

(No Model.)

C. PHILLIPS.
ROPE DRILL JAR.

No. 321,753.

Patented July 7, 1885.

Fig. 1.

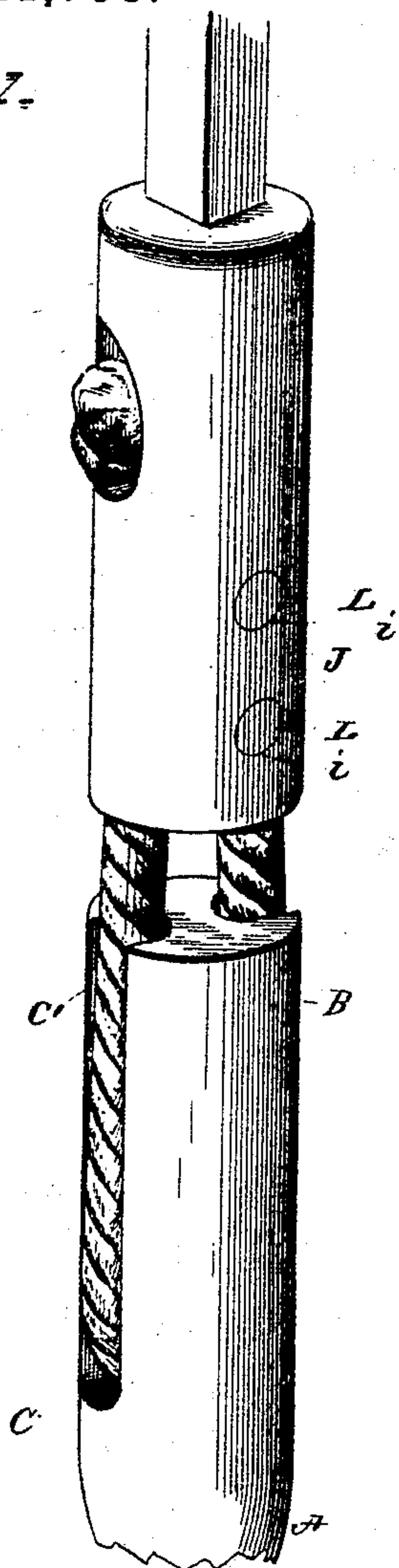


Fig. 2.

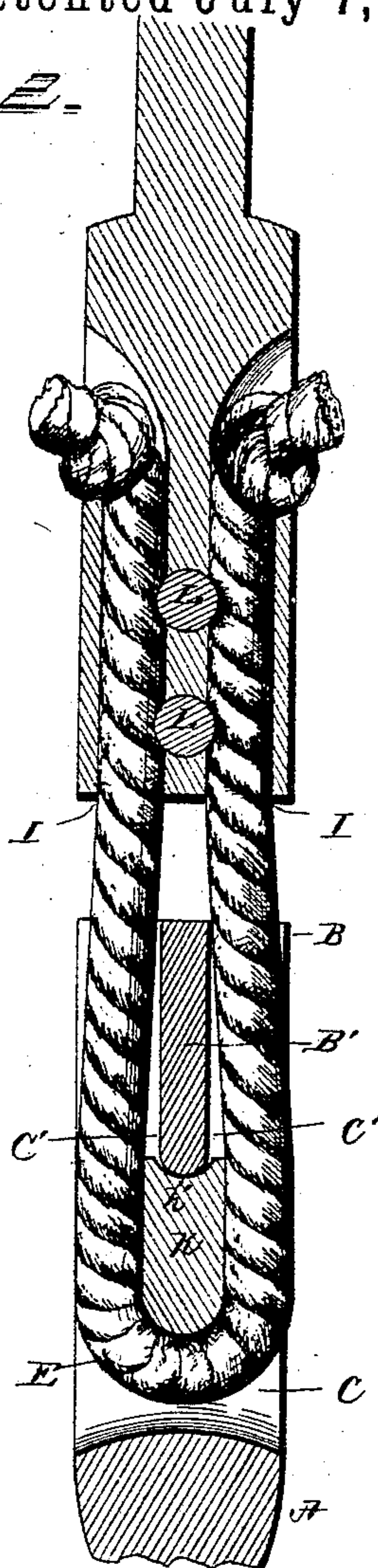
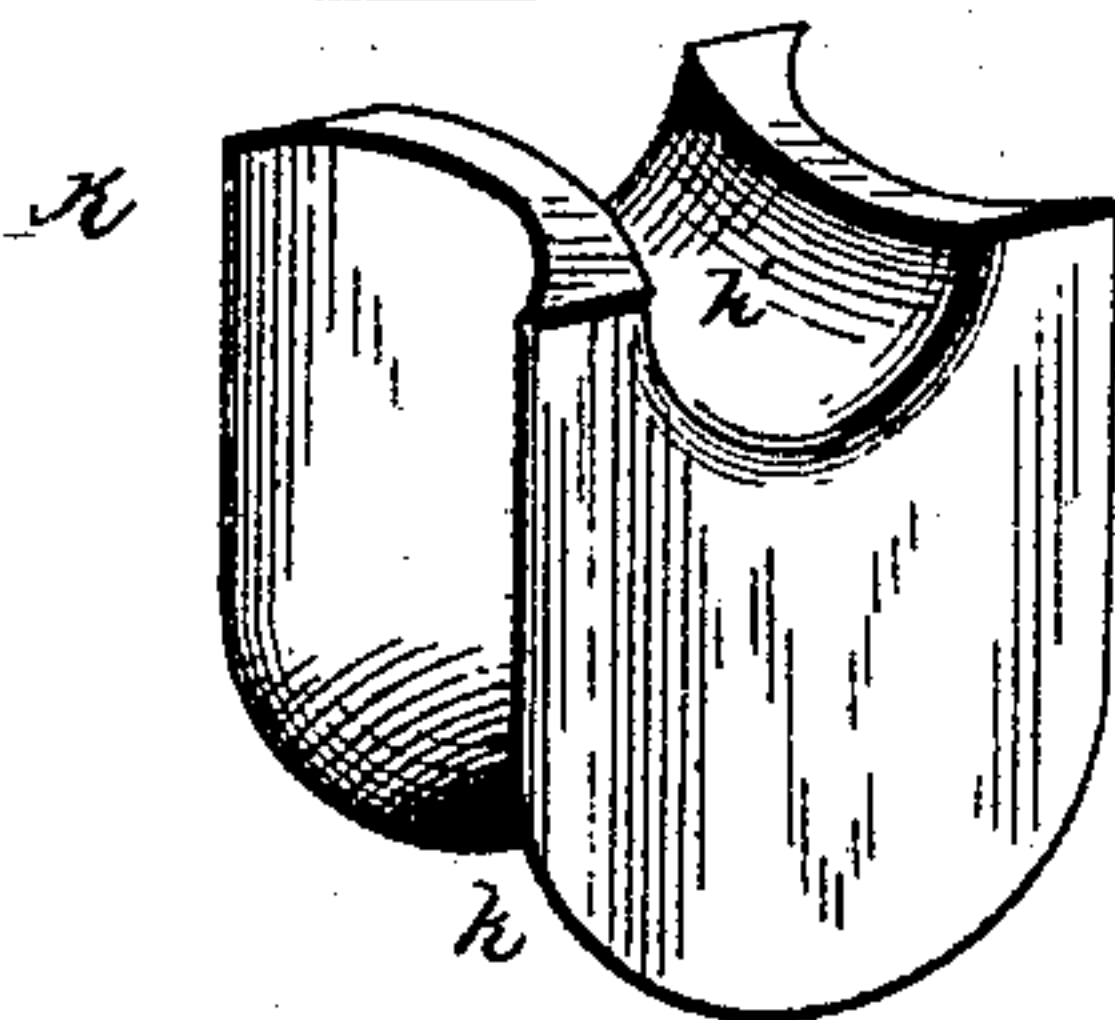


Fig. 3.



WITNESSES

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ROPE DRILL-JAR.

SPECIFICATION forming part of Letters Patent No. 321,753, dated July 7, 1885.

Application filed May 11, 1885. (No model.)

To all whom it may concern:

Be it known that I, CHARLES PHILLIPS, a citizen of the United States, and a resident of Richburg, in the county of Allegany and State of New York, have invented certain new and useful Improvements in Rope Drill-Jars; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to rope drill-jars; and it consists in certain new and useful improvements on the invention for which Letters Patent No. 311,157 were granted, bearing date of January 20, 1885, the said improvements consisting, first, in a removable grooved steel block, which is placed in operative position in the vertical slot of the drill stem or handle at the lower end of the "knocking-head," and around which the rope-bight passes, and, secondly, in the use of suitable keys, which pass through the jar box or weight and serve to prevent the ends of the rope-bight from slipping or pulling out of the said jar-box.

Referring to the annexed drawings, Figure 1 is a perspective view of my improved rope drill-jar. Fig. 2 is a longitudinal vertical sectional view of the same, taken on line *xx*, Fig. 1; and Fig. 3 is a perspective detail view of the removable grooved steel block.

The same letters of reference indicate corresponding parts in all the figures.

Referring to the several parts by letter, A represents the upper end of the drill-stem, and B the metallic handle, which is welded thereto, and is provided with the vertical slot C and the grooves C', extending from the said slot to the upper end of the handle, these grooves being of a sufficient depth and size to adapt them to receive the rope-bight E, which is large and strong enough to form a connection between the drill-stem and the box or weight.

K indicates a steel block, which is grooved on each side and at one end at *k*, to adapt it to receive the rope-bight E, the rear end of this steel block being provided with the re-

cess or groove *k'*, to adapt it to fit upon or rest against the lower rounded end of the knocking-head B'. The ends of the rope-bight pass up through the inclined apertures I of the box or weight J, and are knotted at their extremities to prevent their escape from the said apertures, the pins or keys L being driven through transverse holes *l* in the box or weight between the ends of the rope-bight, as shown in the drawings, thereby compressing the rope and preventing the extremities of the same from pulling through the jar, which is liable to happen where the said keys are not employed, this arrangement saving much loss of time and annoyance.

It will be seen that as the steel block, around which the rope-bight passes and to which the strain is applied in lifting the drill at the end of each down stroke, becomes worn through use it may be readily removed without the use of skilled labor and replaced by a new block, while the keys L effectually prevent the ends of the rope-bight from slipping out of the perforations I of the jar J, thereby effecting a great saving in time.

From the foregoing description, taken in connection with the accompanying drawings, the nature of my improvements will be readily understood without requiring further explanation.

It will be seen that my improvements are exceedingly simple in construction, and are at the same time very effective in their operation.

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

1. In jars for drilling machinery, the combination, with the drill-stem having the vertical slot and the grooves extending from the same to the top of the handle, of the jar-box having the inclined perforations, the rope-bight, and the keys passing through transverse perforations in the jar-box between the ends of the rope-bight, for the purpose set forth.

2. In jars for drilling machinery, the combination of the jar-box having the inclined apertures, the rope-bight, the drill-stem having the vertical slot and the grooves extending from the same to the top of the handle,

and the removable grooved steel block, arranged as described, for the purpose set forth.

3. In jars for drilling machinery, the combination, with the drill-stem having the vertical slot and the grooves extending from the same to the top of the handle, and the removable grooved steel block, of the rope-bight, and the jar-box having the inclined apertures and provided with the transverse keys, arranged to operate for the purpose set forth.

In testimony that I claim the foregoing, as my own I have hereunto affixed my signature in presence of two witnesses.

CHARLES PHILLIPS.

Witnesses:

JOHN R. WICK,

CHARLES F. FOX.