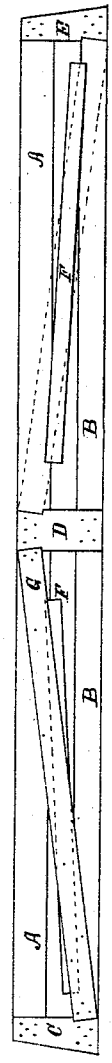
I. C. MARTIN.

Floor-Beams.

No. 155,960. Patented Oct. 13, 1874.



Witnesses;
J. H. Campbell
J. Edgerton

Inventor;
Isaac C. Martin
by Humphrey & Stewart
his attorneys

UNITED STATES PATENT OFFICE.

ISAAC C. MARTIN, OF AKRON, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO DAVID G. WILCOX, OF SAME PLACE.

IMPROVEMENT IN FLOOR-BEAMS.

Specification forming part of Letters Patent No. **155,960**, dated October 13, 1874; application filed September 10, 1874.

To all whom it may concern:

Be it known that I, ISAAC C. MARTIN, of Akron, Summit county, and State of Ohio, have invented an Improved Floor-Joist, of which the following is a specification:

The object of my invention is to construct a strong floor-joist for large rooms, as in public halls, school-rooms, and public buildings, and wherever a long span is required, which shall be light and at the same time not liable to vibrate, spring, sag, or break.

I accomplish this by means of a combination of an upper and lower joist, placed edgewise toward each other, separated by a small space, and fastened together at the ends, and at one or more intermediate points, by uprights, with inside braces of the thickness of the joists, notched into the lower edge of the upper joist near the center, and the upper edge of the lower joist near the ends, and outside braces extending on each side from the top of the middle uprights to the foot of the end uprights.

My invention is illustrated by the drawing hereto annexed, which represents a joist for twenty-feet space, and in which the right front outside brace is removed to show the arrangement of the inside brace.

A is the upper, and B the lower, joist, the upper being sprung slightly "crowning," held in place by uprights C D E on each side securely nailed. F F are the inside braces, carefully fitted into notches in the upper and lower joists, and held in place by the outside braces G G, which latter fit corresponding notches in the uprights, and are securely nailed at all points.

From the various sizes of joists needed no exact rule can be given for the proportions of the several parts.

I have adopted in a joist for a twenty-foot span the following proportions, from which any skilled mechanic can construct a joist of any desired span or strength: Upper joist, eight by two inches; lower, two by six inches, and placed six inches apart; inside braces, two by four inches; outside braces, one and one-fourth by eight inches; uprights, one and one-fourth by nine inches.

I claim as my invention—

The combination, with the upper and lower joists or beams A and B, supported apart by the uprights C, D, and E, of the braces F F, arranged between the joists and the braces G, arranged on the outside thereof, as herein shown and described, for the object specified.

ISAAC C. MARTIN.

Witnesses:

EDWARD ORIATT,

S. EDGERTON.