

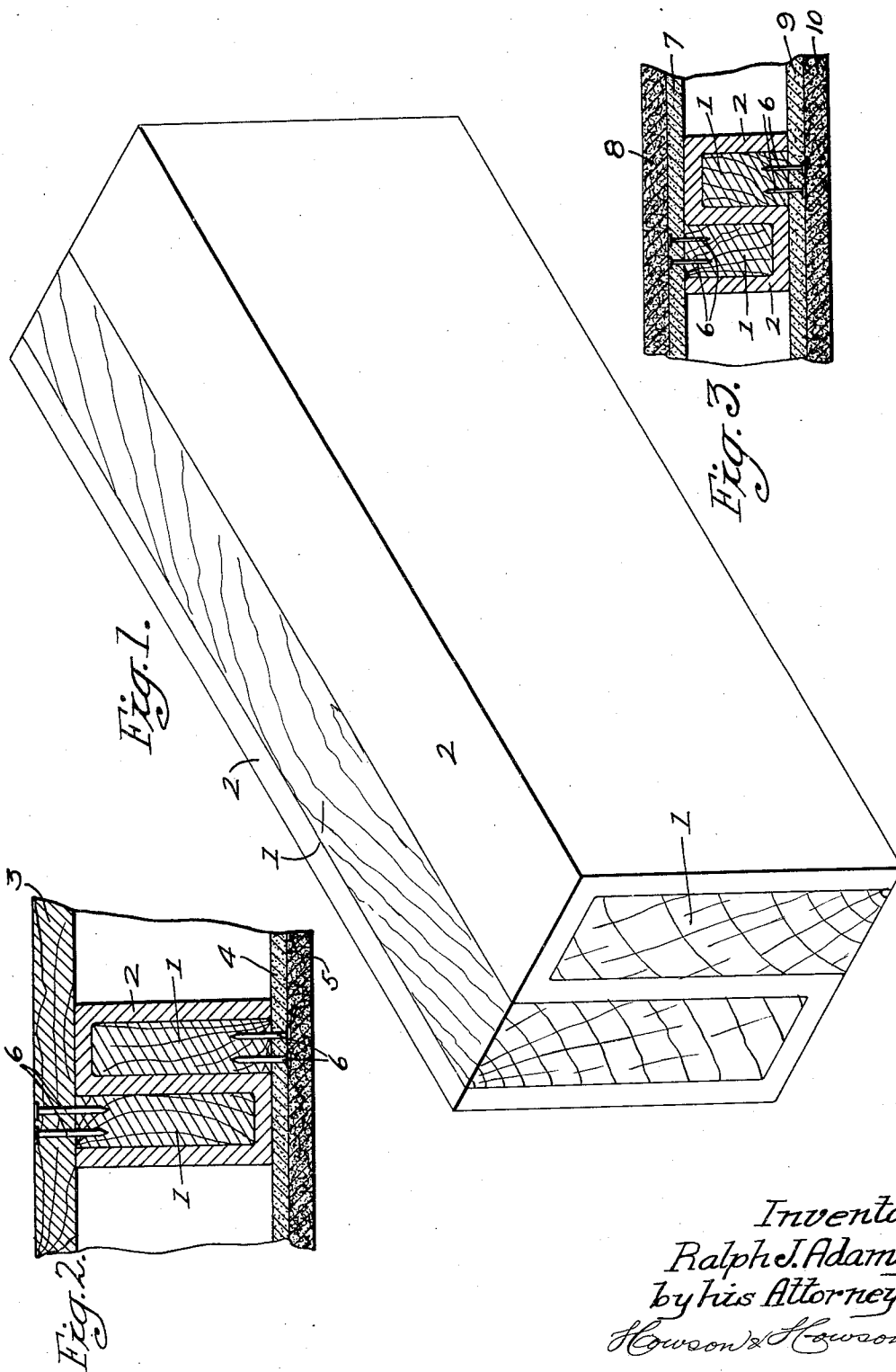
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COMPOSITE BEAM

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COMPOSITE BEAM

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This invention relates to metal and wood beams and is particularly concerned with combining wood, composition, or the like with metal in such a manner as to form beams, studs, joist, girders, etc.

An object of the invention is to produce a longitudinally extending metal member of substantially S-shaped section, having a filling of non-conducting material.

Another object is to produce a composite beam comprised of metal and non-conducting material.

Another object is to produce a beam comprised of wood or similar stock enclosed on three sides by a casing of metal.

Still another object is to produce a beam comprised of a plurality of members of non-conducting material arranged side-by-side and enclosed on substantially three of their sides by a metal member of substantially S-shaped section, opposite faces of the first-named members being exposed.

Other objects will appear hereinafter.

In the drawing:

Fig. 1 is a perspective view of one form of my invention;

Fig. 2 is a transverse section illustrating the invention employed as a joist, while

Fig. 3 is a transverse section showing the invention used as studding.

As shown, the invention comprises a plurality of members, 1 composed of non-conducting material, wood, celotex, other forms of composition material, moldable material, or the like. These members 1 are enclosed on at least three of their sides by a substantially S-shaped member 2 formed of rolled stock, cast, or struck-up shaped metal. It is of course understood that the invention may include a metal member of substantially U-shaped section enclosing on three sides a member 1 of composition, wood, or the like, or in fact may cover any form of beam comprised of the combination of metal and wood or composition material.

As shown in Fig. 2, the invention is illustrated as employed as a floor and ceiling joist, the flooring 3 being mounted on one face of the joist and the metal or other form of lath 4 and plaster 5 being mounted on the opposite

face thereof. The flooring, plaster and lath are secured to the beam by nails, or other suitable means 6 sunk into the wooden or composition portion 1 of the beam.

In Fig. 3, the invention is illustrated as employed as studding. The plaster board or lath 7 and plaster 8 are shown as carried on one face of the studding by means of nails 6, while similar plaster board or studding 9, and plaster or stucco 10 is carried on the opposite face thereof by similar means 6.

By means of this invention an extremely strong and rigid beam of relatively small cross-section can be constructed at a minimum of expense. The members 1 may be of the cheapest type of material, and yet efficiently perform their function so long as they have sufficient toughness to hold screws, nails or the like.

It will be readily appreciated that the invention is susceptible to a variety of uses, such for instance, as a joist and "dropped" ceiling for carrying pipes, wires, and other equipment. It might also be used as studding and joist for refrigerators and freight cars.

It is of course, understood that the invention is susceptible to numerous modifications and adaptations, and it is intended that it be limited only by the scope of the appended claim.

I claim:

As an article of manufacture a unitary metallic beam having longitudinal channels formed in opposite faces thereof, said channels being each of substantially the same depth as the beam and extending from end to end thereof, the mouth of each channel being coplanar with the base of the other channel, and readily nailable material filling each channel without projection therefrom.

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