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A New Power of Propulsion.

A Boston correspondent sends us an extract cut from a paper of that city, but republished from an English journal, and asks an opinion respecting the wonderful invention which it describes. The substance of the extract is as follows :—

"It is now found that the immense amount of resistance encountered at the heads of ships and steamers, which increases at a ratio approaching to the square of the velocity, can be converted into useful power, instead of being, as at present, all sustained as dead loss. A method for achieving this has been patented by Robert Griffiths, engineer, London, inventor of the screw propeller which bears his name, and consists in forming the lower part of the head of the vessel with a revolving cone, around which are wound spiral flanges. By this arrangement, the resisting water, instead of falling upon the ordinary bows, impinges, when the ship is in motion, upon the screw flange, and this causes the cone forcibly to revolve. The power thus obtained from the cone is transmitted by shafting and multiplying gear to work a screw at the stern, if a sailing vessel, or to go in aid of the engine, if a steamer. Confidence is entertained that not only will the speed of steamers be greatly increased by this mode of dealing with resistance, but that the invention must lead to the creation of a class of profitable self-acting screw clippers, whose speed will far exceed the best modern-built ships."

We consider the invention of Mr. Griffiths as worse than useless. This is not the first time that similar devices have been proposed for employing the resistance of the water through which a vessel is driven, to propel it, and upon the same fallacious principle as that of Mr. Griffiths. All the power which he proposes to obtain from the resisting action of the water is by presenting an extra amount of resisting surface to it, by his spiral flanges. By such devices the loss must be equal to the gain ; this appears to be a self-evident fact in mechanics. Instead of such a self-acting screw increasing the speed of vessels, as has been stated, it would diminish their speed ; and we must say it is falsely called "self-acting." If it were a self-acting power it could propel a vessel without sails or steam, but this it cannot do.

"THE new steamer *Voyageur de la Mer*, built for the Pasha of Egypt, remains at East Boston, and since her trial trip, her sails have been unbent, the yards sent down, and she will not leave for her destination at present. A failure."

[The above paragraph, from an exchange, is mysterious, and needs some explanation. What are the reasons for this failure?—EDS.

TURNER'S COMBINED SMUTTER AND GRAIN SEPARATOR.

Fig. 1

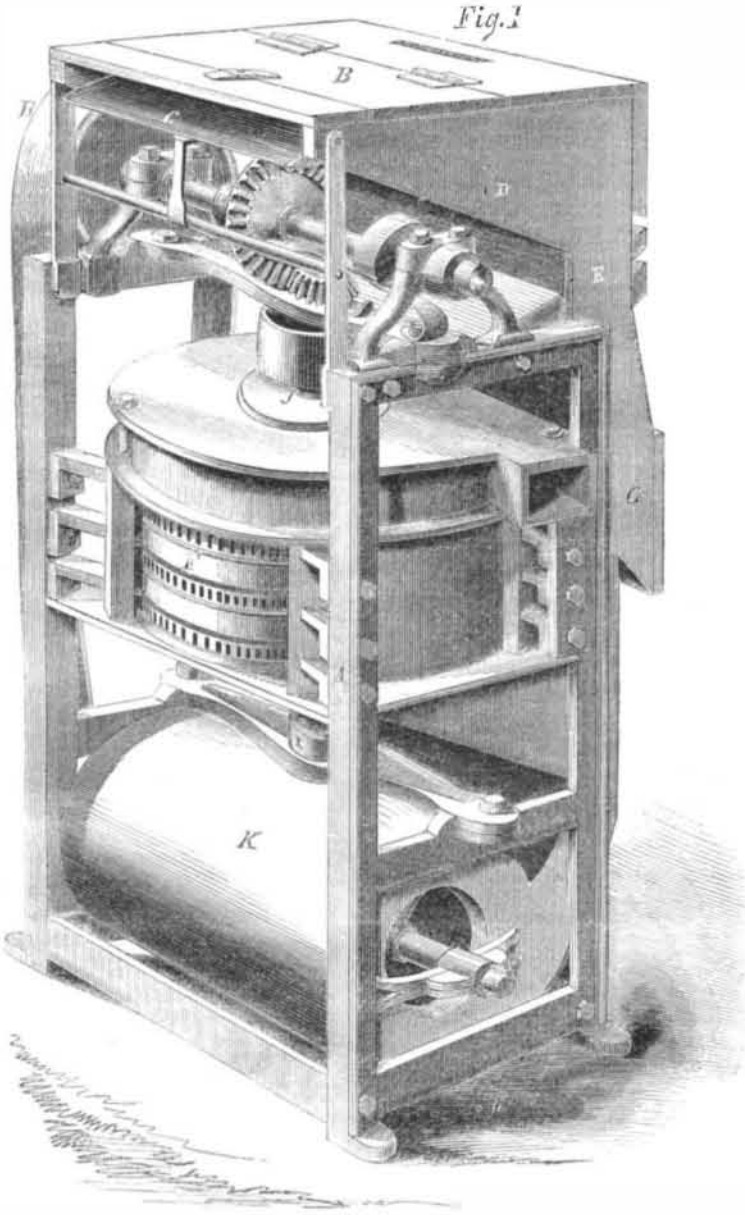
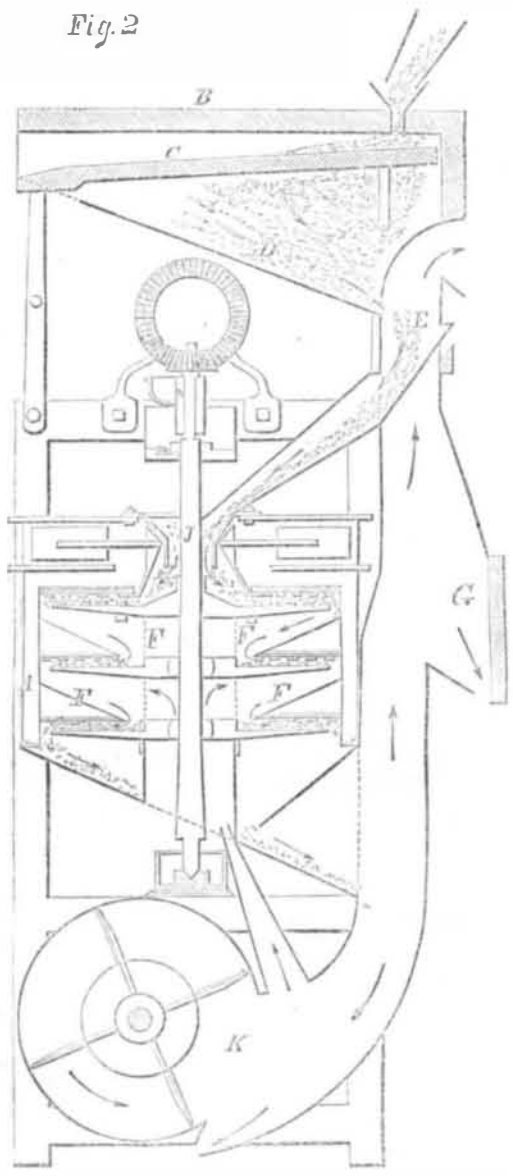


Fig. 2



Wheat always contains, when brought to market, more or less smut, dust, chess, and other foul stuff; and in passing it through a smut mill, if the grain be the least damp, the smut dust, &c., is liable to adhere. It is absolutely necessary that the dust should pass out of the machine as soon as scoured from the berry, that the grain may not wallow in it.

In the machine shown in the engraving, the smutter is composed of from three to five sets of horizontal scouring plates, between which the grain passes. The lower plate or runner of each set is provided with beaters, which throw the grain against the upper plate, which is stationary, and also provided with beaters, thereby causing the grain to act against both plates with equal certainty and uniformity. A rough or sharp surface is not depended on for scouring; but it is claimed that what the machine will do the first month it will continue to do for years in the same manner.

Fig. 1 is a perspective view of the whole machine, and Fig. 2 a section through its working parts. Similar letters of reference indicate corresponding parts in both figures. A is the frame in which the machine is mounted. The grain enters at the top, B, where it first falls upon a zinc or sheet iron riddle, C, through which the grain passes, taking off sticks, stones, &c., over it. The grain then falls upon the first inclined plane, D, then into the first blast, E, from the fan at the bottom of the machine, which takes out most or all of the smut balls, oats, chess, and other light impurities, before the grain enters the smutter, F. This all millers know to be of the greatest importance, particularly if the grain be damp. The grain then passes out of the blast of the separator into the smutter, F, and passes through the machine as indicated by the arrows in Fig. 2, discharging the screenings at the angle in the enlarged spout, G. This machine makes five distinct separations :—First, The hoads, sticks, &c., over the riddle. Second, Screenings from the first blast, which are the lightest, and before the grain passes to the smutter. Third, The dust. Fourth, Screenings from the second blast of the separator, after the smutter. These last screenings are free from dust, and in a good condition to grind for feed or otherwise. Fifth, The clean grain.

Only one driving belt, H, is required, and but two in all, and can be as easily attached as any upright smutter. Rolling screens may be dispensed with, except for cockle. The inventor states that it takes less power to drive it than is required to drive most of the common smut mills.

The step, I, of the smutter shaft, J, is the only place from whence arises any danger from fire by the friction of smut mills; hence the absolute necessity of having the step always in sight, and convenient to be oiled, with no liability to run dry, from its situation being unapproachable without taking the machine to pieces.

It is the invention of G. B. Turner, and was patented May 8, 1855. Further information may be had from the manufacturers, Turner, Parks & Co., Cuyahoga Falls, Ohio.

New Process of Amalgamation.

The ordinary gold quartz rock of Virginia seldom yields more than $3 per tun, while the assayers and chemists who assay and analyse it say that it ought to produce from $50 to $60 per tun. The reason why it cannot be extracted is, that the gold is in a state of such fine division that without the quartz is ground as fine as flour the quicksilver cannot act on it and amalgamate with the gold. Mr. John M. Wyckoff, of the Melville Mining Co., Spotsylvania Co., Va., has discovered a method of extracting from $20 to $30 per tun from this rock by the simple process of boiling the broken rock in water with half its weight of quicksilver, when the quicksilver seems under the influence of heat to acquire some new attractive power for gold and to enter the pores of the rock and liquefy it out. The sand or rock is first concentrated by a mechanical arrangement to about one-fifth its bulk, and the cost of the process is is not more than $5 per tun, at the above mines where it is in operation.