

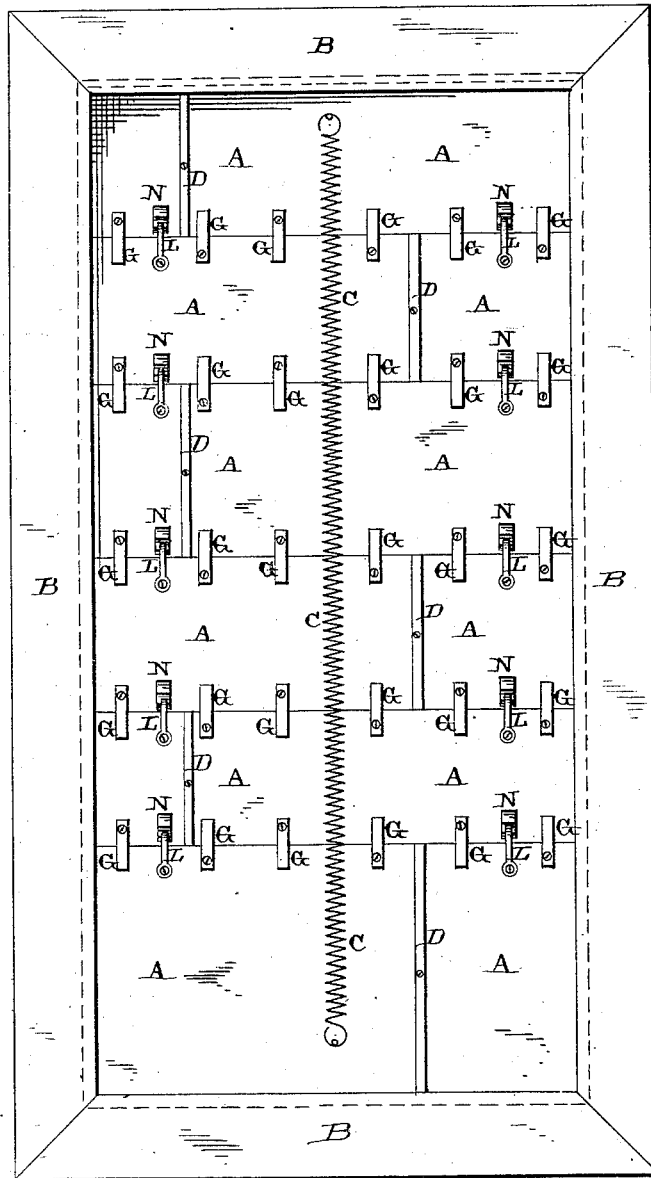
(No Model.)

E. H. GORHAM.  
SIGN AND BLACKBOARD.

No. 306,075.

Patented Oct. 7, 1884.

*Fig. 1.*



—Witnesses.— *Fig. 2.*

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# UNITED STATES PATENT OFFICE.

EDWIN H. GORHAM, OF PHILADELPHIA, PENNSYLVANIA.

## SIGN AND BLACK BOARD.

SPECIFICATION forming part of Letters Patent No. 306,075, dated October 7, 1884.

Application filed January 12, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN H. GORHAM, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Sign and Black Boards, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improvement in sign and black boards; and it consists, first, in the combination of the grooved frame, a number of boards placed in this frame, and a spring which has its ends fastened to the two end boards for the purpose of keeping the boards closely pressed together; second, in the combination of the boards and a spiral spring, for the purpose of drawing them closely together at all times, with spring-pawls and suitable ratchets, as will be more fully described hereinafter.

The object of my invention is to construct a sign-board so that it will not tear itself to pieces by its expansion and contraction, as is always the case where the boards are exposed to all kinds of weather.

Figure 1 represents a side elevation of a sign-board embodying my invention taken from the rear side. Fig. 2 is a detail view of the pawl and ratchet.

A represents a number of short boards, which are secured together for the purpose of forming a sign-board. These boards A have their edges inserted in suitable grooves made in the inner edges of the side and end pieces, B, which form a frame for the sign-board proper. The grooves in these pieces are sufficiently deep to allow these boards A to move freely in expanding and contracting, and dispense with all need of nails or screws in attaching the ends of the boards to the casing or frame in the usual manner. Where the ends of the boards are fastened to the outer frame or molding, or screwed to the long battens in the usual manner by nails or screws, when the boards expand and contract, the nails or screws cause the boards to split and open. This trouble I entirely overcome by inclosing all of the boards in an outer grooved frame in

which the boards have enough room to expand and contract. In order to draw these boards together at their edges, regardless of all shrinkage, one or more spiral springs, C, are secured to the outer or end boards, as shown, so as to exert their pressure in drawing the boards together. As all of these boards are free to move in the outer inclosing-frame, it will readily be seen that as each board contracts the other boards are drawn tightly against it. In order to catch these when thus drawn together by the spring C, a suitable number of spring-pawls, L, and ratchets N are used. The pawls L are made from strong spring wire or rod, and have a catch formed on one end, in order to engage with the ratchets, which are placed on the next adjoining boards. As the boards shrink and are drawn together by the spring C the pawls automatically move over the teeth of the ratchets, and by engaging with them prevent the boards from again separating.

In order to prevent the boards from warping, one or more battens or braces, D, of any suitable material, will be applied tightly to each board at any suitable point, and these battens will be held by screws. These battens, bearing against the boards near their centers, brace them at these points, so as to prevent warping.

In order to counteract any tendency to warp at the edges, additional battens and braces, G, are applied at suitable points, and which battens or braces extend across the edges of the adjoining boards, so as to brace them at these points. These battens are fastened at one end, but not at the other, so as to prevent the boards from being split or opened when the boards expand. The boards, being braced across their centers and across their edges by separate battens, can warp to a very slight extent under any circumstances.

By means of the construction above described sign and black boards which are exposed to weather of all kinds last much longer and are much more serviceable than those of the ordinary construction. This construction is also specially adapted for securing boards together in floors and ceilings, and in

other places where it is necessary to hold the boards together without warping, splitting, or cracking.

Having thus described my invention, I  
5 claim—

1. In a sign and black board, the combination, with the grooved frame, of a series of boards which are placed in the frame, and a spiral spring which has its ends fastened to  
10 the two end boards of the series for the purpose of pressing the boards closely together, substantially as shown.

2. In a sign and black board, the combination of the grooved frame, a series of boards placed therein, a spring which has its two  
15 ends fastened to the end boards, and the pawls and ratchets L N, substantially as described.

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

EDWIN H. GORHAM.

Witnesses:

ROBT. MCCURDY,  
F. A. LEHMANN.