

A NEW SHEEP PROTECTOR.

It is estimated that the annual loss in the United States by the destruction of sheep by dogs is more than a million of dollars. In the State of Georgia alone the yearly loss from this cause amounts to the round sum of \$73,852. To remedy this evil and to avoid the loss, Captain Cephas Gilbert, of Bucksville, S. C., has, after several experiments, perfected the sheep protector shown in the engraving. It is stated that dogs invariably attack the necks of the sheep, the object being to sever the arteries and drink the blood.

The device illustrated consists of an oval collar formed of hoop iron, with overlapping ends, which are straight and parallel with each other. In one of these ends there is a rivet, the head of which projects through a slot in the other end. One end of the slot is enlarged to admit of fastening and unfastening the collar. The part of the collar that comes under the throat is straight, and to it are secured by a single rivet two short bars, which are crossed and pointed. The same rivet that fastens these bars is used as a pivot for the spring button, which is employed to secure the collar against accidental unfastening. The relation of the button to the other parts is clearly shown in the perspective view, Fig. 2, and the section, Fig. 3.

Besides protecting the sheep against dogs, the collar serves another important and humane purpose. The common method of indicating the age of the sheep is to slit or punch the ears. This collar affords an excellent surface on which to stamp dates and the owner's name. The inventor states that the oil from the wool protects the collar against corrosion. By means of a suitable crook, the sheep may be readily caught by the collar, thus avoiding the tearing of the skin and injury to the sheep, which frequently results when sheep are caught by the wool.

Captain Gilbert has devised a shearing table which, in connection with the collar, greatly facilitates the operation of shearing.

This invention was patented June 18, 1878, and another patent is pending. For further particulars address Thomas W. Beaty, Conwayboro, S. C.

ELWELL'S MIDLINGS SEPARATOR.

The system of close grinding which was prevalent a few years ago is now fast giving way to a sensible system of granulation. The grain is now ground high enough to avoid over-grinding any portion of the flour. The middlings separator or purifier, shown in the engraving, takes out the specks and light particles. All heavy particles of the grain are returned to the eye of the stone and whittled a little smaller, and if any particles are yet heavy, they are still valuable, and their weight causes them to return to the stone again and again, until they are divested of all the flour, while the remainder, being light, goes out with the blast. In this way the grains of the flour can be made more uniform in size than by any other system of grinding.

In the upper part of a vertical draught box, B, are placed a number of inclined slats, which break and distribute the downward flow of middlings and the upward current of air. The said slats are located at the entrance of a horizontal box, C, along which the particles carried over from the vertical box are transported to the hopper, D, and are discharged through the spout, E. The middlings are fed into the horizontal box from the hopper, A, passing upon a vibrating shoe, F, and their supply being regulated by slides, G. The horizontal box, C, is provided with a regulating valve (which is not shown in the engraving) for controlling the air current as required. It is also provided with air checks or breakers, which, by forming eddies, allow nearly all of the air separations to settle in the hopper, D, only a small portion of the lightest particles passing out through the fan, H. Below the apparatus thus described is arranged a duplicate set of mechanism, in which the middlings, falling from the vertical box above, are again treated by air currents set in motion by the fan, I.

This separator is designed expressly to work on buckwheat middlings, but it does good work on both wheat and rye. It is said to stand the test as establishing a new method of purifying middlings, avoiding the use of sieves, bolting cloth, or brushes, to wear out, and intricate machinery to get out of order. It is substantially built, simple in its construction and manner of working, easily regulated, occupying but small space, and requires but very little power to run it. It wastes nothing, and the moment the hopper is empty the machine is clear, nothing being left in it to mix with the next grist. It is the machine that is especially

adapted to custom milling, to purify middlings, putting them in suitable condition to be reground with the grain without waste. For further particulars address the patentee, Mr. Morris N. Elwell, Oneonta, Otsego county, N. Y.

Hydraulic Cement.

An excellent cement for foot-walks, and for all uses which

of cutting or breaking it down; and it consists in a novel combination of devices for gathering the upper branches of the hedge, and for twisting them into a rope-like form, whereby the upper portion of the hedge is made to present a neat and uniform appearance throughout, and is at the same time greatly strengthened.

An improved Grain Separator has been patented by Mr. Samuel Stone, of Bristol, Tenn. The object of this invention is to furnish an improved machine for removing from wheat cockle seed, cheat, and other impurities which cannot be removed by the ordinary fan mill.

Mr. Alexander Thomas, of Ledyard, N. Y., has patented an improved Grain Separator, which consists in a sheet metal cylinder revolving upon an inclined central axis, and perforated with longitudinal cup slits in circumferential rows, arranged to break joints each with the next. A cam wheel secured upon the cylinder shaft vibrates the cylinder by contact with a stationary pin. A stationary brush is arranged in contact with the surface of the cylinder, to clear out all seeds that may lodge in the perforations.

Mr. Henry D. Terrell, of Starrsville, Ga., has patented an improved scraper for attachment to the stocks of shovel plows and other plows to do the work of a sweep.

Mr. William N. Phipps, of Glenwood, Iowa, has patented a cheap and simple device to be used at thrashing machines, for ascertaining the number of bushels or half bushels of grain thrashed. Figures marked on the tape, and visible through a glass pane on the cover of the box in which the apparatus is inclosed, indicate the number of teeth moved forward, and consequent-

ly the number of half-bushel measures successively placed upon the hinged lid.

Mr. Charles V. Baker and Jacob W. Baker, of Middlebourne, Ohio, have patented an improved Churn, which is simple, inexpensive, convenient, and effective, bringing the butter in a very short time, and developing all the butter there may be in the milk.

Mr. Sheldon E. Harris, of Whitesburg, Tenn., is the inventor of an improved seed planter, which is so constructed as to open a furrow to receive the seed, drop the seed, and cover it; it may be adjusted to plant the seed at any desired depth in the ground, and may be drawn from place to place without operating the seed-dropping device, and it may be readily adjusted for use as a cultivator when required.

Mr. Hugh S. Jory, of Salem, Oregon, has patented an improved Hinge for the frames of harrows and cultivators, which is so constructed as to keep the parts of the frame in proper relative position while allowing them to adjust themselves freely to the surface of the ground. The parts of the frame may be readily raised to pass stumps, stones, and other obstructions, and to free the teeth from grass, weeds, and other rubbish, that would clog them and impair their proper operation.

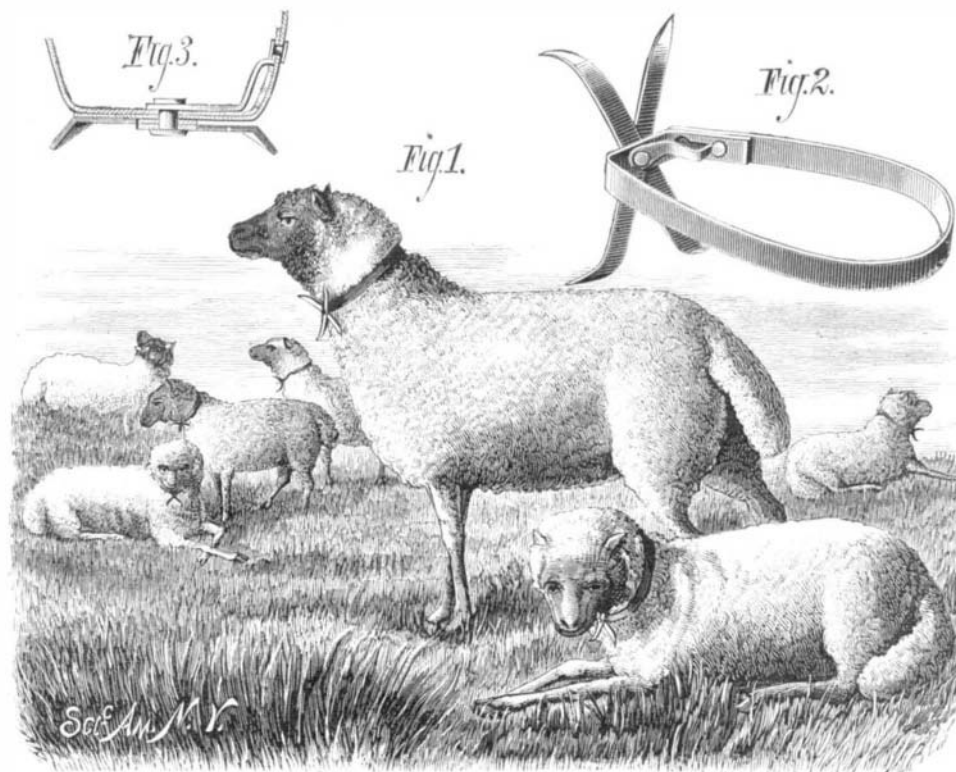
Mr. George W. Ross, of Newton, West Va., is the inventor of an improved Harrow that has the advantage that all its parts or sections may be conveniently raised or lowered from the driver's seat, so as to pass over obstructions without injury and delay, and which may also be easily moved from place to place without detaching any one of the working parts.

Messrs. Addison H. Whiteside and Milton S. Whiteside, of Onarga, Ill., have patented an improved Means for Connecting the Sections of a Harrow Frame with the Draw Bar, so that the said sections will be held firmly in place laterally, while being free to move up and down to adjust themselves to the surface of the ground and to be cleansed.

An improved Grain Separator has been patented by Mr. Daniel O. Harshman, of Shannon, Ill. The invention is an improvement in that class of thrashing machines in which a series of rakes having a reciprocating and rising and falling movement is employed in connection with an endless traveling apron or carrier.

Mr. Charles Brustman, of Fremont, N. Y., has patented an improved Straw Cutter. The wheels on the driving shaft are of peculiar form and have different diameters, and the two wheels on the feed roll shaft are also of different diameters, and are arranged to slide on the roll shaft, so that either of them may be thrown into gear with its driver. This straw cutter has other novel features which cannot be well described without an engraving.

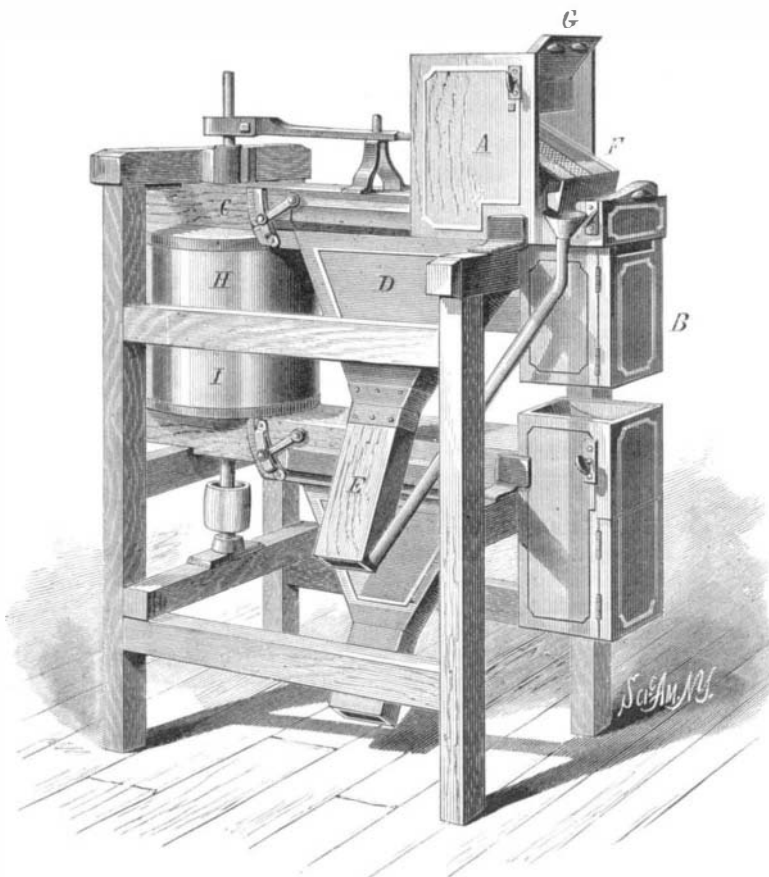
Messrs. David H. Weaver and Martin Heatwole, of Spring Creek, Va., have patented an improved Reversible Line or Rein Holder, conveniently attachable to either side of the harness, to prevent the lines or reins from dragging.

**GILBERT'S SHEEP PROTECTOR.**

require exposure to the weather or to dampness, is described in *Der Praktische Maschinen-Constructeur*. It is made by thoroughly stirring Portland cement, or good hydraulic lime, into a warm solution of glue, so as to make a thick paste, and applying it immediately. In three days it acquires extraordinary hardness and tenacity. It is an excellent cement for joining the porcelain heads to the metal spikes which are used as ornamental nails.

New Agricultural Inventions.

Mr. John H. Gilleland, of Peek's Hill, Ala., has patented an improved Plow, by which plow-hoes of different thicknesses may be interchanged and rapidly and securely

**ELWELL'S MIDLINGS SEPARATOR.**

fastened upon the same standard, and by which the depth of the plow and the elevation of the handles may be easily regulated and adjusted.

Mr. John T. Ewan, of Bethalto, Ill., has patented an improved Grain Separator, in which, in place of the blowing fan, a suction fan is used, whereby a superior separation of the dust and other impurities from the grain is obtained.

An improved Hedge Plashing Machine has been patented by Mr. Alva S. Warren, of Atlas, Ill. This invention relates to a machine for laying or bending the hedge, instead