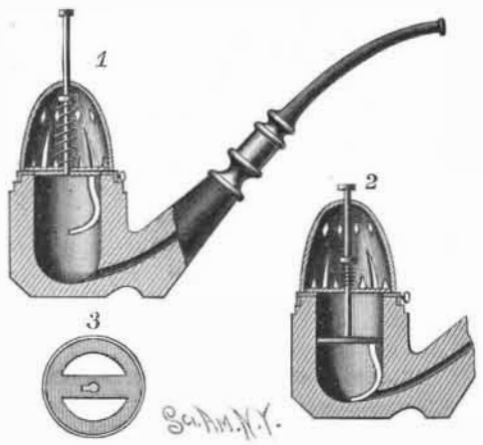
### AN IMPROVED TOBACCO PIPE.

A pipe in which the tobacco can be pressed down in the bowl, or loosened if pressed too closely, and in which the bottom of the bowl can be conveniently scraped and cleaned, is illustrated herewith, and has been patented by Messrs. Thomas B. Whitledge, George W. Kenner, and Michael Rueckert, of St. Mary's, Mo. To a ring plate on the edge of the bowl is hinged a cap or lid, having air holes, this lid having at its base a web, shown in Fig. 3. A pusher rod passes through the top of the cap and the center of the web, carrying at its lower end a disk constituting a tobacco presser, this disk having perforations, while a curved bowl-

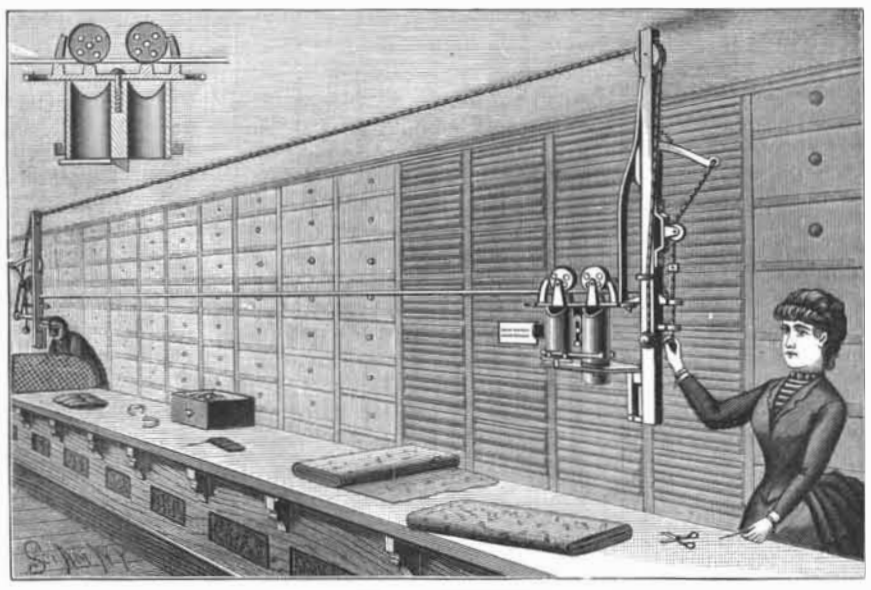



AN IMPROVED TOBACCO PIPE.

cleaner arm projects downward from its edge. A spiral spring around the pusher rod holds it normally in the position shown in Fig. 1, but the rod has a shoulder adapted to engage a slot in the web at the base of the lid, whereby it may be held in the position shown in Fig. 2, for the partial rotation of the cleaner arm in the bottom of the bowl.

### AN IMPROVED STORE SERVICE APPARATUS.

A carrier for cash, messages, and parcels, etc., from one place to another in a store, is illustrated herewith, and has been patented by Mr. Hubert Hebert, of Lake Linden, Mich. Between a post located near the cashier's desk and one in another part of the store is stretched a track formed of a rope or strip of any suitable material, a suspended carrier traveling on this track by means of grooved wheels. On the bottom of the plate to which the wheels are secured are the downwardly extending compartments of the carrier, as shown in the sectional view, both open at the bottom, and having side openings near the top for inserting money or parcels. On the lower ends of the compartments is held a bottom adapted to cover one or the other of their open ends, the bottom being held to slide longitudinally on guideways, and being locked in place by bolts sliding vertically. On the front and rear of the bottom are downwardly extending lugs adapted to engage the front and rear edges of plates secured to the posts, preventing the bottom from moving with the carrier as the latter nears the end of its route, a short tube on the inner end of each plate being adapted to register with the open lower end of one of the compartments. On the top of the plate to which the grooved wheels are secured are lugs against which operate the free ends of vertical springs secured to each of the end posts, the springs being acted upon by levers fulcrumed on the posts, the cords connected with the ends of the levers having dependent balls or



HEBERT'S STORE SERVICE CARRIER.

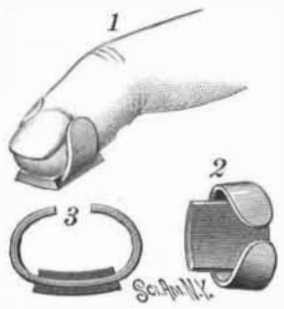
handles within easy reach. Each of these cords also has an attached block adapted to release a catch by which the carrier is held in locked position, when the pull on the cord has put the propelling spring under sufficient tension. The cord extending from one post to the other near the ceiling is so connected that the operator sending the parcel, etc., at a distance from the cashier's desk, can bring the carrier back again. As the carrier in its forward movement nears the cashier's desk, the downwardly extending lugs on its bottom engage the edges of the plate attached to the post, so that the bottom is held while the carrier moves forward the width of one of its compartments, its open compartment then registering with the tube over the desk, so that the parcel or money drops out. On the post at the cashier's desk there is, also, a pin adapted to open a spring clamp secured to one of the compartments of the carrier, the clamp being adapted to hold written messages, which are released by the contact of the carrier with the pin, so that the message drops out on the desk.

### A Village Destroyed by Ice.

Advices from the fishing village of Kerschkaranza, in Kola, a peninsula on the White Sea, describe a wonderful phenomenon, new in Arctic annals, which took place on January 5th last. At 4 o'clock in the morning the inhabitants were awakened by a series of heavy, dull detonations, like heavy artillery. Shortly afterward a great ice wall to the northwest, several hundred feet high, was seen to be moving toward the village, doubtless in consequence of the pressure of the ocean of ice outside. The ice hills came slowly but irresistibly onward, and passed over the village, which they completely erased, and kept onward for a mile inland. The ice traveled a mile and a half in four hours. The villagers saved their lives, but little else.—*Philadelphia Press.*

### A FINGER SHIELD FOR MUSICIANS.

A simple and inexpensive device for the protection of the fingers of musicians while playing on stringed instruments, such as the guitar and harp, has been patented by Mr. Anton Ahlquist, of Ishpeming, Mich., and is illustrated herewith, Fig. 3 showing the device in transverse section. It consists of a curved strip of metal adapted to receive the end of the finger or thumb, and provided with a covering of leather or analogous material. To the outer surface of this covering is applied a mixture of Venice turpentine and pine pitch, preferably mixed in about the proportions of




AHLQUIST'S FINGER SHIELD.

three parts of turpentine and one of pitch, the design being to thus render the playing more comfortable and insure a more positive action of the finger upon the string.

### Carbons.

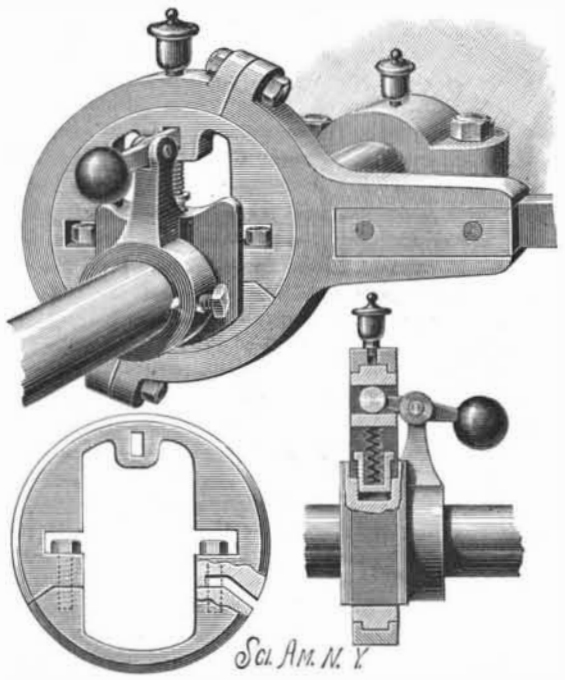
There are said to be 150,000 carbons burned daily in the electric lights used in the United States, of which 100,000 are manufactured in Cleveland, Ohio. Six years ago all the carbons burned in this country were made in a single room in Boston. Now there are twenty carbon furnaces in Cleveland alone. The carbons are made chiefly of the residuum of oil after it has been refined, and the deposit about natural gas wells is also coming into use. The material is ground to a powder, a little pitch is added, and the substance is then placed in moulds. These are packed in boxes and the latter placed in a furnace, where they are subjected to the most intense heat.

The capacity of an ordinary furnace is 45,000 carbons.

A BLOWER is being placed in the Shaw mill, Bath, Me., and a tunnel is being led from the mill to the electric light station, about fifty yards distant, by which all the sawdust of the mill is to be blown from the mill to the electric light station, where it will be used for fuel. There is said to be considerable rejoicing among 'longshoremen that this is being done, as for several years past the sawdust of the mill has been thrown overboard, and the depth of the river and docks has been materially lessened in consequence.

### AN IMPROVED CUT-OFF VALVE GEAR.

An improved cut-off for regulating, automatically, the travel of a valve of a steam engine according to the speed of the main driving shaft is illustrated herewith, and has been patented by Mr. George B. Rait, of



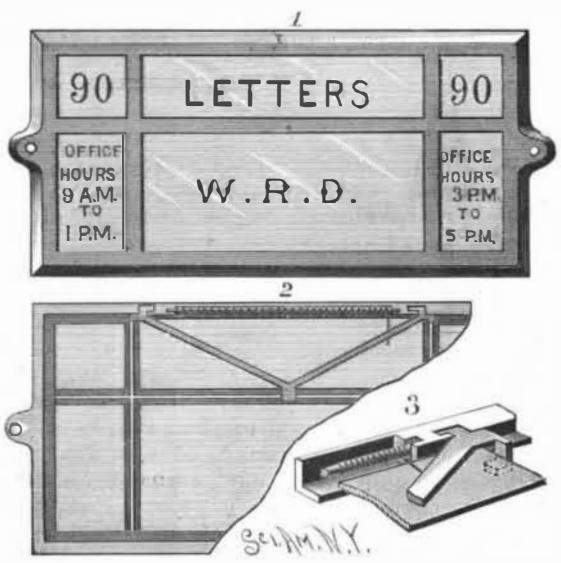

RAIT'S CUT-OFF VALVE GEAR.

Everly, Iowa. A shaft block secured to the main driving shaft has parallel ways on two of its sides in which fit the parallel side walls of an eccentric made to slide thereon, an expansion spring within the central opening of the eccentric, as shown in the sectional view, bearing against one of its end walls and against the adjacent end of the shaft block. This spring is balanced by a vertically swinging lever, mounted at right angles to the block and eccentric, weighted at its outer end, and engaging the eccentric at its inner end to throw the eccentric against the action of the spring, the latter being of sufficient tension to hold the eccentric in its proper position for the desired rate of speed.

When the speed exceeds this rate, the ball of the lever is thrown outward by centrifugal force, causing the eccentric to slide toward the center on the shaft block, and making the valve cut off sooner, thus admitting less steam to the cylinder, and diminishing the speed of the engine, until the normal point is reached. The eccentric is preferably made in two parts, as shown in one of the views, fastened together by bolts and rivets, for convenience in placing on the guideways of the shaft block.

### AN IMPROVED LETTER BOX DOOR PLATE.

A door plate adapted to serve for the name and number, to show office hours, or give other information, and also adapted for use as a letter box door, is illustrated herewith and has been patented by Mr. Rolf Stafsvick, of No. 187 North Morgan Street, Chicago, Ill. The frame is formed of a rectangular casting, arranged to furnish such compartments as desired, the exterior as well as the longitudinal and transverse bars of the frame being rabbeted on the back to receive glass panels. In the back of the upper bar are formed right-angled recesses for receiving the pivotal ends of a Y-shaped frame, as shown in Figs. 2 and 3, the pivots being held in their places by setting the metal of the frame




STAFSVICK'S LETTER BOX DOOR PLATE.

partly over them. In a recess in the back of the top bar is a rod which supports a spiral torsion spring, one end of which rests upon the Y-shaped frame in such manner as to press it in the direction required to close the letter box door, behind which, inside the door, the letter box is arranged.

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