

No. 732,028.

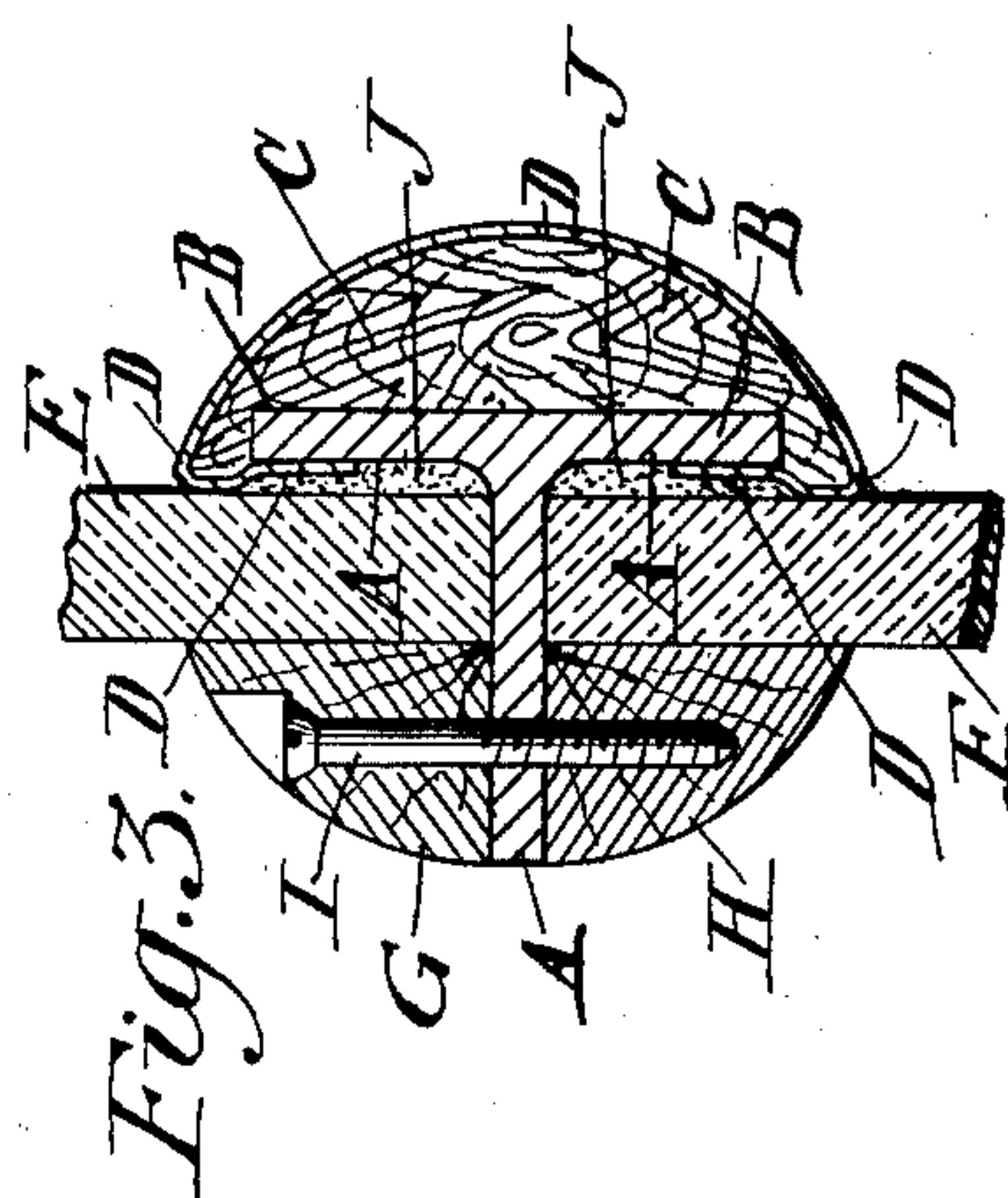
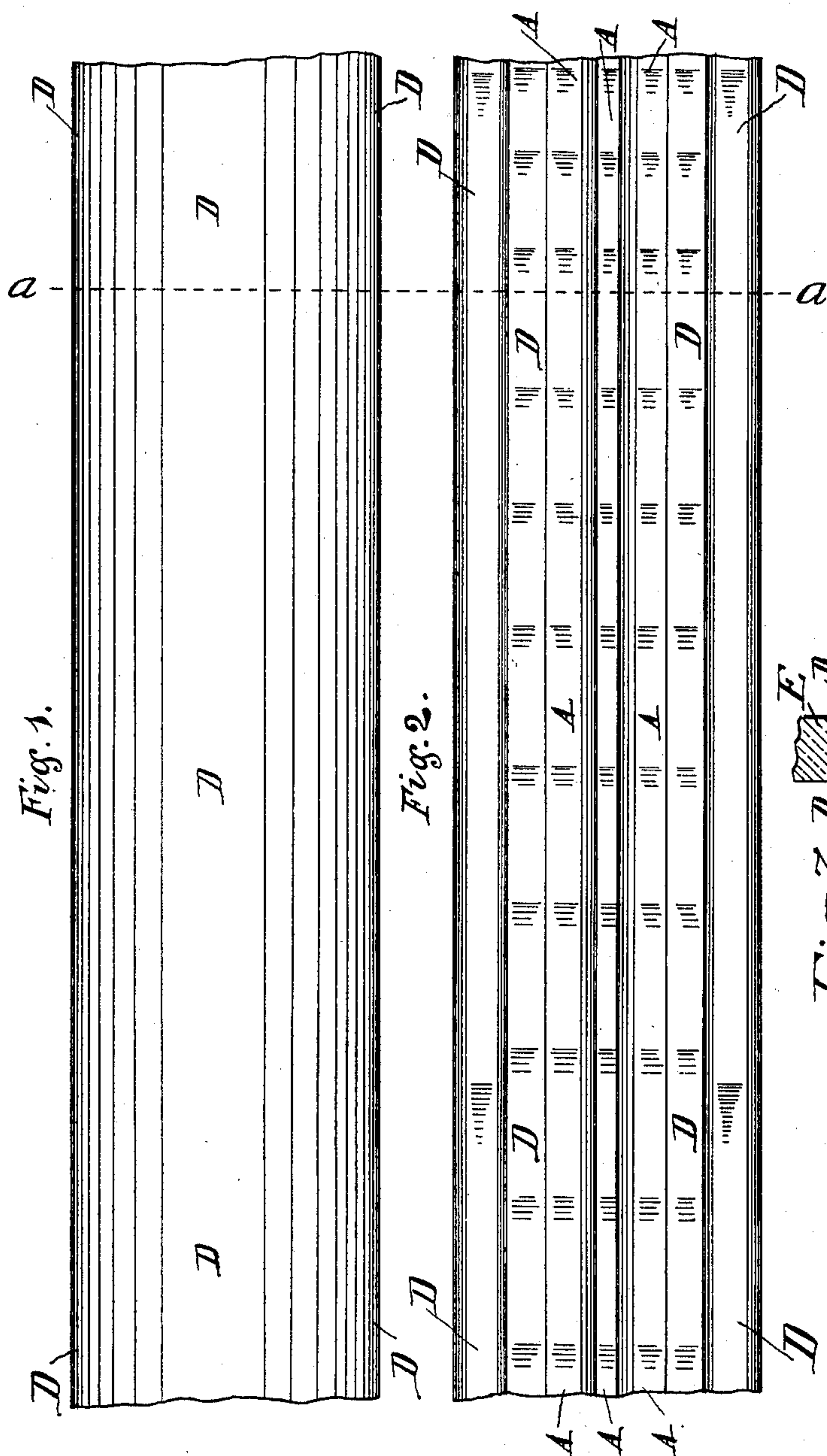
PATENTED JUNE 23, 1903.

R. H. RAPHAEL.

BAR FOR HOLDING TOGETHER PORTIONS OR SHEETS OF GLASS
OR OTHER MATERIALS.

APPLICATION FILED JULY 17, 1901.

NO MODEL.



WITNESSES:

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ROBERT H. RAPHAEL, OF LOS ANGELES, CALIFORNIA.

BAR FOR HOLDING TOGETHER PORTIONS OR SHEETS OF GLASS OR OTHER MATERIALS.

SPECIFICATION forming part of Letters Patent No. 732,028, dated June 23, 1903.

Application filed July 17, 1901. Serial No. 68,683. (No model.)

To all whom it may concern:

Be it known that I, ROBERT H. RAPHAEL, of the city of Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Composite Bars for Holding Together Portions or Sheets of Glass or other Materials, of which the following is a full, clear, and exact description or specification, reference being had to the annexed sheet of drawings and to the letters marked thereon.

My said invention, which relates to certain new and useful improvements in the construction of composite bars for holding together separate portions or sheets of glass for the windows of stores, for show-cases, and the like, has for its object to produce a stiffer bar relatively with the dimensions thereof than is the case in or with such bars as hitherto constructed; and my invention essentially consists in constructing such bars of a T-iron, whose length corresponds to the length of the bar, which is variable, according to the purpose or width of window or other framing to or into which it is secured for holding sheets of glass in said window or other framing, and the depth or width of which bar constitutes the stiff vertical member of the bar, which carries the weight chiefly of the sheet of glass or other material resting upon it, so that a stiff bar is obtained with a comparatively small amount of heavy material, besides which the horizontal member of the T-shaped bar constitutes a rigid foundation for the metallic exterior covering of the bar to be fastened down upon by this exterior casing being creased, as hereinafter described, upon the vertical flanges of the T-shaped bar and over a piece of recessed wood or other light material placed against the exterior flat face of the T-shaped bar, so that the T-shaped bar enters into said recess, the covering metal being bound over the wood and over the edges of the T-shaped bar, thereby not only inclosing the wood, but at the same time holding it securely against the T-shaped bar and binding the T-shaped bar, the wood, and the outer casing firmly together, thereby producing a composite structure of bar which is not only rigid in every direction of strain, of comparatively light weight, and at the same time ornamental in its exterior appearance.

The sheets of glass or other material are held into these bars by strips of wood or analogous material, being fastened by screws or otherwise through the horizontal flat member of the bars, both at the top and the bottom of the said horizontal flat portions.

Upon the annexed sheet of drawings, Figure 1 is a front elevation of a portion of my improved composite bar constructed as hereinbefore described. Fig. 2 is a rear elevation of the same, showing the back of the said composite bar and the T-iron with the rear portion of the thin metallic covering creased over the interior face thereof. Fig. 3 is a transverse section of the said composite bar upon the line *a a*, Figs. 1 and 2, and showing a mode of fastening sheets of glass or other material to my improved composite bar.

In the figures the T-iron bar is marked A A, consisting of the flat vertical member and the flat horizontal member projecting from the center of the flat vertical member, as shown more particularly at Fig. 3. The vertical member of the bar A A is entered into the recess B B of the portion C, constructed of wood or other material, which forms the rounded exterior part of the bar, and in order to hold the T-bar A A and the wooden exterior C C firmly together the thin metallic casing D is bent closely over the rounded exterior of the wood and creased down closely over the edge thereof upon the vertical face of the T-iron bar A A, as shown more particularly at Fig. 3, but which is also shown in elevation at Fig. 2, and by means of this covering D, of thin metal, being closely bent over the wooden portion B B and the inner face of the T-iron bar A A, as shown at Figs. 2 and 3, the whole of the parts—viz., the bar A A, the wooden member C C, and the casing D—are bound firmly together by reason of the inner lips of the metal casing D D being bent or pressed by creasing close down upon the face of the bar A A.

The edges of the upper and lower sheets of glass or other material E and F are held into the improved composite bar by means of slips of timber G and H, held in their places by screws I passing through the slips of wood G and H and through holes in the horizontal bar A of the composite bar, and with the view of making the joint tight cement or putty J

is placed in the recess in the upper and under vertical faces in the upper and under parts of the bar, as shown at Fig. 3.

Having now described the nature of my
5 said invention and the best system, mode, or manner I am at present acquainted with for carrying the same into practical effect, I desire to observe in conclusion that what I consider to be novel and original, and therefore
10 claim as the invention to be secured to me by Letters Patent, is as follows:

A composite bar consisting of a homogeneous metallic bar of T-shaped section, whose
15 web or mid-feather is central and projects at right angles to the flanges, the front or flanges

of which bar is rendered of curved form by a filling of wood or other material held thereto by a casing of thin metal overlapping both and binding together the three parts of which the bar is constituted, all substantially as
20 hereinbefore described and shown upon the annexed drawings.

In testimony whereof I, the said ROBERT H. RAPHAEL, have hereunto set my hand and seal, this 29th day of May, 1901, in the presence
25 of two subscribing witnesses.

ROBERT H. RAPHAEL. [L. S.]

Witnesses:

ST. JOHN DAY,

BEATRICE WILKINS.