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NRW INVENTI

Improvement in Time Pieces.

Silas B. Terry, of Terryville, Plymouth, Conn., has invented new and useful improvements in, Time-pieces, for which he has taken measures to secure a patent. The improvement is more particularly applicable to "Marine Clocks," but is also applicable to all sorts of "time-pieces." It consists in substituting for the spindle of the balance, a straight, thin, flat spring of steel, or other suitable metal, secured at its ends, so that they cannot turn or otherwise move from their position. The balance is fastened to this spring at about the middle of its length; the said spring must be of sufficient length to allow of its twisting by the vibration of the balance. The object of thus hanging the balance is to avoid the friction of the pivots of the ordinary balance. which soon chafe by use, and require to be often lubricated. The improvement also dispenses with the common hair-spring. Another part of the improvement consists in making what is termed the "fork" or "crutch wire," which transmits the motion from the verge to the balance, very flat or thin, or forming it with a joint, so as to be capable of bending or turning with ease in a direction at right angles to the motion of the pallets of the verge, at the part where it is fastened to the verge, or verge-arbor, from which it extends in line with the axis of the balance, and in fitting its point into a collet attached to the balance, whereby, as it gives motion to the balance, it will move in the same direction, and obviate the excessive friction produced by the common lever, whose motion is at right angles to the arbor of the balance.

Improvement in Threshing Machines.

James Robinson of West Hebron, Washington Co., N. Y., has taken measures to secure a patent for an improvement in machines for threshing grain. The object of the improvements are mainly to combine the threshing apparatus in such a manner, with a wagon, that the grain can be threshed on the field while the wagon is moving, without taking it into the barn and housing it. Of course, in carrying out this idea, there must be other peculiar improvements in the arrangement of the machinery, to carry it out so as to render it useful, profitable, and practicable.

is dispensed with. Some of our cloth manufac-' troduced into our part of the country; there cabin, and there adjusts the indicators to the this process.

Improvements in Ventilation.

In Vol. 6 of the Scientific American, we is John L. Shorey, Principal of the Howard depart. We will now suppose that the boat published a description of Ruttan's System of School, Lynn, Mass. A spontaneous certifi- has proceeded on her voyage as far as Mem-Ventilation; it was illustrated with eight en- cate from him is now before us; he speaks of phis, and during this time the engineer has gravings, on pages 299 and 317, said volume. it exultingly, and says, "it has given him a had "dangerous steam" or dangerous water, It has been very difficult to get his system in-' new lease of life."



Last week, on the column devoted to boilers, we noticed the efforts which had been made by Alfred Guthrie, of Chicago, Engineer, for the prevention of steamboat boiler explosions on the Mississippi river; and we also stated that an excellent bill had been introduced into the Senate by Senator Davis, as an amendment to the act, " providing for the better security of the passengers on board of vessels propelled in whole or in part by steam." The accompanying engraving is a vertical section of a "Water Indicator," invented by A. Guthrie, for steam boilers, the object of it being to show the passengers on water falls too low," the card "Dangerous" water. It is well known that a defecmost explosions, for a defective supply of waresult they are made soft and weak, and then when fresh water is suddenly ejected on the very great pressume is generally the result. caloric or heat.)

praise and consideration of our whole agriculsteamboat; G G are the flues; P P P are Western waters These inspectors are to The prices, we believe, are \$10, \$15, and \$20, tural people. three floats bound together and separated by a have the same charge of the indicators that and can be obtained of the inventor and pa-Improvement in Paper Making. stretcher. These floats are attached by a proper persons now have of the keys of the tentee, J. W. Nystrom, No. 31 Union street, chain to valves, S S, which on being drawn mails. The plan of operations sketched out Philadelphia. There are two pamphlets of Milner Gibson, M. P., in a recent speech made in the House of Commons, on the sub- open by the floats as they descend with the by the inventor is as follows :instructions accompanying the machine, these water. admit steam through the pipes, E, to We will suppose a steamboat have to be studied attentively for some time stated that had four xing paper the miniature engine or cylinders, I I, which ready to depart for New Orleans. The inuntil a perfect acquaintance with working the by experiment that paper can be manufactured in a fit state for the printer, with a beautihave pistons, J J, in them, the one set of which spector is notified of the fact, repairs on board, machine is obtained, after which it will be esraises the card "Dangerous," and the other and makes a proper inspection of the boilers, teemed a constant friend. ful smooth surface, that could be printed upon strikes the bell, M, to give warning both by engines, and machinery, and finds they bear without drying, and that printing could be sound and sight. The pistons, J J, No. 1, are the relative proportions, with the proper Locks. carried to a more advanced state-both letter Hobb's American Bank Lock has been press and engraving-than can now be atalso intended to raise a card above the one pumping apparatus, free and unobstructed pas-"Dangerous," with the words "Water getting sages, and all in good order. But he finds the opened by an ingenions mechanic, on the tained by drying paper and re-wetting it for low" on it. It will be observed that the boilers are old and somewhat worn; or per-Surry side of the river, in two hours. printing. small cylinders to strike the bells, have screw haps, in the hydrostatic pressure, he finds in-[The above is from the English correspon-Hydrogen Gas for Singeing Cloth. pistons, which receive a rotary motion so as dications that it will not be safe to run these dence of the Quebec Mercury. We have seen In Bradford, England, hydrogen gas, made to turn round and operate the hammers; K is boilers under a higher pressure than, say no such notice in any of our numerous English from water by White's process, has been eman index for registering the number of times fifty-five pounds to the square inch. He then exchanges. We question its correctness. ployed by a Mr. Sister for singeing cloth. there has been "Dangerous" or low water in says to the engineer, you may run with this This, we believe, is a good improvement, as one trip; L is a pall to turn the register; n is pressure and no more. You may also run, According to Hawksbee, water is condensathis gas gives out great heat, and the expense a spring to hold the index; m is a cam for when the water is full, three inches above the ble by cold one 28th part of the whole trom of decomposing carbonic gas, to mix with it, throwing back the pall, L; N is the plate of flues and no lower. He then repairs to the 130° above freezing point.

turers and bleachers might do worse than try is a spirit of conservatism, even to indifferent prescribed limits, (which can be done in a



and useless things, which seems to stand in moment), locks up the indicators and retains the way of many good inventions. One man the keys. Between the two indicators he has had the spirit and enterprise to try it; he places his permit, and the boat is allowed to and none of the passengers are disposed to prosecute him for the penalty in the bond; it will be the duty of the local inspector there to repair immediately on board and unlock the indicators, where he will find a secret register giving the exact number of times that dangerous steam or water has occurred, and exactly to what extent, since the departure from St. Louis; and if he should consider it unsafe to allow the engineer to continue in charge, he substitutes another in his stead.

The steamboat men of St. Louis have held a public meeting, at which they suggested the necessary masures to prevent a recurrence of the terrible steamboat disasters on the Western waters; expressing their candid anxiety for the adoption of restrictive and cogent laws for the better protection of life and property, only asking that they may not be subject to useless and uncalled-for expenditures and restrictions; all of which we agree with, but then the question will arise, "what are useless and uncalled for expenditures?"-There is a necessity for the most strict and thorough reform, and that promptly. We hope Congress will act on Senator Davis' Bill at an early date.

Nystrom's Calculating Machine.

It may be remembered by our constant readers that, on page 273 of our last volume, there was presented an engraving and description of "Nystrom's Calculating Machine," which is the neatest and most compact or all the calculating machines that have come under our observation. Since that time Mr. Nystrom has made some important improvements, by the addition of two more scales-one on the outside and one on the inside of the "Calculator's " disc. The new inner scale is laid out in points and fractions thereof. by the compass, which correspond with angles, distances, and differences in latitude, longitude, &c., on the outer scales spoken of, so that navigators will be enabled to make quick and correct calculations without reference to any tables.

Improvements in Planofortes. The new outer scale, which has been added, deck or in the cabin, the state of the boilers R. E. Letton, of Quincy, Adams Co., Illiis divided into degrees and parts of the same, in respect to water. When there is plenty nois, has taken measures to secure a patent and is for adding and subtracting degrees and of water in the boiler, the top fixed sign, for improvements in Upright Pianofortes. minutes, and to turn degrees and minutes into Good Water" alone is exhibited, when the indicator, which is secured in a suitable time, &c. Were the engraving before us, we The invention consists in the construction of the frame and the arrangement of the soundconspicuous place, but kept from being touch- could present the method of solving many is pushed up and covers the other, so as to let ing board, metallic plate, and bridges, and also ed by any person on the steamboat. Mr. problems by it in a simple and expert manner, all know, when there is danger from low in the action or striking parts. The base or Guthrie states in his pamplet that he does but without this it would only confuse this nolonger strings are placed in a different plane not suppose any law can be so framed or tice of the said machine, to present figures of tive supply of water has been the cause of administered that evasions and abuses will reference. We allude to this machine at prewith and oblique to the shorter one, which are vertical. not creep in, he therefore invented this water sent for two reasons; one is, an improvement ter leads to the overheating of flues, and as a indicator, and he has also a steam indicator has been added to it; another is, that we have Dairyman's Assistant. operated by the pressure of steam, raising a examined the new machine, and we like it Miss Lettie A. Smith, of Pineville, Bucks piston which lifts weights, acting thus by ex- A calculator is only a disc, not quite 9 inches Co., Pa., has taken measures to secure a patent red hot plates, a sudden increase of steam to a pansive pressure, precisely as this water inin diameter. and with two arms placed upon for a good improvement on a new machine for dicator does by gravity. In all parts they are it. The most intricate questions in arithmetic working butter. For large dairies, one man This forces the boiler to pieces like gunpownearly alike. These are for the passengers, and higher branches of mathematics, can be or a dairymaid will be able, by this improved der, for water has nearly the same expansive | their safeguards which warn them of danger. resolved in a very short period. For calculamachine, to work as much butter in the same power when combined with a certain amount This indicator is to be locked up against all ting angles it is an invaluable instrument, and time as five persons by the plans in common of caloric, (steam is the product of water, and interferance of any person but the governis therefore of great benefit to engineers, nause, and do it with more ease. It is a most ment inspectors, who are intended to be loca- | vigators, surveyors and draughtsmen. The commendable improvement, and deserves the ted on various points on the Mississippi and Calculator is made of brass, and is silvered. In the annexed figure, F is the boiler of a