T. C. JOHNSON.

TAKEDOWN GUN.

APPLICATION FILED MAY 22, 1920.

1,373,888.

Patented Apr. 5, 1921.

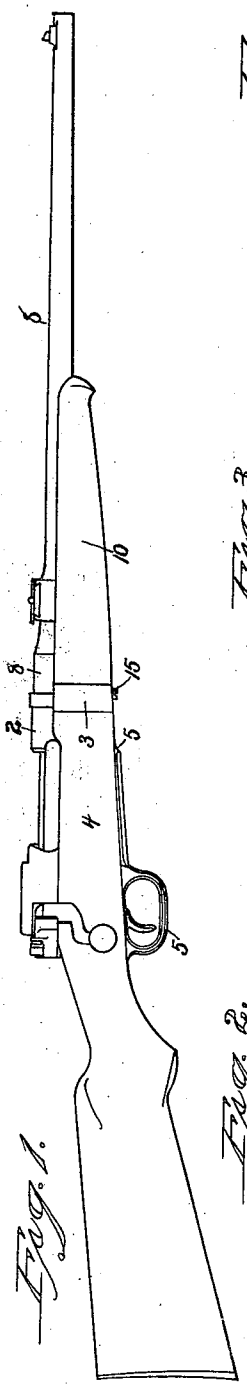

Fig. 1.

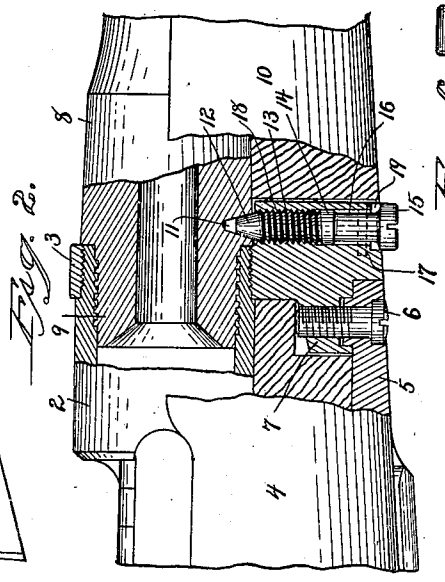

Fig. 2.

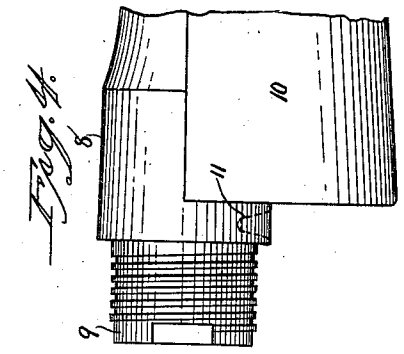

Fig. 4.

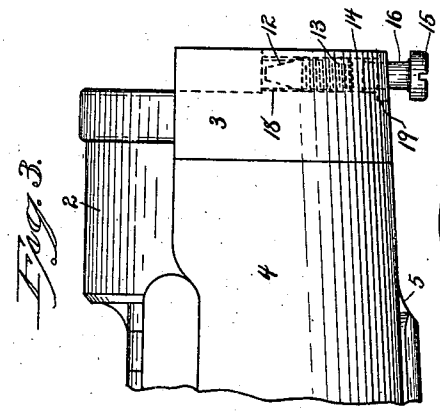

Fig. 3.

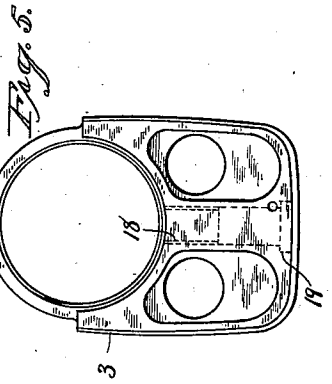

Fig. 5.

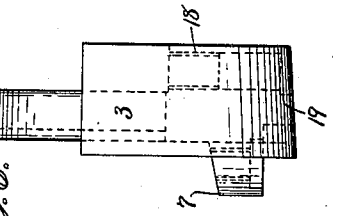

Fig. 6.

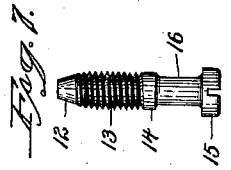

Fig. 7.

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UNITED STATES PATENT OFFICE.

THOMAS C. JOHNSON, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO WINCHESTER REPEATING ARMS CO., OF NEW HAVEN, CONNECTICUT, A CORPORATION.

TAKEDOWN GUN.

1,373,888. Specification of Letters Patent. Patented Apr. 5, 1921.

Application filed May 22, 1920. Serial No. 383,353.

To all whom it may concern:

Be it known that I, THOMAS C. JOHNSON, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Takedown Guns; and I do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this application, and represent, in—

Figure 1, a view in side elevation of a take-down gun embodying my invention.

Fig. 2, a broken view thereof partly in side elevation and partly in vertical section, showing its two main parts as put together and positioned and locked by my improved frusto-conical positioning-and-locking screw.

Fig. 3, a detached broken view in side elevation of the forward end of the receiver and butt-stock.

Fig. 4, a corresponding view of the rear end of the barrel and forearm.

Fig. 5, a detached view in front elevation of the receiver-extension as it appears when stripped.

Fig. 6, a side view thereof.

Fig. 7, a detached view of the frusto-conical positioning and locking screw.

My invention relates to an improvement in that class of take-down guns composed of two, separately organized, unitary structures or parts, adapted to be united for use and "taken down" or separated for transportation, one of these parts comprising the receiver and its system and the other comprising the barrel and its appurtenances; the object of my invention being to provide simple, reliable, and durable means for accurately positioning the unitary parts of the gun when the same is put together. My invention is characterized by the fact that in the take-down mechanism the function of holding the two unitary parts of the gun together and the function of accurately positioning the said parts with respect to each other are assigned to different and independent features of the mechanism, whereby the feature having the locking function protects the feature having the positioning function from deformation by the shocks and strains incident to the use of the weapon.

With these ends in view, my invention consists in a take-down gun having certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claims.

For the illustration of my invention, I have shown a two-part take-down gun comprising a receiver unit and a barrel unit, as these parts may properly be designated. The receiver unit comprises a receiver 2, a receiver-extension 3, a butt-stock 4, a trigger-guard 5, and a screw 6 for connecting the guard to the rearwardly projecting coupling-lug 7 of the receiver-extension; while the barrel unit consists of a barrel 8 formed at its rear end with a concentric threaded stem 9 and furnished with a depending forearm 10 which is secured to it in any convenient manner. The said receiver and barrel units contain other parts and appurtenances, which may have any desired form and have nothing to do with my present invention, which is applicable to all guns of substantially the type of the gun herein illustrated. The forward end of the receiver is internally threaded, as shown in Fig. 2, to receive the externally threaded stem 9 of the barrel. These complementary screw-threads have the function of holding the receiver-unit and the barrel-unit of the gun together when assembled for use and upon them fall all the shocks and strains due to discharge, such as the direct recoil due to the action of the powder gases, the counter-recoil due to the elasticity of the stock and receiver, and the "whip" of the barrel.

Directly in front of the threaded stem 9 of the barrel and in the lower face of the extreme rear end of the barrel proper, I locate a relatively deep frusto-conical positioning and locking socket 11, which receives the frusto-conical positioning dowel-end 12 of a screw 13 having an intermediate stop-shoulder 14 and a substantially cylindrical head 15 separated from the said shoulder 14 by a wide circumferential groove 16 for the reception of a locking-pin 17 by means of which the said screw 13 is prevented from falling out from the threaded hole 18 provided for the reception of the said screw and entering the lower face of the forward portion of the receiver-extension 3.

In practice, the frusto-conical socket 11 and frusto-conical dowel-end 12 of the screw 13 will be so proportioned, relatively, that

the upper end of the dowel-end screw will never come to a bearing upon the bottom of the socket during the useful life of the arm, whereby the accurate positioning of the two unitary parts of the gun is guaranteed to the user. For the reception of the substantially cylindrical head 15 of the screw, the lower face of the forward end of the receiver-extension 3 is formed with a straight-walled counter-bore 19 of sufficient depth to permit the said head to gradually enter the bore as wear takes place between the said frusto-conical socket 11 and dowel-end 12, and is compensated for.

In putting the gun together, the receiver-unit and the barrel-unit are screwed one into the other in the ordinary manner. This is purely a manual operation and, in the nature of manual operations, can never be done exactly twice alike. It is hardly conceivable, therefore, that at the end of the manual operation the receiver-unit and the barrel-unit will be left in that exact final relationship called for by the design of the gun. But it is easily within the power of the user of the gun to bring the frusto-conical recess of the barrel-unit into sufficiently close opposition to the frusto-conical nose of the take-down screw to permit the latter to be screwed home, whereby the said nose, acting upon the inclined walls of the recess operates to rotate the receiver and barrel units sufficiently to bring them into exact alinement, in which they are thereafter held. This rotation is, of course, a slight rotation, and will vary with each operation of the putting of the gun together. The shocks of recoil tending to pull the barrel and receiver apart fall entirely upon their heavy threads, which thus protect the nose of the take-down screw against any hammering, and hence from any deformation.

Without going further into the details of the gun herein shown, it may be described as a "take-down" gun of the type illustrated in my prior Patent, No. 1,163,156 of December 7th, 1915.

I claim:

In a take-down gun having a receiver-unit and a barrel-unit, the combination with a receiver provided at its forward end with a threaded opening and a depending abutment-lug, and a barrel provided at its rear end with a threaded shank adapted to be screwed into the said receiver, and also provided with an integral collar located immediately in front of the said shank and formed with a frusto-conical recess; of a take-down screw mounted in the said abutment-lug and provided with a frusto-conical nose adapted to enter the said frusto-conical recess, whereby after the receiver and barrel units have been manually screwed together and while the said take-down screw is being turned home, the wedge-like action of its frusto-conical nose upon the side walls of the frusto-conical recess will relatively rotate the barrel and receiver-units until they are brought into predetermined relative position, and whereby the threads of the receiver and barrel take the shocks of recoil and protect the said nose of the take-down screw from deformation thereby.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

THOMAS C. JOHNSON.

Witnesses:
ERIK S. PALMER,
A. E. HODGSON.