

IMPROVED AUTOMATIC CRADLE.

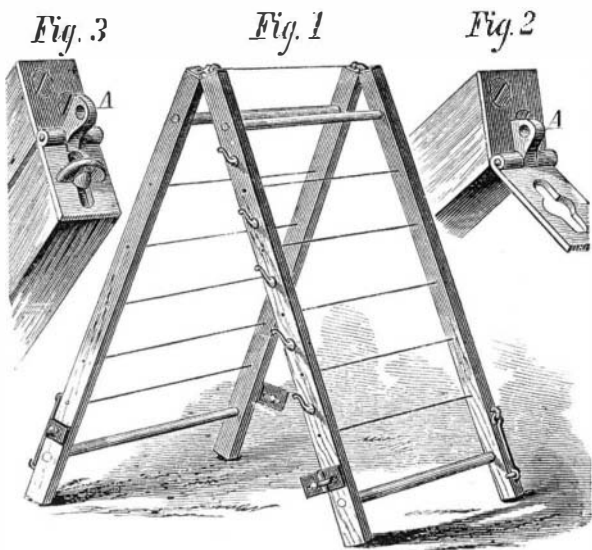
The accompanying engraving represents a new form of cradle, which, by means of suitable clockwork, may be caused to rock itself for periods ranging from thirty minutes to an hour and a half, according to the strength of the actuating mechanism. The cradle proper is mounted on its pedestal in a novel manner, and is so connected with the rocking device that its motion may be uniform without reference to the position of its occupant.

The clockwork, as shown in the engraving, rotates a crank shaft which, through the medium of the pitman, A, oscillates the bell crank, B. On the vertical arm of the latter is a spool, around which passes a cord, which is extended between two springs, C, attached, as represented, inside the hollow head board. The rotation of the crank shaft determines the oscillation of the bell crank, the spool of which, traveling along the extended cord, alternately depresses the ends thereof, and so communicates motion to the cradle. It will be obvious that the inclination of the cradle is compensated for the self-adjustment of the springs, C, so that these, with the cord, form an automatic regulator, by which the rocking lever is always adjusted in proper position to operate. As the child might be placed far over to one side in the cradle, thus giving the latter a prominent "list" in that direction, the utility of the above device, which causes the rocking to be always uniform, will be readily appreciated. The motion or swing of the cradle is regulated by the weight, D, within the headboard; said weight is adjustable by a screw clamp attached thereto, which works through a slot in the headboard (see dotted lines).

The mode of attaching the rockers to the base or pedestal consists simply in the pivoted connecting bars, E. On the rear rocker, the bar, F, is extended and terminates in a treadle, as shown, thus affording an easy means of rocking the cradle by the foot when it is not desired to use the spring. Patented November 23, 1875. For further information relative to sale of rights, royalties, etc., address the inventors, Messrs. W. V. and N. W. Vandervort, New Antioch, Clinton county, Ohio.

BROOKS' IMPROVED CLOTHES DRYER.

The new portable clothes dryer, illustrated in the annexed engraving, is so constructed as to admit of its being opened, either as shown in Fig. 1. or with its frames vertical, after the manner of an ordinary clothes horse. To adapt it to be placed in either position, the inventor has attached a novel hinge, which forms the principal feature of the device. The construction of the hinge will be understood from Figs. 2 and 3. One portion of it has apertures through which the attaching screws pass; the other has a slot to accommodate a button which, when inserted and pinned as in Fig. 3, fastens that side of the hinge. There is also a stop, A, which prevents the hinge from opening too far, and also has an aperture through which a cord is passed to afford additional accommodation for the clothes.



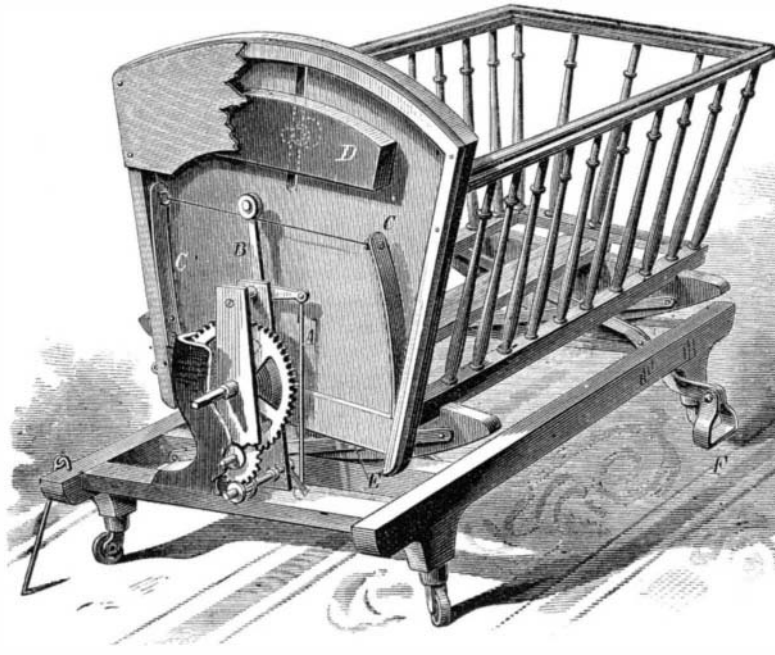
The location of the hinges is apparent from Fig. 1. Two at the upper extremities of the vertical pieces of the frames connect the latter together, so that they may be adjusted as shown. When it is desired to set the frames up, clothes-horse fashion, one of the upper hinges is disconnected; and the vertical bars being brought together, their lower parts are fastened by the hinges shown near the bottom.

Patented November 2, 1875. For further particulars relative to sale of State and county rights, address the inventor, Mr. G. A. Brooks, Norwich, Conn., or J. W. Heaton, Bridgeport, Conn.

The Art of Skeletonising Leaves.

"The subject having excited a little interest among some horticulturist lately, owing to the exhibition of some beautifully executed examples at some of the large provincial exhibitions held in the Northern and Midland counties of England, I took the liberty of appealing to a lady friend, who has been very successful as a skeletoniser of foliage, requesting her to favor me with the *modus operandi* by which she produces her specimens with such perfect completeness.

"My informant states at the outset that the art of skeletonising leaves and flowers would be found much less difficult of accomplishment were the nature and character of the various plants thoroughly studied at first. This is, no doubt, a very important matter. For instance, it would be but a poor direction to the learner to say: "Gather the leaves on a certain day," unless proper attention be also paid to the leaves chosen. They must have reached a certain degree of maturity, neither too old nor too young; and as all leaves do not reach this point at the same time, it is obvious that care must be taken that each kind must be gathered when fit for use. The leaves of the magnolia, for instance, may be gathered



VANDEVORT'S AUTOMATIC CRADLE.

when the plant is in bloom, varying in time from June till August. They will require from a month to six weeks time to be well immersed, and so be easy to dissect, as the fiber is so strong. The leaves of the ivy rank among the most difficult, and, because of the peculiar beauty of the fiber, will amply repay the trouble involved in the preparation. These may be immersed from the beginning of May to October, but should be leaves of the previous year's growth. All leaves will not answer for dissecting, but those that have been most successfully operated on are from the magnolia, ivy, pear, rose, holly, orange, poplar, willow, elm, lime, service tree, Spanish and horse chesnuts, and the oak. The leaves of the last-named should not, however, be put into the same vessel with the others, as it affects them in an undesirable manner. Seed vessels may also be dissected in an admirable manner; such are those of the stramonium, winter cherry, poppy, etc. "To procure good specimens, put the leaves into a deep jar, and cover them with soft water, which must not be changed; the jar is then to be put into a cool place. When, upon examination, the leaves are found to be quite soft, they must be carefully brushed in a weak solution of chloride of lime for a short time, to whiten the fiber, and afterwards washed well in two or three waters, and dried carefully between sheets of blotting paper or linen; after which they are ready for mounting. To make stems for this purpose, thread, stiffened with gum, is most useful, and it has a natural appearance. The leaves may be formed into bouquets or wreaths, according to the taste of the operator, and should be placed under glass shades to preserve them from harm.

"I have seen groups of leaves so prepared, that formed most acceptable table ornaments in sitting and drawing rooms; and it suggests a pleasant employment for the fair sex, with which to fill up moments of leisure. It is evident that much nice discrimination in the selection of the right leaves is required; and a light and careful manipulation is also essential; and in the case of failure from a first attempt, no small amount of patience is needed to carry the operator through to ultimate success."—R. D., in *Land and Water*.

Compulsory Education in New York.

A recent report of the Superintendent of Truancy to the Board of Education of this city exhibits the practical working of the compulsory education law, which went in force on the 1st of February, 1875. By comparing the figures showing the average attendance on the above date, and those showing the same at the close of December last, there appears an increase of 6,443 in the number of pupils registered, and of 6.515 in the daily average attendance. Including the increase of average attendance at the industrial schools also, the last mentioned figures are augmented to 7,614. In other words, in ten months and at an expense of \$14,355.88 for the period, nearly 8,000 children have been induced to abandon a course of idleness and vagrancy, fitting them to become paupers and criminals, and to enter upon a course of industry and instruction, preparing them to be future thrifty and intelligent citizens. This is an admirable and encouraging showing for the first workings of the law, although one which we may hope to see improved upon after the lapse of another year.

Koumiss.

The foreign medical journals are giving considerable prominence to the discussion of the utility of koumiss as a remedy for that, now to all intents, incurable disease, consumption. It is to this peculiar preparation that the Tartars at-

tribute their total immunity from the disease; and that this immunity has long since been traced to koumiss by Russian physicians is proved in the fact that the latter as frequently send consumptives to regions where koumiss is constantly used as the physicians in this country dispatch patients to the orange orchards of Florida for the winter.

The Tartars, above all other people, excel in the manufacture. The material is an alcoholic liquor produced by the fermentation of mare's milk. A certain quantity of the latter is placed in a wooden vessel, and one sixth of its amount in water is added. A similar amount of cow's milk is next poured in, and then the receptacle is covered with a thick cloth, and either buried in the earth or subjected to a moderate heat for 24 hours. The mixture becomes sour, and thick clots form on its surface, but these last are again incorporated by brisk stirring, which is continued until the liquor becomes homogeneous. Another twenty-four hours' repose follows; the liquid is transferred to a higher and narrower vessel, and the stirring and beating operation is repeated. It is then ready for use, although the stirring has to be done over again every time the contents of the vessel are drawn upon after any period of rest.

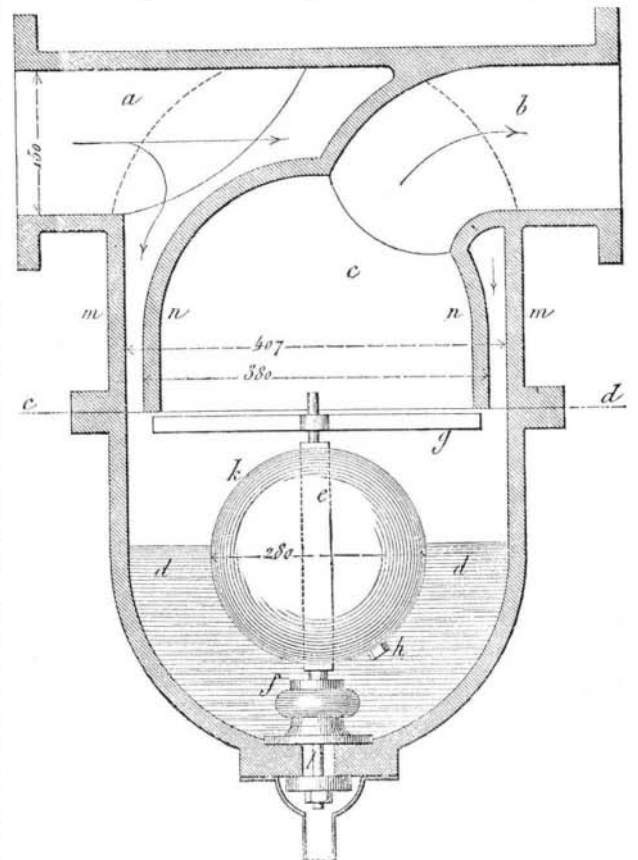
The taste is agreeable, and of a kind of acid sweet. A dose of something less than a quart is intoxicating, even to persons habituated to its use. It appears to act on the faculties of nutrition like alcohol and raw meat, that is, it moderates the consumptive action of the disease. The patient gains in weight.

In the large cities of Europe, koumiss has, in cases where large quantities of mare's milk were unattainable, been made of cow's milk alone, or mingled with asses' milk. To use it as a medicine, it is bottled, and a tube is forced down through the stopper, as in the siphon jars so much in use by mineral water makers, said tube having a suitable faucet.

The pressure of gas generated in the bottle is always sufficient to drive out the koumiss forcibly, so that it can be drawn off at pleasure, like artificial seltzer water.

A NEW STEAM TRAP.

We extract from the Belgian *Bulletin du Musée de l'Industrie* the annexed engraving of a new steam trap, for drying saturated steam during its passage from the boiler to the engine cylinder. The apparatus is composed of a cast iron chamber, *m*, which is surrounded by felting or other non-conducting material. The steam enters at the opening, *a*; and in its descending course between the sides, *m* and *n*, and in rising in the bell, *c*, it deposits the water of condensation, which, sinking to the lower portion, *d*, of the receptacle,



there accumulates. In order to allow this water to escape, a double seated valve, *f*, is placed at the bottom. On the stem, *l*, of the valve, a spherical float, *e*, is carried. The stem is fixed in a tube which traverses the sphere, and is guided above by three arms, at *g*. When the water level rises in the receptacle, the float is raised and the valve beneath lifted, allowing of an escape until the sphere falls sufficiently to close the valve. The weight of the float may be regulated by admitting a suitable amount of water at the opening closed by the plug, *h*. The dry steam makes its exit above and is conducted to the cylinder by the pipe, *b*.

THOUSANDS of dollars are lost by farmers through neglect to shelter their farm machinery during winter. It only takes about two winters' exposure to rot the wooden portions at the joints, and to render the bolts loose and weak.