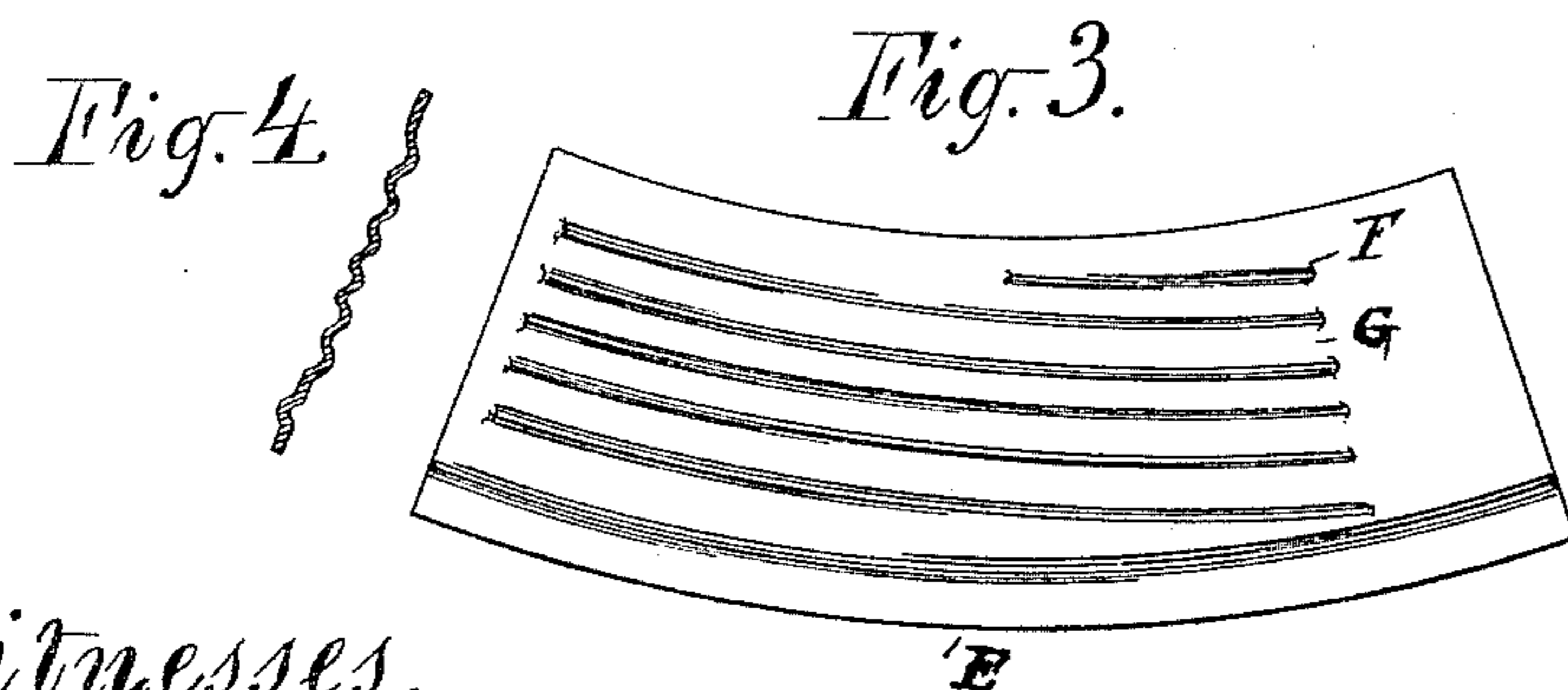
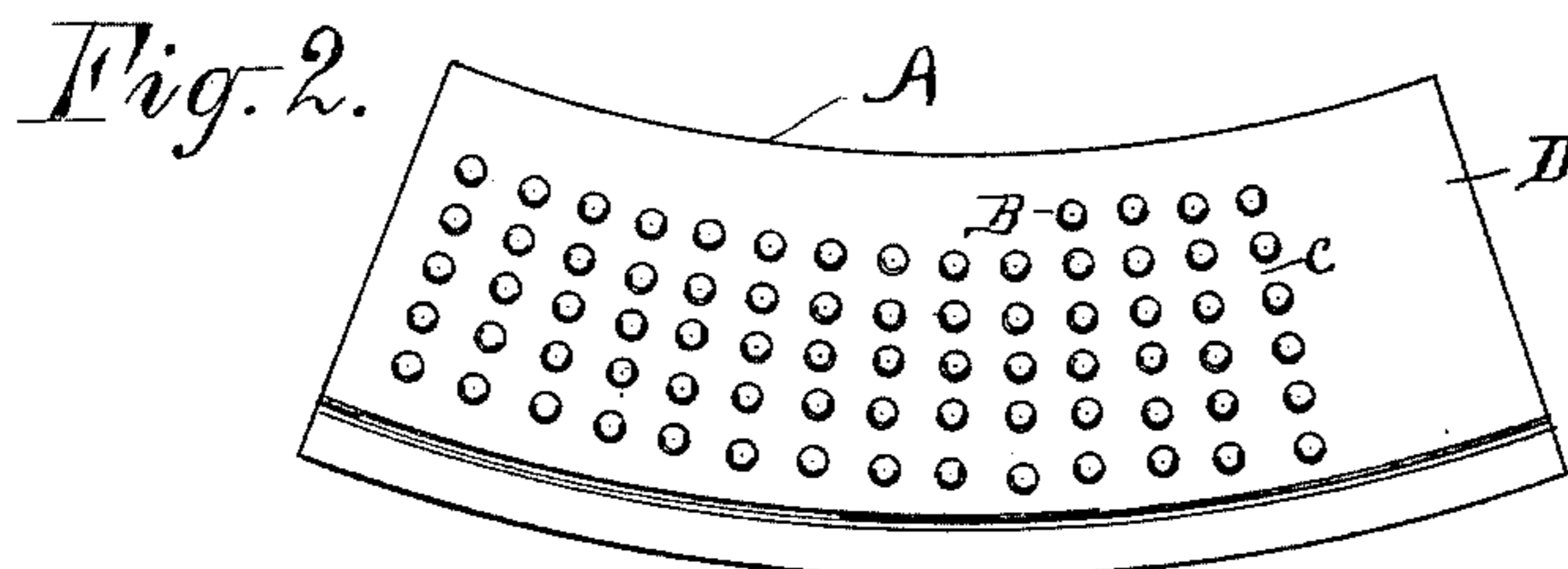
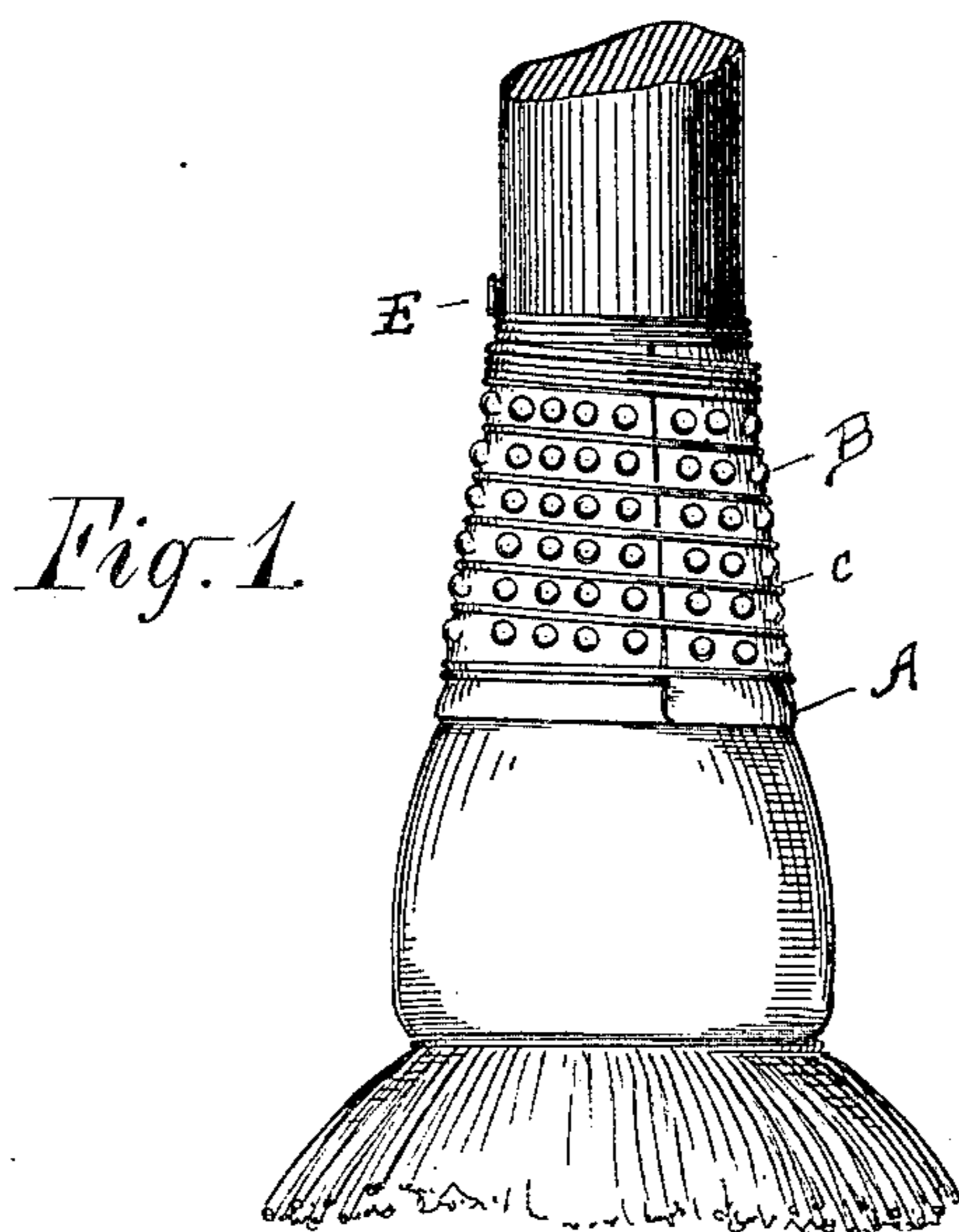


(No Model.)

F. ZAN.  
SHIELD FOR BROOMS.

No. 450,859.

Patented Apr. 21, 1891.



Witnesses.  
*H. Monteverde.*  
*M. S. Loefler.*

Inventor.  
*Frank Jan*  
By *Boonsticker*

# UNITED STATES PATENT OFFICE.

FRANK ZAN, OF SAN FRANCISCO, CALIFORNIA.

## SHIELD FOR BROOMS.

SPECIFICATION forming part of Letters Patent No. 450,859, dated April 21, 1891.

Application filed June 11, 1890. Serial No. 355,091. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK ZAN, a citizen of the United States, residing at the city and in the county of San Francisco, and State of California, have invented certain new and useful Improvements in Shields for Brooms; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

This invention has relation to certain new and useful improvements in shields for brooms; and it consists of the parts, as will be hereinafter more fully set forth in the drawings, described, and pointed out in the specification.

The object of my invention consists in providing a shield which shall permit of the wire being more effectually secured thereon, and which shall provide a stronger and more secure protector for the ends of the broom-corn, and to provide for the winding of the wire around the body below the shield, and then upwardly and continuously around the exterior of the shield to a point upon the broom handle or shank above said shield.

Heretofore in the art of securing broom-corn to handles great difficulty has been encountered in providing means whereby the upper ends of the broom-corn are held firmly in place to the handle. Various devices have been invented for this purpose, but none so far have offered a practical solution to the difficulty. In some a shield is employed which is wrapped around the upper ends of the broom-corn, and a wire, after being wound around the base, is passed out from the joint of the shield and continued around the lower end of the same, being finally secured to a tack. By this arrangement only a small surface of the shield is wrapped, and it therefore becomes necessary to secure the upper end of said shield to the broom-handle by means of tacks or equivalents. To those familiar with the art it becomes apparent that a device of the nature described but poorly, if at all, accomplishes the end desired, as the upper portion of the shield, owing to the great strain of the ends or butts of the broom-corn, is liable to be broken. Besides this objection,

a great amount of work is involved in order to adjust a shield of this character to the broom, as it is necessary, first, to employ a tack for each end of the wire in addition to the tacks for securing the shield at the upper end.

Another form is employed wherein a sleeve is provided with depending arms having a series of lugs thereon to form a pathway for the wire. This wire has its lower end fastened to the base of the shank or handle, and after encircling the broom-corn is carried up beneath the corn (the latter being turned back for that purpose) until a suitable point is reached. The idea is to then insert the thimble or sleeve with its depending arms from the upper end of the broom-handle and allow the arms to embrace the outside of the corn and the sleeve portion to encircle the same, after which the wire is continued downward in the inclined grooves formed by the lugs of the arms to the lower end of the shield, where it is secured to a tack or equivalent. The operation above described is not only exceedingly complicated, but, furthermore, in actual practice would be found impossible. In order to adjust a complete sleeve over the ends of the broom-corn, it is absolutely necessary that said corn be first securely wrapped by wire, as otherwise the ends of the corn, owing to their stiffness, would project and bulge out, and should an attempt be made to adjust the sleeve or cap it is obvious that the arms, instead of passing upon the outside of the corn, would extend down into it, while a great quantity of corn will be upon the outside of the cap or sleeve. It would be impossible to remedy this by encircling the corn with the hand, as the stiffness of the straws is so great as to make it absolutely impossible to give sufficient pressure by hand power. This is demonstrated by the fact that in the securing of broom-corn to handles machinery is necessary in order to wind the wire. In order, therefore, to render this device satisfactorily operative, it would be necessary to wrap the ends of the broom-corn in the first place with the wire, then apply the cap, and subsequently wrap the wire around the exterior of the arms. It is apparent at a glance that this involves an unnecessary amount of work.

Another objection to the employment of a complete sleeve or cap is this: During the operation of securing the corn to the handle it is necessary to secure the latter in a rigid vertical position. This is usually done by employing a collar with a thumb-screw working through the same and impinging against the broom-handle. In order, therefore, to adjust a cap or sleeve by passing over the end of the handle, the labor of removing the collar and thumb-screw would necessarily be entailed.

From the foregoing it is obvious that a perfectly successful device needs to be a split shield (in contradistinction to a complete cap or sleeve) provided over its exterior surface with a series of lugs arranged at an incline so as to form a spiral pathway, with a wire used in connection with the shield, said wire having its lower end attached to the base of the handle, then coiled around the straw, then brought up to the point where the shield is located and passed between the joint thereof, and finally wrapped upwardly around the exterior surface of the shield, the wire occupying the inclined grooves and secured at its extreme end to a tack driven in the handle. All these points are covered in my invention, and the result is that the difficulties heretofore met with have been overcome in a simple and expeditious manner.

Referring to the drawings forming a part of this specification, in which similar letters of reference are used to denote corresponding parts, Figure 1 is a broken perspective of a broom provided with my improved shield; Fig. 2, a top plan view of said shield. Fig. 3 is a view of a modified form; Fig. 4, a cross-sectional view of Fig. 3.

The letter A indicates the shield proper, which is stamped, preferably, in the shape of a partial crescent and has formed thereon the projecting lugs B. (Illustrated by Figs. 1 and 2.) These lugs are so arranged at an incline that when the shield is secured to the broom-handle the pathway C therebetween will form a spiral for the winding of the wire. This arrangement of the pathway permits of the

wire being spirally wound thereon, thus causing the tension upon the ends of the broom-corn to be uniform throughout the entire shield. The end D of the shield I prefer to form free of corrugations or lugs. The wire is wound within the lugs or corrugations until gradually carried off at the upper end of the shield, whence it is secured to the broom-handle by means of the tack E or the like.

It is not necessary that the invention be confined to lugs or corrugations, for I am aware that other means may be employed for providing the spiral pathway for the winding of the wire.

In Figs. 3 and 4 I have illustrated a modified form of my invention designated by the letter E, which consists of a shield having formed thereon a number of longitudinal ribs or corrugations F, which do not run the entire length of the shield, thereby leaving free edges for overlapping. These corrugations, as in the case of the construction shown in Figs. 1 and 2, are so arranged at an incline that when the shield is secured to the broom-handle the pathway G therebetween will form a spiral for the winding of the wire.

Having thus described my invention, what I claim as new, and desire to secure protection in by Letters Patent of the United States, is—

The combination of a broom-handle, a split shield applied thereto, provided with a series of lugs or projections arranged at an incline so as to form a spiral pathway, said shield adapted to inclose the ends of the broom-corn, and a wire having one end secured to the base of the handle below the shield and its other end continued upwardly and passing out between the joint at the lower end of the shield, and then wound upwardly in the spiral grooves until a point is reached above the shield, where its extremity is secured to the broom-handle, substantially as set forth.

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

FRANK ZAN.

Witnesses:

N. A. ACKER,  
BERT SCHLESINGER.