

(Model.)

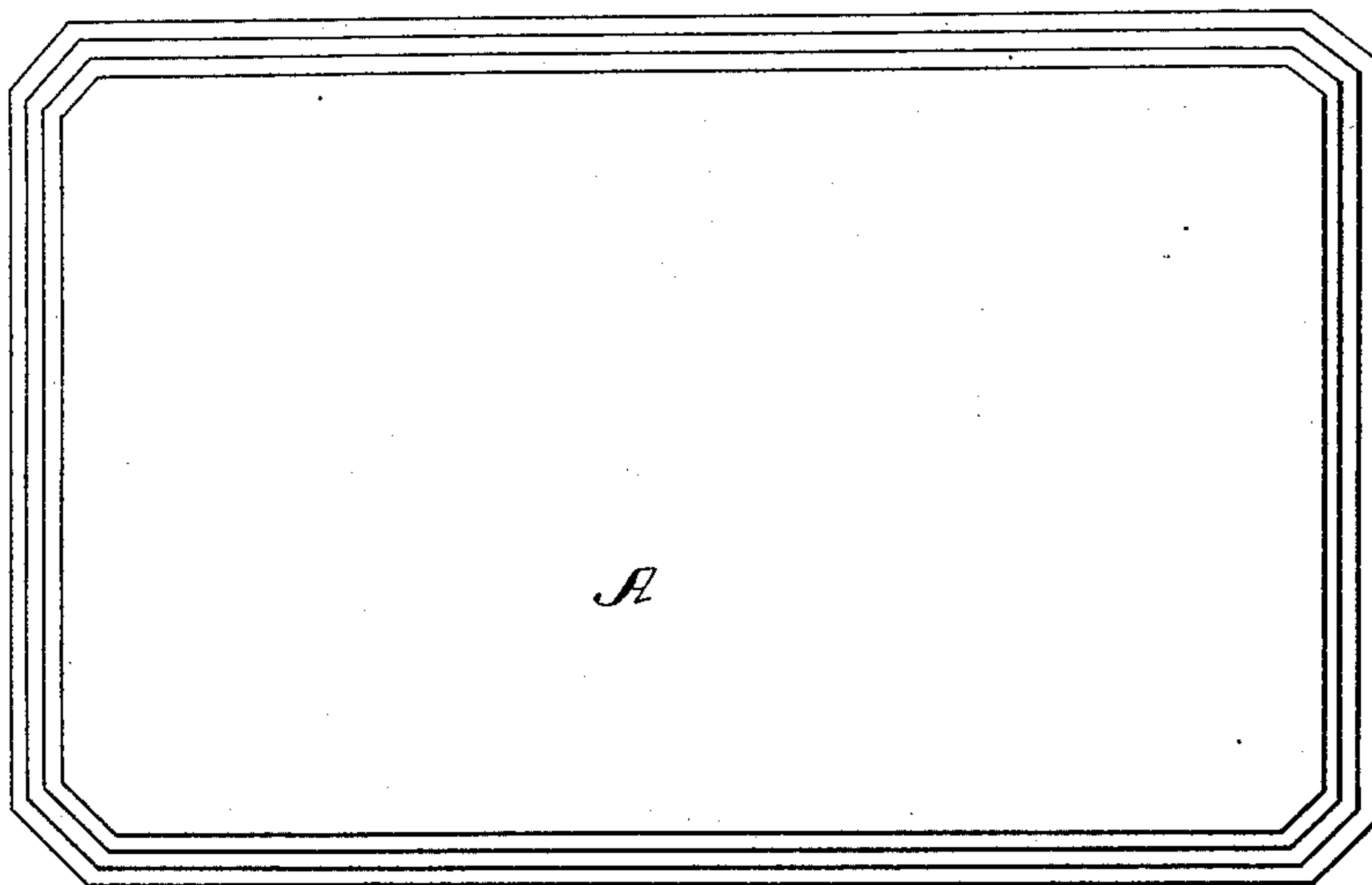
C. GALLE.

FLEXIBLE AND TRANSPARENT SIGN BOARD.

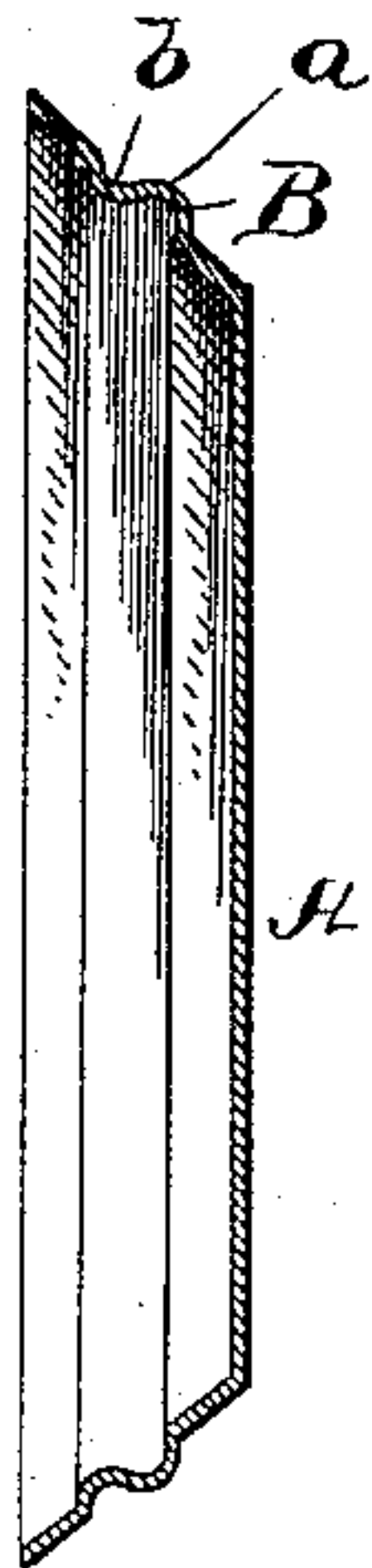
No. 428,086.

Patented May 20, 1890.

*Fig. I.*



*Fig. II*



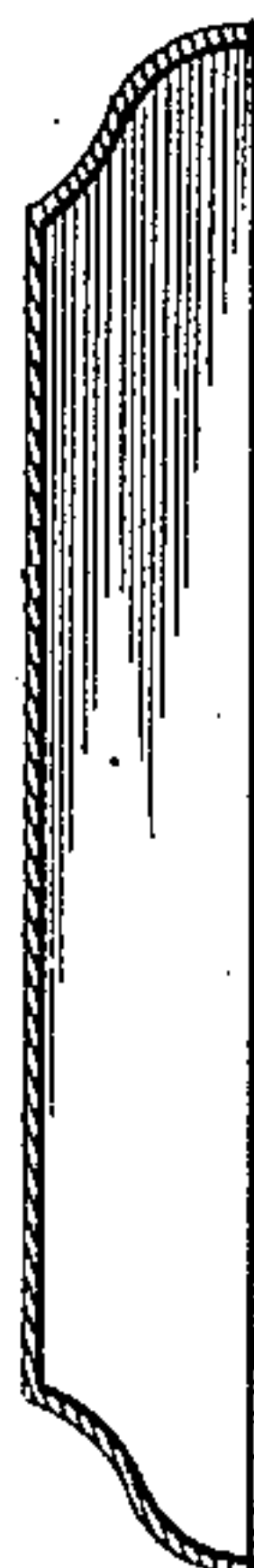
*Fig. III*



*Fig. IV*



*Fig. V*



*Fig. VI*



Witnesses:

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# UNITED STATES PATENT OFFICE.

CHARLES GALLE, OF ST. LOUIS, MISSOURI.

## FLEXIBLE TRANSPARENT SIGN-BOARD.

SPECIFICATION forming part of Letters Patent No. 428,086, dated May 20, 1890.

Application filed March 11, 1889. Serial No. 302,928. (Model.)

*To all whom it may concern:*

Be it known that I, CHARLES GALLE, a citizen of the United States, and a resident of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Flexible and Transparent Self-Sustaining Signs, of which the following is a specification.

My present invention relates to a flexible transparent or translucent sign; and the object of the invention is to provide a sign for advertising and other purposes which shall be self-sustaining, or, in other words, which will not roll or curl up or twist out of its plane when suspended without the use of a frame to inclose and form a support for the body of the sign.

With this and other ends in view my invention consists of a flexible transparent sign comprising a sheet or layer of pyroxyline or celluloid provided with a suitable inscription on one of its faces and having its edges or borders crimped or bent into a re-enforcing fold or bend which extends out of or beyond the plane of the body of the sign, whereby the central portion or body of the sign is prevented from twisting or curling out of shape under the weight of the sign or the action of the elements thereon when the sign is suspended by a cord or otherwise and without a supporting-frame.

My invention further consists in the peculiar construction and adaptation of parts, as will be hereinafter fully described and claimed.

Heretofore transparent signs have been made of glass, which, as is well known, is a very friable unbending material and liable to become broken. I am also aware that a sign has been composed of several sheets of mica, solidified or made integral by transparent cement, and having letters on the inner face of such mica sheet. I am further aware that an ornamental metallic sign or show-card has been produced by inscribing the desired lettering upon the surface of the sheet metal, surrounded by the representation of a frame, and by striking up the portion of the plate covered by the frame representation, so as to cause its outer surface to conform to the shape of the frame represented. My invention differs from the prior devices referred to

in the following particulars: My improved sign is both flexible and transparent or translucent, and is self-sustaining when suspended by a cord without the employment of a supporting-frame; and to attain these ends I provide the single thickness or sheet of celluloid or pyroxyline material with a crimped or bent border, which lies out of or beyond the plane of the body of the sheet.

To enable others to understand my invention, I have illustrated the same in the accompanying drawings, in which—

Figure I is a front elevation of my improved flexible transparent sign. Fig. II is an edge view of the sign, showing one form of the crimped bent border at the edges of the sign. Figs. III, IV, V, and VI are views similar to Fig. II of various shapes of crimped borders with which the sign may be provided.

Like letters of reference denote corresponding parts in all the figures of the drawings, referring to which—

A designates the body of the sign, which is made of a flat sheet, layer, or single thickness of pyroxyline or celluloid or equivalent material, which, as is well known, is of a transparent or translucent and flexible nature. This flexible sheet or layer is provided on one of its faces with a suitable inscription, advertisement, or other desired matter to be displayed by the sign, and the sign is adapted and intended to be suspended by a cord or its equivalent without the use of a frame to inclose and support the flexible sheet or layer of pyroxyline or celluloid.

I have found that if a flat thin sheet or layer of pyroxyline or celluloid is suspended by a cord without the use of a supporting-frame, such sheet or layer of celluloid, &c., will become twisted, distorted, or curled up, which is very objectionable, as it renders the device unsightly. To overcome this objection in a sign of this material and class I provide the sheet or layer with a crimped border B, which is bent out of the plane of the body or center of the sign, and which extends continuously around the edges of the sign. This crimped border may be of various different patterns or shapes, either ornamental or plain, as shown in Figs. II and VI, inclusive. Thus in Fig. II the border may be fitted or corrugated on curved lines, as at *a b*; in Fig. III the

corrugations are straight and lie at a sharp angle to each other, as at *c*; in Fig. IV a plain border is provided at an obtuse angle to the plane or body of the sign; in Fig. V the border is given a compound curvature, and in Fig. VI a continuous channel and bead is formed in the crimped border at an intermediate point of its width; but in each instance the same general feature of the border is preserved—to wit, a crimped border which lies at an angle to the plane or body of the sign. The crimped border may be formed on the edges of the flexible sheet of celluloid or pyroxyline by means of an ordinary tinner's or other bending rollers or an ordinary bar-folder; but I do not confine myself to the use of any particular means for forming the crimped border.

I have found that pyroxyline material can be most successfully treated or formed with the crimped border by means of stamping or embossing appliances under heat and pressure, and I therefore prefer to use appliances for bending or crimping the border while under heat and pressure; but the border can be crimped by cold tools.

The body of the flexible transparent sign of pyroxyline or celluloid has a suitable inscription, advertisement, cut, or any other desired information, and I prefer to print such inscription, &c., on the body of the sign

and before the body is crimped or bent; but this is not essential.

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

1. A self-sustaining flexible transparent sign of a sheet or layer of pyroxyline or celluloid having a crimped border around the same, as and for the purpose described. 40

2. A self-sustaining flexible transparent sign adapted to be suspended by a cord without a supporting-frame, consisting of a sheet or layer of thin celluloid or pyroxyline material having a crimped border around its edges, which border lies out of the plane of the body of the sign, as and for the purpose described. 45

3. A self-sustaining flexible transparent sign, consisting of a sheet or layer of celluloid or pyroxyline material having a suitable inscription on the body thereof, and provided with a crimped border which extends continuously around the body of the sign and lies at an angle to or out of the plane of said sign-body, for the purpose described, substantially as set forth. 50 55

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

CHAS. GALLE.

Witnesses:

L. D. SEWARD,

HENRY HIEMENZ, Jr.