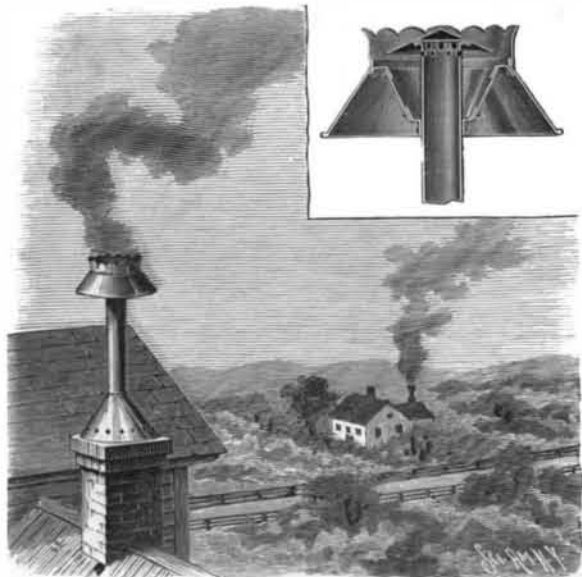


A NEW CHIMNEY COWL.

The lower end of the vertical draught pipe, according to this improvement, has a conical base portion adapted to be secured on the chimney top, and at its upper end, as may be seen in the sectional view, are draught apertures, a flat cap plate fitting over the upper end of the pipe, on which is also riveted a projecting conical shell or hood. A lower hood or shell, also of conical form, encircles and is supported on the draught pipe by means of angular braces held in place by rivets. The two shells are surrounded by a hood which



DE LANOY'S CHIMNEY COWL.

has an upper straight portion and a lower coned portion, and is held in place by braces or brackets secured to the lower shell. The improvement has been patented by John M. De Lanoy, of No. 15 John Street, Tarrytown, N. Y. When the device is in place on the chimney, an air current from either side is deflected by the encircling hood, and prevented from blowing down the chimney, although drawing along with it the smoke issuing from the apertures of the draught pipe, and thus increasing the draught. Both ascending and descending air currents are likewise deflected by the shells, and the cap plate on the upper end of the pipe, between it and the shell, prevents the formation of eddy currents and the collection of soot.

To Prepare a Transparent Mirror.

The following process (Neuste Erf. u. Erf.) for producing a mirror which reflects from one side, but is transparent from the other, has been patented in Germany: Dissolve 1 part by weight of silver nitrate in 10 parts by weight of water and label No. 1. Prepare another 10 per cent solution of silver nitrate, but in larger quantity; to this add ammonia water, drop by drop, stirring carefully until the precipitate formed at first is completely dissolved, and label No. 2. Now add solution No. 1 to solution No. 2 until the odor of ammonia is no longer recognizable and the liquid has again become very turbid. Now add 100 parts by weight of distilled water for every part of silver nitrate originally used in solution No. 2, and filter until clear. Label this No. 3. Prepare a reducing solution by dissolving 0.8 part by weight of Rochelle salt in 384 parts by weight of distilled water, boil, and to the boiling solution add gradually a solution of 3 parts of silver nitrate in 10 parts by weight of distilled water, and filter when cool, and label No. 4. Clean the glass to be coated thoroughly, lay it on a perfectly level surface in a room at a temperature of about 25 degrees C. (77 degrees F.) Mix equal parts of No. 3 (the depositing fluid) and No. 4 (the reducing fluid) and pour over the glass. The glass may, if preferred, be dipped into the solution. The time required for the deposition of the layer of silver of just the correct thickness has to be determined by the judgment of the operator in each case, and this may be aided somewhat by observing a piece of white paper below the plate of glass. When a sufficient deposit of silver has been made, and much less is required than for an ordinary mirror, pour off the silvering liquid and rinse thoroughly with the distilled water, and stand the mirror on edge to dry; coat the silvered side with a solution of colorless shellac in alcohol and finally frame the mirror with a backing of clear glass to protect the mirror surface from being scratched.—American Druggist.

Education in Japan.

The calendar of the Imperial University of Japan in Tokyo for 1894-95 shows depth and strength in the older faculties and departments and bright promise in those that are newer. In December, 1894, there were 1,468 students in the various colleges of law, medicine, engineering, literature, science, and agriculture. Taking the year 1878 as that in which the previously existing school reached the grade of a European university, we find that 781 graduates in full course (not counting 152 deceased persons) have gone into active life well prepared for varied usefulness.

The evident thoroughness of the curricula in the newer departments of science and agriculture, and the happy combination of the theoretical and practical, are striking facts in the higher education as here given. The eighteen pages which set forth the titles and contents of scientific monographs, mostly by native authors and investigators, are also very suggestive. Almost every department of human knowledge, with its appropriate apparatus of books, instruments, laboratories, and observing stations, is organized in this Teikoku Daigaku (Imperial University of Japan). To study this modest pamphlet in the perspective of the past quarter of a century, the Evening Post adds, is to understand largely the secret of Japan's life and power on the threshold of the year 1896.

AN IMPROVED FOLDING BABY CARRIAGE.

The illustrations represent a baby carriage which may be folded both longitudinally and laterally, the construction being strong and simple and the changes to the different positions easily effected. The improvement has been patented by George Mayer, No. 117 East One Hundred and Fifth Street, New York City. Each axle comprises four members, the end members comprising spindles and hub flanges, and the inner members having projections received in recesses in the end members, by which the axles are prevented from excessive swinging movement when extended. The inner ends of the inner axle sections are pivotally mounted in blocks to which are connected end sections of an axle coupling connecting the front and rear axles, the coupling consisting of two sections and folding centrally. Mounted on each outer axle section and each of the central pivotal blocks is a bowed spring, the upper portions of the springs being secured to the under side of the carriage body, the outer springs being rigidly attached and the central ones having pivotal movement when the carriage is folded. Fixed to each of the outer axle sections are also brace rods on which are sleeves slidable on depending hangers secured to the underside of the carriage body, the braces moving inwardly with the sections of the axle as the carriage folds. The carriage body has hinges in its side portions and in the bottom and ends, constituting four sections arranged in pairs, so that they may fold first on the longitudinal line and then break in the middle and fold on a transverse hinge, as shown in one of the illustrations, the sections when being opened working in unison and being firmly supported in extended position. The upper ends of the handle bars are connected by a hinged cross bar adapted



MAYER'S FOLDING BABY CARRIAGE.

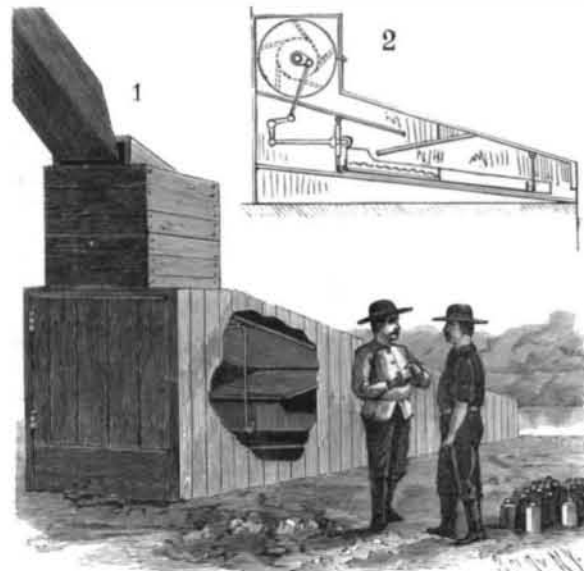


MAYER'S BABY CARRIAGE—IN FOLDED POSITION.

to swing down when the carriage is folded, this being the first operation in folding the carriage, after which the central pivotal axle blocks are moved longitudinally and the body folds together sidewise, when, the side fastenings being disconnected, the whole body may be swung on the side hinges to be folded transversely, in the smallest possible space.

A SIMPLE AND EFFICIENT AMALGAMATOR.

The illustration represents an apparatus of simple construction, more especially designed for placer mining and milling amalgamation of free milling ores, Fig. 1 showing the practical working of the amalgamator, with a part of the casing broken away, to disclose its interior, and Fig. 2 being a sectional view. In the upper end of the casing is a hopper in which turns a wheel whose buckets are supplied with water and gold-bearing sand by a suitable chute, the wheel being thus rotated, and delivering the water and sand in measured



DUNN'S AMALGAMATOR.

quantities upon an inclined chute, this chute discharging upon another oppositely inclined chute. The second chute discharges upon a riffle frame hung on pivoted links, the transverse parallel corrugations of the riffle being rounded so that the flow of water and sand will not be greatly retarded, the gold settling in the quicksilver contained in the depressions between adjacent riffles. A shaking motion is given to the riffle frame by a link which connects one of the hangers with one arm of an elbow lever whose other arm is connected by a link with a crank attached to the shaft of the water wheel. This improvement has been patented by Seth Dunn, of Custer City, Idaho. The casing of the amalgamator is designed to be entirely closed at its top and rear end, but the top and end have hinged covers to facilitate reaching the interior for removing the amalgamated gold and for cleaning or repairing the working parts.

Water Drinking in Typhoid Fever.

Water drinking in typhoid fever is not a new suggestion. The importance of subjecting the tissues to an internal bath was brought prominently to the notice of the profession by M. Debove, of Paris, who was perhaps the first to systematize this mode of treatment. The treatment of this eminent physician consists almost exclusively of water drinking. "I make my patients drink," he says; and they must be kept pretty busy in attending to this rinsing process; for they are required to take from five to six quarts of water daily, which would amount to eight ounces every hour.

The writer has for many years followed the practice of having his patients drink from one-half to two-thirds of a glass of water hourly, when awake. It is sometimes, however, impossible to induce patients to drink a large quantity of water. In cases in which the stomach is dilated, the patient is often unable to absorb water so rapidly. In these cases the introduction of water by the rectum proves a satisfactory substitute for water drinking. Of course, if the patient subsists chiefly upon a diet of thin gruel, fruit juices, or skimmed milk, the amount of liquid thus taken may be subtracted from the quantity of water named. The important thing is to get into the system, and out of it, a sufficient amount of water to prevent the accumulation of ptomaines and toxins within the body.

Copious water drinking does not weaken the heart, but, on the contrary, encourages its action, by maintaining the volume of blood. It also aids the action of the liver, the kidneys, and the skin; and by promoting evaporation from the skin, it lowers the temperature.—The Bacteriological Review.

KEEP A SCRAPBOOK.—The Keystone gives some practical directions. Every merchant should keep a scrapbook. This suggestion has been made before, but it is fully worth emphasizing. Every bright advertisement that you notice in your local paper or those of other towns; every model advertisement that you observe in your trade paper, and every practical trade-bringing plan or hint, should be cut out and pasted in the book, with full data as to the name and date of the paper. You will find such a book as this an inexhaustible treasury of riches, especially on those days when your ideas run scarce, and you are too busy to take time to evolve a good advertisement.