A. G. McADIE.

METHOD FOR ASSISTING FORECASTERS IN THE PREPARATION OF WEATHER MAPS, &c.

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914,500. Patented Mar. 9, 1909.

Fig. 1.

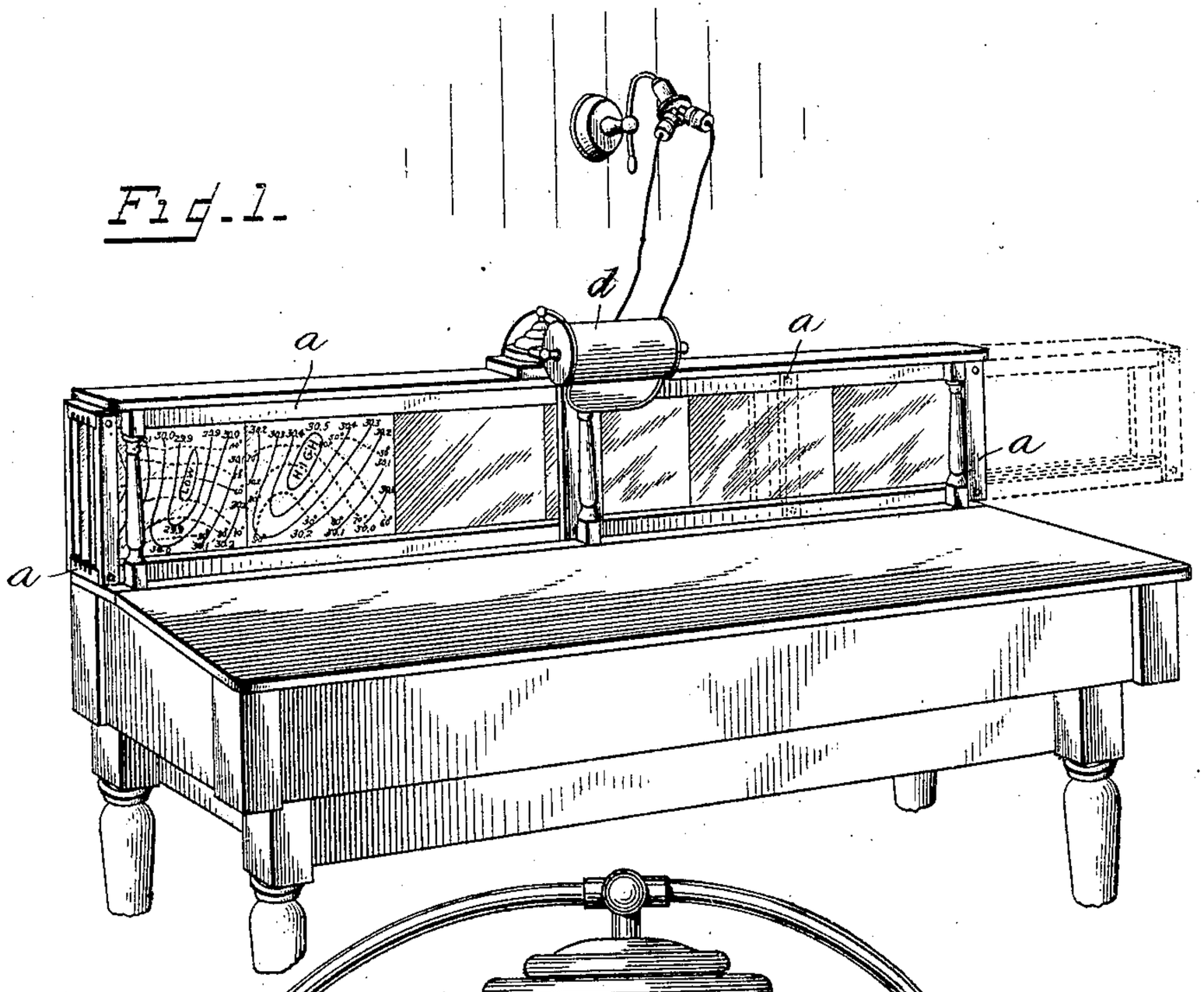

Fig. 2.

WITNESSES-

G. H. Williamson

O. D. Stewart

INVENTOR-

Alexander G. McAdie

UNITED STATES PATENT OFFICE.

ALEXANDER G. McADIE, OF SAN FRANCISCO, CALIFORNIA.

METHOD FOR ASSISTING FORECASTERS IN THE PREPARATION OF WEATHER-MAPS, &c.

No. 914,500. Specification of Letters Patent. Patented March 9, 1909.

Application filed February 6, 1908. Serial No. 414,621.

(DEDICATED TO THE PUBLIC.)

To all whom it may concern:

Be it known that I, ALEXANDER G. McADIE, residing at San Francisco, in the county of San Francisco and State of California, whose post-office address is Local Office, Weather Bureau, San Francisco, in said county and State, have invented a new and useful Method for Assisting Forecasters in the Preparation of Weather Maps, Charts, Bulletins, &c.

This application is made under the act of March 3, 1883, Chapter 143 (22 Stat., 625). and the invention herein described and claimed may be used by the Government of the United States or any of its officers or employees in the prosecution of work for the Government, or by any person in the United States, without payment to me of any royalty thereon.

The object of the invention is to provide a method for assisting the forecasters in the preparation of weather bulletins.

Generally stated, it consists in the use of a series of maps or weather charts, any one of which may be moved in front of or progressively past another map or chart of similar character of different date. It affords a means of ready comparison of the daily maps with normals or maps typical of certain weather phenomena.

The nature, characteristic features and scope of the invention will be more readily understood from the following description taken in connection with the accompanying drawing forming a part hereof, within—

Figure 1 shows a perspective view of means for practicing the invention, and Fig. 2 shows an enlarged transverse section of the tray or holder.

In the practice of the invention a freshly printed daily weather map is placed face downward upon a plate of extra fine window glass, preferably not thicker than one-sixteenth of an inch, ten inches long and seven inches wide. The glass surface should be clean and freshly washed with benzin. The sheet is held firmly to prevent slipping and blurring. The rubber tip of an ordinary lead pencil is rubbed evenly and firmly over the back of the paper. By rubbing along the lines which it is desired to transfer a sharp, clean and good transfer of the printers' ink to the glass plate results. Care being taken to register properly the plate, viewed from the reverse side is a fac-simile of the printer's sheet and is a glass weather map. The whole operation need not exceed five minutes, including the washing of the plate in benzin. Extra matter may be stamped or written with a pen on front side of glass. A suitable tray or holder, such as *a*, is provided for each glass and it is to be understood that a number of such glasses up to ten or more are relatively disposed for comparative readings, the trays or holders fitting nicely into the rack usually found on a forecast desk or high office desk.

At the rear of the tray a sheeting of tracing linen *b* is tacked. The purpose of this is to afford a proper background for uniform reflection and diffusion of light. One or more electric lamps *c* give all needed illumination. The tracing linen may bear data, ready reference tables of storm velocities and mean paths, typical charts, etc.

Some of the uses of the system are as follows: Study of successive daily maps; and the relative movements of "highs" and "lows," "counter-spins" and "spins" across the United States. Extension of area of mapping. The passage of "highs" and "lows" can be followed for days after they have passed across the Atlantic coast line. Abnormal conditions for a week, a month or a season can be charted and a composite made; so that relation of the current condition can be studied in connection with the conditions existing previously. Conditions in various levels can be superimposed for purposes of study. Thus a composite is easily made by arranging maps in front of each other. The back-plate showing surface circulation, the middle plate the circulation at three thousand feet, and the front plate the circulation at ten thousand feet. This system is of further value in studying the general eastward drift of the air in temperate latitudes. Depressions may be studied as indices of the movement of the main air stream in which they drift. Stagnant periods, or times of slow eastward motion will be indicated in part by slow movement of "highs" and "lows." Highs and lows do not necessarily represent the true motion of the stream in which they move, any more than eddies in a river truly gage the flow of the river, but it is thought that some advance in forecasting may result by using this map tray device, because it permits of a relative charting of the entire pro-

cession of highs and lows and so to a degree the general behavior of the main surface air current in temperate latitudes.

Having thus described the nature and objects of the invention, I claim—

The method of assisting weather forecasters in the comparison of daily weather maps, which consists in illuminating a transparent map of a certain date from the rear, and moving progressively in front of said map another transparent map of a generally similar character, but of a different date.

In testimony whereof I affix my signature in the presence of two subscribing witnesses.

ALEXANDER G. McADIE.

Witnesses:
G. H. WILLSON,
O. D. STEWART.