S. H. GARTRELL.

COMPOSITE BENCH.

APPLICATION FILED FEB. 7, 1916.

1,223,576.

Patented Apr. 24, 1917.

2 SHEETS—SHEET 1.

FIG. 1.

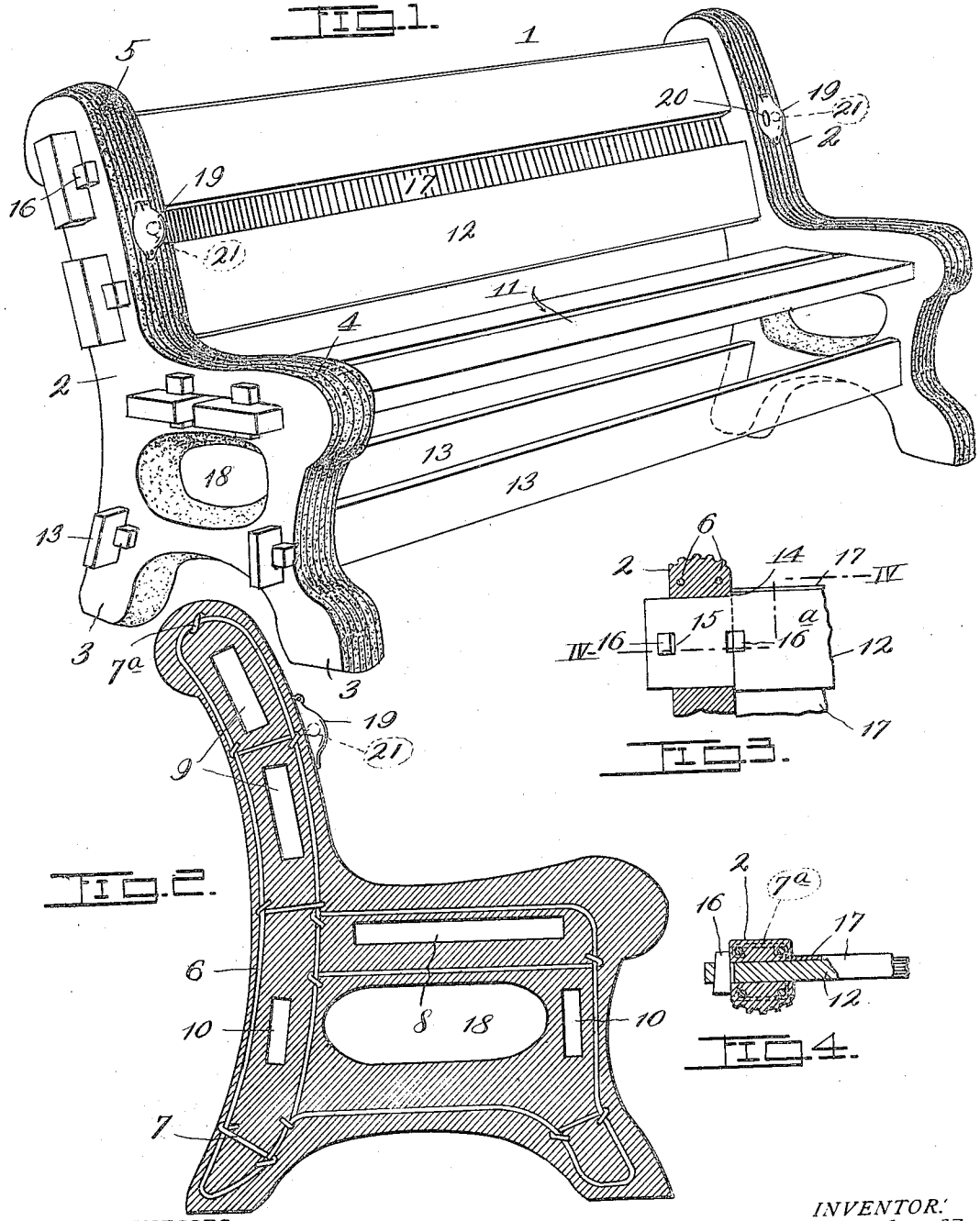


FIG. 3.

FIG. 2.

FIG. 4.

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2 SHEETS—SHEET 2.

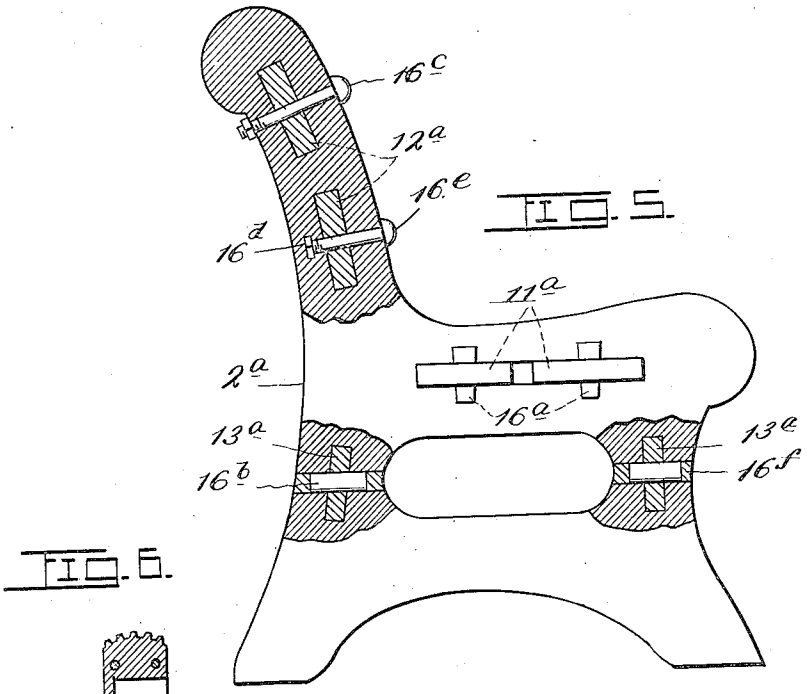
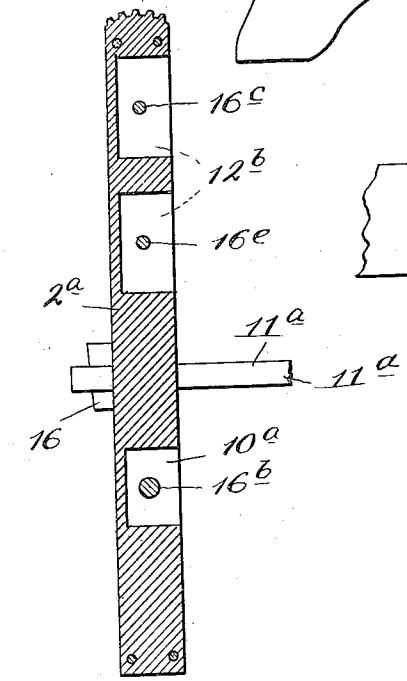


FIG. 5.

FIG. 6.



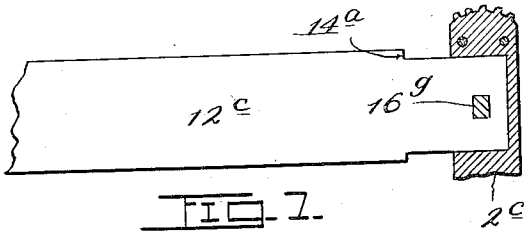


FIG. 7.

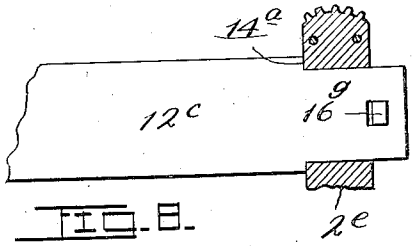


FIG. 8.

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UNITED STATES PATENT OFFICE.

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COMPOSITE BENCH.

1,223,576. Specification of Letters Patent. Patented Apr. 24, 1917.

Application filed February 7, 1916. Serial No. 76,604.

To all whom it may concern:

Be it known that I, STERNE H. GARTRELL, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Composite Benches, of which the following is a specification.

My invention relates to benches, and embodies a composite structure of wood, steel and concrete; and my objects are to provide a strong, durable and comparatively inexpensive structure sufficiently ornamental to adorn private and public lawns, and one which may be used to advantage in a commercial way for the display of advertising matter, etc. The invention also embodies means for illuminating the bench at night.

In order that the invention may be fully understood, reference will now be made to the accompanying drawing, in which:

Figure 1 is a perspective view of the bench.

Fig. 2 is a vertical section of one of the reinforced concrete ends of the bench.

Fig. 3 is a broken detail section of an upper corner of the bench.

Fig. 4 is an irregular section on line IV—IV of Fig. 3.

Fig. 5 is an end elevation, partly broken away and in section of a modified form of the invention illustrating various ways of securing the front and rear rails and the back planks in position;

Fig. 6 is a vertical sectional view of the end member of Fig. 5;

Fig. 7 is a fragmentary detail sectional view of a still further way of securing a plank; and

Fig. 8 is a view similar to Fig. 7 of a still further modified form of plank securing means with use of the form of plank shown in Fig. 7.

1 designates the bench which may be made in different sizes as required.

2 designates the concrete members, which in the present instance embody legs 3, arms 4 and backs 5. Said concrete end members 2 may be reinforced in any suitable manner, but I prefer to reinforce each with a pair of continuous rods 6 bent as disclosed by Fig. 2, and connected at various points with tie-rods 7 and stirrups 7^a.

Oblong openings 8, 9 and 10 are left in the end members 2 to receive the reduced terminals of seat planks 11, back planks 12, and front and back rails 13, which coöperate with the seat and back planks in maintaining the concrete end members 2 in upright position. All of said planks may be of wood, reinforced concrete, or other suitable material.

All of the planks have shoulders 14, which abut the inner surface of the end members 2, while the reduced terminals of said planks have openings 15, through which wedges 16 are driven to bear against the outer surface of the end members 2 and firmly clamp the same between said wedges and the shoulders 14, so that the planks cannot shift longitudinally in the end members 2. When desired the shoulders 14 may be omitted and wedges 16^a be substituted therefor, to coact with the wedges 16 in clamping the end members 2 in position.

17 designates a sheet metal back secured to the back planks 12, to form a suitable surface for advertising matter, which may be painted or otherwise applied thereto. The upper and lower margins of the sheet metal back 17 lap the adjacent edges of the planks 12 to prevent vandals from marring said edges by whittling the same with a penknife. The edges of the other planks may be protected in a like manner. If a large advertising surface is desired the sheet metal back 17 may be of sufficient size to reach from the uppermost back plank 12 to the bottom of the rail 13.

Openings 18 are left in the concrete end members 2 to lighten and ornament the same and for further ornamentation said end members may be given either a smooth or a rough finish and colored in imitation of various kinds of marble. The appearance of the structure is further enhanced by the projecting terminals of the planks and the wedges extending therethrough which give it a mission type appearance.

19 designates a hood hinged or otherwise secured to each concrete end member 2 and provided at one side with a longitudinal slot 20 through which light rays from an incandescent or other lamp 21, beneath the hood, may shine and illuminate the bench.

In the modified form disclosed by Figs. 5 and 6, various ways are shown for securing the planks to the concrete end members 2^a. For instance, one of the back planks 12^a is secured in place by bolts 16^c adapted to pass through said plank and the upper portion of the member 2^a, while the other back plank

12^a is shown secured in place by a bolt 16^e passing therethrough and threaded into a nut 16^d embedded in the concrete. The front and rear rails 13^a are shown secured in place by plugs 16^b driven through openings in the concrete, after which said openings are plugged with putty 16^f or suitable material which may be removed to give access to the plugs 16^b should it become necessary to remove the rails 13^a. As disclosed by Fig. 6, cavities 12^b and 10^a, instead of openings 9 and 10, are provided to receive the back planks 12^a and the rails 13^a, respectively.

In the modified form, Fig. 7, one of the seat planks 12^c is shown fitted into a recess in the end member 2^c and held therein by a wedge 16^g. The shoulders 14^a are spaced a sufficient distance from the adjacent end of the plank to allow said end to pass through an opening in the concrete member 2^e as disclosed by Fig. 8 in case a bench of less length than that provided by Fig. 7 is desired.

From the foregoing description it is obvious that I have produced a bench embodying all of the features of advantage above enumerated, and one which is practically nondestructible as the bench may be turned over either forward or backward without injury to the concrete end members 2, owing to the fact that the continuous reinforcing rods 6 are so placed as to resist all strains or stresses to which said end members may be subjected irrespective of the position they occupy. The life of the planks 11, 12 and 13 may be greatly prolonged by treating them with any of the well-known decay-resisting preservatives.

From the foregoing description it is apparent that I have produced a bench embodying all of the features of advantage above enumerated, and while I have shown the preferred embodiment of the invention I reserve the right to make such changes in the construction, combination and arrangement of parts as properly fall within the spirit and scope of the claim.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:

In a bench, end members, rails connecting the end members, seat forming planks and back planks also connecting the end members, and a metal sheet extending across the rear faces of the back planks and having its top and bottom edges bent outwardly and engaged over the top and bottom edges of the back planks and having its ends engaged with the inner faces of the end members to hold the metal sheet against movement.

In testimony whereof I affix my signature in the presence of two witnesses.

STERNE H. GARTRELL.

Witnesses:
FRED C. FISCHER,
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