No. 776,906. PATENTED DEC. 6, 1904.

J. S. GREGG.

SPRING SUPPORTED SIDEWALK.

APPLICATION FILED AUG. 13, 1904.

NO MODEL.

Fig. 5.

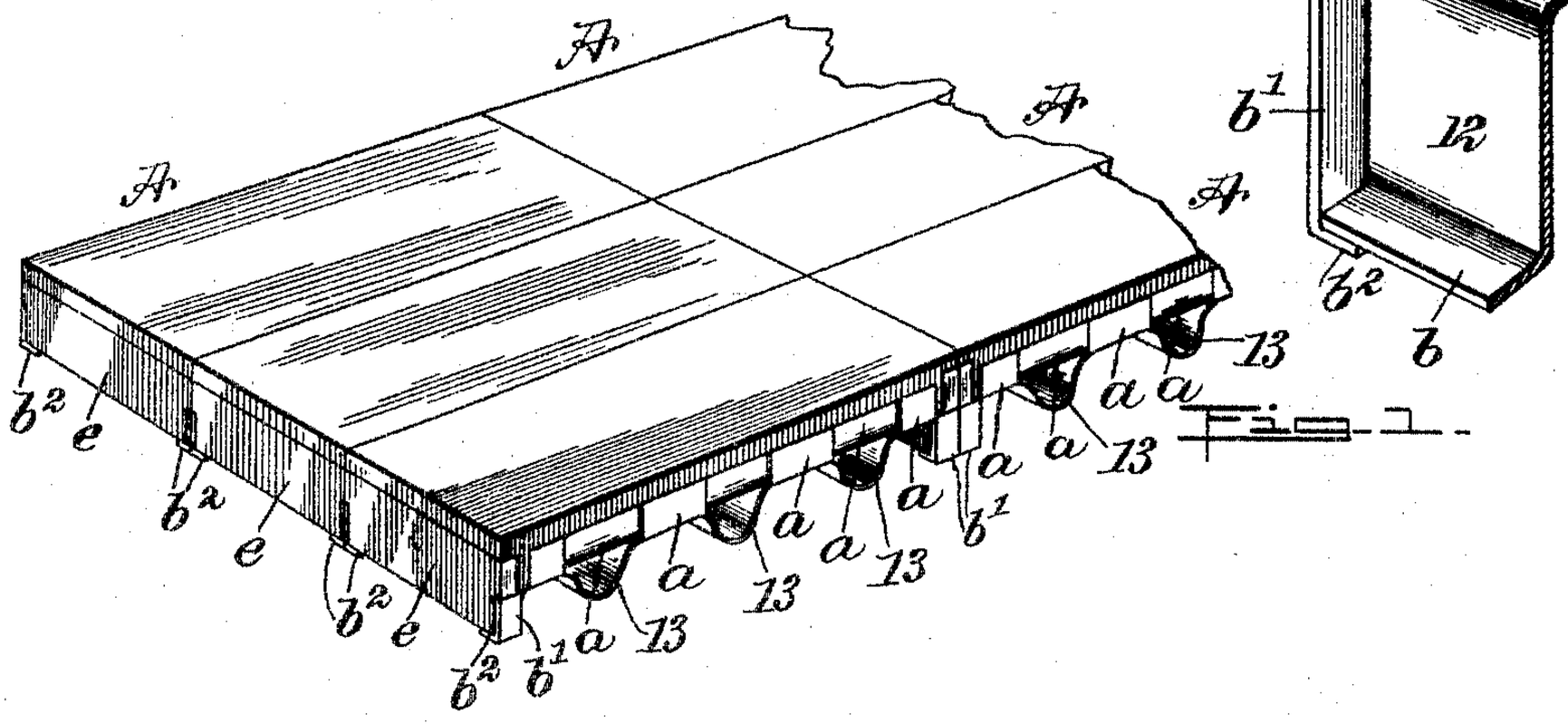
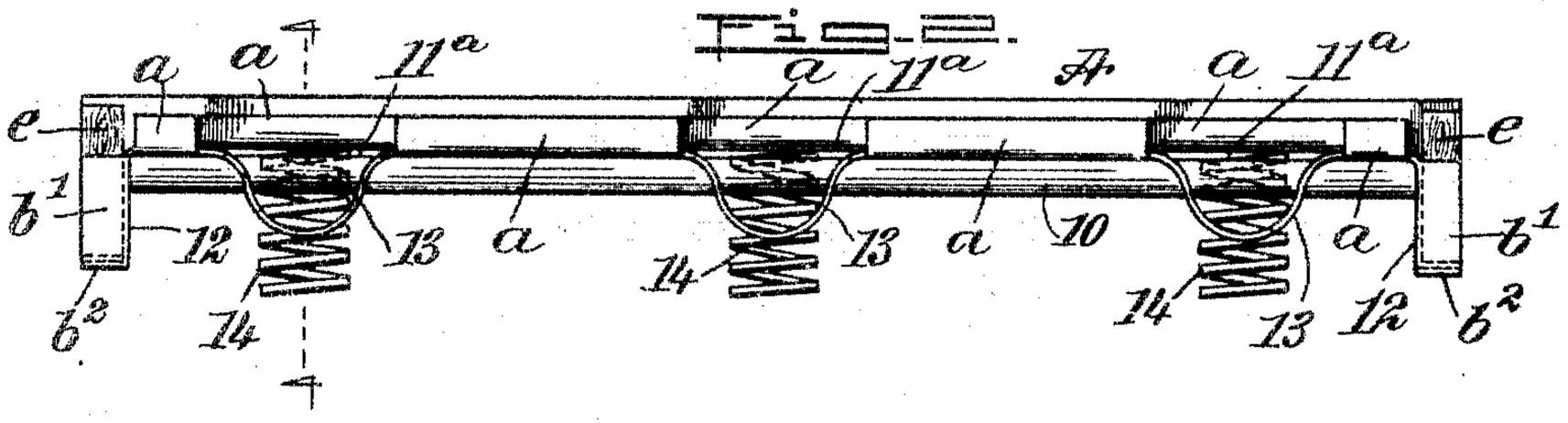


Fig. 1.

Fig. 2.



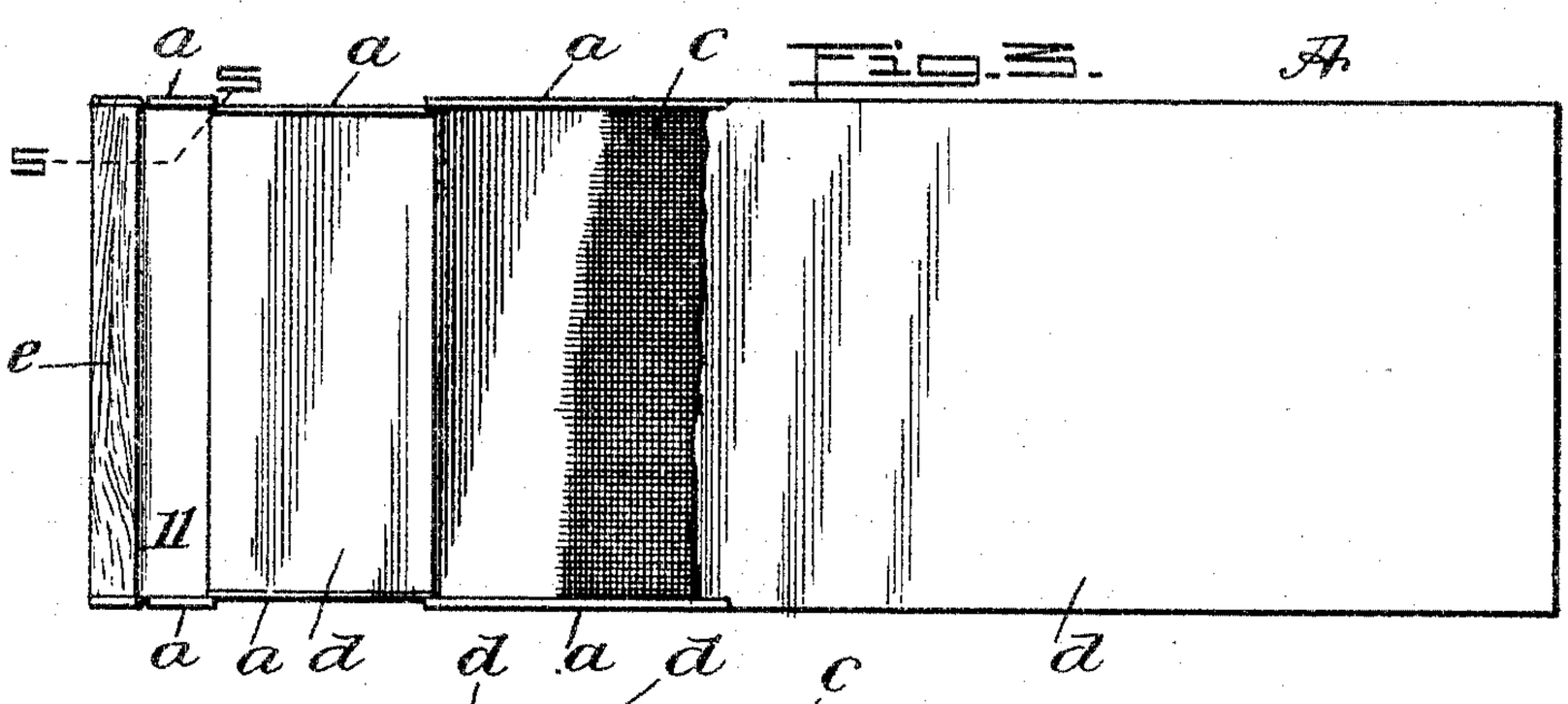


Fig. 3.

Fig. 4.

WITNESSES:
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No. 776,906. Patented December 6, 1904.

UNITED STATES PATENT OFFICE.

JEROME STATES GREGG, OF POMONA, MICHIGAN.

SPRING-SUPPORTED SIDEWALK.

SPECIFICATION forming part of Letters Patent No. 776,906, dated December 6, 1904.

Application filed August 13, 1904. Serial No. 220,625. (No model.)

To all whom it may concern:

Be it known that I, JEROME STATES GREGG, a citizen of the United States, and a resident of Pomona, in the county of Manistee and State of Michigan, have invented a new and Improved Spring-Supported Sidewalk, of which the following is a full, clear, and exact description.

This invention has for its object to provide novel details of construction for a sidewalk to be used by pedestrians which render the sidewalk measurably resilient and adapt it for service at any point where it is desired to locate a sidewalk, the resilience of the structure rendering it easy to walk upon.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the subjoined claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a portion of a sidewalk embodying features of the improvement. Fig. 2 is a side view of parts shown in Fig. 1. Fig. 3 is a plan view broken away on the upper side to show details of construction. Fig. 4 is a transverse sectional view of a portion of the improved sidewalk substantially on the line 4 4 in Fig. 2; and Fig. 5 is an inner side view of a corner portion of a sidewalk-section, taken substantially on the angular line 5 5 in Fig. 3.

The improved sidewalk is usually constructed in sections of a convenient length and width that when assembled afford a level surface on the upper side for public travel thereon, these sections, that are indicated by the reference characters A, being formed, essentially, of parts constructed and arranged as follows: A plurality of preferably plate-metal sleepers 10, that with advantage may be in the form of a semicircle in cross-section having equal length that represents the length of a section of the sidewalk, are held spaced apart and parallel with each other by a series of spaced transverse plate-metal bearer-strips 11, these flat strips having their ends turned up to provide keeper-flanges *a* thereon, affording an equal length thereto. At each end of a section A a box-like bearer is secured, which consists of a metal plate 12, having a length equal to the width of the section and provided with a base-flange *b*, bent at a right angle to the normally upright wall of the bearer-piece, said wall at each end having a flange *b'* bent thereon in the same direction as that of the base-flange, and, as shown in Fig. 5, a reinforcing foot-flange b^2 is bent toward the base-flange on each end wall *b'* and laps beneath the same, this being duplicated at each end of the bearer, whereby a strong light box-like plate-metal support is produced. The upper portion of the wall 12 is bent at a right angle in a direction opposite from the trend of the base-flange *b* and may be prolonged to any suitable length, coacting with the sleepers 10 and flat bearer-strips 11 to produce a skeleton base for the body of the sidewalk. Cross-bearers 13, that may be semitubular in form, are provided at intervals throughout the length of a section A. These spaced semitubular bearers, which are of larger size, considered endwise, than the sleepers 10, are apertured transversely to permit the passage therethrough of said sleepers, which when secured thereto adapt the arched bearers 13 to stiffen the structure. At points between the sleepers 10 openings are formed in the crowns of the arched bearers 13 for the reception of springs 14, that seat upon the lower sides of respective flat bearers 11^a or other flat supports that may be extended transversely above the springs to provide seats therefor. The springs 14 are of suitable strength to afford a resilient support for the completed section A and may seat at their lower ends upon any preferred foundation formed of cement, brick, or timber. (Not shown.)

The body portion of the walk that takes the place of planks used in a wooden boardwalk is preferably formed of a plastic mixture of a good quality of cement and any other material, such as sharp sand, plaster-of-paris, or other substance that with the cement will afford a smooth, waterproof, and solid composition that will not crack or get soft when exposed to either extreme of heat or cold. The composition while plastic is spread upon a netted fabric *c* of any preferred character

having strength to support and bind together the coating *d* of plastic compound, this web of netting being smoothly imposed upon the skeleton base hereinbefore described and extending throughout the length and breadth of the same. The cement may be spread thin on the textile fabric and should be rendered level on top. A second web *c* of the fibrous netting is now placed upon the upper surface of the plastic composition of matter *d*, and upon this sheet of reticulated fabric a second coat of plastic compound *d* is spread evenly and rendered smooth on its upper surface or, if preferred, may be slightly roughened to prevent slipping in winter. While two layers of the coating material are shown, it is to be understood that the number of layers may be increased, having a sheet of the perforate fibrous material interposed between successive layers of the plastic material.

Binders of rectangular wooden scantling *e* may be extended across the transversely-alined ends of the sections A, that are disposed side by side to give proper width to the sidewalk, these strips being secured upon the box-bearers at the ends of the sections A in any preferred manner.

It is evident that in place of cement and the other ingredients of a plastic compound asphalt may be employed to form the tread-surface of the pavement or sidewalk, in which case it will not be necessary to employ fibrous sheets; but a metal sheet may be imposed upon the sleepers 10 to serve as a base-support for the asphalt, the spring-supports having contact with said base.

In constructing a sidewalk or pavement of any desired length and width the sections A are arranged as indicated in Fig. 1, but of course are placed upon a graded or level foundation that is durable and which will support the sections impinged laterally and endwise, having their upper surfaces level one with the other.

By provision of the spring-supports for the sidewalk ease in traversing it is afforded, which is a distinguishing feature of the invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a sidewalk, the combination with a suitable frame, and springs mounted on said frame, of a tread portion supported by the springs, said tread portion consisting of a plastic composition adapted to harden, and fibrous sheets alternated in layers with the plastic composition.

2. In a sidewalk, the combination with a base-frame of plate metal made up of longitudinal sleepers in semitubular form, and transverse flat bearers spaced apart and secured upon the sleepers, of a series of spaced springs whereon the base-frame is supported, and a tread portion formed of layers of plastic material adapted to harden, and of interposed sheets of fibrous fabric, the tread portion being formed on the top of the base-frame.

3. A sidewalk formed of a plurality of elongated rectangular sections, each section comprising a plate-metal base-frame made up of semitubular sleepers, transverse flat bearers and box-like end bearers, a series of springs spaced apart and engaging the lower surface of the base-frame, and a tread portion formed of a cement composition that is applied upon the base-frame in a plastic condition and subsequently hardens.

4. A sidewalk formed of a plurality of elongated rectangular sections, each section comprising a series of semitubular sleepers spaced apart, a series of flat bearers arranged at intervals transversely, a plurality of arched bearers intervening the flat bearers, and box-like end bearers, a series of coiled springs held in apertures in the arched bearers, wooden binder-pieces at the ends of the sections, and a tread-surface formed of alternate sheets of netting and layers of plastic cement that subsequently hardens.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JEROME STATES GREGG.

Witnesses:

LEO. L. DUFFY,

CHESTER E. LAKE.