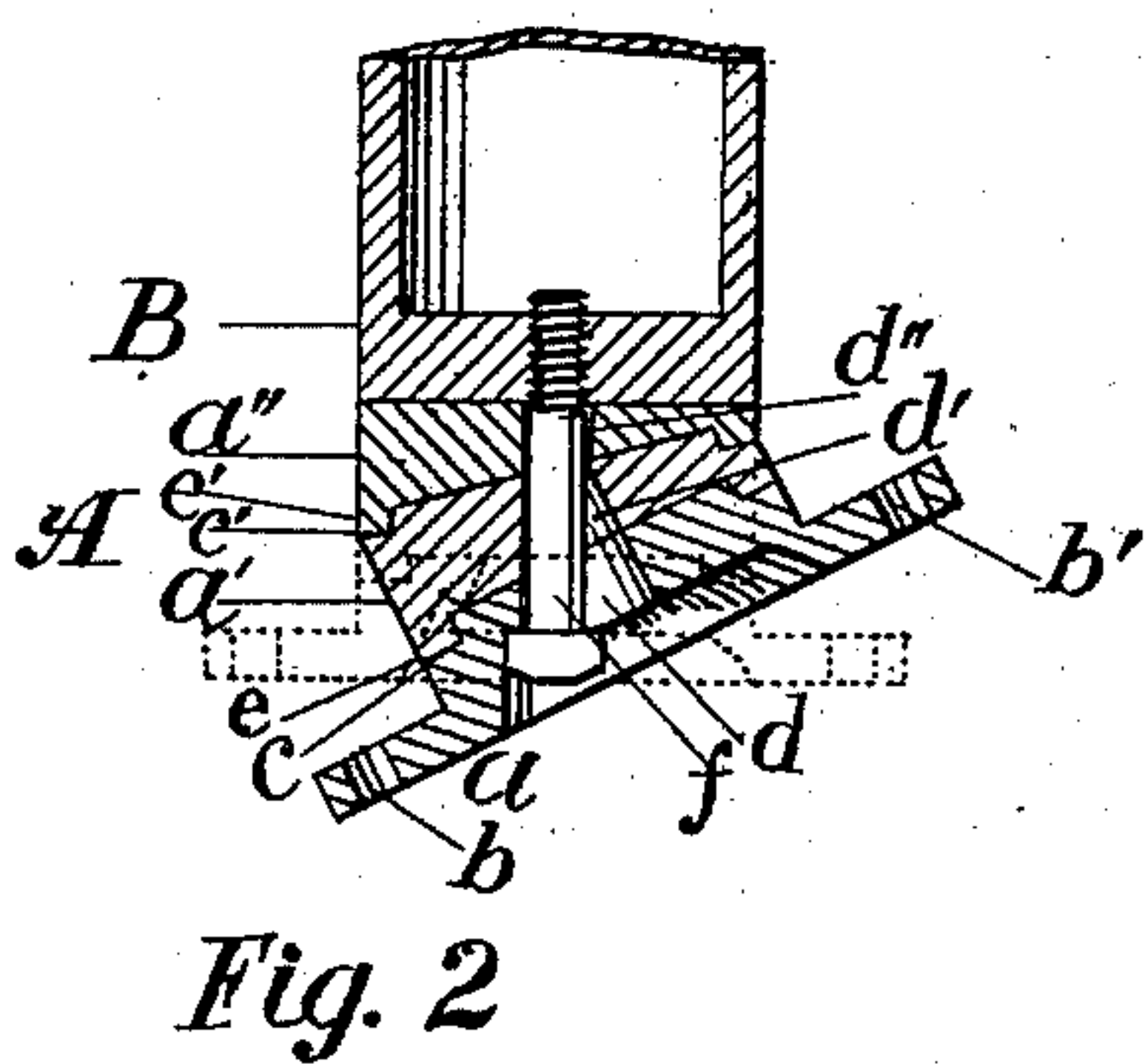


**G. M. BEERBOWER.**  
**FENCE.**

(Application filed Apr. 11, 1900.)

(No Model.)



**WITNESSES:**

H. R. Mitchell  
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INVENTOR

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# UNITED STATES PATENT OFFICE.

GEORGE M. BEERBOWER, OF NEW YORK, N. Y., ASSIGNOR TO THE NEW YORK ZOOLOGICAL SOCIETY, OF SAME PLACE.

## FENCE.

SPECIFICATION forming part of Letters Patent No. 656,314, dated August 21, 1900.

Application filed April 11, 1900. Serial No. 12,492. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE M. BEERBOWER, a citizen of the United States, residing in New York city, in the county and State of New York, (whose address is One Hundred and Eighty-third street and Southern Boulevard, New York city,) have invented a new and useful Improvement in Fences, of which the following is a specification.

My invention relates to improvements in fences which are constructed of iron and in which posts and rails are employed, to either or both of which may be attached a lattice or grille work; and the objects of my improvement are, first, to provide a post-footing which may be secured to the surface of rock, which surface may be level or inclined in any direction, said footing being adjustable to support the post in an upright position without supplemental bracing, and, second, to furnish a post-base capable of being lengthened or shortened to compensate for various depths of deposit of earth upon the surface of the rock, causing the proper portion of the post to project above the surface of the earth. I attain these objects by means of the device illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of a post having fragments of rails and lattice attached, portions being broken away to more clearly exhibit the construction; Fig. 2, a sectional view of the footing adjusted for an inclined surface and drawn on an enlarged scale; Fig. 3, a horizontal section on the line 1 1 of the base, showing it in position for telescoping to adjustment; Fig. 4, a similar view of the same as it appears when the members are clamped in position; and Fig. 5, a transverse section through the rails and lattice on the line 2 2, suitable to more clearly show the pivotal attachment of the lattice to the rails.

Similar letters refer to similar parts throughout the several views.

The post consists of the following principal sections: The adjustable footing A, the telescoping base B B', and the shaft C. The footing A has the flange-plate *a*, in which are formed the holes *b b'* to receive expansion-bolts for securing the plate to the surface of the rock in a well-known manner,

the annular rabbet *c*, which will be referred to hereinafter, and the hole *d*, which is made to resemble half of a cone in order to compensate for changes in line of axis, as will appear later in this description. The lower beveled adjusting-plate *a'* has an annular flange *e*, adapted to be seated in the annular rabbet *c*, before mentioned, for the purpose of centering this with the flange-plate *a*. The said adjusting-plate *a'* has the annular rabbet *c'*, which will be referred to below, and the hole *d'*, which is made to resemble half of a cone for the same purpose as explained of the hole *d* in plate *a*.

*a''* is the upper beveled adjusting-plate. It is provided with the annular flange *e'*, whose perpendicular face is everywhere equally distant from the center, suitable to fit into the annular rabbet *c'*, mentioned in the foregoing, and serves to center the two plates *a' a''* together—that is to say, retain the center of plate *a'* immediately under the center of plate *a''*, which it does by means of the flange *e'* engaging in the rabbet *c'* and completely surrounding the elevated portion of the aforesaid adjusting-plate *a'*, which forms the perpendicular face of the rabbet *c'*. The bolt *f* passes through the previously-mentioned semiconical holes *d d'* in the plates *a a'*, respectively, through the hole *d''* in the plate *a''* and is tapped into the bottom of the member B of the post-base and serves to hold all rigidly in position.

The post-base consists of two tubular members B B'. They may have one or more sides, four in the present instance, flattened as *o o'*, and member B is sufficiently larger than member B', so that when their flattened sides *o o'* are opposite, as shown in Fig. 3, they may readily be telescoped and set at the desired length. The member B' may then be rotated until the raised sides, as *p'*, bind tightly against the flattened sides, as *o* of member B. As shown in Fig. 4, they are retained in this position by the set-screw *g*, Fig. 1.

The shaft C of the post has the spheres *h h'* at the points where the ends of the rails are to be attached and have the elongated bolt-holes *i i'* in opposite sides of each. Their purposes will appear farther on. The upper and lower rails are similarly attached, so that



a description of one will suffice for both. The ends of the rails  $D D'$  are reamed to fit the sphere  $h$  and are threaded internally to receive the externally-threaded nuts  $j j'$ , as shown in Fig. 1. The nuts  $j j'$  are tapped to receive the threaded ends of the bolt  $k$ . The lattice has the bar  $E$ , whose ends are pivotally attached to the sides of the rails  $D' D''$  by the screws  $l l'$ , which arrangement permits the rails to incline upwardly or downwardly. The muntins  $F F'$  of the lattice are pivotally attached to the bar  $E$  by the rivets  $m m'$ , respectively, and are free to parallel the rails whether they be level or inclined.

The adjustable joints here set forth may be employed in a great variety of designs or patterns. Therefore I do not limit my claims to the particular pattern selected to exhibit the salient features which render the fence capable of being manufactured and carried in stock ready to be set up without special construction on undulating surfaces.

The process of setting up the fence described in the foregoing is as follows: The flange-plate  $a$  is placed in the desired location. The adjusting-plates  $a' a''$  are in turn placed in position and the upper surface of plate  $a''$  made level, which may be accomplished by rotating either or both plates, as may be necessary, the thickest sides of the beveled plates approaching each other until the inclination of the flange-plate  $a$  is compensated for, as shown in Fig. 2. Here appears the purpose for making the holes  $d d'$  conical, as previously mentioned. The footing now being properly adjusted, it is firmly bolted to the member  $B$  of the base. The member  $B'$  of the base is now bolted to the shaft  $C$  and is entered into the member  $B$ , having its flattened side  $o'$  opposite the flattened side  $o$  of the member  $B$ , as shown in Fig. 3. It is then lowered to the proper elevation and rotated until the raised side  $p'$  of member  $B'$  binds against the flattened side  $o$  of member  $B$ , as shown in Fig. 4. It is now secured in position by means of the set-screw  $g$ . Holes to receive expansion-bolts

are drilled into the rock to correspond with holes  $b b'$  in the flange-plate  $a$ . The bolts may now be entered and screwed down firmly. The externally-threaded nuts  $j j'$  are now screwed into the ends of the pipes  $D D'$ . One end of the bolt  $k$  is screwed into the nut  $j$ . The other end is passed through the sphere  $h$  and entered into the nut  $j'$ , and the pipe  $D'$ , with its nut  $j'$ , turned until it is screwed up tightly. For a last or connecting rail one end of the bolt  $k$  and the nut  $j'$  may have a left-handed thread. The muntins  $F F'$  of the lattice are now riveted to the bar  $E$  and the latter attached to the rails  $D' D''$  by means of the screws  $l l'$ , as clearly shown in Figs. 1 and 5.

Having thus described my improvement and the manner of its construction, I will now set forth what I regard as new, and desire to secure by Letters Patent of the United States, in the following claims:

1. In a fence, the combination with the flange-plate  $a$  having the annular rabbet  $c$  and the hole  $d$ , of the beveled adjusting-plate  $a'$  having the annular flange  $e$ , the semiconical hole  $d'$  and the annular rabbet  $c'$  all substantially as and for the purposes set forth.

2. In a fence, the combination of the beveled adjusting-plate  $a'$  having the annular rabbet  $c'$ , the hole  $d'$  and the annular flange  $e$  with the beveled adjusting-plate  $a''$  on which is formed the annular flange  $e'$ , all as described.

3. The combination, in a fence, of the flange-plate  $a$  having the annular rabbet  $c$  and hole  $d$ ; the beveled adjusting-plate  $a'$  having the annular flange  $e$ , the annular rabbet  $c'$  and the semiconical hole  $d'$ ; the beveled adjusting-plate  $a''$  on which is formed the annular flange  $e'$  and the bolt  $f$  with the member  $B$  of the base, all as described and for the purpose specified.

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Witnesses:

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