Kefir.

While during the last few years koumiss has been introduced into Western Europe, and even into America, a new drink prepared from cow's milk by a process of fermentation imperfectly understood is coming into use in Russia. This drink is kefir, and it has for long formed the chief article of diet among the mountaineers in the neighborhood of Mount Elbruz and Kasbek, in the Caucasus. It forms a thick white fluid, with a faintly acid flavor, said to resemble certain light wines. The mountaineers themselves call it "ghippo." The inhabitants of the plains near the Caucasus, and the Russian settlers, who term it kefir, kifir, or khiafar, make use of it, not for the table, but as a popular remedy for anæmia, struma, gastric catarrh, and chronic bronchitis.

According to the Moscow *Medical Gazette*, where a contribution on the subject has recently appeared, Dr. Kern being the author, the preparation of kefir is very simple. The mountaineers make it by filling a bag made of goatskin with milk; then a tenacious mass, of the size of a walnut, of a material which they term "kefir seed," and the precise origin of which is unknown, is added to the milk. In a few hours the process of fermentation sets in actively. When prepared in wooden or glass vessels, the kefir tastes better. After a lapse of twenty-four hours a weak kefir is produced; when the process is allowed to continue for three days, the kefir becomes very strong. The source of the ferment is scrupulously concealed by the Caucasian mountaineers, who, with the humor of the English cook who once sold a secret for making "fundied cheese," the "secret" being that the cheese must be fundied after toasting and before the addition of pepper, cannot be persuaded to enlighten strangers to any greater extent than in supplying a small sample of the ferment, in the form of dry, dark-brown, earth-like masses, but steadfastly refusing to say whence they are obtained. One of these fragments dropped into milk begins rapidly to effervesce, turns milk-white, and assumes the form of a mulberry, then fermentation proceeds at once. If a piece, thus transformed, be dropped into another bowl of milk, it rapidly increases in size, and also causes fermentation. Dr. Kern has carefully examined specimens of this "kefir seed," which consists chiefly of masses of zoogloea, holding together collections of a bacterium which he calls *Dispora caucasica*. The yeast-fungus, *Saccharomyces cerevisiæ*, is always found associated with this new germ. "Kefir seed" retains its vitality after remaining for months in its dry condition. Dr. Kern has a great belief in the future of kefir, which has all the virtues of koumiss, and possesses one great advantage over the latter fluid in that it is just as good when prepared from cow's as from mare's milk.—*British Medical Journal.*

Wood Finish.

The patented preparations known as wood fillers are prepared in different colors for the purpose of preparing the surface of wood previous to the varnishing. They fill up the pores of the wood, rendering the surface hard and smooth. For polishing mahogany, walnut, etc., the following is recommended: Dissolve beeswax by heat in spirits of turpentine until the mixture becomes viscid; then apply by a clean cloth, and rub thoroughly with a flannel or cloth. A common mode of polishing mahogany is by rubbing it first with linseed oil, and then holding trimmings or shavings of the same material against the work in the lathe. Glass paper followed by rubbing also gives a good luster. There are various means of toning or darkening woods for decorative effect. Logwood, lime, brown soft soap, dyed oil, sulphate of iron, nitrate of silver exposed to the sun's rays, carbonate of soda, bichromate and permanganate of potash, and other alkaline preparations are used for darkening the wood; the last three are specially recommended. The solution is applied by dissolving one ounce of the alkali in two gills of boiling water, diluted to the required tone. The surface is saturated with a sponge or flannel, and immediately dried with soft rags. The carbonate is used for dark woods. Oil tinged with rose madder may be applied to hard woods like birch, and a red oil is prepared from soaked alkanet root in linseed oil. The grain of yellow pine can be brought out by two or three coats of Japan much diluted with turpentine, and afterward oiled and rubbed. To give mahogany the appearance of age, lime water used before oiling is a good plan. In staining wood, the best and most transparent effect is obtained by repeated light coats of the same. For oak stain a strong solution of oxalic acid is employed; for mahogany, dilute nitrous acid. A primary coat or a coat of wood fillers is advantageous. For mahogany stains the following are given: 2 oz. of dragon's blood dissolved in one quart of rectified spirits of wine, well shaken; or raw sienna in beer, with burnt sienna to give the required tone; for darker stains boil half a pound of madder and 2 oz. of logwood chips in one gallon of water, and brush the decoction while hot over the wood. When dry, paint with a solution of 2 oz. of potash in one quart of water. A solution of permanganate of potash forms a rapid and excellent brown stain.—*Amateur Mechanics* (*London*).

SIMPLE CAN OPENER.

The engraving shows a very simple form of can opener adapted to all forms and sizes of cans, and capable of cutting out the entire end of the can. The opener is a plain, simple knife, with a lip to rest on the edge of the can, using the can as a fulcrum, as shown in the engraving. It will be noticed that the tool has neither joints nor adjustable parts, and is therefore not a thing to get out of order. Fig. 1 is a side view, Fig. 2 an end view, and Fig. 3 shows the opener in use.

This useful invention has been patented by Mr. Augustus

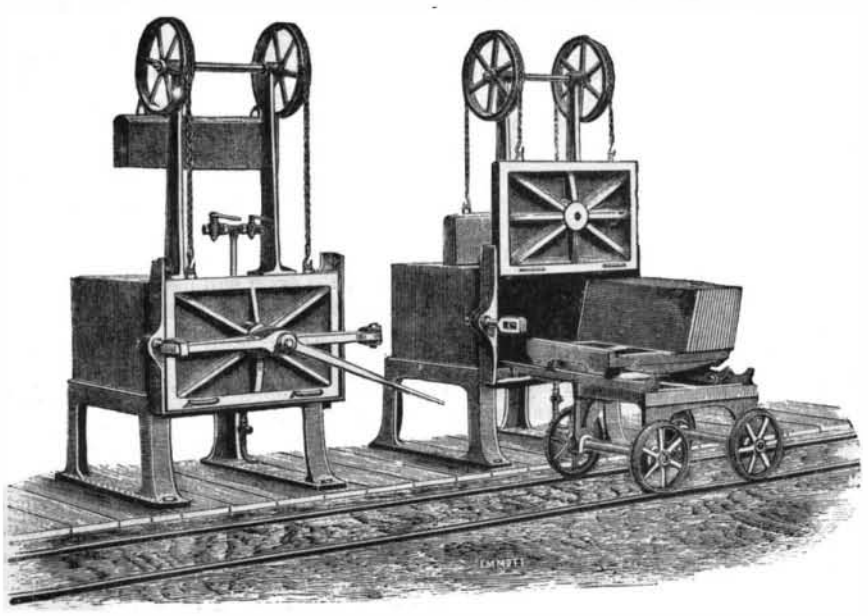
LEAVITT'S CAN OPENER.

J. Leavitt, and is manufactured by the New England Specialty Company, of North Easton, Mass., of which Mr. Leavitt is manager.

STEAM OVEN FOR CLOTH PLATES.

The illustrations given herewith represent a steam oven for use in heating iron plates used by cloth finishers in hydraulic presses. With this apparatus the plates are put inside, and after the door has been fastened steam-tight, steam is turned in and heats the plates to its own temperature. The great advantage of steam heating in this way is that perfect uniformity in the temperature of the plates can be relied on.

The door is balanced and suspended on chains, and opens the oven by lifting vertically in guides. This provides a clear front before the oven, which is not obtained with hinges. The oven, for purposes of strength, is cast from the same mixtures of metal as locomotive cylinders are usually made. To make the joint the faces of the door and oven are planed—a groove being made in the former, to contain an India rubber ring, and a tongue in the latter. The fastening of the door is made very expeditiously by means of the screw through the middle of a forged crossbar, one end of which is hinged to the right hand side of the oven, the other free end entering an eye before screwing up.



STEAM OVEN FOR CLOTH PLATES.

The most noteworthy feature, perhaps, is, says the *Textile Manufacturer*, the adoption of a wagon system of conveying the plates into or out of the oven from or to the presses. This is accomplished as represented in Fig. 2. The rails on the floor run in front of the range of presses, also in front of the range of ovens, and close to all of them.

The wagon that runs on this line carries on rails across its top a smaller carriage, that is usually locked or scotched in position. Upon this upper carriage the plates are piled when coming from the presses. They are then taken to an empty oven, and bridge pieces are laid between the oven and the lower wagon, so as to form rails for the top carriage to be run into the oven with the plates upon it. After heating the carriage the plates are withdrawn similarly. The separate handling of the plate with tongs at the oven is thus avoided, and the whole operation greatly expedited. The longer the plates remain in, up to a certain limit, the more uniformly they become heated, and the better is the finish obtained. It is, therefore, certainly better to utilize the time in heating that in the old plan is occupied in handling the plates.

Cholera.

In view of a possible, but we may still hope not very probable, invasion of cholera, it may be worth while to ask ourselves, seriously and urgently, in what condition will that formidable epidemic disease find us as regards the facilities provided for its rapid extension? In the history of previous epidemics there can be no doubt we may trace the record of progressive limitation and repression by sanitary improvements. The time has now arrived when, with all our light and knowledge, we ought to have no great dread of cholera. It is, in a very special sense, a perfectly controllable *in*fection; we do not say that it is so controllable as an *af*fection. It remains to be seen whether medicine, as a healing art, has discovered any new remedy, or learnt to apply any known and tried, but not perhaps thoroughly understood, principle of therapy in relief of the malady. What, however, we do assert is that medicine, as a preventive art, in its dealings with the germs of disease, ought to be able to grapple instantly and successfully with cholera. We know that it is propagated solely through excreta, and that water is the great carrier of the infective germs. Obviously, if the excreta of a cholera patient are allowed to dry in contact with the air, they may float away in the atmosphere, and the air will then become infected; but in a primary sense it is the water to which we must look.

In any case, it has been demonstrated that, provided all the excreta from a cholera patient are instantly destroyed—not merely disinfected—the disease will not spread. The malady can no more develop *de novo* than a plant can grow without seed. It is no use waiting until the disease has effected a lodgment in our midst. If choleraic dejecta have passed into the sewers before the nature of the disease has been recognized, as is most likely to happen, the seed has been already sown broadcast, and the production of a crop of cases in some locality—it may be seemingly far from the first case, but in connection with it—will be inevitable. The only effectual safeguard against the epidemic we desire to avoid is to begin at once to destroy *all* diarrhœa stools, lest too late they may be found to have been choleraic! As a matter of precaution we ought always to destroy the stools of fever and diarrhœa. It is wanton recklessness to allow them to pass into the sewers. This is how disease is spread and perpetuated, when it should be stamped out. Whatever disinfectant we employ should be used *at once*, and of strength sufficient to accomplish the object in view. These are hints which should be reduced to practice without delay.—*Lancet.*

Small Wastage on a Large Amount of Work.

The annual settlement of accounts of the Philadelphia Mint for the last fiscal year closed July 6. Representatives of the Treasury Department have for more than a week been weighing up enormous amounts of gold and silver on hand, and arrived at the actual loss in the operations of the institution for the period named. The result of the examination discloses the fact that the wastage of gold and silver in the operations of last year were the smallest on the amount of bullion operated upon in the history of the Mint. The total amount of gold bullion operated upon during the past year was $2,210,944\frac{83}{100}$ ounces, equal to 76 tons. The total amount of silver operated upon was $45,591,338\frac{72}{100}$ ounces, equal to 1,563 tons. The gold coinage for the year consisted of $415,486\frac{56}{100}$ ounces, equal to 14 tons, the value being $7,729,982.50. The number of gold pieces struck and issued was 941,680. The total silver coinage issued weighed $10,551,908\frac{88}{100}$ ounces, equal to 362 tons, value $12,325,470.15. The number of pieces of silver coined was 18,798,076. The total minor coins issued weighed $7,315,135\frac{30}{100}$ ounces, equal to 251 tons, value $1,428,307.16. The number of minor coins was 60,951,526.

The legal wastage allowed by law on the gold operated on during the year was $32,018.33. The actual wastage was $20.77, showing the wastage on gold to be $31,997.56 less than the legal allowance. The legal wastage on the silver allowed by law was $57,293\frac{5}{100}$ ounces, equal to $57,293.05, at $1 an ounce. The actual wastage on silver worked was, 809·23 ounces, equal to $809.23, or $56,483.82 less than the legal allowance. In other words, the actual wastage at the Mint upon the operations on the precious metals was $830.12, while the legal allowance was $89,311.38.

INDICATIVE of the enormous prices paid for rare specimens of orchids, at a recent auction sale at Stevens' (London) a single fine specimen of the Cattleya trianæ alba from Brentham Park collection sold for seventy guineas, or more than $400.