June 25, 1887.]


## ENGINEERING INVENTIONS

A railway rail spring has been pa tented by Mr. Edward A. Olmstead, of New York City It is a bowed spring plate with slots through which both rail and spring are held in place, it being designed o diminish the pounding effect of hexvy trains upo the rails and lesen the noise.
A car coupling has been patented by Mr. Eugene A. De May, of Richmond, Texas. It has pring-preseed hook attached to or formed upon a rock to turn it, and there is also a rod extending to the side of the car, for uncoupling cars from the bottom or side the device being applicable with the ordinary draw

A dumping car has been patented by Mr. Lawrence J. Woodhead, of Chattanooga, Tenn. In for opening and closing and holding them locked in position, while the car has a rounded or convex bottom, which aids in the automatic removal or dumping of the simple of construction and durable.

## AGRICULTURAL INVENTIONS

A potato digger has been patented by Mr. James W. Scott, of Uhricheville, Ohio. The plow easily by the driver, a rocking motion is given to shaker to separate the earth from the potatoes as both are raised by the plow in its forward progress, and there are various novel features of construction and arrange ent of parts.
A sulky harrow has been patented by Mr. Nathaniel T. Collins, of Hartford, Kansas. The invention covers varieus novel details in the construc tion and arrangement of parts, permitting the raising or lowering of the two harrows mdependently of each
other, and the lengthening or shortening of each as desired, while the machine is light, durable, and ef fective.

## MISCELLANEOUS INVENTIONS

A ball turning lathe has been patented by Mr. Tronson Draper, of Petrolia, Ontario, Canada thas an adjustable face plate covered with leather an tongs having steel cups, an adjustable steel cup placed on a holder, a ball rest, and means for adjusting th
A lumber register has been patented y Mr. John Thompson, of Minneapolis, Minn. It is made by splining to the axle of a drive wheel a con pinion, communicating motion to a series of registering disks, the several pinions constituting the cone repre-
senting each a standard length of lumber, the cogs cor esponding to the number of feet in the length of each piece.
A weather board gauge has been pa tented by Mr. James H. Smith, of Little Rock, Ark. It for supporting the board to be next secured to the building, hatchet to be employed in removing nails, try square and straight edge, dispensing with the use of
separate nails for holding the board in position while being marked and nailed.
A stump extractor has been patented by Mr. John Cornelius, of Oakland, Md. It comprises a main frame with horizontal shaft having chain and worm wheels, with intermeshing worm, a pulley frame
and pulleys supported in the main frame, with a guide so devised that when the machine is anchored to the ground and under strain, the machine will conform to
the variations in strain.
A keyboard attachment for musical instruments has been patented by Mr. Henry Richards of Decker, Ind. The invention consists of a series of keys operating on the keys of the instrument and ing the keys, and provided with means for adjusting them, with a device for moving the belt, whereby piece of music may be performed on organ or piano.
A ventilator has been patented by Mr John Williams, of Quebec, Canada. Combined with a
fixed cylindric section having a winged fan, and a re fan, and a re centrally within the fixed section and adapted toclose gainst back draughts, with other novel features, the device being designed as a simple and effective venti lator for windows or shafts.

A cuspidor has been patented by Mr James J. Brennan, of Morris Plains, N. J. It is de igned for use in railroad cars, and has anapertured in
clined bottom, an apertured inclined cap suspended below the bottom, with a detachable apertured top of novel form, making an article designed to be self-clean
ing, which cannot be upset and which will help ventilate the car.

A stop valve for water service pipes has been patented by Mr. Daniel Kearney, of Montreal Canada. It is designed to facilitate the operating of such valves from within the basement or cellar, instead of from the surface of the ground outside, a pisto ing into the basement so that having two pipes extend ing into the basement, so that their ends are easily acdown as desired.
A machine for making wire and slat fences has been patented by Mr. Joseph S. Locke, of
Spartanburg. Ind. Combined with a standard and draw wires or bands are spools, bands and clamps re atively arranged to allow the strands of the finished fence wire to be put in tension independently, the fenc ing to be made along the line of the fence posts, or
made in lengths suitable for rolling up for shipment.
A vending apparatus has been patent ed by Mr. George A. Macbeth, of Glenisla Ealing, Mid
dlesex County, Eng. The invention covers a rotating
delivery drawer or slide by which the articles are withdrawn singly, with a mechanism for locking the
drawer each time it is pushed in or closed, with other ovel features.
A machine for sizing oranges and othe ruit has been patented by Mr. Alfred Ayer, of Lak Weir, Fla. It has grading frames with longitudina ibs, so that the oranges in passing upon them will not e cut or bruised, and beneath each frame a vertically siding table forming a bed or support for the oranges,
with cushions, and other novel features, to facilitate the rapid and exact sorting of the fruit without injury

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