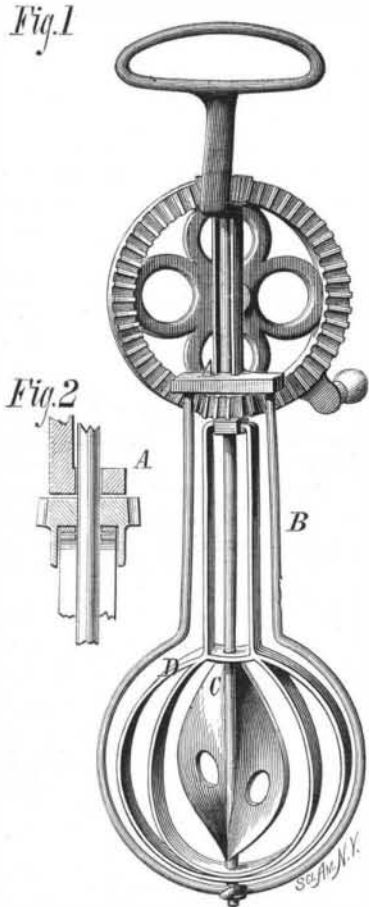


NEW EGG BEATER.

The accompanying engraving shows an improved egg beater recently patented by Mr. Harry C. Mann, of 4850 Cherry St., Frankford P. O. While the egg beater in some respects resembles others in market, it differs from them in important particulars. It is so simple and well designed that the parts may be easily made and readily put together without special machinery or skilled labor. The essential feature of this invention is the perforated spiral



MANN'S IMPROVED EGG BEATER.

disk secured to the central spindle and forming a screw or propeller-shaped blade, which renders the device very efficient. The egg beater is shown in perspective in Fig. 1, and Fig. 2 is a detail view of the lower spindle bearing, showing connection of the lower pinion with the beater, D.

On the lower end of the handle there is a cross piece, to which the ends of the wire, B, are secured. The center of the wire, B, is formed into a coil or eye forming a bearing for the lower end of the spindle, C. The latter has near its lower end a perforated metallic disk, and at the top a pinion which is engaged by the driving wheel. The perforated disk is twisted, forming a propeller wheel, which, together with the curved strip, D, rapidly and thoroughly beat the eggs. The bent strip, D, is connected with a pinion placed loosely on the spindle, C, and meshes into the drive wheel. By this arrangement the two movable parts are driven in opposite directions.

NEW AGRICULTURAL ENGINE.

The annexed engraving represents a very compact and simple agricultural engine made by G. Westinghouse & Co., of Schenectady, N. Y. This engine, in its general design and in the details of its construction, seems well adapted to work for which it is intended. It is very light, weighing complete but 3,800 lb., and its economy in the consumption of fuel is worthy of special mention, as it consumes only 50 lbs. of coal per day when working 10 horse power.

This engine has an upright boiler shell, but it is not open to the objections usually brought against upright boilers. The tubes in this boiler are horizontal, and so arranged that they are filled with water so that a constant circulation is maintained in them. The difference between this and boilers having vertical tubes is material; the danger of burnt tubes and crown sheets is avoided, and by reason of the small volume of water contained in the tubes, steam is made rapidly. The circulation of the water in the tubes tends to keep them free from sediment, and they do not become incrustated with scale. The boiler may be easily taken apart at the junction of the upper shell and fire box; and this being done, the tubes are all exposed and the inner surface of the boiler placed within reach for cleaning or repairs.

The boiler is surrounded with a sheet iron casing, leaving a space

between it and the boiler shell. This space acts as a flue for conducting the waste heat from the fire box, and affords complete protection against condensation, and in addition to this it receives and extinguishes all sparks coming from the fire. No screen is required in the stack, and the annoyance resulting from screens becoming clogged, and the temptation to remove or open them in order that sufficient draught be obtained, are avoided.

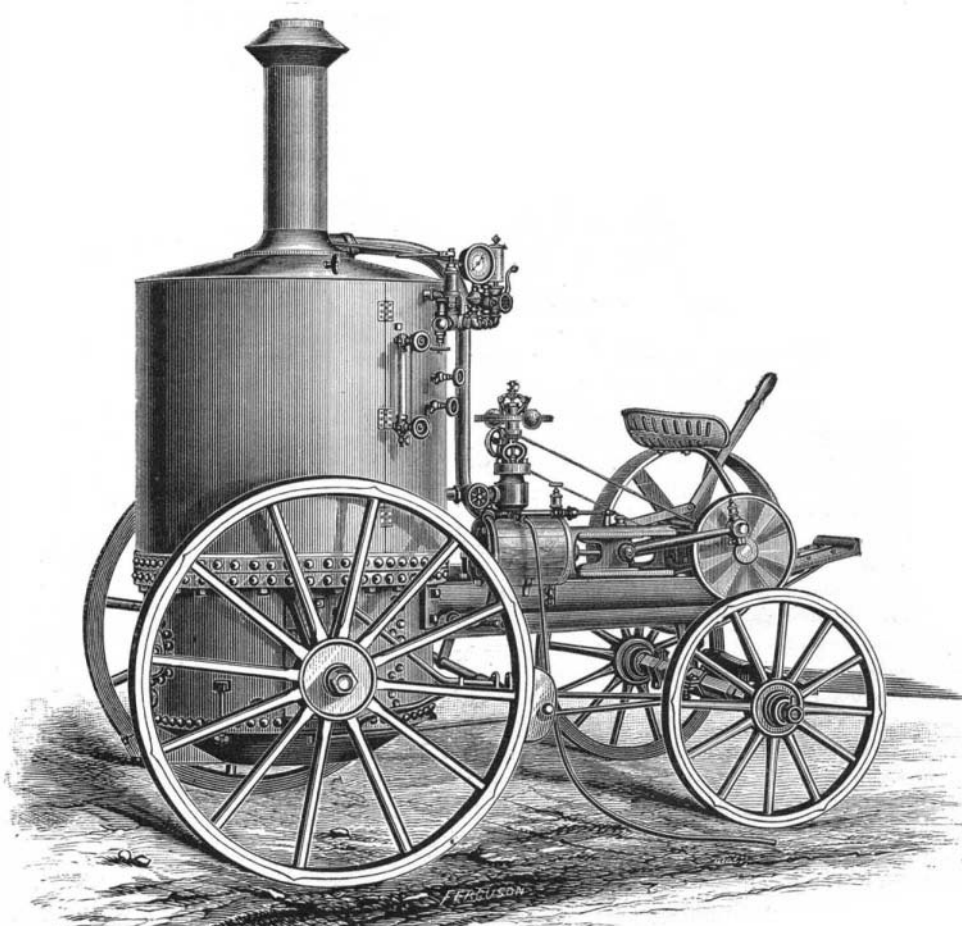
The manner in which the engine and boiler are connected is clearly shown in our engraving. The bed or frame contains the heater, and is securely bolted to the fire box portion of the boiler. The engine has its cylinder, steam chest, guides, and main boxes all in one solid casting, and having all the work relating to the lining of the cylinder and main bearings done from a single position, absolute truth of all working parts is assured. The engine and its bed being connected with the lower part of the boiler, the greatest weight is below the center, and takes away all danger of turning over while on difficult roads. All parts of the engine are accessible from the ground and can be seen by the operator. Every desirable appliance for rendering the engine efficient, durable and convenient has been supplied. A blower and variable exhaust nozzle furnish means for regulating the force of the draught, and for making steam rapidly when required.

An ordinary team can handle this engine easily over common roads even with a full supply of water. Economy in the use of fuel and water is an important point to be considered by both the owner of an engine and by those who employ him, for there are but few places where fuel is too plenty, and in many places water is scarce or has to be drawn so far that it becomes important to make all the saving possible.

Systematic and thorough tests made with this engine have shown that less than 500 lb. of good coal and 350 gallons of water were sufficient to make steam for ten horse power, ten hours, as against 800 to 1,000 lb. of coal and from 400 to 450 gallons of water required by the average engine to accomplish the same work.

Warmth and Energy.

In ancient times, energy of mind and strength of body were supposed to be the effects of warmth, while depression of spirits and bodily weakness were ascribed to cold. Modern science has explained and modified these theories concerning the production of physical and psychical force, but in the main it has confirmed the principle of causation. In a general sense, it may be said that animal heat, when duly generated within normal limits, is the concomitant of vigor. Practically, therefore, warmth is to be sought and cold avoided; but with this qualification, that the heat must be elicited by organic processes going on within the body, and not borrowed from without. The chief, if not the only use of wraps and "warm" surroundings is to avoid the loss of animal heat by abstraction. It is neither scientific nor hygienic, in any true sense, to trust to external sources of supply for the warmth we require to live well, happily, and usefully. The food is more than the raiment, and those who desire to help the poor and melancholy over their "dead points" in the course of life should be chiefly anxious to feed them well and sufficiently. So in the management of self—to live well is to feed appropriately. Stimulants do not give strength, because they cannot add to the normal and healthy sources of animal heat. Nutriment is the only true fuel.—*Lancet.*



THE NEW WESTINGHOUSE AGRICULTURAL ENGINE.

LIFE PRESERVER EXHIBITOR.

Some time since we pointed out the necessity of making known the whereabouts of life preservers on board vessels, and of informing the public how to apply them so that in cases of accident they may be readily found and properly applied. Mr. C. C. Delhommer, of Carencro, Lafayette Parish, La., in response to the suggestion, devised and patented the exhibitor shown in the annexed engraving. It consists of a water tank made in the form of a human figure, having applied to it a life preserver in the position



DELHOMMER'S LIFE PRESERVER EXHIBITOR.

in which it should be worn. The water tank is an indispensable article on the vessel, and as it must of necessity be frequently visited by the passengers, the manner of applying the life preserver will be often seen, and the public will soon gain an accurate idea of the proper way of putting them on.

Most vessels have life preservers conspicuously labeled so that they may be readily found, but there are many people who would be entirely at a loss to know just how to apply them without some sort of instruction. The device shown in the engraving is a mute but efficient teacher ever on duty and within sight of the passengers. We are informed that Mr. Delhommer has taken steps to bring this invention to the notice of the proper authorities. Certainly too much cannot be done in this direction.

AGRICULTURAL INVENTIONS.

Mr. Charles A. King, of Cheshire, Ohio, has patented an improved machine for digging potatoes, which is so constructed as to dig the potatoes, separate them from dirt, clods, etc., and deposit them in a box or basket.

Mr. William R. Iles, of Fairmount, Ill., has invented an attachment to corn planters for dropping and marking the corn in perfect check row. The attachment has more especial adaptation to that form of corn planter in which two thin blades or runners are arranged on each side of the tongue so as to rest upon and run on the ground, which runners or blades are connected to a suitable framework and terminate in the rear in vertical spouts extending from the seed boxes, from which seed boxes and down which spouts the corn is dropped by the reciprocation of a slide extending from one to the other of said boxes.

Mr. John W. Fields, of Sherman, Texas, has invented a device for supplying water and air to the face and land side of a mould board, to prevent the earth from adhering to them. It consists in perforating the mould board and land side with small holes, and attaching to the back of the mould board a water reservoir and a piston and pump or other device for forcing water and air through the perforations, so as to lubricate the faces of the plow, and thus prevent the adhesion thereto of earth.