

## IMPROVED SEED CLEANER FOR THRASHERS.

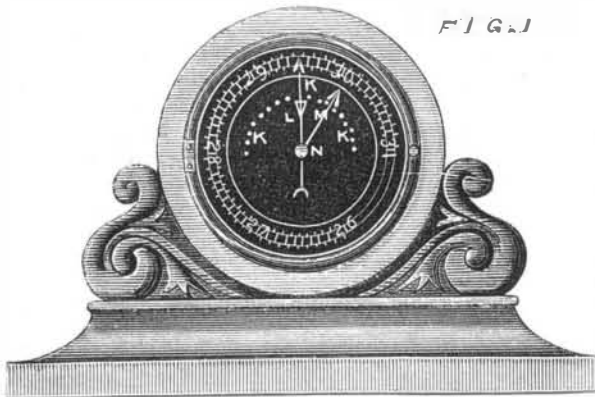
The invention now illustrated is an improved apparatus for cleaning timothy and other grass seeds, which can readily be attached to the thrashers and separators in ordinary use. Our engraving shows the riddle and chain of rakes which compose the improvement, unattached to the machine. The side boards of the riddle, A, are notched and made of a shape suitable to fit on to the shoe of the thrasher, to which they are secured by screws or bolts. The riddle shown is provided with four screen plates, which are perforated so as to allow the blast to pass upward and the seeds downward through the perforations. They are made with steps between them, the uprights of which are pierced with numerous holes, above which teeth are arranged so as to carry the stalks, etc., on to the next plate and at the same time allow the blast to operate upon them properly as they are passing from one plate to the other. The carrier or stirrer, B, consists of the endless belts shown, which pass round pulleys attached to shafts at the ends of its framework, and to which are attached toothed crossbars. The rear shaft revolves in bearings which are firmly connected with the frame of the thrasher in such a position as to bring the rear end of the carrier over the forward end of the last plate in the riddle. The forward shaft runs in adjustable bearings secured by screws, by means of which the tension in the belts is regulated. The carrier is driven by a belt connection with the operating mechanism of the straw stacker. The teeth attached to the crossbars are of sufficient length to reach nearly to the screw plates of the riddle, and the belts and teeth are arranged so that the sides of the riddle do not strike against them as the shoe of the thrasher is vibrated.

By the construction described, the motion communicated to the teeth of the carrier causes them to carry backward the chaff, stalks, etc., while they and the seed are being moved from side to side by the vibration of the shoe and riddle. The seed which falls through the three forward plates of the riddle passes down through the machine to the floor or grain box. That which passes through the rear plate is received by a spout and carried back to the thrasher.

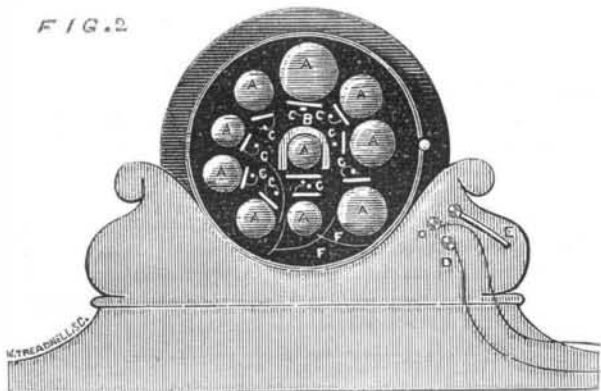
The improvement is the invention of Mr. John L. Custer, of Bonaparte, Van Buren Co., Iowa, from whom further information on the subject may be obtained. Patented through the Scientific American Patent Agency, May 14, 1872.

## A MUSICAL BAROMETER.

A very interesting and useful application of the electro-motive force is seen in the musical barometer, invented by Captain Hans Busk, and patented in England. Within the case of an ordinary aneroid barometer, he arranges a series of



musical bells, of different tones, having hammers that are operated by electro-magnetic agency, the magnets of the hammers being brought into the battery circuit, and so made to strike, by means of the usual indicating pointer on the



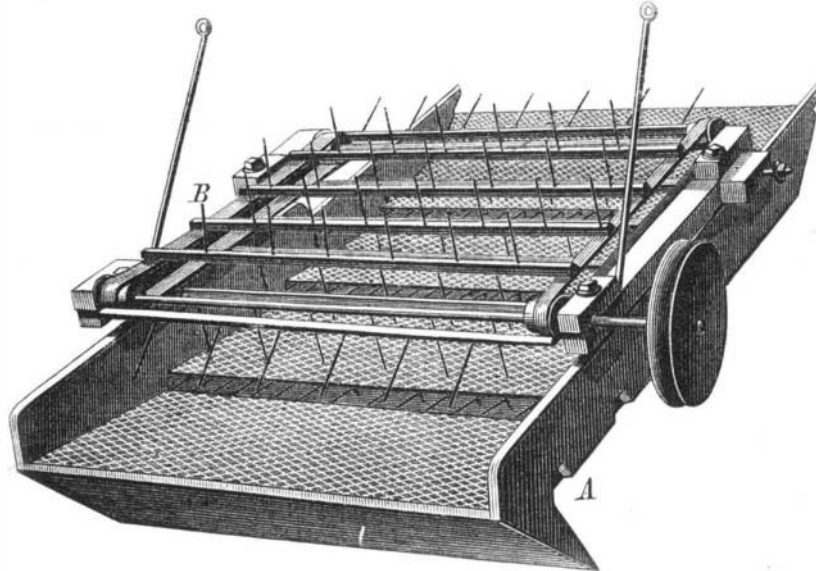
face of the barometer. To effect this closing of the circuit the face of the barometer is provided with a series of platinum conducting pins, and whenever, by a change in the atmospheric conditions, the pointer is moved it touches a corresponding pin, and the bell that is in connection with such pin is sounded.

The general construction will be readily understood by a glance at our engravings, in which Fig. 1 shows the front of the barometer, and Fig. 2 the back thereof, exhibiting the bells and their magnets. All the bells have a different note. It is therefore easy to tell, even at a distance, whether the

barometer is rising or falling. The deeper toned bell gives notice when the barometer falls from 29.50 inches down to 28, while the higher notes indicate a rise towards 31 inches. In variable and unsettled weather, more especially at sea, it is curious to note the rapidity with which these changes occasionally succeed each other.

## Imported Sailors---Shall we Abolish the American Service?

It is a suggestive fact that the new American Steamship Company of Philadelphia think of going abroad for seamen to man their vessels. A comparison of English and Ameri-

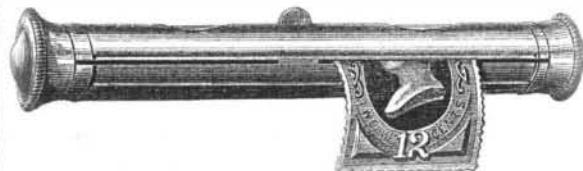


## CUSTER'S SEED CLEANER FOR THRASHERS.

can wages per month for seamen shows that, in the case of one of the new Philadelphia steamers, the annual difference in wages in favor of a competing English steamer of the first class will amount to about \$25,000, or six per cent on the cost of construction. A first class English engineer gets, according to the current rates, \$80 per month, while an American engineer asks \$240 per month. An English fireman works for \$20 per month, and an American fireman wants \$40 per month; an English ordinary seaman has \$12.50 per month; an American seaman, \$40. Of course, no good American sailor could be tempted to work for less pay than sailor receives, and consequently the owners of American shipping seek the cheapest help they can get. The item of wages, in the case of the Philadelphia company, is one demanding serious consideration. If, as the New York Bulletin says, an American steamer be manned with American seamen at current wages, her annual expenses would be greater than those of an English steamer with a crew of the same size, and to build a ship at home and send abroad for a crew to man it is, so far as we know, without precedent in maritime history. If we are ever to have ships, we must have sailors of our own to navigate them; and how can we have sailors of our own if the seamen's labor market is to be perpetually depressed by unrestricted foreign competition? Philadelphia is a strong "protective" city, and it would not look very well for the owners of the new steamship line to import its sailors.

## POSTAGE STAMP HOLDER.

Every one has experienced the difficulty of carrying postage stamps about the person. If kept in the vest pocket or even in a portemonnaie, the warmth of the body is sufficient to make them adhere to their receptacle, thus rendering them



liable to be torn or defaced. Their small size also makes them easily lost or mislaid among the papers of a writing desk, so that there has been an actual need for some invention which, while retaining the stamps safely, should always present them in a convenient manner ready for use.

These requirements it is aimed to fulfil in the neat little device represented in the accompanying illustration. It consists of a small cylinder of metal in which the stamps, after being rolled up, are placed, the ends of the rolls projecting through slots cut in the side of the cylinder. These slots are covered by a sliding cover, which is kept in position by means of a spiral spring. This cover is represented in the engraving as drawn back. The ends of the cylinder are closed by two small caps which are readily removed when necessary.

The end of a roll of stamps, after the latter is placed in this cylinder, is drawn out through one of the slots until the perforated portion, attaching a stamp to the roll, is held between the edge of the sliding cover, when closed, and a shoulder extending along the length of the cylinder. The stamp is then readily torn off. If now the cover be pushed back, the end of another stamp will be found protruding from the slot ready to be drawn out when required. The cylinder is made in two compartments, each pierced with a slot, so that stamps of two denominations may be carried.

The holder is small, may be easily carried in the vest pocket,

and is, besides, a convenient addition to the writing desk. It can be made, if required, of sufficient size to contain tickets or similar small articles. Address, for further information, Mr. H. V. Dempster, 1,014 E street, Washington, D. C.

## THE PATENT OFFICE GAZETTE.

The Official Gazette of the Patent Office is furnished at the government expense to Senators and Representatives in Congress; each of these persons may designate eight public libraries to which the Gazette shall also be sent free. All others who desire to receive the publication must subscribe.

The rate is to be not less than five dollars a year, which is the price at present. The Commissioner of Patents may, we presume, increase the price should he deem it necessary. The publication of the drawings of the patents for the current year on a reduced scale has been commenced in the Gazette. They are admirably executed by the American Photo-Lithographic Company. The drawings are given in full, but such is the perfection of the reductions that, although the drawings of no less than thirty patents are in some cases presented on a single page of the Gazette, every drawing is clear and legible.

The success of this excellent and economical mode of publishing the patent drawings, will, it is to be hoped, induce Congress to provide the means for the printing of the specifications in the same concise manner. If fine types are used, and care taken not to waste space in the margins, it will be practicable for the Government to issue printed copies of all the patents, occupying only eight or ten volumes a year, at a cost to subscribers of from ten to twenty dollars. This will be a work of great public importance and value. At present the drawings are given in full but not the specifications. Only the concluding portions, or claims, of the specifications are now published.

## AUTOMATIC FAN.

The invention we now illustrate is peculiarly applicable to the present season, as it is intended to provide simple and efficacious means for cooling the air in, and driving away insects from, the vicinity of the person. It consists in an arrangement of clockwork, by which fans of various forms can be conveniently operated in such positions as may be required.

The clockwork used is contained in a suitable frame, and is actuated by either a spring or weight, as found most convenient. The last shaft of the train carries a wheel which has a star-shaped slot or groove cut through or formed in its face. A lever is pivoted at one end to the frame, and carries at the other a little pin and roller which enter the star-shaped slot or groove in the wheel. By this construction an oscillating motion is imparted to the lever by the revolution of the wheel; and, in consequence of the momentary check, given as the roller passes either of the angles in the star, the mechanism also serves as an escapement. The stem of the fan is connected in any suitable manner with the oscillating lever or its pivot, and the proper waving motion is thus communicated to it.

Our engraving represents the apparatus attached to the



head of a bedstead and employed to swing a double fan for the two-fold purpose of cooling the air and keeping off flies and mosquitoes. The inventor states that the machine, when actuated by a weight, will run for six hours and a half where the room is ten feet high. He considers the employment of such a fan in the sick room most advantageous.

Patented through the Scientific American Patent Agency, February 27, 1872, for Mr. J. B. Williamson, of Louisville, Ky., of whom further information may be obtained by addressing him through P. O. drawer No. 79, in that city.