

Vol. XX.-No. 6.
JUNE, 1892.
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## INVENTIONS PATENTED.

NoTE.- Patents are granted for 15 years. The term of years for which the fee has been paid, is given after the date of the patent.

## No. 39,03t. Feed Water Heater and Purifier. <br> (Rcchouffeur et épurateur d'cau d'alimentution.)

Robert Searmonth, Buffalo, New York, U.S.A., 1st June, 1892; 5 years.
Claim. -1st. In a feed water heater and purifier for locomotive boilers, a chamber, centrally located upon the boiler to which it is connected, and having its lower portion or base so constructed as to conform with the upper surface of the boiler, substantially as and for the purpose stated. 2nd. A feed water heater and purifier for lecomotive boilers, consisting of a chamber having arranged in its uper portion a series of spraying plates, and its lower portion consisting of a chamber or jacket which is fitted over the upper section of the loiler, said chamber or jacket having a dividing wall or partition at the lower ends of which are arranged deffecting plates through which the water is made to pass on its way to the boiler, substantially as shown. 3rd. A feed water heater and purifier for locomotive iooilers, consisting of the spraying chamber 3, centrally located ujon and opening into the chamber or jacket 4 , said jacket arranged to conform with the upper section of the boiler, and having the partition 10, and deflector 13, around and through which the water is made to pass, and the equalizing tube 14 , extending from the chamber 3 , to a point below the water level in the jacket 4 , the feed supply pipes 16 , having shut-off valves 17 , and leading from the eriualizing tube to the foottom of the boiler, the steam supply pipe 6 , and blow-off valves 18 , all arranged and operating substanstantially as shown and described. 4th. In a feed water heater and purifier, a deflecting plate consisting of a series of metallic strips or bars arranged within a frame forming a lattice work, through which the water is made to pass in such a manner as to deflect the serliment to the bottom of the purifier, substantially as shown and described.

## No. 39,035. Pneumatic Tire. (Bandage Pneumatique.)

Thos. B. Jeffery, Chicago, Illinois, U.S.A., 1st June, 1892 ; 5 years.
Cleim.-1st. An inflatable tire having the base or inner circumferential wall of stiff material adapted to resist buckling or creasing, such base being transversely folded or arched inward, forming a reentrant angle or curve, and provided with exterior laterally projecting beads or spurs at the opposite edges of said base, substantially as set forth. End. An inflatable tire, having the base or inner circhmferential wall of stiff material adapted to resist buckling or creasing, transversely folded or arched inward forming a re-entrant angle or curve, and provided with laterally projecting beads or spurs $6^{4}$ at the opposite edges of said base, in combination with a rim having a seat for the imner circumferential wall of the tire bounded by hooked or over hung flanges adapted to receive the beads or spurs of the tire, substantially as set forth. 3ro. A tire sheath, having a
base or inner circumferential wall of stiff material adapted to resist buckling or folding, transversely arched or folded inward forming a re-entrant angle or curve, and provided with exterior laterally projecting beads or spurs at the opposite edges of such base, combined with a flexible inflatable core within such sheath adapted when inflated to press outwardly against such base, substantially as set forth. 4th. A tire sheath, having the base or inner circumferential wall of stiff material adap,ted to resist buckling or creasing, transversely folded or arched forming a re-entrant angle or curve, and provided with exterior laterally projecting beads or spurs at the opposite edges of such base, in combination with a flexible inflatable core within such sheath, adapted when inflated to force the base outward, in combination with the rim having a seat for the base of the sheath laterally bounded by the hooked or overhanging flanges adapted to receive the beads or spurs of the base, substantially as set forth. 5th. In a tire, in combination, substantially as set forth, a sheath $B$, and the inflatable core $C$ therein, the sheath being comparatively, as respects the core non extensible, and the core being larger than the cavity of the sheath, whereby the substance of the skin or wall of the core is compressed when inflated between the interior inflating air and the exterior retaining sheath. 6th. In a tire, an exterior sheath combined with an interior inflatable core, said core being corrugated, substantially as and for the purpose set forth. 7th. In combination, with the sheath having at its inner circunference at lateral edges, the exterior and oppositely projecting spurs or beads $b^{4}$, and the interiorly projecting lever base, in combination, with an inflatable core within said sheath and adapted when inflated to press outwardly against such lever base, and the rim having the seat to stop the outward movement of the lever base at the middle part, and the flanges or hooks at its edges to receive the lateral projections of the sheath, substantially as set forth. 8th. A vehicle wheel, having a broad rim, in combination with an elastic tire seated therein, the rim having spoke holes in two parallel planes at opposite sides of the equatorial plane of the tire, said rim having the tire seat provided with two peripheral grooves in the planes of said spoke holes, and spokes connected at said holes in the two planes and having their heads lodged in said grooves, substantially as set forth. 9th. A tire sheath having at its inner circumference at the opposite lateral edges outwardly projecting beads or spurs, in combination with the rim having the tire seat bounded by hooks or flanges to engage said spurs, and the inflatable core within such sheath having its base normally inwardly arched and lodged at its comers or angles against the sheath directly inward from said exterior spurs or beads, said base of the core being stiff and adapted to resist creasing or folding, whereby the inflation of the core causes its base to straighten and force the spurs of the sheath into engagement with the rim, substantially as set forth.

## No. 39,036. Animal Trap. (Piege.)

George Andrews, Ashford, County of Kent, England, 1st June, 1892; 5 years.
Cluim.-An animal trap, consisting of a base or platform, having in combination thereon a standard, a rotative disk mounted on said standard, a cam and slot in said disk, a trigger pivoted to said standard, and having a lug for engaging the cam, the opposite end thereof being provided with a bait hook, and a spring actuated reticulated frame having its free end extending over and engaging the slot for setting the trap.

## No. 38,037. Grate. (Grille.)

Elonzo J. Gordon, Grenville, Michigan, U.S.A., 1st June, 1892 ; 5 years.
Claim.-1st. In a furnace of the class described, the combination, with a hollow grate bar having an opening in its top, and the walls of which are provided with a beveled seat, of a removable cap

