(No Model.)

W. H. PAIGE.

CAR ROOFING.

No. 287,459. Patented Oct. 30, 1883.

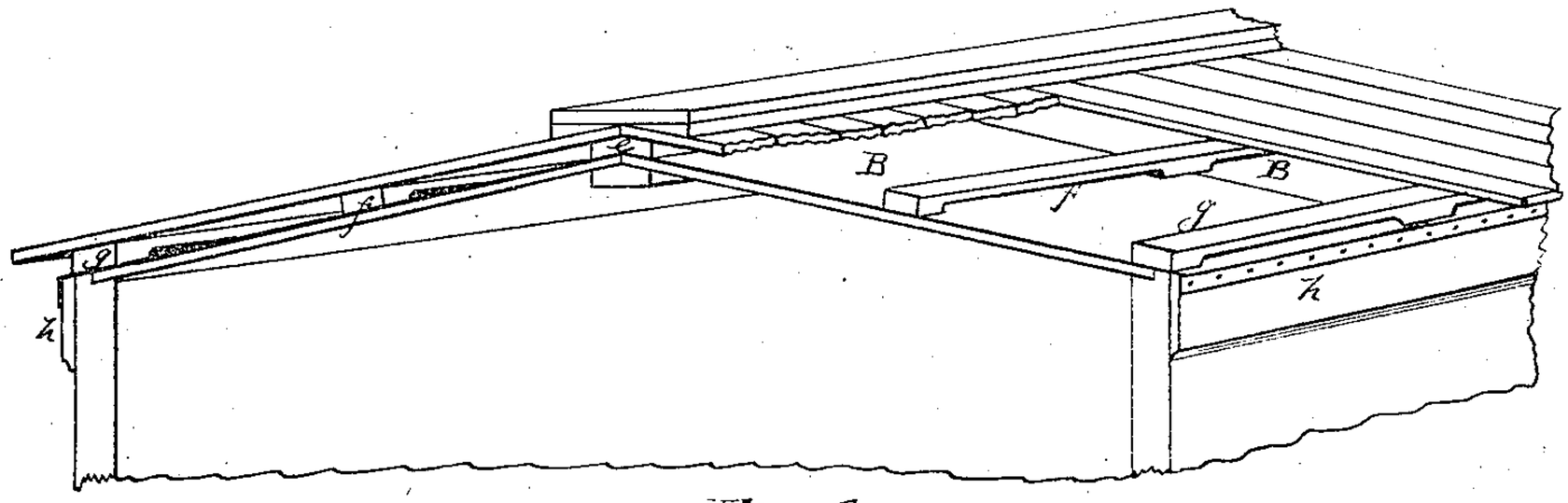

Fig. 1.

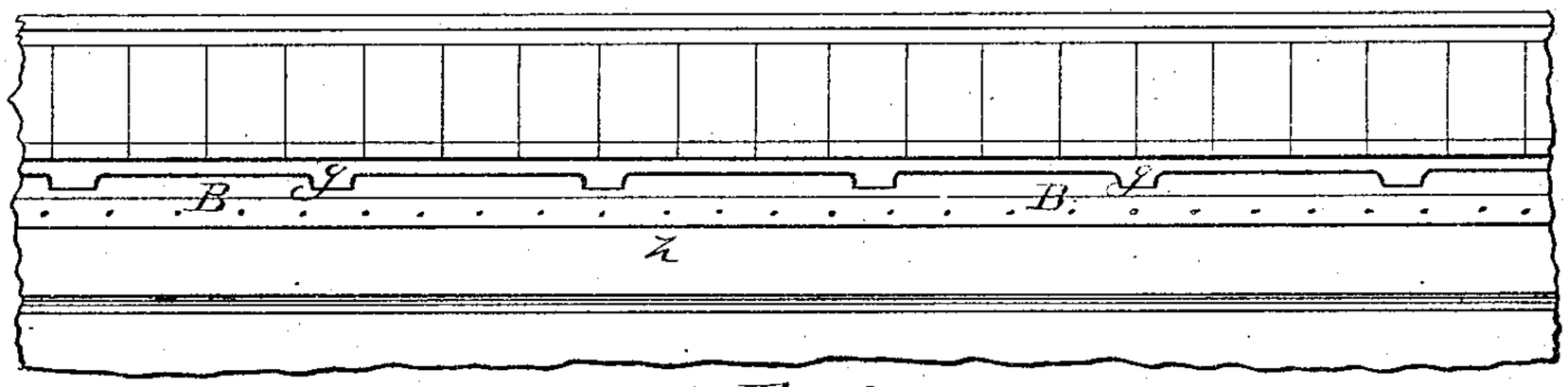

Fig. 2.

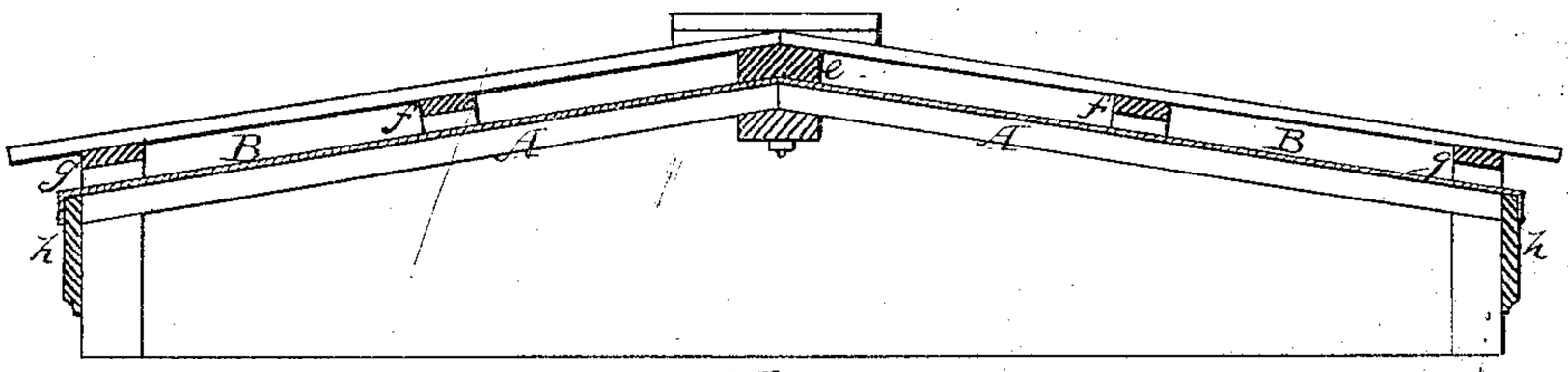

Fig. 3.

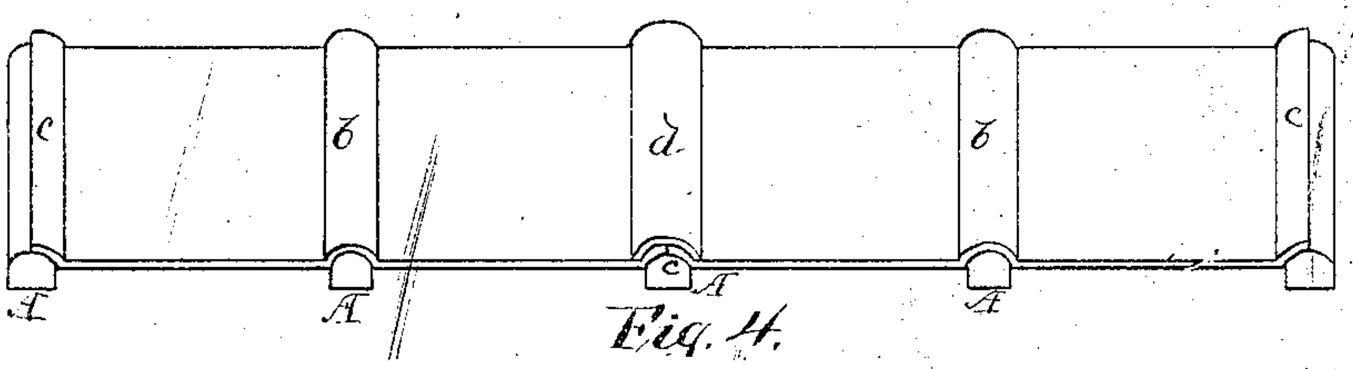

Fig. 4.

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UNITED STATES PATENT OFFICE.

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CAR-ROOFING.

SPECIFICATION forming part of Letters Patent No. 287,459, dated October 30, 1883.

Application filed July 20, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. PAIGE, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Car-Roofs, of which the following is a specification.

This invention relates to the application of prepared paper to car-roofs, in lieu of sheet metal, and has for its object to supply a cheap and durable material for that purpose not liable to the dangers and changes that are attendant upon sheet metal.

Heretofore sheet-iron, principally galvanized iron, has been employed in the construction of car-roofs. Such material is found objectionable, for the reason that metals are liable to rust and soon become worn, which renders them useless, and, furthermore, they are greatly affected by heat and cold, and are therefore not durable or economical.

The object of my invention is to provide a material to take the place of metal, which shall be capable of resisting all the detrimental influences and effects that car-roofs are liable to, and which shall be strong and durable, and that will last as long as the car will.

In the accompanying drawings, Figure 1 is a perspective view, showing a portion of a car-roof in which my improvement is embodied. Fig. 2 is a side elevation; Fig. 3, a cross-section. Fig. 4 shows one method of constructing and attaching the paper roofing material.

My new material consists of paper or straw-board prepared in the following manner: Two or more sheets of paper or straw-board are united by interposing between them a coating of cement, and then subjecting them to great pressure between heated plates, which thoroughly dries and unites them together. The surfaces of these sheets are then coated with suitable paint and are ready for use. The methods of applying these sheets may be varied somewhat; but they are capable of being attached in like manner to the metal sheets.

In Fig. 4 are shown sheets having a central corrugated rib, *b*, and half-ribs *c c* at the side edges. These ribs fit over and lie on the rafters A, and the sheets secured thereon with nails. The abutting edges of the adjoining sheets are covered with a cap-piece, *d*, of metal or the same material. Over the said paper sheets are laid a second ridge-piece, *e*, purlins *f*, and plate *g*, upon which is laid an outer roofing of wood in the usual manner. The lower edge of the paper material B is turned down over the corner under the eaves, and is secured to the molding *h* by nailing.

In Fig. 1 is shown the paper in flat sheets lying on a thin wood ceiling, and over said sheets are laid the ridge-piece *e*, purlins *f*, and plate *g*. The purlins and plates are cut away on their under sides, except at their bearing-points, which are at the seams of the adjoining sheets. This leaves a space above the paper and between the roof above in communication with the outer air through the spaces under the purlins and plates. In this method of constructing the roof no rafters are used. The ceiling of wood and paper has sufficient strength, together with the outer roofing, to be self-supporting.

This preparation of paper for the purpose is very tough, strong, and durable, and is not liable to be broken or punctured, as the metal is, which frequently occurs in loading freight-cars by the corners of heavy boxes or other heavy rough articles striking against it.

Having described my invention, I claim—

1. In car-roofing, the combination of the described prepared paper with the rafters A and outer roof, forming an impervious ceiling to the car, substantially as described.

2. In car-roofing, the combination, with the outer roofing and a wooden ceiling, of the interposed prepared paper and the cut-away purlins and plates, substantially as described.

3. The combination, in car-roofing, of the within-described prepared paper, substantially as and for the purpose specified.

WILLIAM H. PAIGE.

Witnesses:
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GEO. W. TIBBITTS.