tridge; fourthly, in the cap or plug which is adapted to be laid over any such one of the cavities in the carrier as it may be desired shall not receive the cartridge, owing to some disarrangement of the parts or the bursting of the barrel, which may render that section of the gun inoperative.

The gun, speaking of it in general terms, is mounted upon its carriage, consisting of the wheels B B and the trail C, and is secured thereon by the usual cap, D, over the trunnions F, which project laterally from the frame H, by which the gun is supported and within which it revolves. The breech is raised and lowered by the elevating-screw E. The revolving portion, consisting of the lock-cylinder carrying the loading and firing mechanism, the cartridge-carrier, and the barrels, is attached to and supported by an axial or main shaft, N, whose forward end is journaled in the end piece of the frame H, and the rear end in a diaphragm or partition, I, within the casing J, which is supported by flanges on the frame H. The rotation of this shaft and the devices recited above, which are rigidly attached thereto, is accomplished by means of a hand-crank, K, whose shaft L carries a bevel-pinion, M, which gears into a bevel-wheel on the shaft N. (Shown clearly in Fig. 14.) The gearing is located in a chamber occupying the rear of the casing J, whose end is closed by a screw-cap, O, with an attached cascabel.

It has been stated that the cylinder P, which carries the loading and firing mechanism, the cartridge-carrier Q, and the barrels R are attached to the axial shaft N by a feather fitting into them and a groove in the shaft N, so as to revolve with it. The barrels are secured thereon by means of two disks or heads, S S′, which are fast on the shaft and in which they are secured, the rear disk, S′, being clamped between the sleeve T and the carrier Q, to be hereinafter described. The barrels R are secured in the said disks in any suitable way, and are shown as secured into the rear disk and passing through the forward disk, being fitted thereon, so as to be sufficiently tight to hold the contents of the casing U, which surrounds the barrels and holds water, plaster-of-paris, or other material to preserve the barrels from injurious expansion by excessive heating. The said fluid is inserted and withdrawn through the orifice U′, other provision, not necessary to describe, being made for more solid contents, should it be required.

The cartridge-carrier Q is fitted between the disk S and the cylinder P, and has a number of grooves in its periphery which are parallel with the axis of revolution, are in line with and agree in number with the barrels, which may be of any desired number. I have shown in my drawings but four, but the invention has no reference to specific number. These grooves are shown very clearly in Fig. 7, and are adapted as the carrier passes under the box containing the cartridges to receive each of them a cartridge to be thrust into the bore of the gun by the suitable mechanism, which will be described in detail presently, when the action will be more properly treated of under that general head of this specification which is devoted to describing the operation.

Immediately in the rear of the cartridge-carrier Q is a cylindrical chamber, P, likewise attached by feather or other suitable device to the axial-shaft N, and supported at the rear by the nut V, which screws upon the threaded portion of the shaft N. This cylinder is shown by a rear end elevation in Fig. 8 and side elevation at Fig. 9, as well as being shown in its place by the two longitudinal general sections, Figs. 3 and 4; but as it is a mere shell with longitudinal slots in its periphery and orifices in each end, the purpose of which slots and orifices will be presently explained, the sections, Figs. 3 and 4, only show the detached parts which are cut by the section, and do not give so correct an impression of its form and character as Figs. 8 and 9.

In the rear immediate neighborhood of the cylinder P, but not in connection therewith, is a cam-ring, W. (Shown in perspective in Fig. 5, and also in its place in the sections Figs. 3 and 4.) This cam-ring W abuts at its rear upon and is bolted to the diaphragm I, which is a part of and a partition in the stationary casing J. The exterior cylindrical portion of this stationary ring is embraced by the casing J, and the inside is provided with two cam-surfaces, W′ W″, which alternately advance and retract the loading mechanism, which will be presently described, and in connection therewith I shall take occasion to describe more explicitly the action of these cams to which I now merely refer.

Around the anterior portion of the cylinder P is another stationary ring, X, which I call the "cocking-ring," Fig. 6, whose forward edge is in the plane of revolution of the barrels, but its rear edge forms a spiral or cam surface, which impinges upon a lug on the lock-hammer, and withdraws it toward the rear until it reaches the end of the incline plane or cam-surface X′, when it drops off, and is thereby suddenly released to the influence of the spring and caused to strike the collar attached to the igniting-punch, as will be more fully explained in the next paragraph, which will explain in detail the construction of the moving parts, which load and explode the cartridge and withdraw the spent capsule or case.

The loading, firing, and cartridge-case-extracting device is shown in its place in Figs. 3 and 4, and is more particularly exhibited on a larger scale in Figs. 12 and 13, in the former of which it is shown in elevation and in the latter in section. It consists of a butt-piece, *a*, with lugs *a′ a″*, and united to the breech-pin *b* by the rounded shank *b′* of the latter, which forms a mandrel for the traversing of the sleeve *c* of the hammer, which has a longitudinal reciprocating motion upon it, and has a lug, *c′*, for a purpose to be explained. *d* is a collar and punch, the former of which