

A STRAINING AND MEASURING POT.

The straining and measuring pot shown in the illustration is designed to be especially useful and convenient in families, drug stores, etc. Upon its body, at spaced distances, are ribs or rings to afford means of measuring the contents of the vessel. A removable funnel strainer, A, has a flange or rim fitting in an annular recess around the top of the pot, to offer no obstruction to the closing of the cover, and the liquid with which the pot is supplied is passed through this strainer. The funnel-shaped outlet is also supplied with a strain-



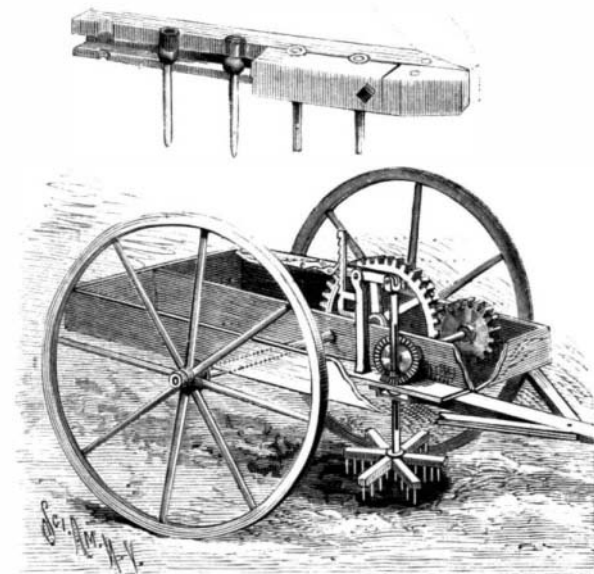
STANTON'S STRAINING AND MEASURING POT.

er, B, by which the contents are strained while being poured out, two strainings being thus effected. The spout of the discharge pipe has a cap stopper to prevent the entrance of insects, dust, etc.

This improvement has been patented in the United States, Great Britain, and France, by Mr. George C. Stanton, of New Iberia, La., to whom application may be made for further particulars.

AN IMPROVED CULTIVATOR.

A cultivator especially adapted for working sugar cane and similar plants is shown in the illustration. It is of simple and durable construction, and the rotary hoe consists of a series of teeth whose upper ends are elastically secured, so that when the teeth come in contact with the cane stalks they will yield sufficiently to prevent injury. The improvement has been patented by Mr. William H. Waggoner, of Patterson, La. The frame of the machine is centrally braced by a longitudinal angle beam, and on each end of the axle, near the supporting wheels, are ratchets engaged by spring-pressed dogs on the wheel hubs, the dogs being readily held out of engagement with the ratchets by bolts



WAGGONER'S ROTARY CULTIVATOR.

when desired, as when taking the machine to or from the field, etc. Just front of the axle, journaled in the longitudinal brace beam and one of the sides of the frame, is a transverse shaft, on which is a pinion meshing with a spur gear on the axle, the transverse shaft having on its inner end a bevel gear meshing with a bevel pinion on a vertical shaft, to the lower end of which the hoe is secured. The hub of the bevel pinion turns in a suitable opening, and has a bearing at its lower end upon a yoke rigidly held to the bottom of the frame, the vertical shaft having a longitudinal key-slot and the hub of the pinion having a key extending into the slot, whereby the shaft may be vertically adjusted to raise or lower the hoe. The adjustment is effected by a lever fulcrumed on a standard, the lever having a spring-pressed pawl and auxiliary thumb lever, and the pawl engaging the teeth of a vertical rack. The hoe consists of a series of radial arms, as shown in the small figure, each of the arms consisting of two longitudinal

sections, each having a longitudinal channel in its inner edge, with semicircular upper and lower aligning-recesses for the teeth, the upper recesses being larger than the lower ones. The teeth are round, each having near its upper end a collar, and in the upper recesses of one section rubber sockets are placed, into which are introduced the upper ends of the teeth, the collars being located in the channels, and the other section being then bolted to place. With this arrangement the teeth will yield as they come in contact with obstacles, and may be swung in any direction, automatically returning to their normal upright position after passing the obstructions.

A Wreck-Indicating Buoy.

A new device to indicate the position of wrecks by Mr. A. F. Ward, of Detroit, Mich., consists of a hollow ball of two halves, the bottom one being attached to a bed by a soluble glue joint. This bed is fixed to an iron plate which is screwed to the deck of the vessel or in any suitable position. As soon as the dissolution takes place the buoy rises, a cord, which can be of any length—1,000 feet and upward—and which is fixed on a reel in the hollow ball, reels off through the bottom of the ball. As soon as the latter reaches the surface the line stops paying out, the core of the reel being controlled by springs. The soluble joint is protected by a flange, which prevents water reaching it before the buoy has been submerged for some time, seas washing over the deck having no effect on it. The soluble joint can be arranged to dissolve within any time desired from 24 to 48 hours, and the cord may be replaced by copper wire when used in salt water.

AN ENSILAGE HARVESTER AND CHOPPER.

The illustration represents a machine designed to be taken out into a field of standing corn, and, with three horses and two men, cut down the corn, elevate it to chopping knives, cut it into half inch lengths, and then convey the product into a cart accompanying the machine. This work is designed to be effected at the rate of speed of a self-binder—from eight to ten acres, or 150 to 200 tons per day—thus practically putting ensilage within reach of farmers of very moderate means.

Cutting or harvesting knives are located at the front of the main frame, at the foot of a conveyer connecting at its upper end with a chopping box supported on a rear extension of the frame. Within the chopping box, immediately behind the upper conveyer-shaft, are two horizontal feed-rollers adapted to grasp and carry the fodder to a series of cutting blades, spirally arranged in a manner to form an open cylinder.

An inclined chute is located in the chopping-box, just below the knife cylinder, and carried downward and outward near the bottom, its projecting end extending nearly to a second rear conveyer leading upward and outward, in position to permit of a cart being driven beneath it to receive the chopped feed for transportation to the silo. All the mechanism is actuated by the drive-wheel journaled at the right hand side of the center of the main frame, there being erected around the wheel an upright framing, on the front upper portion of which is a bracket in which is journaled a reel shaft, the reel being of any approved construction and adapted to feed the standing grain to the harvester knives. The harvester knives are also actuated by a crank and pitman connected through the medium of shafts having bevel pinions and gears with one of the two spur wheels on the drive axle. The pinions may be readily disengaged from the gears to discontinue the motion of the harvesting knives and reel, as well as that of the chopping knives and both conveyers.

This one machine is intended to take the place and do the work of several machines now used in harvesting and chopping corn, oats, or other green fodder for ensilage. It is adapted to be drawn by horses or propelled by steam power, any farmer employing it being able, with his own help, to fill his silo at his leisure, and at far lower cost than at present. It is also adapted for use as a soiling machine, cutting all kinds of green crops for soiling cattle with the greatest ease.

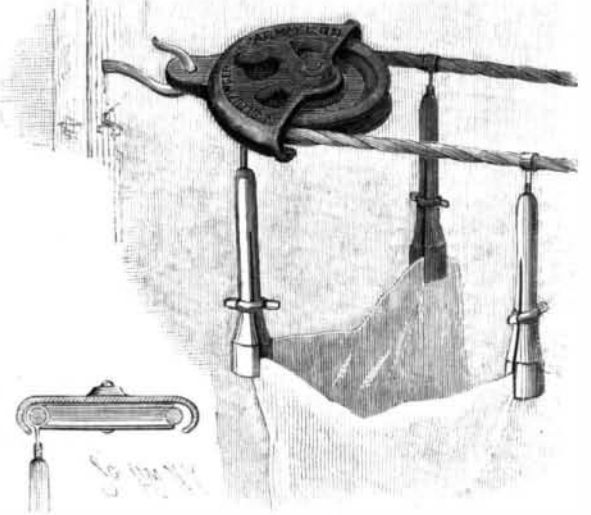
For further information relative to this improvement, address W. J. Conroy, the patentee, Aylmer, Quebec, Canada.

Beet Sugar in Canada.

Following the example of the United States, the Canadian government has passed a law offering a bounty of one cent per pound on all beet root sugar produced in the Dominion between July 1, 1891, and July 1, 1893, with an additional bounty of three and one-third cents per one hundred pounds for each degree, or fraction of degree, over 70 degrees polariscope test.

AN IMPROVED CLOTHES LINE PULLEY.

The device shown in the illustration is of simple and durable construction, the line passing freely around the pulley and carrying with it a hanger to which the clothes are attached. The improvement has been patented by Mr. John J. Leuzinger, of West New Brighton, N. Y. The block in which the grooved pulley is pivoted has a semicircular recess in its under face, the recess extending through one edge of the block, and its side walls being concave. The pulley is of slightly less diameter than the diameter of the recess, leaving sufficient space between the peripheral surface



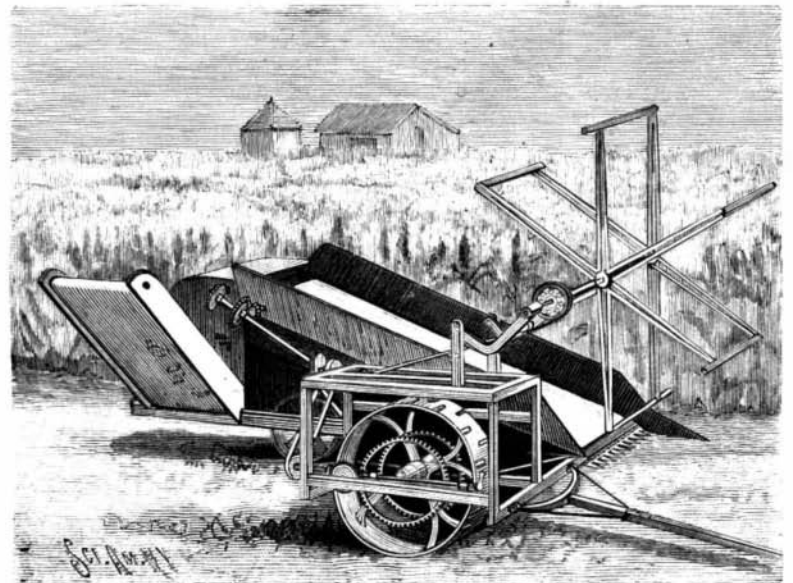
LEUZINGER'S CLOTHES LINE PULLEY.

of the pulley and the edges of the concave walls for the line with the hanger to pass freely. The head of the bolt on which the pulley is pivoted is at the upper face of the block, and its lower end is provided with a suitable washer and a nut. The block has at one edge a lug or ear, with an eye or aperture, by means of which it may be secured to a hook or staple in a pole or other proper support, the pulley being on the under side of the device, while to the other support an ordinary pulley block may be attached. The hangers, any desired number of which may be secured upon the line, are of very simple construction, and may consist, as shown, of a ring screw, the ring of the required size for the line and the screw adapted to screw into the top of an ordinary spring clothes pin, the clothes being clamped in the pin by moving down upon it a clamping ring.

Traced Lantern Slides.

When dealing with the production of lantern slides from book illustrations, it has occurred to me that were I to relate a very neat and simple way in which a particular class of illustrations may be readily produced by a mere tracing operation, it might tend to cause some beginners to practice this neat way of turning out a hand-made slide.

In my practice I always keep a stock of gelatinized glasses ready for my collodion work, and I find that with such I can trace over and make excellent productions by using a fine etching pen and ticketing ink. If any of my readers should have difficulty in procuring this kind of ink, they can make a very good substitute by dissolving a piece of lump sugar in ordinary writing ink. When doing this tracing operation the main thing is to get the ink to take kindly to the glass. If a worker will prepare a very weak solution of gelatine and flood the face of the glass plate, and then carefully dry the same free from dust, he will find he can write or sketch with the greatest of ease on its surface, and this being so it becomes a very easy matter to copy some rough sketches by hand, which, when projected on the screen in the shape of a lantern slide, will give unbounded satisfaction.—T. N. Armstrong.



CONROY'S ENSILAGE HARVESTER AND CHOPPER.