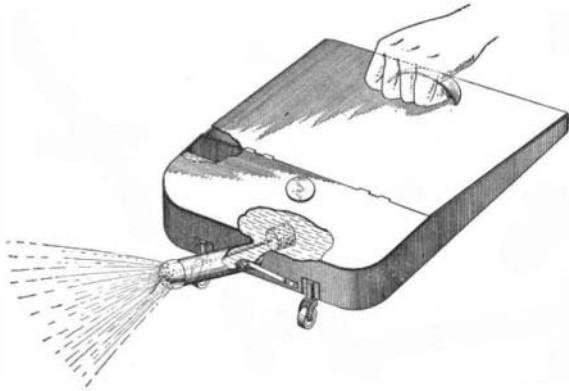


## SOME NEW INTERESTING INVENTIONS.

**COMBINED DUSTPAN AND SPRINKLER.**—A household device which can be alternately used for sprinkling the surface to be cleaned and gathering up the dust after the floor has been sprinkled, is clearly a serviceable invention. The dustpan is provided with a hinged cover to retain the dust when the pan is used as a

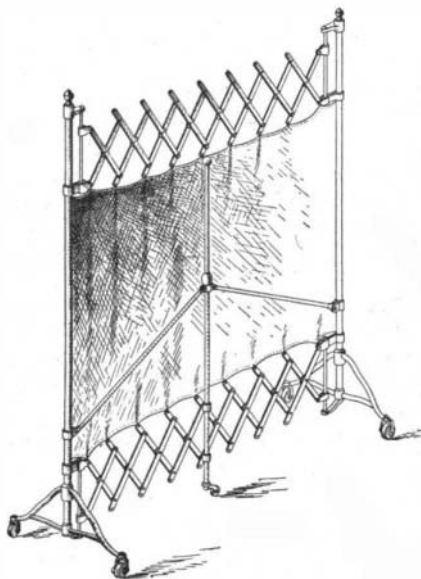


A DUSTPAN AND SPRINKLER.

sprinkler. The cover is provided with a hollow finger-grip which serves a double function—as a means for raising the cover, and as a handle for holding the device when it is used as a sprinkler. The dustpan has a transverse partition by which it is divided into two compartments, the one serving as a water receptacle, and the other as a dust receptacle. When employed as a dustpan, the rear portion is held raised by means of castors.

**FOLDABLE SCREEN.**—A screen that can be folded and

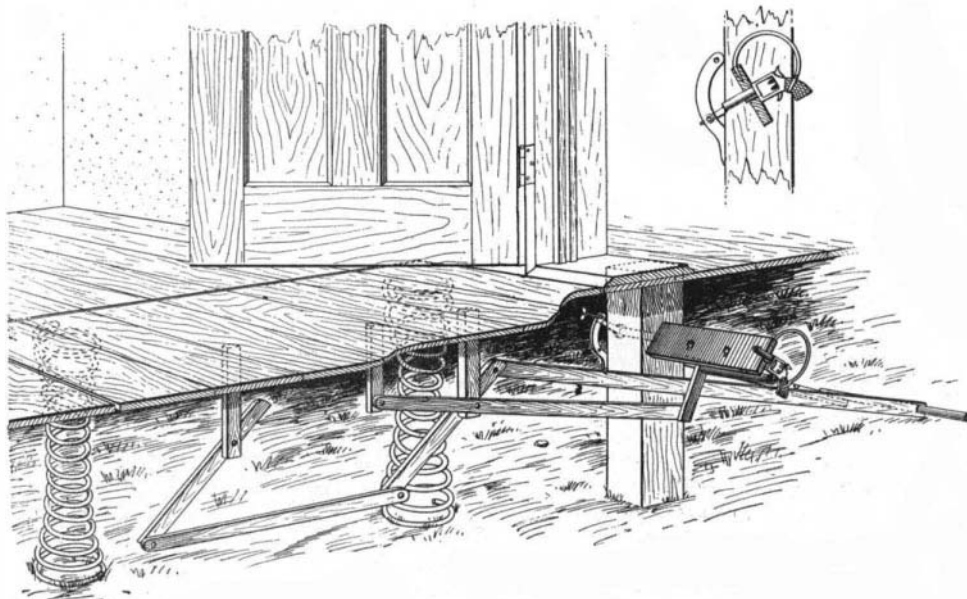
packed a way and that can be varied in length is the invention of a New Yorker, Mr. Albert Taubert. The end uprights comprising the screen-frame are connected by upper and lower lazy-tongs. A rod is secured to the lower lazy-tongs, and is provided with a slide connected by links with the uprights. When the slide is moved up, the



AN EXPANSIBLE SCREEN.

sides of the screen-frame are drawn together; and when the slide is moved down, the screen-frame is extended.

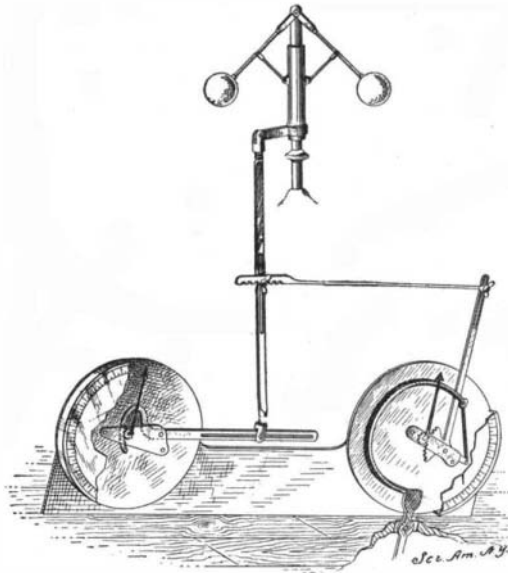
**BURGLAR-ALARM.**—Most inventors of burglar-alarms are satisfied if they can merely give a signal to indicate that a door or window has been opened. A Kentucky inventor evidently thinks this is too lenient a method, for he has devised a means for moving the floor beneath the burglar and firing a pistol at him. As our picture shows, part of the floor is supported on springs and is provided with vertically foldable supporting standards, which in one position hold the floor in inoperative position. The movable standards are connected with an adjustable rock-bar carrying the pistol. The burglar who enters the house will find the floor mysteriously giving away beneath his feet, and will be rather disagreeably startled to have the pistol discharged at him. The inventor will probably be charitable enough to load the pistol with blank car-



AUTOMATIC BURGLAR-ALARM AND MAN-TRAP.

tridges. The small detailed view shows that the pistol can be thrown down out of operative position.

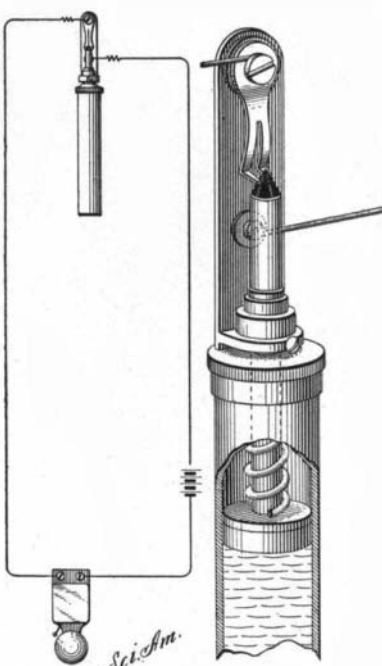
**AUTOMATIC ENGINE HORSE POWER INDICATOR.**—It is probably a new idea to provide an indicator calibrated for a steam engine of known approximate boiler pressure. Edmund Fortier, of Kankakee, Ill., is the inventor of the indicator. The apparatus comprises a



HORSE POWER INDICATOR.

power-indicator dial over which a hand plays operated by gearing carried on a slotted rod which receives a vertical operating rod arranged to reciprocate upon the governor shaft by means of a sleeve. The operating rod likewise controls a pressure-indicator through the medium of a bell-crank lever. A segment gear on the lever meshes with a pinion on the pressure-gage pointer; and an extension on the lever connects it with an expansible Bourdon tube confined within the gage-casing. The indicator is operated to correspond with the fluctuations of the governor; and the leverage between the connecting devices intermediate of the tube is automatically adjusted through the medium of the pressure-gage and its connection therewith. The power delivered by the engine to either side of the normal load is indicated.

**THERMOSTATIC FIRE ALARM.**—A new form of thermo-



AUTOMATIC FIRE-ALARM.

static fire alarm has a stem provided with an insulating tapering point and is connected with a conducting bracket. The bracket is wired with one end of a circuit including alarm and conducting wires. A binding-post connected with and insulated from the bracket holds the other end of the conducting wire. A spring-tongue is secured by the binding-post to the bracket and is insulated therefrom, the tongue having its free end normally maintained by its spring action out of contact with the bracket. The tongue is notched to receive the tapering point of the stem. When the thermostat reaches a certain temperature, the stem will be forced up, and its tapering insulated end, coming into contact with the downwardly-projecting tongue, will force the tongue into contact with the bracket, thus closing the circuit and sounding the alarm.

Some time ago the English Automobile Club offered a prize of £100 for the best method of preventing the dust raised by motor cars causing annoyance to other users of the

roads, says The Engineer. As none of the devices submitted in the prescribed time were satisfactory, the period for the submission of inventions has been extended by the club.

## Brief Notes Concerning Patents.

George Westinghouse has applied in the Orange Free State for patents covering his gas manufacturing process. The application will be formally acted upon during February.

David A. Nicoll, of 305 North Street, Baltimore, Md., claims to have discovered the means of making glass soluble. By means of a chemical action he reduces it to a fluid state, when it can be applied with a brush like paint.

Telephones on the Overland Express permit of communication between the cars of the train while in transit, and up to the time that the train is ready to leave the station the passengers have the advantage of connection with the city service.

A patent was recently issued to Lewis B. Clark, track foreman at the Belle Dock Yards of the Consolidated road at New Haven, Conn. He is a civil engineer and has made an instrument for alining and gaging tracks by an ingenious arrangement of mirrors.

M. Goubet, the French submarine boat inventor, is now at work on the designs of a boat to carry two hundred persons, to be used in the Channel service across the straits of Dover. It is expected to make this trip in a half hour without the least inconvenience to the passengers, while with the present type of craft the trip is much longer and almost invariably rough.

Christian Lehman, quite widely known as an inventor of loom machinery and an expert machinist, died on December 19 at his home, No. 1216 Mascher Street, in the very heart of the mill district of Philadelphia. He was born in Baden, Germany, in 1828, and came to this country when a young man, embarking in the knitting machine business, and he was responsible for many great improvements in this line.

The first public use of the Nernst lamp in this country is to be seen at Hartford, Conn., where the Hartford Electric Lighting Company has installed a number of the lamps in the stores of that city. These lamps were on exhibition at the Pan-American Exposition and have been in regular service at the works at East Pittsburg, but other than this the Hartford experiment is their bow to the world.

A new way of charging for telephone service may come into use if the invention recently patented by Thomas Baret, of Sydney, N. S. W., meets with general approval. He proposes to charge for the total length of all the conversations and not for the total number. His meter consists of a clockwork device which is at rest except at such time as a conversation is being held, and then it is at work registering the actual time consumed by the talk. The up-and-down movement of the switch lever throws the clock into action, shuts it off and keeps it wound.

The interference proceedings instituted by the Patent Office some time ago between Charles E. Tripler and Carl Linde to determine, as between these two inventors, who is entitled to priority of invention of the commercial process of liquefying air, have at last been decided in favor of Carl Linde. Masses of testimony were furnished by both sides. Articles published in the SCIENTIFIC AMERICAN and SCIENTIFIC AMERICAN SUPPLEMENT figured prominently in the evidence against Tripler. It now remains to be seen whether Linde can maintain his claims against other contestants.

An electrical device, it is said, will supplant the "claque" which is maintained in many French theaters to lead the applause. From Europe comes the rather doubtful story that a machine which counterfeits the clapping of hands has been invented by Herr Zimmerman. It consists of inflated leather bags which are scattered around the house in pairs, being hidden in convenient places. These are brought in rapid contact by electrical means, and the sound made is so natural that the difference cannot be detected. The apparatus is controlled from behind the stage. The story, even if not above suspicion, is at least interesting.

Commander Richardson Clover, the naval attaché of the United States Embassy at London, has just returned to this country for a brief sojourn and has brought with him, for the inspection of the Naval Department officials, an invention for controlling torpedoes by wireless telegraphy. This is the invention of an Englishman named Garden, and while the Commander would not go into particulars about the system, he said he thought it had several features not to be found in any of the other methods accomplishing the same purpose. It is said to be possible, not only to steer the torpedo by the means of the etheric waves, but to stop, start and discharge it with perfect accuracy.