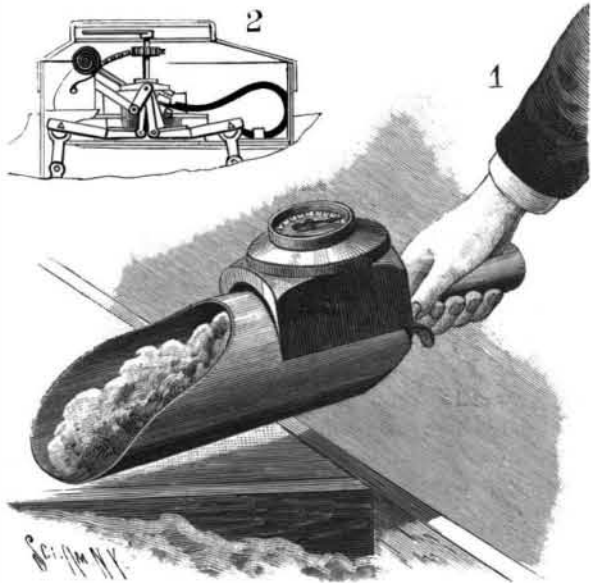


AN IMPROVED WEIGHING SCOOP.

The illustration represents a convenient device for use in the household, in hotels and warehouses, and by retail merchants and others. In connection with the usual pan of a scoop is arranged a scale mechanism, whereby the contents of the pan may be weighed and the weight indicated by a pointer moving on a dial face, as shown in Fig. 1, Fig. 2 representing a sectional view of the scale mechanism. The invention has been patented by John M. Withrow and W. H. Theobald, of Apalachicola, Fla. The scale mechanism is carried by a sunken portion of the bottom of the casing to which the handle is secured, the handle portion having skirts forming a downwardly opening cavity receiving the upper portion of the scoop or pan. At each side of the pan are links with eyes in which are knife edges resting upon pairs of arms connected by beams, each beam with its arm forming a lever rocking on a fulcrum formed by knife edges for each arm rolling in bearings on the braced bottom of the handle casing. The intermediate portion of each beam is connected by links to a carriage which slides vertically

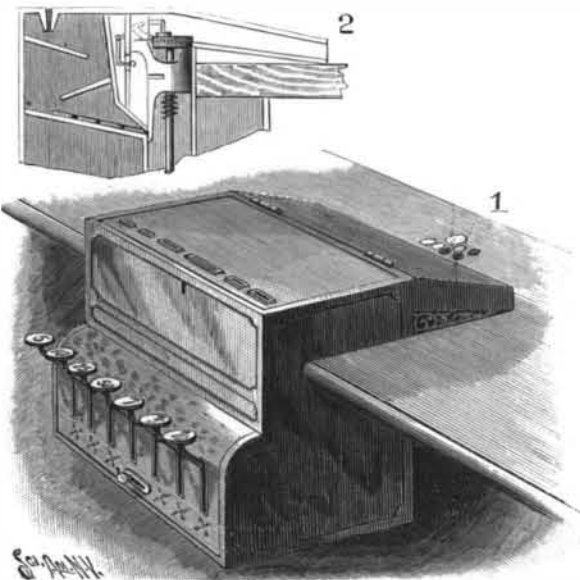


WITHROW AND THEOBALD'S WEIGHING SCOOP.

on the arbor carrying the pointer of the scale, a scroll spring being arranged to normally lift the pan. Weight placed in the pan causes the arms which rest in the knife edges of the eyes from which the pan is supported to swing down, throwing up the carriage, which is so connected as to cause the turning of the arbor and the movement of the pointer on the dial. The tension of the spring may be readily regulated, and a proper adjustment of the parts causes the indicator to show the weight of material in the pan. By means of a thumb plate the pan may be held rigidly, if it is not desired to utilize the weighing mechanism.

SMITH'S CHANGE-MAKING DEVICE.

To facilitate the changing of coins or bills by rapidly and accurately bringing out the required change by operating proper levers is the object of the invention illustrated by the accompanying figures, and which has been patented by Andrew A. Smith, of Westport, Wash. It comprises essentially a casing having a number of coin receptacles or hoppers, each of which contains coins of one denomination only, and mechanism by which one coin at a time may be produced from either of the hoppers. Fig. 1 is an outside view of the complete device, Fig. 2 showing a section through one of the hoppers. The case is intended to be placed at the rear of a counter, with its upper portion slightly above the surface—though not interfering with the display of goods by a salesman—a tube discharging the coins upon the counter opposite the case, as indicated in Fig. 1. The cover of the case is hinged, to afford ready access to the interior, and has a series of slots,



A NOVEL CHANGE-MAKING DEVICE.

beneath each of which is a coin receptacle similar to that shown in Fig. 2, the inclined projections in the receptacles preventing the removal of coin by turning the case over. In the sloping bottom of each coin receptacle is a slot which will pass but one coin at a time, and opposite these slots are coin-receiving cups having false bottoms attached to vertical rods on which are spiral springs, normally holding the cups in lowered position. The cup-supporting rods are, however, pivotally connected with levers whose outer ends project through slots in the casing, terminating in keys marked with the denominations of the coins in the different receptacles; and on the depression of the proper lever, when it is required to make change, the cup and its false bottom is elevated, the latter coming in contact with a pivoted discharge lever, the tripping of which causes the coin to be thrown into the discharge spout. One or more of the keys are thus depressed to operate the levers to discharge the required coin from the different receptacles, according to the change desired. The cover is provided with a lock, to prevent unauthorized access to the interior of the casing, and within the casing is a lock plate which may be moved to prevent operating the keys.

The Forgotten Colonial Library.

The tearing down of the building which covered the east wall of Independence Hall has brought forward some unexpected testimony in confirmation of the specifications, as well as some unanticipated facts which are of great interest and importance. The face of this wall shows unimpeachable evidence of a building having existed of which the present generation had no knowledge, and to which reference is made in all old documents, letters, etc., but which had dropped out of sight. It is barely a century since stood fully equipped the "Colonial Library," corresponding to our "Congressional Library" of to-day, from which public men indited their correspondence. Well might Scrooge say, "And are we so soon forgotten?" But it is hard to think that the existence of such a building should have had no record. It has, fortunately, left its own record on the wall of the old State House. Concerning the Colonial Library, Frank M. Etting's "History of Independence Hall" says, on page 26, a resolution was adopted in 1752 to place at the southeast corner of the State House a structure for the use of the committees and "for our books." Etting adds that "the absurdity of such a building must have prevented its accomplishment." But here is the unimpeachable evidence that it was built, and the further evidence of correspondence dated from it. It probably went down with the changes made in 1813.—Philadelphia Ledger.

GAS AND GASOLINE ENGINES.

The steadily increasing popularity of gasoline power for driving machinery and for propelling boats has led to the perfection of a gas and gasoline engine, by the Mianus Electric Company, Mianus, Conn., which is peculiarly fitted to supply the demand, excelling in economy, safety and durability. The company are manufacturers of complete gas or gasoline engines of from one to six horse power, both stationary and marine, and can supply the castings, parts and working drawings for the one horse power and two and one-half horse power engines, for experimental purposes and for those who wish to construct their own engines. The accompanying illustration shows the two and a half horse power "Palmer" marine gasoline engine, built on the two cycle compression type, with an impulse at each revolution of the crank. The company also build them on the four cycle type having an impulse every other revolution. These engines are readily adapted to motor carriages and are also used for running printing presses and dynamos for electric lighting. They occupy but little space and consume a small quantity of gasoline or gas.

New York's Population 3,438,899.

An official estimate of the population of Greater New York was given out February 10 by the Health Department as follows: Number of persons in all five boroughs, 3,438,899, of which 1,911,755 are in the borough of Manhattan; 137,075 in the Bronx; 1,197,100 in Brooklyn; 128,042 in Queens and 64,927 in Richmond. London, by the census of 1891, had 4,231,000 inhabitants, so that New York is about a million less. In 1891 Paris had 2,447,957 inhabitants, while in 1895 Berlin had 1,677,351, then comes Canton with 1,600,000, Vienna with 1,364,548 and Tokio with 1,214,113.

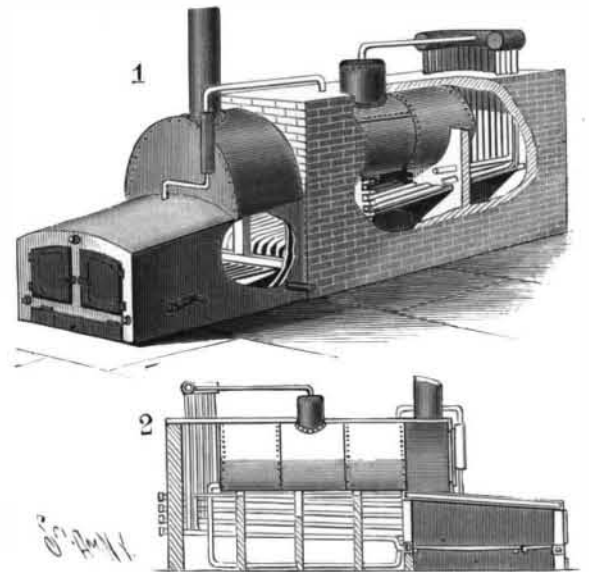
An Inexpensive Garbage Receptacle.

The committee on nuisances of South Park, Dayton, Ohio, is supplying a receptacle for holding garbage and rubbish which is very ingenious. The outside casing is a tile such as is in use for ordinary sewers. It is 18 inches in diameter and 28 inches deep. This tile is set in the ground, the top being about 3 inches above the surface. Into this is fitted a receptacle made of gal-

vanized iron with a substantial bail for the convenience of persons handling the garbage bucket. It is hardly noticeable when the tile is properly inserted in the ground. It is covered by a neat cover. The cost of such a receptacle would be about \$1.50.

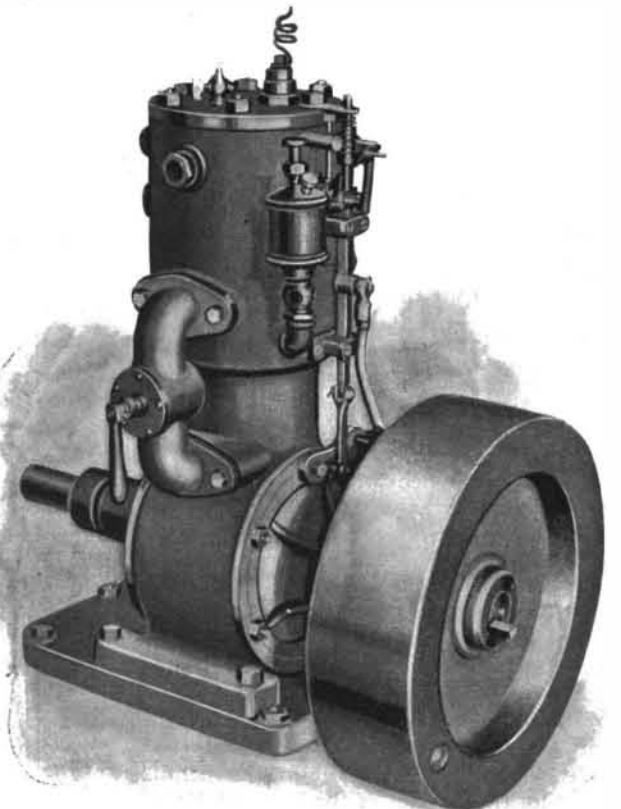
A WATER-JACKETED FURNACE AND BOILER.

The accompanying illustration represents a furnace and boiler in which the furnace is water-jacketed on



INNES' STEAM BOILER.

its sides and top, and special provision is made to insure a perfect circulation and the rapid production of steam. The invention has been patented by Robert W. Innes, of No. 624 North Thirteenth Street, Omaha, Neb. Fig. 1 represents the boiler in perspective, with portions broken out to show the interior, Fig. 2 being a view in section. The fire box has a grate with forward movable section, rocking on a horizontal shaft, whereby it may be dumped by means of a crank at one side, and the top of the fire box water jacket is braced by central water legs at its front and rear, communicating with transverse water beams, the feed pipe entering the water jacket at the rear of the fire box. Extending rearwardly from the water leg and water beam at the rear of the fire box are water tubes which pass beneath and turn up at the rear end of the boiler, to communication with a U-shaped header, these tubes being in the immediate path of the products of combustion, and each tube having a rearward extension, provided with a plug, by removing which the tubes may be blown out. The center of the header



THE "PALMER" MARINE GASOLINE ENGINE.

is connected with the top of the steam dome, and a pipe leading from the forward portion of the boiler at the top is connected with a water column in front of the boiler and thence with the water jacket over the furnace, the column serving to indicate the condition of the water in the boilers. Water tubes also lead from the lower rear portion of the boiler to the water beam at the rear of the fire box. To make tortuous the passage of the gases rearward from the fire box, transverse baffle walls are arranged, each having a break therein, and the breaks being arranged at alternate sides, thus insuring the more perfect combustion of the gases.