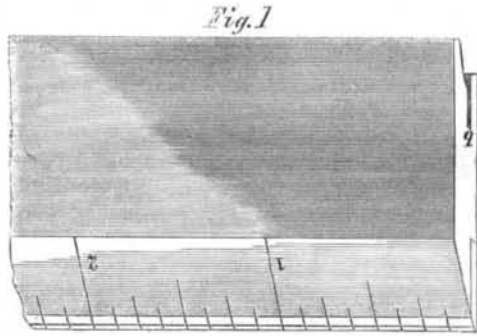


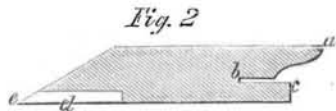
LANE'S CAPILLARY GROOVED RULERS WITH PAPER CUTTER AND RULE COMBINATION.

Among the many useful improvements and combinations which have from time to time been presented for the purpose of facilitating the manual operations of those employed at the desk, none can claim a higher place than the neat, compact and durable article here represented. Being the invention of a practical accountant of many years' experience, it is reasonable to presume that it is applicable to the different uses claimed for it. The object of this improvement in the ordinary flat ruler, is to effectually prevent the ink from blotting the paper, by the introduction of one or more fine grooves, *b*, which, acting



by the law of capillary attraction, absorb horizontally all ink that may descend from the edge along which the pen passes, *a*. The groove may, if preferable, serve the purpose of holding a narrow strip of blotting paper, which, extending and resting on the projection, *c*, will absorb the ink in its descent. The latter may appear the better arrangement to those unfamiliar with the action of capillary grooves, but the former will be found to be equally effectual.

A further improvement consists in the attachment of a paper cutter, *d*, on the under side and opposite edge of the ruler, and beveled with the same to a sharp edge, *e*. This beveled surface is marked as a graduated scale or rule, similar to that in use by draughtsmen. The paper cutter, combined as it is with the ruler, is in a very desirable form, can be handled readily, is true, and not liable to become bent and disfigured like the ordinary tin cutters. The rule or scale is serviceable in various ways to the book-keeper for dotting off the distances for ruled lines, ornamental work, giving orders to the stationers, &c. For the use of schoolboys its advantages are



particularly apparent, as by placing this article in the hands of the pupil, a taste for mathematical accuracy may be cultivated, which is so beneficial in many pursuits of life. This subject has often engaged the attention of those connected with educational interests, and we are pleased to record any invention which has for its object the encouragement of this important branch. A rule or scale should be in the hands of every scholar, and it would seem that Lane's Rulers, conducting as they do to neatness and cleanliness, beside combining three useful and practical articles in the space of one only, are destined to displace to a considerable extent in our counting-rooms and schools, all other rules and cutters. Although but a few months since patented, the inventor has received flattering testimonials of their merits from many of the first accountants and teachers in this and other cities. This improvement in rulers was patented, June 18, 1861, through the Scientific American Patent Agency. Any further particulars may be obtained by addressing the inventor, George Lane, Cashier with Lathrop, Ludington & Co., No. 25 Park-place, or of the wholesale agent, Porter Fitch, No. 3 Park-place, New York city.

It has been stated that the American Indians, and after them the Germans, are the most celebrated for long "jaw-breaking" names, but some chemists are a match for them both put together. One has lately given the term "methylethylamylophenyl ammonium" to a preparation of "wood spirits" and ammonia.

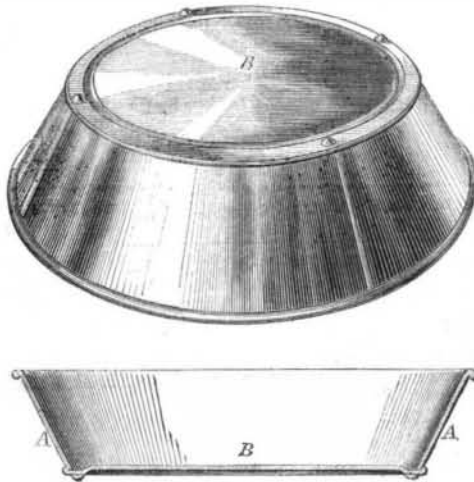
SPAULDING'S IMPROVED MILK PAN.

It is a well-known fact to all workers in tin, that in making a large pan or pail which needs to be watertight, the heat in the soldering process expands the bottom, no matter how well put on, causing considerable slackness, which remains after the heat is dissipated. This slackness is really a sort of wrinkling, which allows the bottom to spring when pressed, or when the pan is filled, and has more or less irregular angles, which of necessity come in contact with the table or shelf on which the pan is set, and are soon worn through, rendering the dish useless. This is peculiarly the case with the milk pan, and the larger it is the more serious is the defect.

A remedy has been found, however, in the invention here illustrated for which a patent was granted to Charles F. Spaulding, of St. Johnsbury, Vt., July 23, 1861.

A A are the sides, and B B the bottom of a milk pan made and soldered in any of the ordinary methods. By means of a roller properly constructed for the purpose nearly the whole of the bottom is raised sufficiently to take up all the slackness, and the result is a beautiful dish with a symmetrical concave bottom, drum-head tight, and, when the usual solder drops or legs, are put on, no where else touching the shelf or other support on which the pan may rest.

Thus constructed this pan will last double the time of the ordinary one; but this is not its only recommendation. Dairymen know that—other things being equal—a greater quantity of cream will be collect-



ed on the surface of milk around which the air is allowed to circulate freely, and which has not been disturbed during this collecting process. Both of these conditions are obtained by this invention, as the pan when full may be moved without having the milk disturbed by a springing bottom, and there is clear space of some eighth of an inch or more under the pan, between it and the shelf, for the circulation of the air.

The expense is but a mere trifle above that of the ordinary milk pan, and the disk roller for the raising of the bottom can be correctly and cheaply attached by any common machinist to Burton's double seamer, already in use among many tinmakers; or a machine for the purpose will be furnished by the owner of the patent at a price not exceeding \$10.

Further information can be obtained by addressing Lorenzo K. Quimby, Lyndon, Vt.

ONE of the most extraordinary salt wells on record, perhaps, is now in operation at Wellsville, Ohio. The well was sunk in anticipation of finding oil, but when at a depth of four hundred and eighty feet the borers struck a vein of gas, which burst forth with such violence as to eject all the tools used in boring, together with two hundred feet of pipe which had been previously introduced. The boring had developed a very strong vein of salt water, which yields a barrel of salt an hour.

THE Seneca Knitting Mills at Seneca Falls, in this State, now engaged on government contracts, employ between three and four thousand men and women, and yet this force is inadequate to meet the demand. Orders for many thousands of pairs of stockings have been turned away. The company have ordered a large amount of new machinery, sufficient to increase the capacity of the mills at least one-third.

MUSICAL SOUND RESULTING FROM ECHOES.—In the *Cosmos* is a notice of M. Fabri's experiments, showing that it is possible to produce a musical tone of echoes which succeed each other very rapidly. By placing himself between two walls parallel with each other, and distant about eight yards, and producing any sound at distinct intervals, he has determined that the reflexions or successive echoes of this first sound, rebounding from the walls, are sent from one wall to the other, giving rise to a musical tone which lasts some time. Knowing the velocity of the sonorous waves, he was able to calculate the number of vibrations which corresponded to this sound, and he found an agreement between the result of this calculation and direct observation. The fact is curious enough, because the intensity of individual sounds, which, by their frequent addition, ought to form the musical sound, becoming more and more weak, it was hardly to be expected that they could combine into one and the same sound.

"THE GREAT EASTERN."—The London *Engineer* says that the Great Ship Company have resolved to issue £22,000 of 10 per cent second mortgage debentures to fit out the Great Eastern for a new voyage. The repairs are estimated at £8,000 (\$40,000) only, and will be, it is said, provided for out of assets in hand.

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