ninety. He was twenty-three inches high, and during the revolutionary period he is said to have passed in and out of Paris, as an infant in the arms of a nurse, with dispatches very dangerous to carry wrapped in his baby clothes. In Mexico, especially in the State of Yucatan, and adjacent islands, there are many stories current about dwarfs; and if the natives are questioned concerning the builders of the old ruined edifices found in those parts, they invariably say, "The Puzob (pygmies) built them." In the islands of Cozumel and Mugeris there is a firmly rooted belief that "little people" wander around at night; many solemnly protest that they see them, and accuse them of disturbing their slumbers by hammering on benches and shaking their hammocks.

On the east coast of Yucatan there are various places, such as Nisuete and Meco, that any traveler may visit, though he must go armed, and keep a sharp lookout for Indians, who may fall upon him at any minute. There can be seen vestiges of small cities, all the houses made of stone, but not large enough for people more than two or three and a half feet high to occupy with any comfort.

In Cozumel Island we saw well constructed triumphal arches but nine feet high, and in the same place there are sanctuaries, temples of worship, built of carefully hewn stones; the doorway of the largest was three feet high, one foot six inches wide, the entire building measuring, outside, but nine feet in height, four-

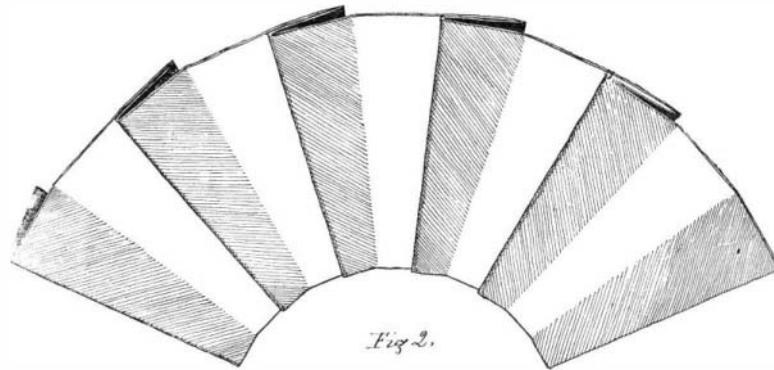
teen in length, and twelve in depth; we have in our possession plans of these buildings. The Indian who accompanied us to them affirmed that he always saw the "little people" at night, but they never spoke to him. He said: "They are very small, and wear big hats. Once, at the entrance of a cave in the forest, I found a clay figure, which was an enchanted dwarf,

and it was reading a book; I picked it up to carry it home, but then I felt afraid and put it down again. Next day I returned to look for it, because I wanted to have the *puz* (dwarf), but I could not find the place."

ALICE D. LE PLONGEON.

**An Indian Cemetery.**

The small uninhabited island of Memaloose in the Columbia River, which is about 100 miles below Portland (Oregon), has from time immemorial been the burial place of the Indian tribes of the Wascos and



MAGIC FAN.

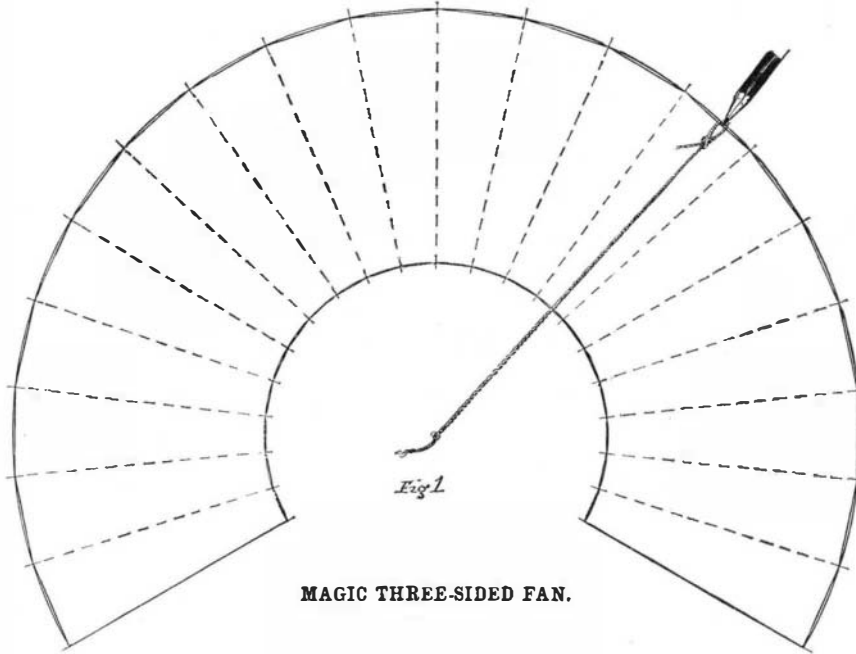
Alickitats, among the famous Indian chiefs interred there being Malatowack and Powshensha. The customs observed after death among these two tribes are as follows: The bodies are swathed in fine linen bands, covered with a profusion of ornaments, and conveyed in a canoe to the island of Memaloose, where they are laid upon the ground until the rain, the wind, and the birds of prey have done their work. When nothing but the whitened bones remain, they are carefully gathered up and placed in a rough sarcophagus, where they are supposed to rest until the trumpet sounds on

a wire heated over a gas flame (Fig. 3). To fasten the sticks together, bend one end of a piece of wire (about an inch long), in the form of a loop, small as possible, then push the straight end through the holes, and bend it in the same way. If the sticks of an old fan are used, and there are more than ten, remove the surplus ones, and fasten the proper number tightly together again.

To fasten the sticks to the paper, glue or mucilage will be the best thing. Begin by pasting the top stick to the center of the last fold to the right (as the paper lies in Fig. 2). When it has dried, turn the whole thing over, and after putting mucilage between the fourth and fifth folds, place the two undermost sticks between them, at the extreme edges of the folds; press between the palms of your hands and the table until they have had time to adhere. Then paste the two next sticks between the eighth and ninth folds; in the same manner. Now fasten the next two between the twelfth and thirteenth folds, and you will have progressed as far as shown in Fig. 4. The sixteenth and seventeenth folds will use up the two remaining center sticks. Now paste the last stick to the outside of the last fold, and close up the fan, allowing it to become thoroughly dry before putting on the pictures.

By putting only one picture on your fan, it can be made to appear and disappear at your wish, by opening and closing the fan in different directions. Be sure and get the picture on the flap side of the fan, or it will fail to make the magical change, because the other side does not alter, whichever way the fan is opened. If scrap pictures are used, they will have to be divided (with a sharp knife) along the edge of each fold that they cross, after being put on.

If you possess any artistic ability, it can be put to



MAGIC THREE-SIDED FAN.

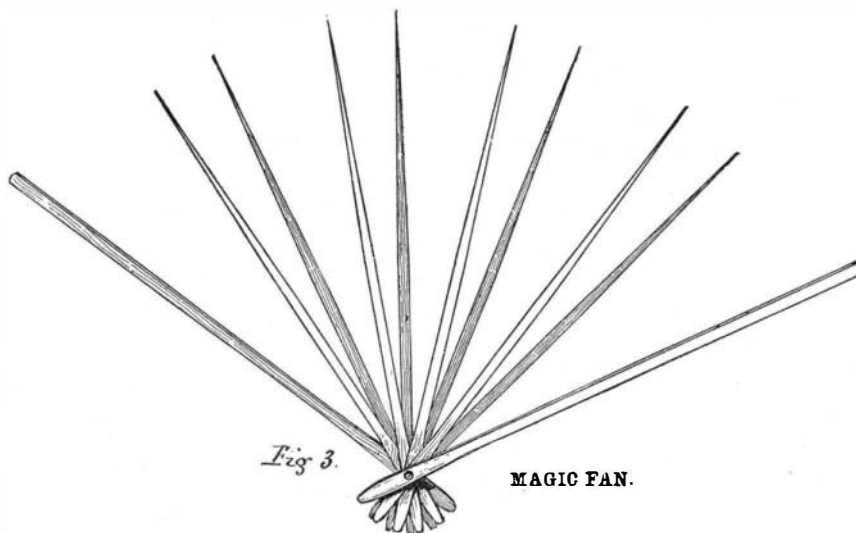
**HOW TO MAKE A MAGIC THREE-SIDED FAN.**

A fan that is equally applicable for winter or summer is a novelty. Such a fan any of the readers can make by following the directions given below, and they will be amply rewarded for their trouble by the looks of astonishment and wonder with which their work will be greeted, if introduced as part of some parlor entertainment during the winter, or casually opened and closed while fanning themselves on the piazza of their favorite hotel at the seashore. The third side of the fan is made by pasting eight of the folds together in four pairs. When the fan is open, one side of the pasted folds is concealed. The third side is shown by opening the fan the reverse way. The three sides are made apparent, without any explanation, by putting a different picture on each side. *Material Needed.*—All the material required is a sheet of stout paper twenty-five inches by nineteen; an old fan, or a piece of straight grained hickory about twelve inches long and quarter of an inch thick.

*How to Make the Fan.*—Lay the sheet of paper upon the table, and mark about three-fourths of two circles on it (see Fig. 1). The inner circle should have a radius of four and one-half inches; the outer circle, a radius of eleven and a quarter inches. Use the same center for each circle. If you have no dividers to make them with, a piece of string with a loop in one end, to place the pencil in, and a

pin fastened in the other (and stuck in the table), will do equally as well (Fig. 1). Divide the outer circle into twenty equal parts, each part two and three-eighths inches wide. From each of these points rule a line to the center of the circle (see dotted lines in Fig. 1). In cutting out the paper, cut straight from where the dotted lines cross the circles; do not follow the curve. The paper should be folded along the dotted lines. By running the thumb nail along each bent edge, the paper will be made to hold in place while the pasting is being done. The second diagram (Fig. 2) shows how the paper lies when ready for the sticks to be placed in.

There are ten sticks in the fan; they may be got from an old fan by removing the covering, or whittled from a piece of hickory. The eight center sticks should be eleven inches long, quarter of an inch wide, and about the thirty-second of an inch thick. The two outside sticks are the same width, but twice as thick, as the center ones, and one inch longer. The eight center sticks should be tapered from about the middle until they come to a point at the top end. Three-quarters of an inch from the thick end of each stick, holes will have to be made to fasten them together; this can be done with a fine drill, or burned through by



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the last day. But the truth is that doctors, students, and collectors of fossils are continually going to this cemetery for skulls and skeletons.

A STATUE of Nicolas Leblanc is being erected in the Conservatoire des Arts et Metiers, at Paris—80 years after the great inventor perished of want. The stone given in place of bread is sometimes rather late.

use by making some design, or taking some familiar story with three parts or incidents in it, and illustrating one on each side of the fan. For instance, the nursery rhyme, "The Three Crows," can be used by illustrating the first line on one side, the second on another, and the two remaining lines on the third side.

V. J. S.

**Medicinal Plants in Brazil.**

Consul Wright, of Santos, Brazil, incloses in his report to the State Department notes upon the medicinal plants of that country. The compilation is the work of S. S. Schindler, a native born citizen of the United States, who is now in Brazil. From Mr. Schindler's notes it appears that the country abounds in herbal remedies, and that alvelos, the new cancer cure, is but one of hundreds of plants or trees possessing properties of great value, as yet almost unknown to materia medica.

Alvelos is a shrub, Mr. Schindler writes, discovered by an eminent French physician of Pernambuco to be a specific for cancerous ulcers. The juice is a powerful caustic. Applied to cancer, it produces an irritating effect, which increases to a strong inflammation, and at length cicatrization takes place. The manner of application is this: A camel's hair brush is dipped in the juice, which is applied to the cancer and allowed to dry. Twenty-four hours afterward a little lint dipped in water is applied to the cancer, and in another twenty-four hours the juice of alvelos is tried again. Dr. Veloso advises for a speedy cure the application of the juice every day, using an infusion of tobacco instead of the arnica and water. This course of treatment is more rapid. The inflammation is much stronger, but can be regulated by the physician according to the nature of the cancer and its proximity to the vital organs. Mr. Schindler says that the alvelos treatment has proved successful in every case of cancer of the lips, tongue, nose, and breasts, where it has been tried.

Baycurn, Mr. Schindler says, is a curious plant of Brazil, which buries itself in the sand, a number of leaves rising above, seven inches long and two inches wide. The flowers resemble a saxifrage. The whole plant is sometimes for days together covered by the sea. The root is six to seven inches long, one inch thick, and tortuous shape. Externally it is chocolate brown; internally flesh colored. It is said to be an unfailing remedy in all kinds of enlargement and glandular swellings.

The juice of the fruit of the cajueiro tree is one of the most powerful blood purifiers known.

A decoction from the bark of the root of the calunga shrub is a remedy for dyspepsia and intermittent fevers.

The leaves of the camapa plant contain a narcotic principle, and the juice of the root and fruit is found excellent for rheumatism and liver diseases.

Boiled fruit of the avoredo pao tree makes a powerful poultice for ulcers. The fruit of the cabacinho has an admirable effect upon dropsy.

The most stubborn coughs yield to a tea made from leaves of the malavrisco shrubs.

Papaw has been found to possess the property of destroying the false membranes of croup and diphtheria.

Papaine is another diphtheria cure.

Poracary is said to be a sure antidote for bites of poisonous snakes.

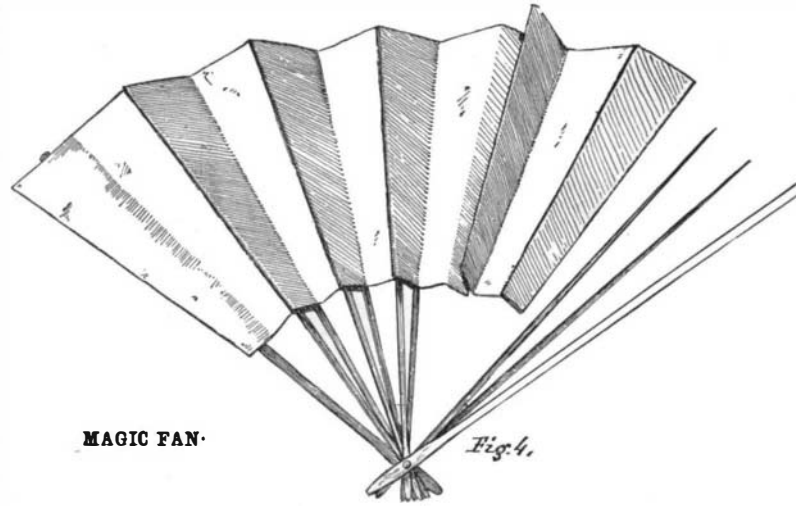
Sapucareira bark makes a decoction which seems to be nature's remedy for kidney ailments.

There are no less than 312 plants or trees in Brazil which possess strong medicinal properties. Mr. Schindler's catalogue of them contains a remedy for every ill known to human flesh, and the wonder inspired in the reader is that people should ever die in that country.

**How Milk is Spoiled.**

Milk will absorb odors at one time when it would not at another. It readily takes in vapors and odors from the air when it is at the same temperature or colder than the air that surrounds it, but parts with its own odors when warmer than the air with which it is in contact. When cold air touches warm milk, the air expands and becomes lighter and rises. As it expands, its capacity for holding vapors, gases, or odors is so much increased that it is not only able to hold all the odors and moisture it contained before, but is enabled to take in more, and hence it is ready to take up, and does take up, any odor or vapor which is volatile enough to rise out of the milk. Thus, cold air, even if it is not quite as pure as one might desire it for breathing, does not contaminate warm milk, but, on the contrary, actually becomes an aid in purifying it. A pail

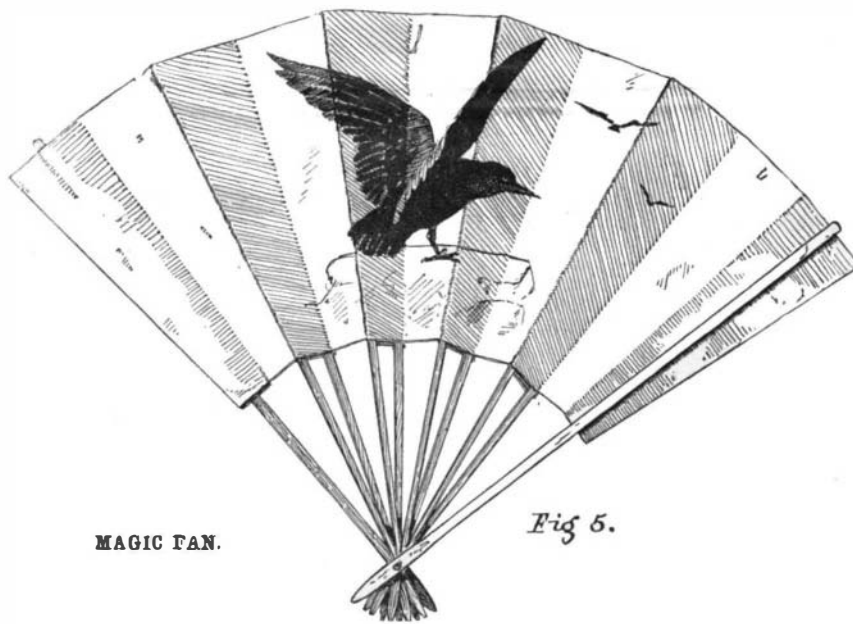
of freshly drawn milk, so long as it remains much warmer than the air in a stable, may stand in the stable unharmed, provided nothing but the air, or what is in the air, touches it. If a vessel of cold milk is placed in warm air, the effect will be reversed. When warm air touches cold milk, the air becomes condensed, and its capacity for holding moisture and odors is so much diminished that it becomes unable to retain the load it was carrying, and is forced to deposit its burden on the surface of the milk, to be absorbed and held in



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Fig. 4.

the milk or its cream in the same way that the air on a hot day unburdens itself on the surface of a vessel of ice water, where the depositions become apparent in the form of dew. If a pail of warm milk and one of cold milk are placed side by side in the same stable, one may be growing purer and the other more foul at the same time, so much has the fact of temperature to do with the absorbing power of milk. Under the law of the diffusion of gases, aeriform bodies will, to some extent, force themselves into liquids like milk or water, when all are at the same temperature, but that



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Fig. 5.

law is largely controlled by relative temperatures. Does the reader ask how stable odors do get into milk, if not absorbed by the milk after it is drawn? The answer is, they get it through the breath of the cow. Standing in a stable filled with foul air, a cow cannot avoid taking in at every breath the odors with which it is loaded. Upon entering the lungs they are forced at once into the circulation. The blood becomes charged with them, and the milk, which always serves as a means of unloading the blood of its impurities as well as its nutriment, also becomes loaded with the odors intensified, greatly to the disgust of those who use the milk. It is surprising to those who have never carefully noted the facts, how soon and how effectually foreign odors, good or bad, are taken into milk in the air breathed by milk-giving cows.

A few instances will illustrate. It is not long ago that an account appeared in the *Journal* of milk spoiled by being saturated with the odor of onions, from tethering a cow to the leeward of an onion patch. In the experience of the writer, twelve cows, in passing to and from their pasture, were subjected to the scent of a dead calf lying twenty rods from the lane through which they traveled. The exposure to the tainted air did not exceed one minute at each passage, and yet they inhaled infection enough to make their milk offensive, and to nearly spoil, for cheese making, the milk of eighty-five cows with which their milk was mixed. When the cause was discovered, the burial of the calf terminated the effect. In four different instances the writer

Fig. 6.

has known of cheese being materially injured in cheese factories from the cows of one of the dairies inhaling air scented from dead calves lying round the barn in a state of decay. The annual reports of the dairy associations have often contained similar cases. Foul air is one of the readiest modes of contaminating milk. It will injure milk sooner than bad food. What is taken into the stomach may be, and often is, to a large extent neutralized by digestion, but infection taken into the lungs is at once, and without change, forced into circulation. There is no surer way of befouling milk than by forcing cows to breathe the confined air of their stables, saturated with the fumes of their perspiration and excrement. The consequence of breathing such odors is so plain and certain that it seems strange that it should be permitted to the extent it is. The assumption so commonly made, that the milk absorbs the scent after it is drawn, is doubtless one of the prominent causes. It is time that delusion was dispelled, and that dairymen should appreciate the fact that if they are to have pure-smelling and pure-flavored milk when their cows are in the barn, they must contrive to keep the odors of the stable from the nostrils of their cows, and give them pure air to breathe. Hurrying the milk out of the barn may be a good thing to do, but it will not remove the common cause and frequent occurrence of stable odors in milk.—*Live Stock Journal*.

**Etched Printing Plates of Transferred Engravings.**

The print may be cleaned by means of bread crumb; then, to soften the ink, the print is put to soak in a three per cent solution of stromic oxide, kept at a temperature of about 83° C.; the necessary time for soaking can be found by experimenting on a piece of margin or extraneous matter, cutting off a small piece, drying it, then dampening with nitric acid as hereafter described, and then observing whether it gives a set-off on being rubbed against, another piece of paper with the thumb nail. The length of time may vary from ten minutes to an hour and a half. When the print is removed from the solution, it is thoroughly and carefully washed with hot water, superfluous moisture being absorbed by blotting paper; it is then laid face downward on a few layers of blotting paper, and the back well brushed with a 20 per cent solution of nitric acid, until the paper is thoroughly and evenly soaked; it is then dried between successive sheets of blotting paper. The zinc plate is prepared much the same way as for zincography, with the exception of graining; instead of this it is rubbed with water of Ayr stone, and finally polished with pumice powder.

In transferring, much stronger pressure is required than for zincography; indeed, theoretically, a copper-plate printing press should be used, but in practice a good litho press will be found to answer almost as well. After having adjusted the pressure, place the print face downward on the plate, and immediately pull it firmly and evenly through the press. An intervention of thirty seconds after the print is put on the plate would be fatal to success. After the print is peeled off, the plate is sponged over with unsoured gum water; water is then sprinkled on, and it is gently washed with a clean rag to remove any adherent particles of paper; the transfer on the plate is then rubbed over with a mixture of lithographic ink, thin varnish, and gum water, by means of a fine sponge, care being taken to have an excess of gum water to prevent "blacking up." When sufficient ink has adhered to the lines, the plate is flushed with water under the tap, and is then slightly etched with phosphoric acid and gum water solution, diluted with its bulk of water; the plate is next rolled up with printing ink, and re-etched with the normal solution. It is now ready for use, and can either be printed from in a litho press or it can be etched by acid, and then printed typographically. In preparing freshly printed matter the plate is at once saturated with the nitric acid solution, all further manipulation being the same, with the exception, perhaps, of rather less pressure in transferring.—*Printer and Stationer*.

**Tide Mills.**

A correspondent at Norwalk, Conn., writes that there are four tide mills within fifteen miles of there, and that in dry times this unfailing source of power is greatly appreciated by the farmers, long lines of wagons being seen, waiting to have the grist ground. Two of these mills are said to have single-acting turbine wheels, with a simple flap gate to admit water to the pond. Our correspondent suggests that there are probably many more tide mills in use in the country than is generally supposed.