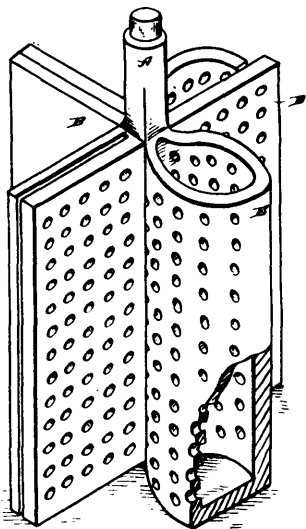


lead, a furnace for keeping the lead and oxygen carrier in a fused state, and a supply of air or other oxidising agent continuously injected into the oxygen carrier, substantially as herein shown and described and for the purpose stated. 2nd. In an electric battery, the employment, as an oxygen carrier, of a compound consisting of bi-chromate of potash, chromium tri-oxide and caustic soda or caustic potash, in the proportions substantially as hereinbefore described. 3rd. In an electric battery, and the lead of which is fed with carbonaceous material in a suitable broken form, a conical or other suitable perforated partition arranged between the trough or container and porous pot for keeping the carbon immersed in the fused lead, substantially as herein shown and described and for the purpose stated. 4th. In an electric battery, which is fed with suitable carbonaceous material, a conical or other suitable perforated partition between the trough or container and the porous pot for keeping the carbonaceous material immersed in the fused lead, and feed pipes for conveying the carbonaceous material to the fused lead, substantially as hereinbefore described and set forth.

No. 62,496. Storage Battery. (Accumulateur électrique.)



62496

Stephen J. Martin, Detroit, Michigan, U.S.A., 1st February, 1899; 6 years. (Filed 14th March, 1898.)

Claim.—1st. In a secondary battery, an electrode consisting of a series of perforated tubes attached to and surrounding a central core, said tube adapted to contain the active material, substantially as described. 2nd. In a secondary battery, an electrode consisting of perforated tubes composed of conducting material, said tubes being formed around and integral with a central core which is prolonged into a stem for uniting the several elements, and being closed at their lower ends, and active material carried within said tubes, substantially as described. 3rd. In a secondary battery, an electrode consisting of four perforated tubes, secured to and formed around a central core in the form of a cruciform figure, said core arranged to project above the tubes for the purpose of uniting the several elements, and a connecting-bar adapted to engage the projecting ends of the core, substantially as described. 4th. In a battery, the combination of the elements A', B', each of which consists of the core A, to which are secured the oval tubes E, opposed to each other, and arranged around the core to form a cruciform figure, each tube of the positive element located between two of the negative element, active material located within said tubes, and connecting-bars adapted to unite the elements of each series, substantially as described.

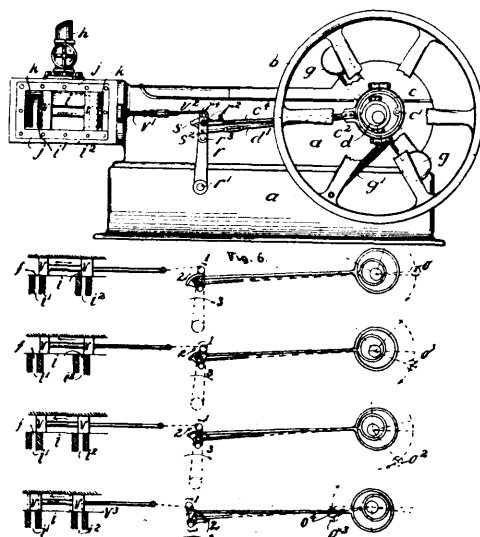
No. 62,497. Valve for Steam Engines.

(Soupape pour machines à vapeur.)

James B. Allfree, of Indianapolis, Indiana, U.S.A., 1st February, 1899; 6 years. (Filed 27th May, 1898.)

Claim.—1st. In a valve gear for steam engines, the combination of an engine shaft, a regulating eccentric mounted on said shaft, a rocker arm or sliding bracket reciprocated by said eccentric, a modifying eccentric relatively mounted on said arm or bracket, a valve and means to connect said modifying eccentric to said valve. 2nd. In a valve gear for steam engines, a reciprocating lever, a modifying eccentric mounted in said lever, and means whereby a motion of alternate rotation is imparted to said modifying eccentric, a valve and means for connecting said modifying eccentric to said valve, substantially as set forth. 3rd. The combination in valve gear for steam engines of a reciprocating rocker arm or lever, an eccentric shaft carried by said lever, means whereby motion of rotation is

transmitted to said eccentric, through and by said lever, substantially as shown. 4th. In a valve gear for steam engines, the com-



62497

combination of a reciprocating lever, an eccentric carried by said lever, means for rotating said eccentric alternately in opposite directions simultaneously with the reciprocation of said lever, substantially as shown. 5th. In a valve gear for steam engines, the combination with a reciprocating lever, a shaft journaled in said lever, an eccentric pinion on said shaft, a pinion on said shaft, a toothed sector meshing with said pinion, pivoted on said lever, a rod pivotally connected at one end of said sector and to an eccentric at its other end to reciprocate said sector, substantially as shown. 6th. In a gear for slide valves for steam engines, the combination with a valve, a modifying eccentric-pin, means for connecting said pin to said valve, means for supporting and carrying said eccentric pin, a main eccentric, an eccentric rod extending from said main eccentric to said supporting and carrying means whereby said means is reciprocated, and means whereby the said eccentric pin is rotated, as shown. 7th. In a valve gear for steam engines, the combination with a valve, a modifying eccentric pin, a rod connecting said eccentric pin to said valve, a lever or rocker-arm, means on said rocker arm whereby said eccentric pin shaft is supported and means to rotate said pin alternately in opposite directions, substantially as shown. 8th. In a valve gear for steam engines, the combination with a slide valve, a rocker arm, a modifying eccentric pin, rotatively mounted on said rocker arm, a rod connecting said slide valve to said eccentric pin a toothed pinion on shaft of said eccentric pin, a toothed sector pivoted on said rocker arm adapted to mesh with said pinion and means for oscillating said rocker arm and said sector, substantially as set forth. 9th. In a valve gear for steam engines, a slide valve, a modifying eccentric pin, a rod connecting said eccentric-pin to said valve, a rocker arm, a shaft carrying said eccentric pin, rotatively supported on said rocker arm, a toothed pinion on said shaft, a toothed sector pivotally secured on said rocker arm, adapted to mesh with said pinion and means for oscillating said rocker arm and said sector in opposing directions, substantially as shown. 10th. In a valve gear for steam engines, the combination with a slide valve, a modifying eccentric pin, a rod connecting said valve to said eccentric-pin, a rocker-arm, an eccentric pin shaft rotatively carried by said rocker arm, a toothed pinion on said shaft, a toothed sector pivoted on said rocker arm, and adapted to mesh with said pinion, a main eccentric adapted to reciprocate said rocker arm and means for oscillating said sector upon its axis in directions going practically opposite to motions of said rocker arm, as shown. 11th. In a valve gear for steam engines, the combination of a slide valve, a modifying eccentric pin, a rod connecting said valve to said eccentric pin, a rocker arm, an eccentric pin shaft carried by said rocker arm, a toothed pinion on said shaft, a toothed sector pivoted on said rocker arm adapted to rotate said pinion, a main eccentric adapted to oscillate said rocker arm and an auxiliary eccentric adapted to oscillate said sector in opposite directions, substantially as described. 12th. In a valve gear for steam engines, an eccentric located at an intermediate point between the primary means for traversing the valve and means whereby the said eccentric is caused to rotate, causing a modification of the primary movement, all substantially as shown. 13th. In a gear for slide valves of steam engines, a modifying eccentric located at a point intermediate between the main or primary eccentric and the valve to be operated and means by which the said intermediately located eccentric is caused to rotate whereby a modified movement is imparted to the valve for the purposes set forth. 14th. In a valve