No. 684,625. Patented Oct. 15, 1901.

C. VANDERBILT.

PROCESS OF MAKING TRUCK BOLSTERS, BRAKE BEAMS, &c.

(Application filed June 7, 1901.)

(No Model.)

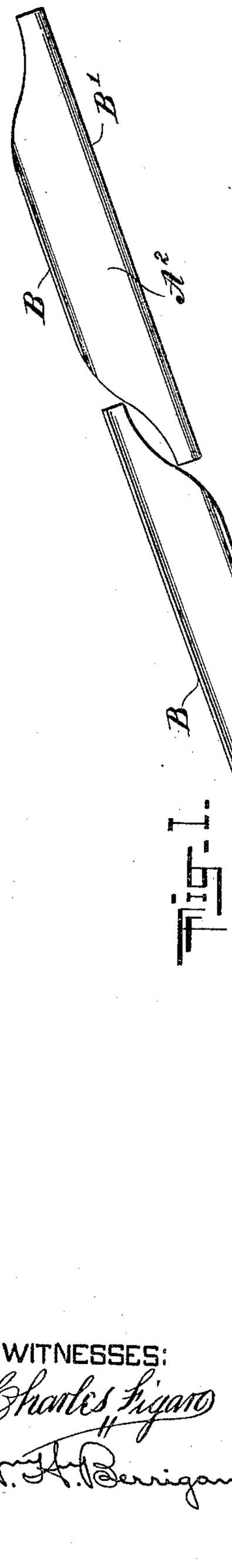

FIG. 1.

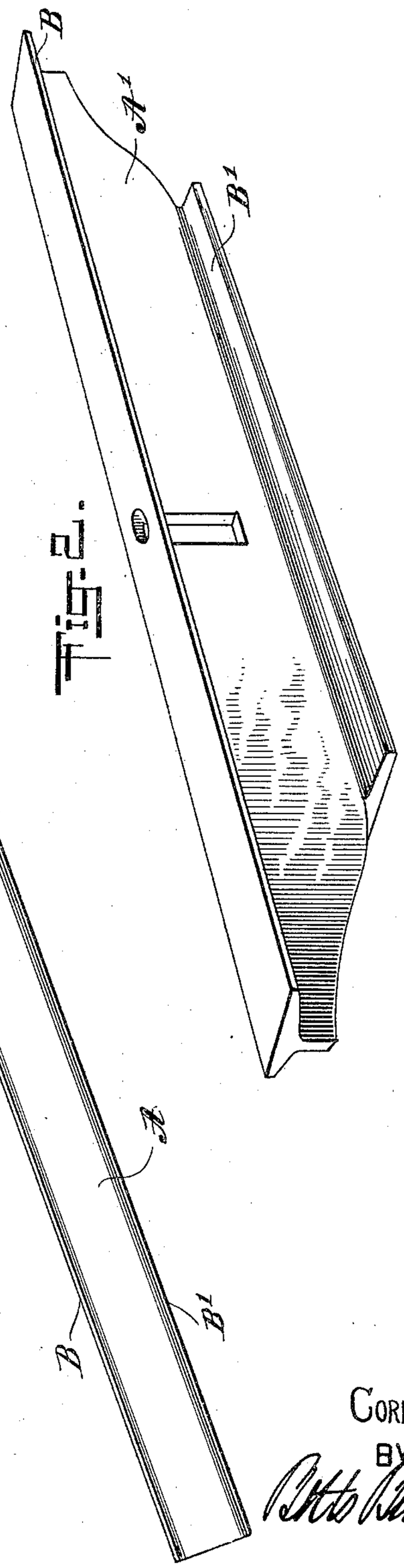

FIG. 2.

WITNESSES:
Charles Figaro
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INVENTOR,
CORNELIUS VANDERBILT,
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HIS ATTORNEYS

UNITED STATES PATENT OFFICE.

CORNELIUS VANDERBILT, OF NEW YORK, N. Y.

PROCESS OF MAKING TRUCK-BOLSTERS, BRAKE-BEAMS, &c.

SPECIFICATION forming part of Letters Patent No. 684,625, dated October 15, 1901.

Application filed June 7, 1901. Serial No. 63,558. (No model.)

To all whom it may concern:

Be it known that I, CORNELIUS VANDERBILT, a citizen of the United States, and a resident of the borough of Manhattan, in the city, county, and State of New York, (and having a post-office address at 100 Broadway, in said borough,) have invented certain new and useful Improvements in the Production of Truck-Bolsters, Brake-Beams, &c., of which the following is a full and true description, reference being had to the accompanying drawings, illustrating the practice of my new method.

The object of my invention is to economically produce one-piece truck-bolsters or brake-beams with reduced ends. Each of the said truck-bolsters, &c., consists of an integral commercially-rolled body, such as an I-beam, having the web and the top and bottom flanges integral, with reduced ends to carry or be fitted with springs, and I take advantage of the fact that such ends are reduced and the further fact that the I-beams have top and bottom flanges of the same or similar size to make an important saving in material in construction, and yet retain my improved form by cutting a plurality of beams from a single continuous beam in such a way that a large part of the web is retained in each of the resulting beams with reduced ends.

In carrying out my improved method when working upon an I-beam or a channel-beam the beam is sawed or otherwise cut diagonally, the successive cuts being disposed in opposite directions, as shown in the accompanying Figure 1, whereby there is produced a short beam having a web, one or more top flanges, and one or more bottom flanges shorter than the upper flanges. It will be observed that the ends of the beam are so cut that the upper and outwardly-disposed ends do not terminate in sharp points, but a considerable portion of the web is left at said ends. As described in a pending application filed by me, spring-seats and side bearings (made integral, if desired) may be fitted upon the reduced ends of the beams, thus making an efficient truck-bolster.

In making the truck-bolster blanks I cut them from a long continuous beam, which, as shown in Fig. 1, may be thus economically divided into a number of blanks, the cuts being made diagonally, whereby material is saved and the blanks are provided with efficient webs, but with reduced ends, simultaneously with their production. The cuts may, as shown, be slightly curved or may be straight.

In order to provide the blanks, especially when they are to be used as truck-bolsters, with a suitable king-bolt socket, I cut in the said blank a single socket-hole, as shown in Fig. 2, midway of the length of the blank, forming the opening in the upper flanges and through the said web and passing downwardly through the flanges and through the web for about three-fifths of the height of said web. The socket thus formed may be completed, as described and shown in my aforesaid application, by the addition of castings, adding strength to the beam and being applied at opposite sides thereof. A form of center-bearing will also be added to the upper face of the flanges B B, as described and shown in said application.

I believe that I am the first to discover that truck-bolsters or similar parts may be efficiently constructed of single pieces having reduced ends with substantial webs extending to such ends, or substantially so. By using beams in the form of continuous I-beams I am enabled to cut a plurality of such complete beams out of one continuous I-beam with great economy of material.

I have mentioned in this specification and claims only truck-bolsters and brake-beams; but other parts of like construction known by different names will of course be understood to be included.

What I claim is—

1. The method of producing solid, one-piece truck-bolsters and brake-beams, consisting in cutting an I-beam, diagonally and from opposite directions at the respective ends, whereby the beam is provided with reduced ends, and forming in the beam a socket-opening, by cutting an opening at the junction of the flanges with the web, at a point midway of the length of the beam, and extending downwardly through a portion of the web.

2. The method of producing solid, one-piece truck-bolsters, brake-beams, &c., consisting in cutting a beam, having a web and outwardly-extending flanges from the edge of the

web, diagonally and from opposite directions at the respective ends, whereby the beam is provided with reduced ends, and forming in the beam a socket-opening, by cutting an opening at the junction of the flanges with the web, at a point midway of the length of the beam, and extending through a portion of the web.

3. The method of producing solid, one-piece truck-bolsters, brake-beams, &c., consisting in forming a socket-opening in a bolster-beam having a web and outwardly-extending flanges from the upper edges of the web, by cutting an opening at the junction of the flanges with the web, at a point midway of the length of the beam, and extending downwardly through a portion of the web.

4. The method of producing a plurality of one-piece truck-bolsters, brake-beams, &c., from a long continuous beam, having a web and upper and lower flanges, which consists in dividing said beam by diagonal cuts, which are, in succession, oppositely disposed, whereby a plurality of beams having reduced ends are produced.

5. The method of producing a plurality of one-piece truck-bolsters, brake-beams, &c., from a long continuous beam, having a web and upper and lower flanges, which consists in dividing said beam by diagonal cuts, which are, in succession, oppositely disposed, whereby a plurality of beams having reduced ends are produced, and providing said beams with suitable socket-openings, by cutting openings therein at the junction of the flanges with the web, at a point midway of the length of the beam, and extending downwardly through a portion of the web.

6. The method of producing a plurality of one-piece truck-bolsters, brake-beams, &c., from a long, continuous beam having a web and upper and lower flanges, which consists in dividing said beam by diagonal cuts, which are, in succession, oppositely disposed, and then cutting the ends of the resulting beams, whereby a plurality of beams having reduced ends provided with a web and flanges are produced.

In witness whereof I have hereunto signed my name this 6th day of June, 1901.

CORNELIUS VANDERBILT.

In presence of—

L. F. H. BETTS,

JAMES J. COSGROVE.