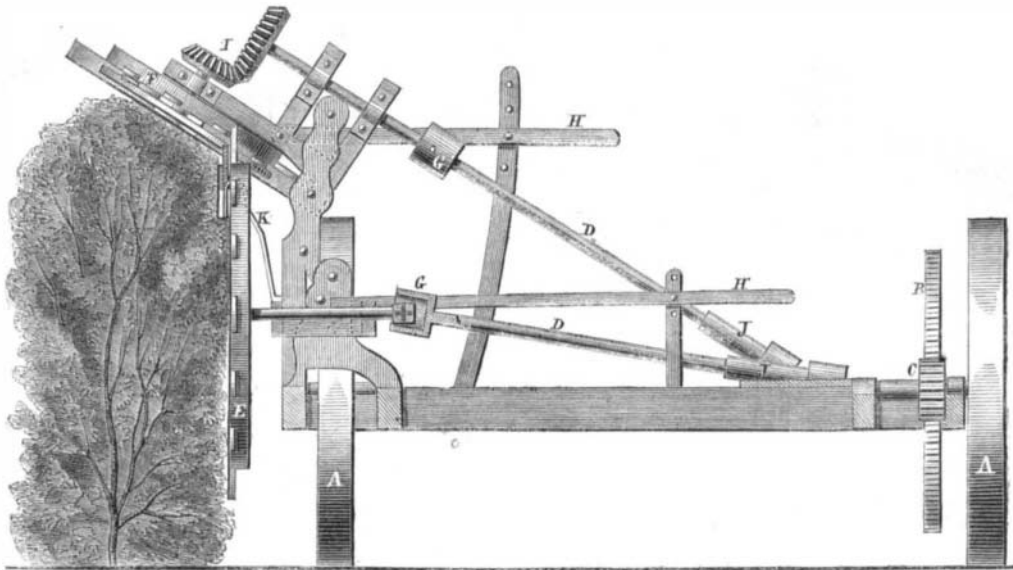


Improved Hedge Trimmer.

In England the hedge, or "live fence," has been the favorite means of inclosing farm lands for many generations. The hedge forms a beautiful feature in the landscape, and, when attended to, is impervious not only to cattle, but to most of the smaller animals. The increasing value of land in England has, however, drawn attention to the necessity of substituting a fence requiring less room and casting less shade. In our Western prairies no necessity exists for thus carefully preserving every foot of arable soil, and the Osage orange, and other closely-growing shrubs, are utilized as fences.—The principal objection to them is the care required to keep them properly trimmed, so that they shall be induced to confine their growth to the limits best calculated to insure an impenetrable barrier. This work is now done by hand, but the improvement herewith illustrated, contemplates a revolution in this department of Western farm work. The engraving represents a frame carried upon two wheels, A, the treads of which may be corrugated to insure their rotation. The apparatus



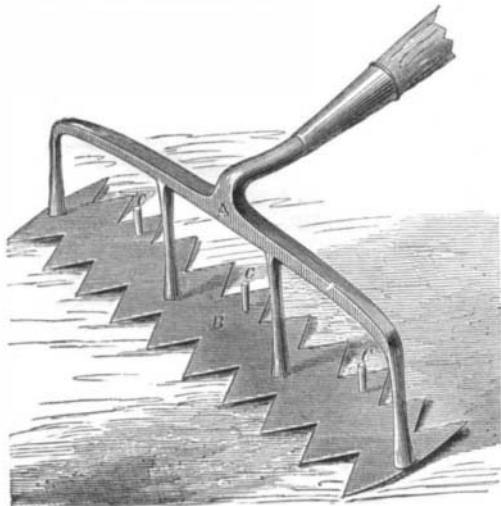
OLIVER'S HEDGE TRIMMER.

may be drawn by horses, attached to a tongue and axle which has two wheels, not shown. To the main shaft, which carries the two wheels on which the body of the machine rests, is secured a large gear, B, which drives two pinions, C, one on each side. These give motion to the shafts, D, one of which carries the vertical cutter head, E, and the other the oblique cutter head, F. The shafts, D, are jointed at G, by Balfour's universal joint, so that any angle desired may be given the cutter heads by means of the levers, H. The head, F, is revolved by the intervention of two bevel gears, I. Sleeves, J, which are adjustable, allow of the extension or contraction of the shafts, D. By means of a fixed disk outside the heads, E and F, which carry cutters corresponding with those on the revolving heads, the knives operate similar to the blades of scissors. A guide, K, passes out and in front of the cutting heads, which serves to bring every twig under the operation of the blades.

Where, as at the West, vast fields, on nearly level ground, are under cultivation, it seems as though this machine might be used to advantage. It was patented through the Scientific American Patent Agency, March 6, 1866, by David Oliver, whom address, Box 572, Galesburg, Ill., for additional particulars.

ALLEN'S WEEDING OR SCUFFLE HOE.

Few farm or garden crops require more thorough



culture than onions, carrots, beets, etc., which are usually planted in drills. While growing they must be

kept free from weeds if the farmer intends to get a decent crop. The simple implement here shown will commend itself to every practical farmer and gardener as an efficient and handy article. The frame, A, is of wrought or malleable iron, the supports being lozenge-shaped across their transverse section, to act as pulverizers and looseners of the soil. To them is attached a steel blade, B, having serrated teeth sharpened from the under side. Pins, C, project from the upper side to catch the weeds and also to loosen the

This ingenious device was patented through the Scientific American Patent Agency, Aug. 14, 1866, by Charles Gschwind and John Grether, Union Hill, North Hudson county, N. J., to whom apply for further information.

The late Marine Disasters.

The appalling wreck of the steamship *Evening Star* has been very generally commented upon by the local press, but no light has been thrown upon the cause of the disaster, though the owners of the vessel are very generally censured for the meager number and character of the life-boats in proportion to so large a body of passengers. The public have a right to a thorough investigation of all the facts connected with the disaster, and it is to be hoped that such investigation may lead to a searching scrutiny of the present system of inspection. It is stated by a morning contemporary that, about the month of July last, the *Evening Star* went ashore on the Florida Reef, from which she received considerable damage; that a hole was stove in her bottom, and her keel was partially

broken off, and that the keel was then cut away, and a piece was scarpd in level with the keel. In place of six life boats prescribed by law, it is said that she had only four, and that even these would scarcely have borne up the whole number of passengers and crew in ordinary weather. The public will probably insist upon rigid proof that the perils of the sea were not heightened by the defects alluded to. The *Evening Star* was a side-wheel steamer, with upright engines, and that she was considered by her owners a seaworthy vessel is inferred from the fact that, although valued at \$500,000, she was uninsured.—*Shipping and Commercial List.*

THE Russian army numbers 1,135,915 men in addition to 119,540 Cossacks liable to serve.



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soil. They can pass through, if desired, to more effectually subserve this purpose. By having the teeth formed like those of a saw they are less liable to become dull. They cut the weeds, and the end supports serve as guides in working close to the rows.

Patented through the Scientific American Patent Agency, April 24, 1866, by George P. Allen, Woodbury, Conn. Address as above for further information.

GSCHWIND AND GREETHER'S COMBINATION HOOK AND HOLDER.

This neat little implement may be called the traveler's convenience. It combines a cigar holder, hat hook, and toothpick, in a neat, portable and handy form. The engraving exhibits it of full size. It is made of brass gilded, or any other metal. The ornamental jaws, A, are hinged at the other extremity, and are held open by the spring of the metal passing round the pivot at B. An embracing clasp, C, can be slipped down the shank, when the two jaws are brought together, and grasping a hat, cap, or other article, it can be hung to the wall by means of the hook, D. Pivoted to the rivet, B, is an ivory toothpick, E, and a metallic one, F. When used as a cigar holder the springs inside the bow, at G, embrace the weed, while the ring, H, is worn on the finger.—The toothpick blades close into recesses in the shank. It can be made small enough to be used by ladies for holding their sewing and also for fastening up the skirts of their dresses.

