No. 678,042. Patented July 9, 1901.

H. R. SARGENT.

RACK INSULATOR.

(Application filed May 1, 1901.)

(No Model.)

Fig. 1.

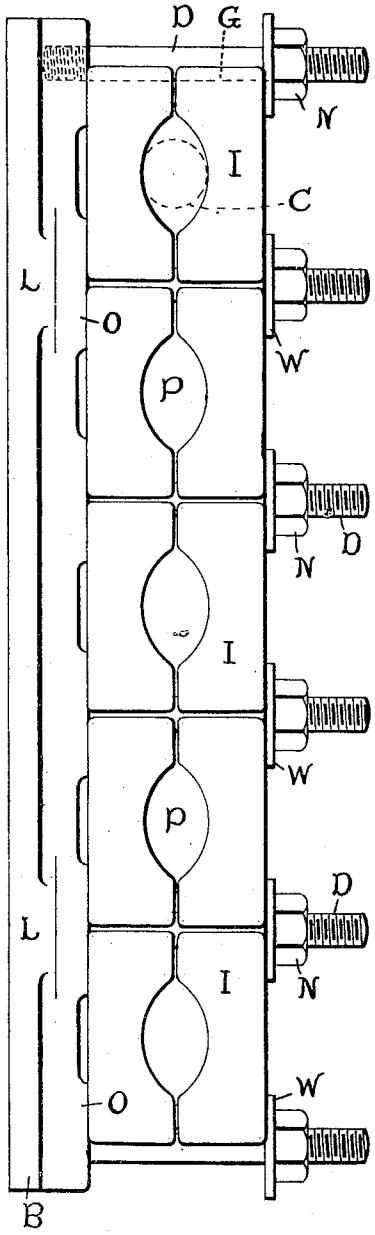


Fig. 2.

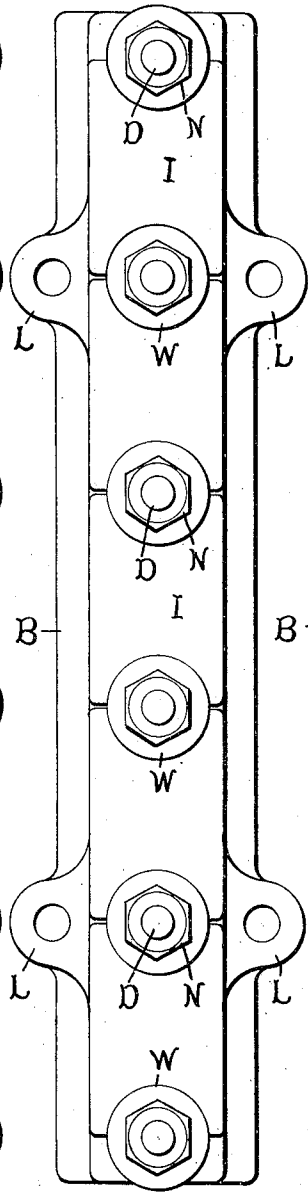
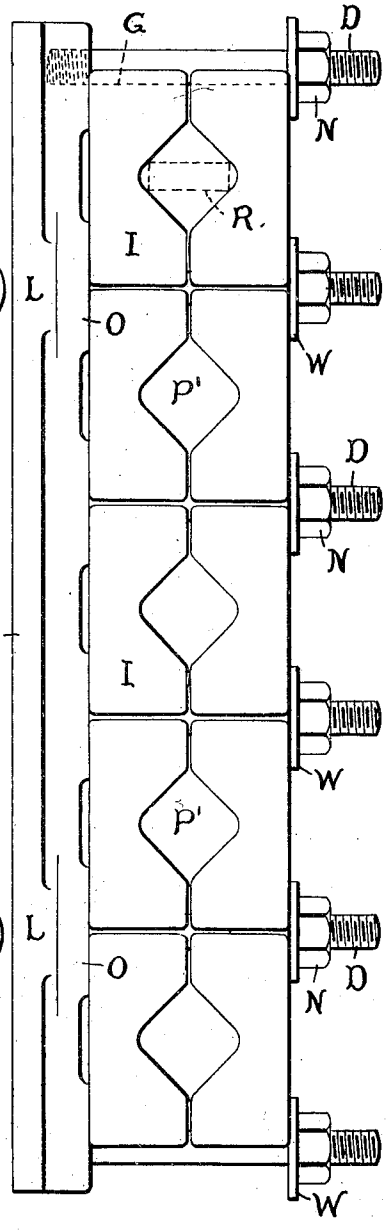


Fig. 3.



Witnesses:

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Benjamin B. Hull.

Inventor.

Howard R. Sargent,

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Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HOWARD R. SARGENT, OF SCHENECTADY, NEW YORK, ASSIGNOR TO GENERAL ELECTRIC COMPANY, OF NEW YORK.

RACK-INSULATOR.

SPECIFICATION forming part of Letters Patent No. 678,042, dated July 9, 1901.

Application filed May 1, 1901. Serial No. 58,265. (No model.)

To all whom it may concern:

Be it known that I, HOWARD R. SARGENT, a citizen of the United States, residing at Schenectady, county of Schenectady, State of New York, have invented certain new and useful Improvements in Rack-Insulators, (Case No. 2,054,) of which the following is a specification.

This invention relates to rack-insulators; and it consists in improvements in the construction of such devices, whereby their manufacture is simplified and they are made capable of great ranges of adjustment, so that a single rack-insulator can be adapted to retain many different sizes of conductors or cables.

Of the drawings, Figure 1 is a side elevation of a rack-insulator constructed in accordance with the invention. Fig. 3 is a modified form of the insulator also constructed in accordance with the invention, and Fig. 2 is a plan or face view of either of the insulators shown in Figs. 1 and 3.

The insulator comprises a metallic base B, which is preferably of cast-iron, and to which the insulating-clamps I are secured by means of the nuts N on the rods D. The clamps I are preferably composed of porcelain and the rods D of steel or wrought-iron. The metal base B is formed with perforated lugs L, by which it can be attached to the wall or other support. This rack-insulator is employed in central stations or other places where a number of cables or bus-bars are grouped together, and the number of pairs of insulating-clamps I can be varied to correspond with the number of cables or bus-bars.

Each insulating-clamp I is formed with grooves G in two opposite sides for the reception of the rods D, each rod being located in the grooves of two adjacent clamps, which thus form an opening for it. The rods D are threaded at both ends, so that they can be readily assembled in the base B and for the reception of the nuts N. The rods engage in bosses O of the base B, against each of which bosses lie two adjacent clamps I. Washers W, preferably of steel, engage the sides of two adjacent clamps, each washer being held against the clamp by a nut on the end of a rod D. When the cable C, as shown in Fig. 1, or the bus-bars R, as shown in Fig. 3, are in place in the opening P or P′, formed by the adjacent central grooves in one pair of insulating-clamps, the nuts are screwed up so as to clamp the cables or bus-bars tightly in place. The grooves of the clamps I, which form the openings P and P′, are of such shape that a single rack may be adapted to clamp conductors of many different sizes, the outer ends of the rods D being threaded to permit the reception of conductors of considerably-greater size than those shown in dotted lines at C and R. This is an important feature of the invention and the result is accomplished by making the openings between the two members of the pair of clamps elliptical, as shown in Fig. 1, or substantially elliptical, as shown in Fig. 3—that is to say, the openings are wider at their centers in the direction of clamping than at other portions in the same direction and gradually decrease in width from each side of the center. Thus, as shown in Fig. 1, a cable of the same diameter as the dimensions of the opening transverse to the direction of clamping can be as well secured between the clamps I as the small cable C shown, and cables ranging in diameter between this maximum and minimum can be clamped in the same way. With clamps constructed as shown in Fig. 3 the width of bus-bars which can be clamped is limited only by the length of the threaded portions of the rods N, and the thickness of bars which may be clamped may be nearly as great as the dimensions of the opening transverse to the direction of clamping.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a rack-insulator, the combination with a base, of a plurality of pairs of insulating-clamps, the clamps of each pair being formed with adjacent grooves forming an opening for the reception of the conductor, each pair of clamps being also formed with lateral grooves, so that adjacent pairs of clamps form openings between them, and independent bolts which are located in said openings and removably engage in the base, whereby each bolt secures two pairs of insulating-clamps in position.

2. In a rack-insulator, the combination with

a base, of a plurality of pairs of insulating-clamps, the clamps of each pair being formed with adjacent grooves, said grooves being wider at their centers in the direction of clamping than at other portions in the same direction, whereby conductors of different sizes can be clamped therein, each pair of clamps being formed also with lateral grooves, so that adjacent pairs of clamps form openings between them, and rods extending from the base through such openings, by which the clamps are held in position.

3. In a rack-insulator, the combination with a metal base, of a plurality of pairs of insulating-clamps, each pair being formed with adjacent grooves, which are wider in the direction of clamping than at their centers and gradually decrease in width on opposite sides of the centers, so that conductors of different sizes can be clamped therein, each pair of clamps being formed also with lateral grooves, so that adjacent pairs of clamps form openings, rods threaded on both ends and extending through said openings to engage in threaded portions of the metal base, and nuts on the other ends of the rods, whereby each nut secures two pairs of clamps in position.

In witness whereof I have hereunto set my hand this 29th day of April, 1901.

HOWARD R. SARGENT.

Witnesses:
BENJAMIN B. HULL,
FRED RUSS.