the boiler. a pipe connected to said valve extending into the ash-pan and provided with perforations, and means, substantially such as shown, for rocking said pipe upon its axis. 2nd. In combination with boiler A and ash-pan B, valve F and pipe J, arranged and oper-ating substantially as described, perforated distributing-pipe L, lo-cated within the ash-pan and connected with pipe J, and a hand-lever Q, connected with said pipe L and adapted to rock the same. 3rd. In combination with boiler A and ash-pan B, valve F and pipe J, all arranged for operation substantially as shown, perforated pipe L provided with flanged tube N and arm S. a nut P adapted to fit upon the tube N and to connect the latter to the pipe J, and a hand-lever connected with the arm S, substantially as described. 4tb. In combination with boiler A and ash-pan B, a two-way valve F adapted to receive steam or water from the boiler, a pipe J connected with said valve, a perforated pipe L connected with pipe J located within the ash-pan, and adapted to be rocked or oscillated upon its longitu-dinal axis, a hand-lever Q iournalled upon the boiler, and a link or bar R connecting the hand-lever with the rocking-pipe. 5th. In com-bination with a boiler and ash-pan therefor, a supply-pipe communi-cating with the atem-space and the water-space of the boiler, and provided with a valve and a perforated pipe placed within the ash-pan, and adapted to be rocked or oscillated upon its longitu-dinal axis, a hand-lever W iournalled upon the boiler, and a link or bar R connecting the hand-lever with the rocking-pipe.

## No. 27,947. Dust Collector.

## (Aspiraleur de poussière.)

The Knickerbocker Company, Jackson, Mich., (assignee of John M. Finch, Crockett, Cal.), U.S., 7th November, 1887; 5 years.

Finch, Crockett, Cal.), U.S., 7th November, 1887; 5 years. Claim.-lst. In a dust-collector, the combination. with a series of communicating separating-chambers arranged side by side. of a core extending through said chambers at unequal distances from the en-closing walls of said chambers, whereby enlargements are formed in said chambers on one side of the core, in which enlargements the air current is weakened, thereby permitting the solid particles to pass out of the air current, substantially as set forth. 2nd. In a dust-collector, the combination, with a suction fan, of a series of commu-nicating separating-chambers, arranged side by side and connected with the eye of the fan, and a core extending through said chambers, the latter being constructed on one side of the core with enlargement is deposited, substantially as set forth.

No. 27,948. Process of Producing Metals of the Alkaline Earths and Apparatus therefor. (Procedé de production des métaux des sols alkalins et appareil pour cet objet.)

Richard Graetzel, (assignee of Adolph Graetzel), Hanover, Germany, 7th November, 1887; 5 years.

The November, 1887: 5 years. Claim.—1st. In combination with a melting and decomposing-pot a, and means for conducting an electric current into the substance contained therein, the insulator p communicating at its bottom end with the said pot, and through which an electrode is passed into the substance, substantially as and for the purpose described. 2nd. In the process of extracting a metal of an alkaline earth from a haloid compound thereof, by an apparatus consisting in a closed melting-pot, means for conducting an electric current into the compound contained in the pot, and an insulator p through which an electrode is passed, the introduction into the pot a, of a gas having either re-ducing qualities or which is neutral in respect to the metal to be ex-tracted, substantially as and for the purpose described. 3rd. In the process of extracting a metal of an alkaline earth from shalid com-pound thereof, by an apparatus comprising a melting-pot, means for conducting a metar of a substance each from shalid com-pound thereof, by an apparatus comprising a melting-pot, means for conducting an electric current into the compound contained in the pot, and an insulator g through which an electrode is passed, the em-ployment of regenerating pieces d composed of the oxide of the same metal as that which is to be extracted and of carbon, and which are planed under the action of the current passing from one electrode to the other, substantially as and for the purpose set forth.

### No. 27,949. Combined Stove Pipe Shelf and Dratt Regulator. (Tablette et clé de tuyau de poêle combinés.)

John A. Tees, Winnipeg, Man., (assignce of James Allingham, Mit-chell, D. I., U.S.), 7th November, 1887: 5 years.

both A: test, which we have the state in the state of the state in th tially as specified.

# No. 27,950. Autographic Telegraph.

(Télégraphe autographique.)

The Writing Telegraph Company, New York. N. Y., (assignee of James H. Robertson, Rutherford, N. J.), U. S., 7th November, 1887; 5 years.

Claim-1st. The combination, with a stylus or holder moved by the

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#### Weighing No. 27,951. Automatic Grain Scales. (Balances automatiques pour les grains.)

Cyrenius Dominy and Charles F. North, Englewood, Ill., U.S., 7th November, 1887; 5 years.

Claim.—Ist. In an automatic weighing-machine, the combination, with a wheel or pulley, of a pair of grain-weighing buckets, sus-pended by a line or chain passing over said pulley, and a pair of scale-wheels until said scale-beams are raised, substantially as spe-bified. 2nd. The combination of weighing-buckets B, B, with line or chain D, pulley E furnished with notches e, e, and beat scale-beams