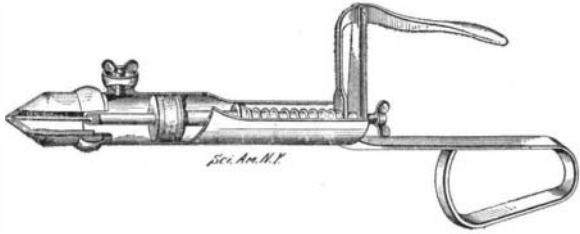




SOME RECENTLY PATENTED NOVELTIES.

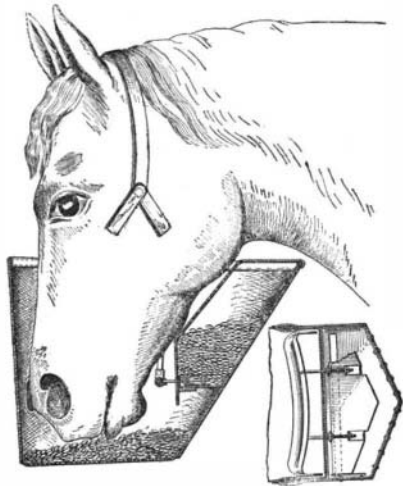
NEW SOLDERING IRON.—The tool here illustrated contains at its soldering end a reservoir of molten solder, which may be fed out at the option of the workman. The feeding device consists essentially of a plunger operated by a bellcrank against the tension of a coil spring. The plunger is mounted on a sleeve, through which passes an adjusting rod, threaded at the rear in



NEW SOLDERING IRON.

a stationary portion of the tool. A pin is connected to the other end of this rod by a knuckle-joint, and extends into the outlet opening of the solder reservoir. The amount of flow can be regulated by turning the adjusting rod, thus withdrawing or inserting the pin into the outlet opening. To fill the reservoir remove the plug at the top of the chamber, operate the adjusting rod to close the outlet, and then the solder may be poured into the reservoir through the cup-shaped inlet without fear of leakage.

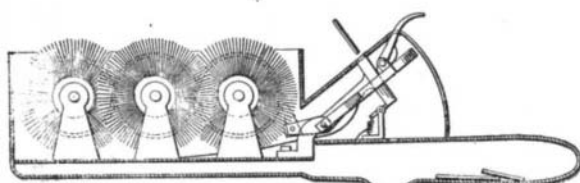
FEED BAG.—At last the poor truck horse can eat his noon meal in peace. Mr. George Dale, of New York



A NEW FEED BAG.

city, who has doubtless often observed the frantic efforts of a horse to reach the oats in his feed bag, is the inventor of a device which automatically regulates the supply of feed to the animal and brings the proper amount always within its reach.

A portion of the feed bag is partitioned off, and serves as a magazine for storing the feed. The oats are fed from this magazine by an escapement operated by the animal's jaw while chewing. A release bar is



COIN-CONTROLLED HAIR BRUSH.

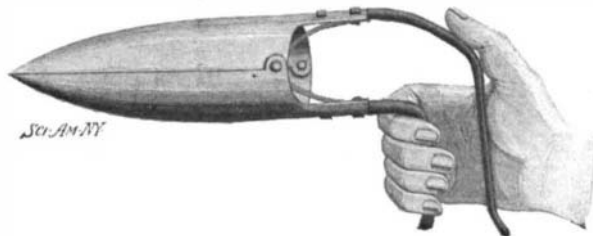
held by a spring against the lower jaw of the horse, and swings on straps at each side of the bag. Connection is made between this rod and a shutter, which, at every motion of the jaw, moves back and forth over an opening in the floor of the magazine and delivers a small quantity of feed to the animal. Means are provided for regulating the flow of the feed.

This arrangement compels the horse to eat slowly and prevents waste; for having a constant supply of food within reach the animal will not toss its head in an effort to catch the food "on the fly."

COIN-OPERATED HAIR-BRUSH.—A very novel idea has just been produced by Mr. Clarence M. Stiner, of New York city. He has designed a brush for use in public places such as toilet rooms in public houses, railway cars, etc., which at any time may be operated at a nominal expense to present a fresh, clean set of bristles for the user. As shown in the diagram, the bristles are radially attached to hubs forming wheels, and the wheels are connected by a gearing. On the handle portion of the hair-brush is a mechanism for rotating the brush wheels. This mechanism can be started only on the insertion of a coin and its operation is as follows: When the coin is inserted it falls freely, until arrested by a small detent at the bottom of the coin slot. The operator then depresses a thumb-lever until its inner end engages the coin and presses it into frictional engagement with the main lever. On the end of the main lever is a pawl which engages the gear teeth on the nearest brush wheel. Depression of the levers results in a partial rotation of the bristles, and the coin chute is depressed sufficiently to clear the detent referred to above. On release of the levers the coin is free to drop into a receptacle within the brush handle and the mechanism assumes its normal arrangement of parts.

PLANTER.

A very simple device is here shown which may be used for transplanting, inserting, and removing plants from the ground; also for inserting fertilizer with the plants or at the sides of the plant roots. The device consists of two jaws pivoted together and forming when closed a continuous round body tapering to a



A HANDY LITTLE PLANTER.

point and, therefore, adapted to be easily inserted in the ground. The handles which extend upward from each jaw are bent at right angles to the body and may be easily grasped in a single hand. Springs secured to these handles hold the jaws normally in closed position.

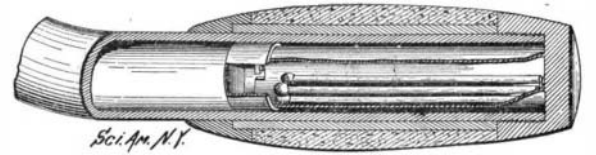
In using this device the plants may be placed therein when the planter is closed, and then after forcing the device into the ground the jaws are spread apart by pressure on the handles. Upon withdrawing the planter the plant will be left in the ground. It is obvious that at the same time of inserting a plant a fertilizer may be also inserted, or fertilizer alone may be inserted at the side of a plant or its roots. While other devices for this purpose have heretofore been made, they are usually much larger, being designed to be operated by two hands and requiring foot power for forcing them into the ground. This planter, on the contrary, is of convenient size for small plants and may be very conveniently carried about and easily operated. Mr. John J. Olinger, of 145 West 20th Street, New York city, has recently received a patent for this invention.

The most up-to-date thing in the way of street sprinklers is in use on the streets of Colorado Springs, Col. Here there is necessity for sprinkling the streets all the year round, and as the avenues are all unusually wide the proposition has always been a difficult one and a matter of serious expense. An electrical sprinkler has been recently put to work and its performances seem marvelous as compared with the machines which are more or less familiar to all. The use of the arm on one side of the machine is dispensed with entirely and the water is thrown from both sides at one time, and by the use of an electrical sprayer it is not only broken up into very fine particles but is thrown a great distance. The tank capacity is 2,600 gallons, and the vehicle is propelled by two 60 horse power motors. The sprinkling heads are in the center of the car on each side, and the water is forced from these by two individual force pumps operated by a 30 horse power motor and a street 120 feet wide can be watered from curb to curb. The amount of water thrown and the distance is under complete control at all times.

UTILIZING THE TUBE SPACE IN BICYCLE FRAMES.

Notwithstanding the hundreds of inventions on bicycles and their accessories in the past, there seems to be but little interruption in the present issue of bicycle patents. A new idea has evidently taken hold of the inventors, for noticeable among the latest improvements are an increasing number of devices for utilizing the chambers contained within the tube frame.

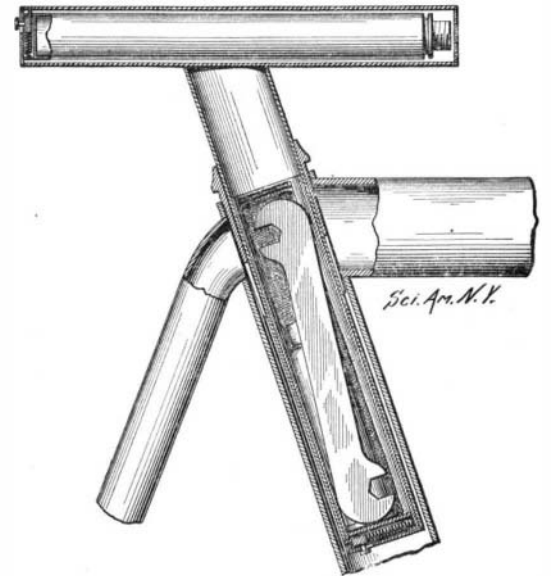
Our readers may possibly remember an article which appeared in our columns a few months ago, describing a bicycle lamp which burned gas generated within the hollow handle bars. We illustrate here a match safe which can also be put within this same space. The match safe is the invention of Mr. J. L. Held, of Bridgeport, Conn., and comprises a tube which, at one end, is integral with a cap piece threaded onto the handle bar, and at the other end is closed by a suitable cover.



THE HANDLE-BAR MATCH-BOX.

Matches can thus be securely kept and protected from the weather.

Two inventors in Canada make use of the seat-post of a bicycle for carrying tools, repair materials, etc. The receptacles consist of cylinders closed at their outer ends and held within the seat-post tubes by spring latches. In our illustration we show the horizontal receptacle as containing a bicycle pump, and in



THE CENTER BRACE USED AS A TOOL RECEPTACLE.

the upright chamber is a wrench and various repair materials.

Three Minneapolis inventors have hit on the novel scheme of inserting a piston into the upright tube which holds the saddle-post, thus forming a bicycle pump. In the first place, a rubber plug is tightly pressed into the lower part of the tube, in order to close it and serve incidentally as a cushion when engaged by the piston rod. Immediately above this plug is the nipple, to which is attached a rubber hose of sufficient length to reach the charging nipple of either tire. The upper end of the piston-rod projects from the top of the seat-post and is bent to form a handle. The advantages of this arrangement are obvious. The pump is always at hand when needed, and out of the way when not in use. It is larger and more powerful than any pump which could be conveniently carried



USING THE CENTER-BRACE AS A PUMP.