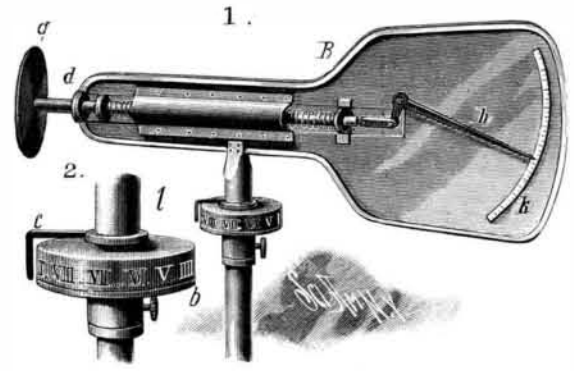
IMPROVED ANEMOMETER.

The engraving shows a simple and inexpensive device for determining with approximate accuracy the velocity of the wind at the moment of observation, and particularly adapted for the use of riflemen at target-practice, which was recently patented by Mr. Eaton A. Edwards, of Fort Meade, Dakota. The post or standard has a folding tripod base for firmly supporting it. The vane, B, has a thimble, *l*, stepped on top of the post to allow free rotation, and the thimble has a pointer, *c*, moving in connection with a numbered dial, *b*, for indicating the direction of the wind with reference to the target; in other words, the apparatus being set so that the vane points to the target when the pointer is at

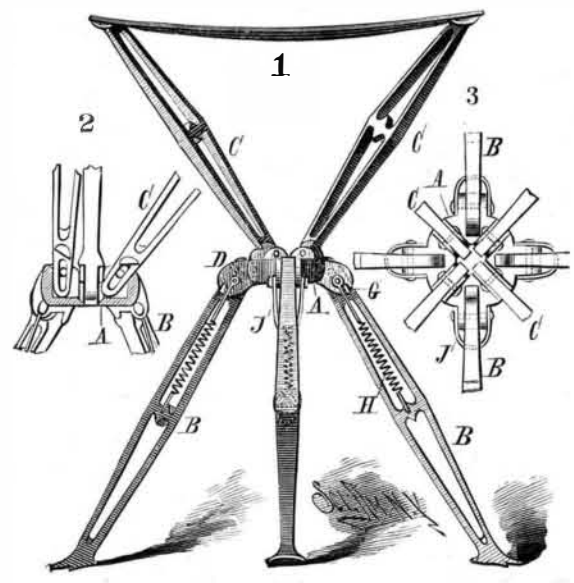


EDWARDS' IMPROVED ANEMOMETER.

zero, the position at right or left will indicate the angle at which the wind blows across the line. Sliding in a slot in the vane is the spindle, *d*, around which is a spiral spring that takes behind a collar on the spindle, and on the end of the spindle is a disk, *g*, the area of which is a convenient part of a square foot. On the large end of the vane is pivoted a pointer, *h*, connected by a link with the end of the spindle, and a properly graduated fixed quadrant, *k*. The pressure of the wind on the disk causes an inward movement of the spindle, and that in turn swings the pointer so that it indicates on the scale the velocity of the wind calculated from the pressure in pounds per square foot, at any moment.

FOLDING CHAIR.

A folding chair, invented by Mr. G. E. Vandenburgh, Box 276, Stillwater, N. Y., is simple in construction, strong, and durable, can be folded very compactly, and can be erected or folded easily and rapidly. It consists of a center piece, A, four hinged legs, B, and four seat supports, C. The center piece is provided with four pairs of jaws, D, projecting from the centers of its sides, and in each pair the upper end of a leg is pivoted through a longitudinal slot. In the bottom and outer edges of the jaws are notches for receiving studs projecting from the sides of the ends of the legs. Spiral springs, H, secured to the middle cross pieces of the legs are connected with bails, J, secured on the pivots, and pull the legs upward, thus drawing the studs into the notches and thereby locking the legs in place. On the lower ends of the legs are foot plates having transverse shoulders to prevent them from slipping on the floor. On the upper surface of the center piece are four pairs of jaws arranged between the jaws, D, and in each of which



VANDENBURGH'S FOLDING CHAIR.

the lower end of a seat support, C, is pivoted through a longitudinal slot. On each side of the end of each bar is a stop lug; these rest on the top edges of the jaws when the bars are at the required inclination, and lock them in place. The seat, made of canvas or other suitable material, is riveted to the upper ends of the seat bars, and is strengthened by two diagonal bands. Fig. 1 shows the chair erected, Fig. 2 is a cross section through the middle part, and Fig. 3 is a plan view. To fold the chair the bars, C, are swung toward each other, and the legs are pulled downward to draw the lugs out of the notches, and are then swung upward until they lie parallel with and next to the bars, C. When folded in this manner, the chair can be placed in a casing to facilitate carrying it.

Refrigerator Cars and Perishable Freights.

Railway tonnage has reached its present magnitude in this country by a rapidity of development little dreamed of in the first stages of its growth. It has kept on increasing with scarcely any check during prolonged periods of general business depression, sustained as it is by the ever-increasing products of a vast territory and the industrial activities of a population increasing at the rate of a million and a half a year. The carrying capacity of the roads has grown with the demands made upon it, until there would seem to be no assignable limit to either. Articles are transported every year of a kind that were never transported before; and if the cars already in use are not adapted to the new traffic, special cars are soon devised and built that are suitable for the purpose.

An illustration of this is afforded in the remarkable growth of the transportation of perishable commodities within the last few years by means of refrigerator cars. Every year adds to the volume of this traffic, and although the business is attended with some drawbacks in the way of losses from delays in transit, it is bound to keep on increasing to an indefinite extent. The shipment of dressed meats from Chicago and other points further west to the Eastern seaboard has already grown from small beginnings to a heavy traffic, while the semi-tropical fruit products of Cuba, Florida, Mexico, and Southern California are finding their way to Northern markets during the warm season in larger quantities every year in refrigerator cars so well adapted to the purpose as to make the losses from the perishable nature of the freight comparatively light. The extent to which this branch of traffic will be developed in future is at present a matter of conjecture, but it is likely to be large.

In regard to dressed meats, everything depends upon its condition and price at points of destination as compared with shipments on the hoof. The abuses practiced in live stock transportation from the Far West, under the spur of competition, are necessarily attended with serious shrinkage in weight, to say nothing of the alleged deterioration in the quality of the meat, especially beeves, upon reaching the Eastern stock yards. Only a few years ago the dressed beef business between Chicago and New York was in need of friends to sustain it against the stock yard interests; but since then it has been steadily gaining ground, and it is now said the number of cattle slaughtered last year in Chicago by the principal dressed beef shippers was 694,026, which was an increase of twenty per cent over that of the previous year. To this must be added 128,000 sheep shipped in carcass. The number of dressed hogs is not stated.

This would seem to support the claims of the shippers that dressed meats, and especially beef, are received at destination in much better condition for consumption than when shipped alive. It is also stated that the cold storage business is increasing at a corresponding rate, buildings for this purpose having been erected in upward of one hundred Eastern towns, exclusive of the chief cities, for receiving these shipments.—*The National Car-Builder.*

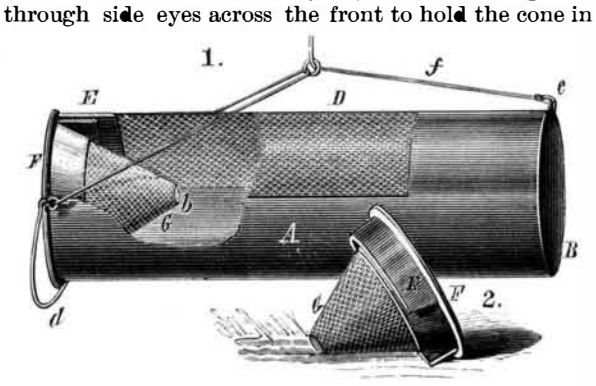
AN AUTOMATIC DISINFECTER.

In the accompanying engraving is shown a simple contrivance, by means of which all the water used in flushing water closets can, before it passes through the closet, be impregnated with a powerful disinfectant. The device is inserted in the pipe leading from the tank or from the ordinary service pipes, and consists of a small box, closed airtight, and divided into two compartments. The sides of each of the chambers, A F, are perforated to permit the water to flow through; the perforations begin a short distance from the bottom, thus forming in each chamber a shallow tank, B, which is constantly filled with water. Through the airtight screw cap, C, a disinfectant is introduced into the chamber, A, and rests in the tank at the bottom. Water from the reservoir enters the chamber, F through the pipe, D, passes to the chamber, A, and thence through the holes to the pipe, E, and to the closet. The water in the shallow tank, being in constant contact with the disinfectant. becomes strongly impregnated, and at each flushing is displaced by the fresh water and sent through the closet. The small holes in the sides of the chamber, A, prevent the escape of small pieces of disinfectant, and by means of the dividing partition the disinfectant is not subjected to the wash of a rapid current of water. As the water flows into the box the air in the top is compressed, thus aiding the discharge through the pipe, E, after the closing of the valve. In placing this device in position, no change is necessary either in the closet or connections. It is also applicable to wash basins and other receptacles which would be rendered more safe by the passage of a disinfectant through them.

Additional particulars can be obtained from the Automatic Disinfecter Company, of 852 Broadway, New York city.

FISH TRAP AND BUCKET.

The device herewith illustrated is a combined minnow trap and bait holding receptacle. The cylinder, A, is closed at one end by the head, B, and at one side is cut away, the opening thus formed being covered by the screen, D. Fitting within the open end of the cylinder is a flanged ring, E, within which is an inclined ring terminating in a screen cone, G, having an opening, *b*, in its apex. A handle, *d*, is attached to loops secured to the side of the cylinder. To use the device as a minnow trap, the bait is placed in the cylinder and the cap, F, put on. It can then be suspended in a horizontal position in the water by means of the cords, one of which is attached to the eye, *e*, and the other passes through side eyes across the front to hold the cone in



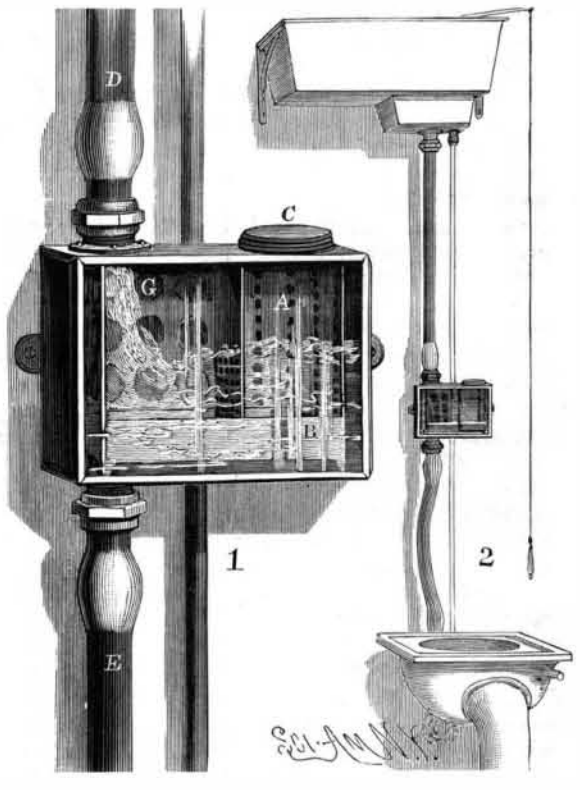
McKINNEY'S FISH TRAP AND BUCKET.

position. The minnows, attracted by the bait, find their way through the opening, *b*, to the interior, and are prevented from passing out by the peculiar shape of the section, G. When the device is used as a bucket, it is carried in a vertical position by means of the bail, the water in the cylinder below the screen, D, being sufficient to keep the bait alive.

This invention has been patented by Mr. George H. McKinney, of Silver Creek, Ky.

The Caspian Petroleum Wells.

The news from Baku shows that the production of naphtha goes on increasing. The Caspian Company has just made a boring 660 feet deep, into which a 6½ inch pipe has been sunk, and the flow of naphtha equals 1,600 tons per day, or from 400,000 to 500,000 gallons. M. Debour, close to the above company, has a flow of 340 tons a day, while the Baku Company, with its 12 inch bore, is able to regulate the quantity by simply opening and shutting the valve on the top of the bore, and can take up to 1,500,000 gallons a day. Steamers from Batoum to Marseilles will now run twice a month, and the export trade from Batoum is rapidly extending. During 1884, from Batoum to Triest, 18,000 casks of distillate (naphtha once distilled) were exported, and to Fiume 13,600 casks, while to Genoa 20,000 boxes of kerosene were sent,



AN AUTOMATIC DISINFECTER.

and to Venice 71,000 boxes. Evidently the whole of the Mediterranean trade will come into the hands of the Russians.

A Large Locomotive.

There is being built at the Tabize works, says *Le Genie Civil*, a monster of a locomotive which will figure at the Anvers Exposition. This engine will be the heaviest and largest that has ever been constructed since the establishment of railroads. It will have ten wheels of more than a yard in diameter, and will weigh, in running order, 165,000 pounds.