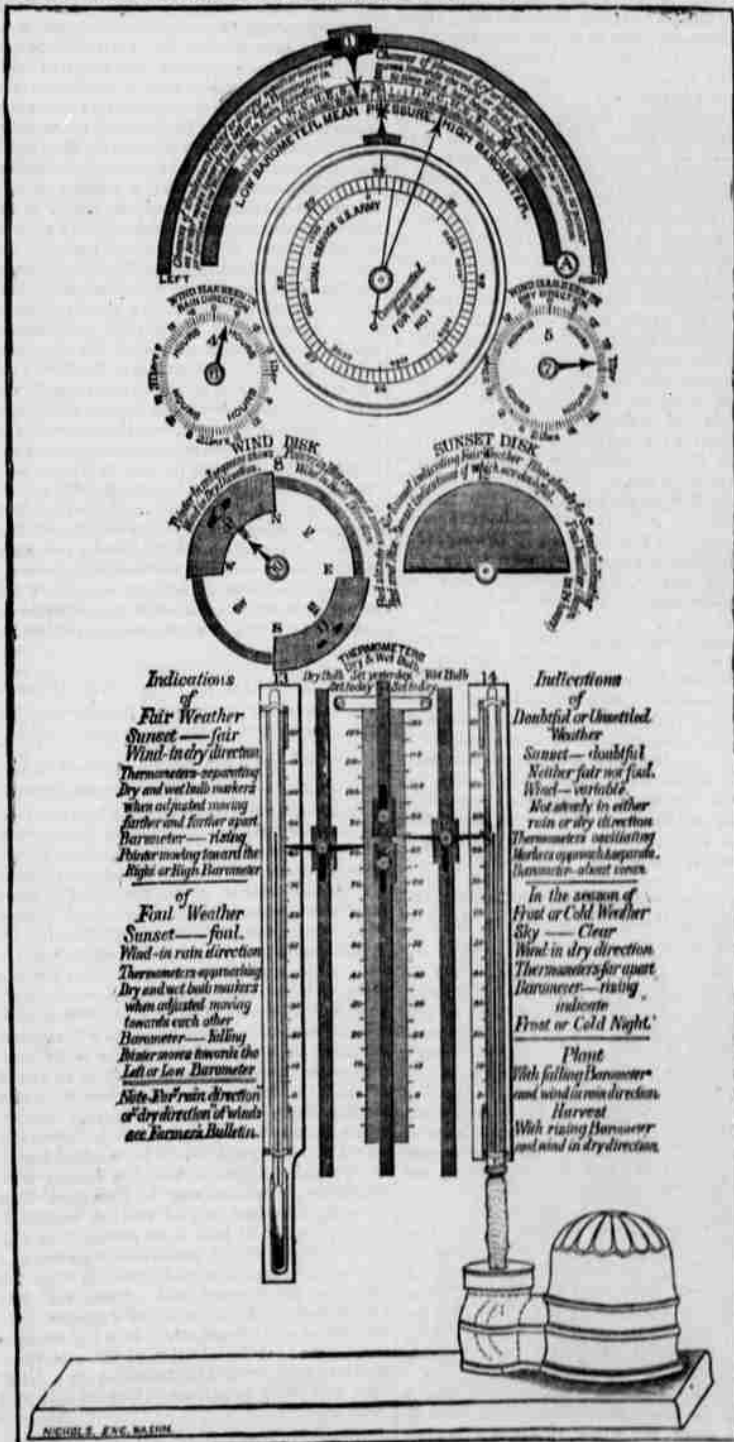


until the outside point is exactly level with the top of the mercury in the thermometers—as near to it as practicable. Examine next the wet bulb thermometer, and move the wet bulb pointer (No. 16) on the slide until the outside pointer is exactly level with the top of the mercury in the wet bulb thermometer, or as near to it as practicable, then turn to the dry

scale" the number of degrees between the keepers.

When the thermometers are examined and set again, following the same plan, it will be easily seen whether the "keepers" are, when set, farther apart than they were at the previous setting, or whether they are, when set, nearer together than at the previous setting.



A WEATHER INDICATOR.

and wet bulb scale, and on the "central brass slide bar" (No. 19) move one of the keepers until it touches as nearly as possible—is on an exact level with the inside pointer of the "dry bulb pointer," then move the other keeper until it touches, as nearly as practicable—is on an exact level with the inside pointer of the "wet bulb pointer." The thermometers are now set and the difference between their readings can be known by counting on the "dry and wet bulb

If they are further apart, the thermometers are said to be "separating"; if they are nearer together, the thermometers are said to be "approaching." Other things being equal, the thermometers show, when they are "separating," that the air is becoming more dry, one sign of approaching fair weather. The thermometers show, when they are "approaching," that the air is becoming more moist or damp, one sign of approaching rain.

The weather case is not intended to be used independently of the official weather reports. It is to be used always in connection with them. The weather case is for the purpose of supplementing the official reports by showing the local instrumental indications and giving other information. It is intended especially for use at farmers' postoffices and places reached with difficulty by the printed reports. It will supplement often whatever knowledge there be of local signs, with the indications of the instrument. Its careful use, taken either with the furnished reports or even without them (if they chance to fail) will often enable the character of the coming weather on the coming day to be so judged as to determine what kind of work or undertaking it is wise to plan for or to omit. The case gives the local instrumental indications, and will frequently aid in making fair forecasts for the next day.

MOTIVE POWERS OF THE FUTURE.—A suggestive paper was recently read before the Liverpool Engineering Society on "The Utilization of the Tides," by Mr. Oates, of Bradford. Mr. Oates was of opinion that although the coal supply of England would last for a long time to come, yet that ultimately the power of the tides would outrival all other sources of mechanical power. After pointing out that the ways of utilizing the tides were innumerable, and describing the construction of the tidal dam with suitable converters of the power, such as turbines in openings of the dam, working air-compressing or magneto-electric machines, he stated that the necessity for large conservators for storing the power between the tides would be the greatest difficulty in utilizing their power. A brief description of how this could be done and the power rendered constant was given. The means of conveying the power to a distance was then considered, air and water pressure and electricity being suggested. With regard to the latter, Mr. Oates believed that the "age of steam" had reached its zenith, and that the "age of electricity" had dawned; but should there be difficulty in conveying the power to a distance, he suggested that manufacturing towns might be built adjacent to suitable sites for utilizing the tides.

TO KEEP WAGON TIRES ON THE WHEEL.—A practical mechanic suggests a method of so putting tires on wagons that they will not get loose and require resetting. He says he ironed a wagon some years ago for his own use, and, before putting on the tires, he filled the felloes with linseed oil, and the tires have worn out and were never loose. This method is as follows: He used a long cast-iron heater made for the purpose; the oil is brought to a boiling heat, the wheel is placed on a stick, so as to hang in the oil, each felloe an hour. The timber should be dry, as green timber will not take oil. Care should be taken that the oil is not made hotter than a boiling heat, or the timber will be burned. Timber filled with oil is not susceptible of injury by water, and is rendered much more durable by this process.

AN AMERICAN SCIENTIST HONORED.—At Berlin recently the prizes to exhibitors at the International Fishery exhibition were distributed. The first honorary prize was awarded to Prof. Baird, of the Smithsonian Institute, United States. He will receive a gold medal and an address. At the distribution of the prizes Prof. Baird, of the Smithsonian Institute, spoke, eulogizing Emperor William, who, he said, was to be found in every place where there is an opportunity for promoting goodness and truth.

HONORING WOMAN.—The first woman who has had entire charge of the female department of Pennsylvania's new hospital for the insane, Dr. Alice Bennett, wore a cap and gown at the recent commencement of the University of Pennsylvania, held in the city of Philadelphia, and received the degree of Doctor of Philosophy.