Scientific American.

THE ADVOCATE OF INDUSTRY, AND JOURNAL OF SCIENTIFIC, MECHANICAL AND OTHER IMPROVEMENTS.

VOLUME IX.] NEW-YORK FEBRUARY 25, 1854. [NUMBER 24.

THE SCIENTIFIC AMERICAN,
PUBLISHED WEEKLY,
At 128 Fulton street, N. Y. (Sun Buildings.)
BY MUNN & CO.

Agents.

Federhen & Co., Boston.	Dexter & Bro. New York
Stokes & Bro., Philadelphia.	B. Dawson, Montreal, C.E
Cook, Kinney & Co., San Francisco.	M. Boullemet, Mobile, Ala
	E. W. Wiley, New Orleans
Le Count & Strong, San Fran.	E. G. Fuller, Halifax, N. S
Avery Bellford & Co., London	M.M. Gardissal & Co. Paris
S. G. Courtenay, Charleston,	S.W. Pease, Cincinnati, O

Responsible Agents may also be found in all the principal cities and towns in the United States.

TERMS—$2 a-year :—$1 in advance and the remainder in six months.

Instrument for Curing Deafness.

We have received several inquiries relative to an instrument for curing deafness which was said to accomplish the desired effect by a simple insertion in the ear. An instrument of this kind has been advertised by a party in this city, under the name of an Organic Vibrator, and from an inquiry referring particularly to it, we were induced to investigate it. We find it a very simple contrivance, but rather dear at the price charged we should think. We present a sectional view of the instrument and should judge it might answer a very good purpose, when deafness is produced from the closing of the "meatus auditorius" or orifice of the ear. This is probably not the instrument invented by those London Professors, a notice of which we published a few weeks since; still their invention must be similar—any silversmith can make one of this kind for a few shillings. If both ears are affected, two must be employed. The cup of the instrument is oval, our section is the longest diameter. The engraving is the full size.

Ocean Steamers in Congress.

A bill has been introduced into Congress, relative to ocean steamships, providing that it shall not be lawful for the master or owner of any sea-going or ocean steamship to use or employ such ships for the transportation of passengers between any port or place in the United States and a foreign country, or between any ports or places in the United States, distant from each other more than five hundred miles, until the said ship shall have made one voyage to sea and her engine shall have been practically tested. It provides that the master or owners of any sea-going or ocean steamship which shall transport or carry any passengers for hire before her engine and machinery shall have been practically tested in the manner set forth in the bill, shall forfeit and pay to the United States for each passenger so transported or carried, the sum of $100, and shall not be entitled to recover any passage money from the passengers.

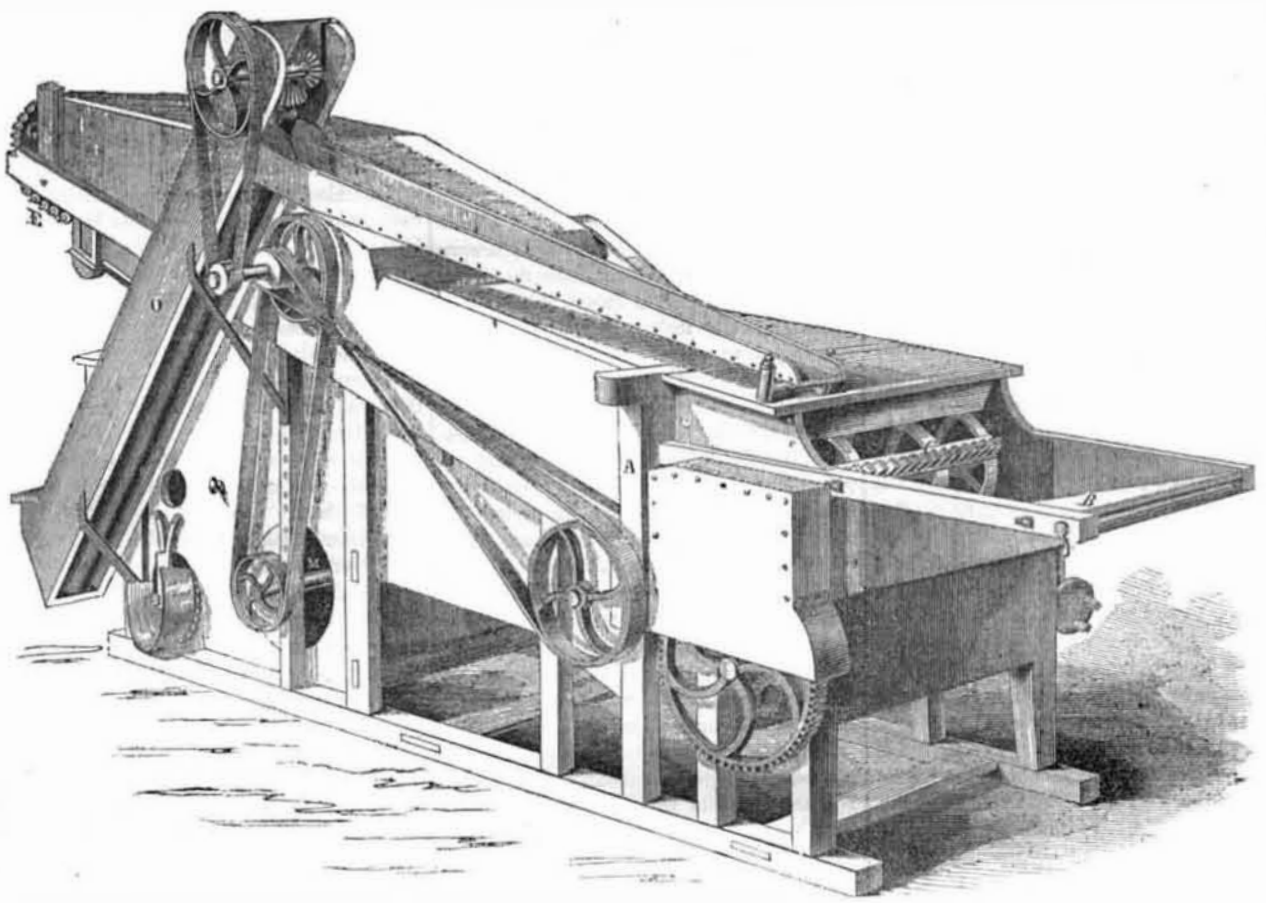
Improved Grain Separator.

We present our readers this week with illustrations of Moffitt's improved grain separator, patented, Nov. 30, 1852. Fig. 1 is a perspective and fig. 2 a sectional view. The same letters in each refer to corresponding parts.

The machine consist of an ordinary frame A, having at one end the feed table, B. C, is the cylinder, made of wrought iron and sixteen inches in diameter. It works in a spiked concave having two rows of teeth, seventeen in each, of the same length as those of the cylinder; these latter are fixed in the bars by screws, and are also seventeen in each bar. But this although somewhat new in England, where this machine has been introduced and extensively used is an ordinary mode of construction in this country.

The prominent points of improvement in this machine consist in devices for the prompt and thorough separation of the grain from the straw,

MOFFITT'S IMPROVED GRAIN SEPARATOR.---Figure 1.

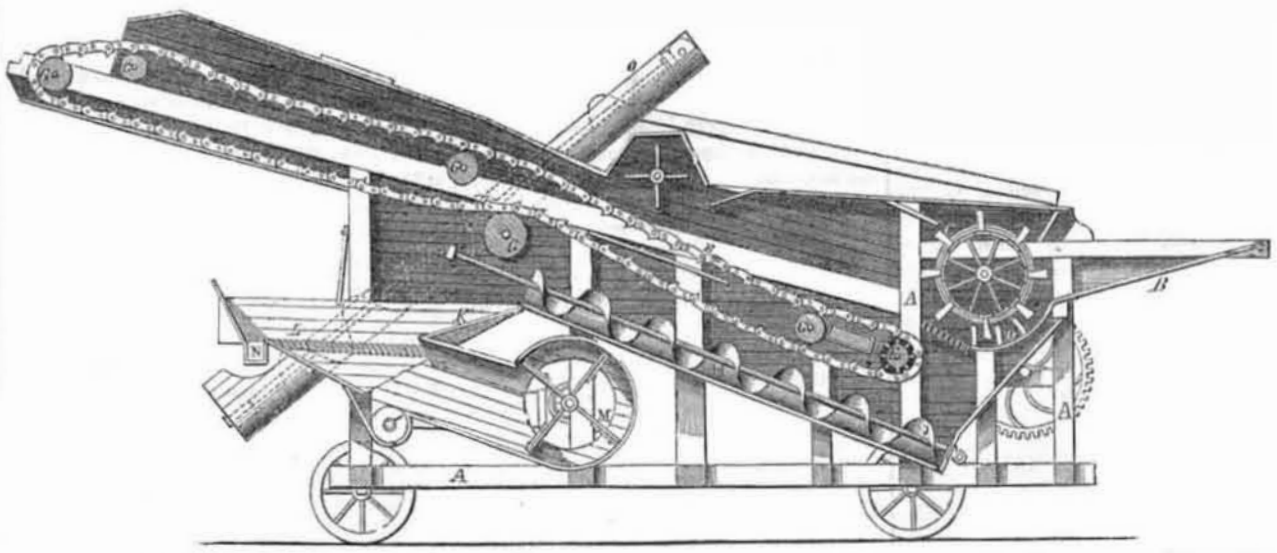


which in the usual machinery for this purpose is liable to carry off and waste a portion of the grain.

D, is a continous revolving apron for carrying off the straw from the grain, the major part of which falls through the grating, for conveyance to the winnowing mill, as hereafter described. This apron has two metallic belts, composed of links E, of cast iron, and curved concavely on their inner edge, to fit the wheels, F, which drive the belts, and wheels, G, which stretch them. Slats connect the opposite links of the two belts, the said slats being firmly wedged in mortices in the links by keys driven into their ends after insertion. The links are provided with teeth enough to enable the cog wheels, F, to revolve the apron by their means. Placed at intervals beneath the belts are rollers, R, which serve not only to support the belt but by the collision of the curved and toothed links with their upper sides, an intermittent jerking motion is imparted to the apron which keeps the straw loose, and effectually separates from it all the grain which has been among it. The narrow iron chain or belt as above described is preferable to the usual leather bands. The iron belt is also more durable and is effectually desirable on account of its applicability to impart the jerking motion before described. The grain and small chaff thus separate from the straw drops on to the sloping sides of troughs, I, at the bottom of which, revolves conveyors J, which as fast as the grain falls move it forward and upward, and deposit it upon the riddle, K, of the winnowing apparatus, through which the milled grain cheat, &c, pass and are separated in the usual way.

While the heads or unpulled grain are passing onward along the riddle, K, they drop

Figure 2.



therefrom into the trough, L, whence they are removed by a conveyor into a shoe, M, which returns them to the beater of the machinery apparatus around two thirds of whose circumference having passed and being mostly rid of their mills they are thereby enabled to pass through the winnowing apparatus, but any which pass a second time unpulled, are sure to be introduced again to the threshing machinery.

What is claimed in this arrangement as new, is the continuous open apron having its belt formed of links, whose cogs are at one part of their rotation, in connection with the pinions, or means of propulsion, and are at another part of their rotation in connection with the rollers or the stationary objects, a means of agitation of the said apron.

This is the machine which has created so great a sensation in England, under the patronage of Mr. Mechi, the celebrated agriculturist of Tiptree Hall. One of them is on exhibition at the Crystal Palace. We should think, from an examination of it, that it was a durable and efficient machine, embracing all the recent improvements upon separators. Our readers are probably aware that the English are far behind us in this class of agricultural implements, and the "American Threshing Machine," seems likely to obtain a notoriety almost as great as the "American Reaping Machines" of McCormick and Hussey.

Any information desired can be obtained by addressing the patentee at Piqua, Ohio.