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## INVENTIONS PATENTED.

NOTE.-Patents are granted for 18 years. The term of years for which the fee has been paid, is given after the date of the patent.

## No. 39,588. Cultivator. (Cultivateur.)

Richard Sylvester, Lindsay, Ontario, Canada, 1st August, 1892; i years.
Claim.-1st. A series of arms B, fixed to the axle A, each arm being connected to a drag bar $C$ by a suitable spring D , in combination with the lever $\mathbf{E}$ fixed to the axle $A$, and provided with aspring catch $F$ to engage with the rack bar ( $x$, substantially as and for the purpose specified. 2nd. The curved block H fitted between the plates of the drag bar $C$ to form a seat for the tooth $I$, in combination with the cheek blocks J, connected together by the bolts K, substantially as and for the purpose specified. 3rd. A scattering tube L, having a branched end, each end being connected to a grain cup M by a rubber tube $N$, substantially as and for the purpose specified.

## No. 39, 5\$8. Loader for May. (Monte-foin.)

Charles Clinton Jewett, Sand Springs, Iowa, U.S.A., 1st August, 1892; 6 years.
Cluim.-1st. In a hay loader, the combination, with the grain elevating devices and mechanism for actuating the same, of a separate and indejendent grain table located wholly beneath the said grain elevating devices and composed of a fixed portion I) and a movable portion $\mathrm{S}^{\prime}$, which movalle portion is pivoted at its lower end in close proximity to the upper end of the fixed portion $D$, and is free to be turned down and away from the said grain elevating devices $t$, diminish the load thereon, and means for supporting the movable portion of the grain table at the desired location, substantially as deseribed. 2nd. In a hay loader, the combination, with the axle, the draft frame, and the grain table having the elevating devices, of the inder bar connected at its uper end with the grain table, and havsides oiwer and passing through a keeper on the draft frame, a disjon+, In the side of the fender bar, means for adjustably connectdispone casting with the fender bar, a rod connected at its lower end with the draft frame and having its upper end working through the said casting and provided with a series of openings, a spring mounted on the said rod and held between the casting and the draft frame, and a pin to pass through one of the series of openings in the said rod, substantially as and for the purpose described. 3rd. In a hay loader, the combination, with the table, the elevating rakes and the crank shaft, of guide rods secured to the rakes, and the couplings mounted on the crank shaft and receiving and travelling upon the said guide bars, substantially as set forth. 4th. In a hay loader, the combination, with the table, the elevating rakes and the crank shaft, of the guide rords connected at their ends with the said rakes and inclining away from the said rakes from front to rear, and the couplings mounted on the said crank shaft and adapted to travel on and have connection with the said guide rods, substantially as and for the purjose described.

## No. 39,589. (ienerator for Steam.

('iénérateur de rapour.)
Charles Dell Mosher, Amesbury, Massachusetts, L.S.A., Int August, 1892; 6 years.
Claim.-1st. As an improvement in a lwiler or steam generator, composed of water drums $b, h^{1}$, steanı drums $c, c^{1}$, and tubes connecting said water drums with the stean drums, some of said tulses being arranged to form walls inclosing flues or passages extending along the sides of the fire box and adapted to conduct the products of combustion from one end of the fire box to a stack over the opposite end of the fire box, the improved baftle plates formed to obstruct the upper portions of said flues, said baffle plates being composed of tubes formed and arranged to constitute walls extending across the upler portions of said flues, the lower portions of said flues being separated to permit the free passage of the products of combustion below said baffle plates, as set forth. 2nd. A boiler comprising in its construction two water drums, two steam drums located above the water drums, pipes connecting the water drums, return pipes connecting the water and steam drums, tubes comnecting the water drums with the steam drums, each water drum being connected with the corresponding steam drum by an independent series of tubes, and means for shutting off the communication between the two water drums, whereby the bxiler may he divided and treated as two independent boilers, as set forth. 3rd. A boiler comprising in its construction two water drums, two steam drums located aloove the water drums, return pipe's connecting the water and steam drums, transverse pipes connecting the water drums, valves in said pipes, whereby communication between the two water drums may he shut off, tubes connecting the water drums with the steam drums, and steam pijes to conduct steam from the steam drums, tach of said steam pipes having a valve, whereby it may be shut off, the valves in the water drum connecting pipes and in the steam pipesenabling either side of the boiler to be entirely cut off from communication both with the other side of the boiler and with the engine, as set forth.

## No. 39,500. Target. (Cible.)

Joseph Belet, Iole, Jura, France, 1st August, 1892; 6 years.
Cluim. 1st. In a mechanical target or butt, the combination, with a bull's eye or ring, of a yoke carrying a bent catch arm, a vertically sliding rox, and an escapement device, substantially as described and illustrated in the accompanying drawings. 2nd. In a mechanical target or butt, the combination, with a vertical!y sliding rod, of a frame $r$, counterweighterl pivoted block $f$, and sector $H$, substantially as described and illustrated in the accompanying drawings. 3rd. In a mechanical target or butt, the combmation, with a pivoted block, of a chain, a hand lever $i$, an index or pointer, a lever $i^{1}$, connecting said pointer to the chain, the pwinter working over a scale at the ''marksman's" stand, substantially as described and illustrated in the accomplanying drawings. 4th. In a mechanical target or butt, the combination, of a bull's eye or ring, counterweighted bell crank lever yoke, bent catch and block d, roxl $c$, arms or projections $e^{111}, S, s^{1}$, frame $r, X^{111}$, rod $q$, pivoted blocks $f, \mathbf{W}^{1}$, weight $f^{\prime 1}$, chain $h, h^{\prime \prime}$, levers $i$, i', counterweight $k$, pointer $j$, movable pointer carrier rail 1 , and stand or talbe $T$, substantially as described and illustrated in the accompanying drawings.
No. 39,561. Method of and Apparatus for Fxtracting Metals from Metalliferoum Materials. (Méthode et appareil pour extraire les métaux des mattères métallifères.)
Jose Baxeres Alzugaray, Oporto, Portugal, 1st August, 1892 ; 6 years.
Claim. 1st. The process of extracting metal from ores and metalliferous materials, consisting in placing the said ores or materiala in a closed chamber in which they are exposed to a reducing tem-

