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H. E. WINANS & F. SINNOCK.

SPREADER FOR SHELLS.

APPLICATION FILED JUNE 1, 1907.

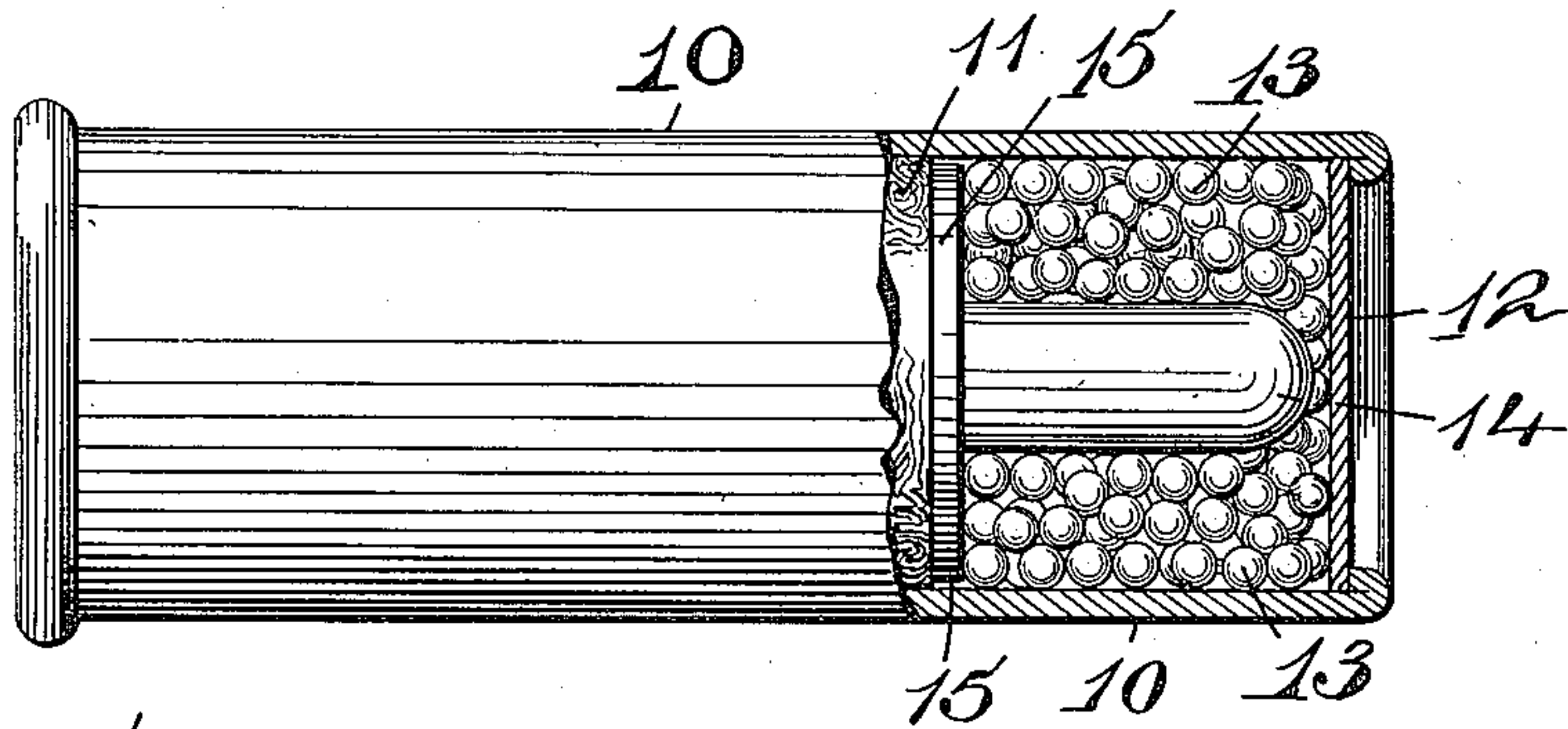


Fig. 1

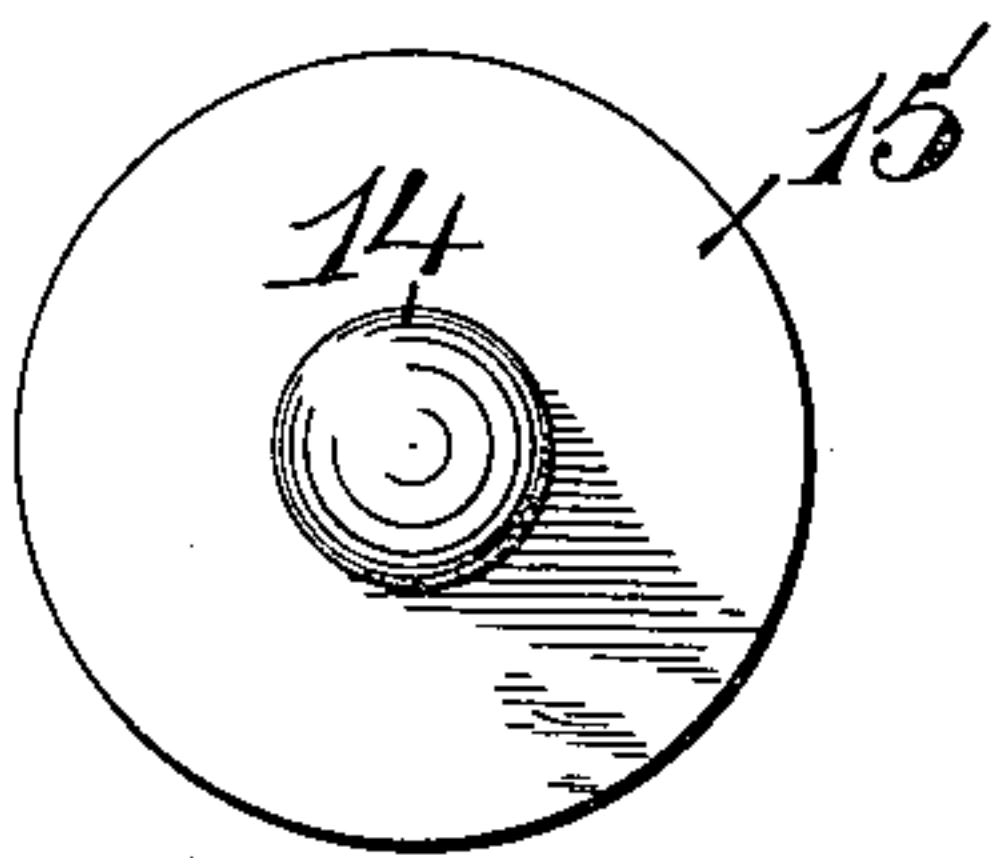


Fig. 2

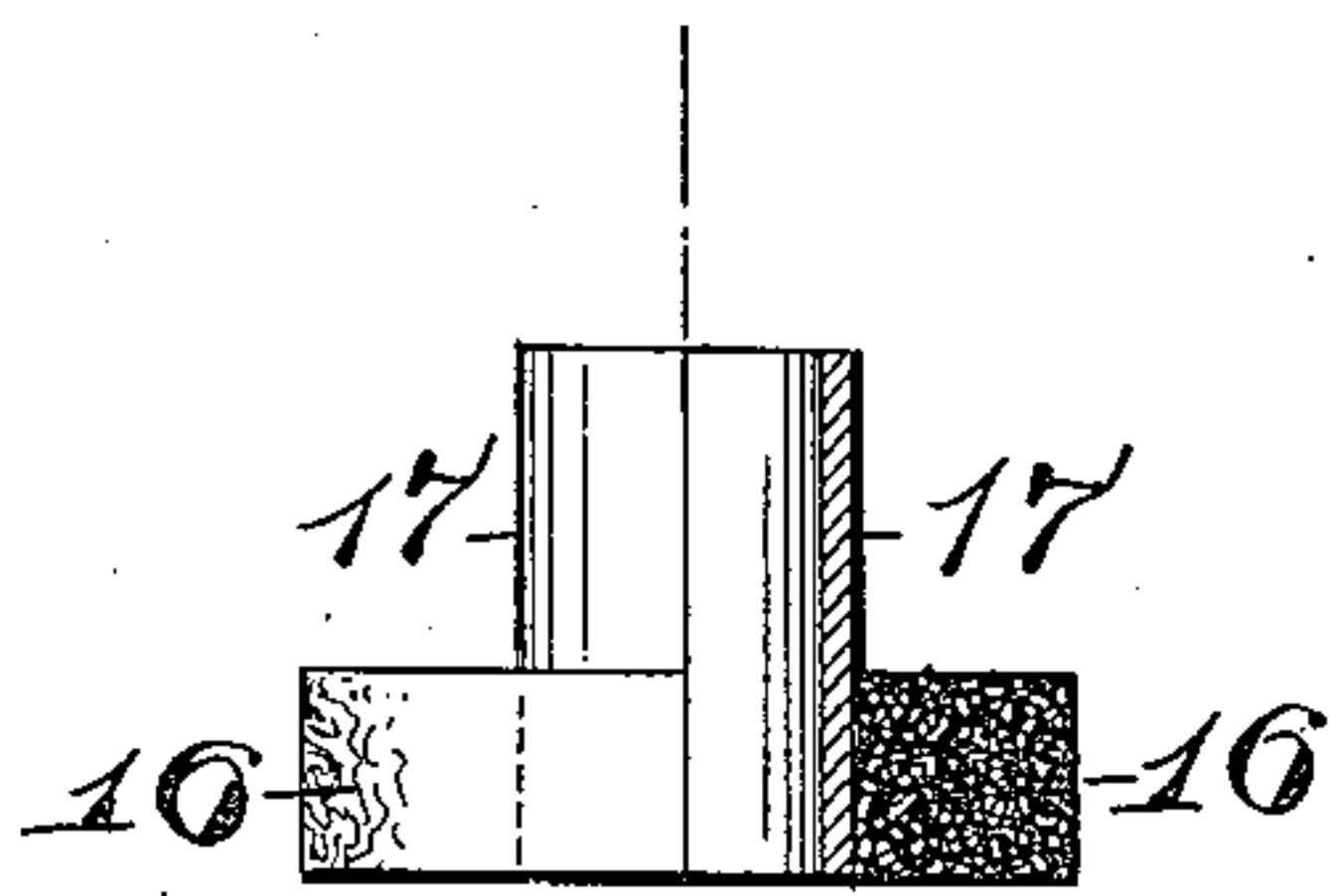


Fig. 3

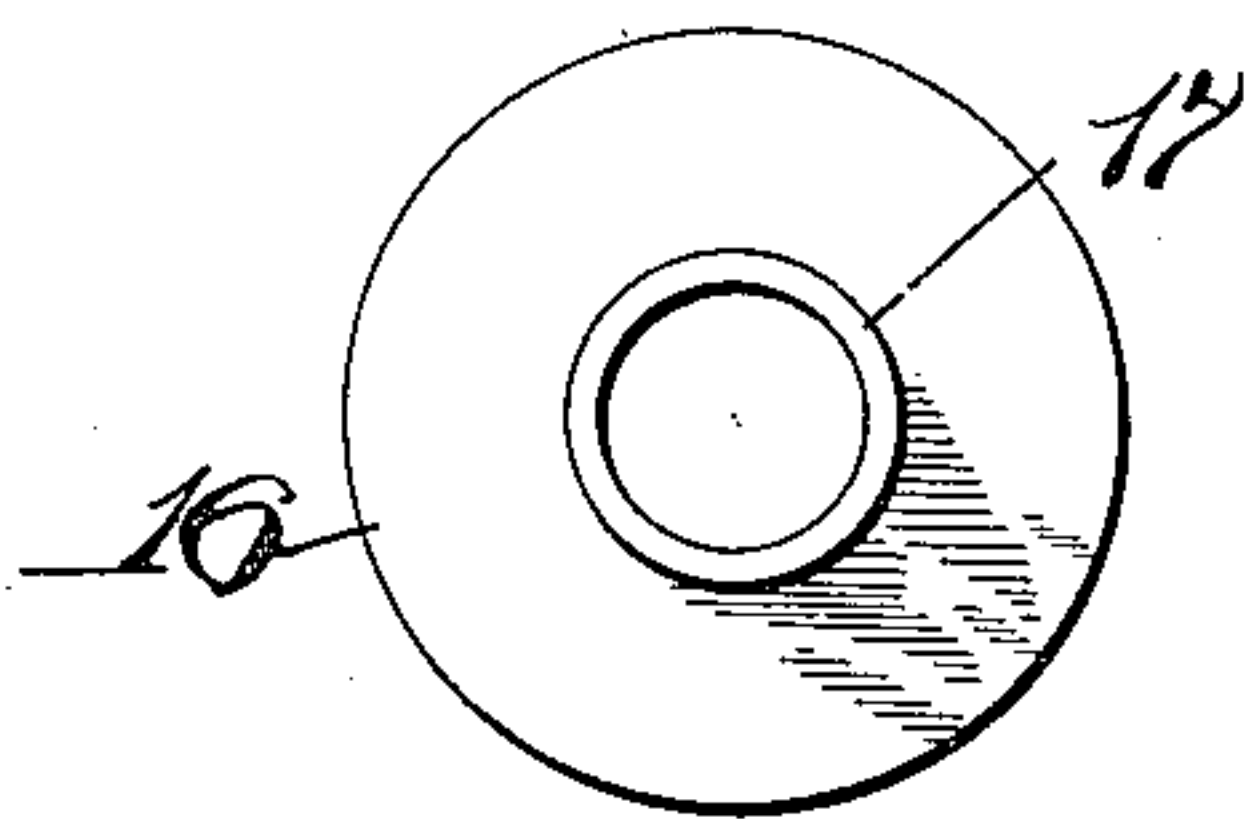


Fig. 4

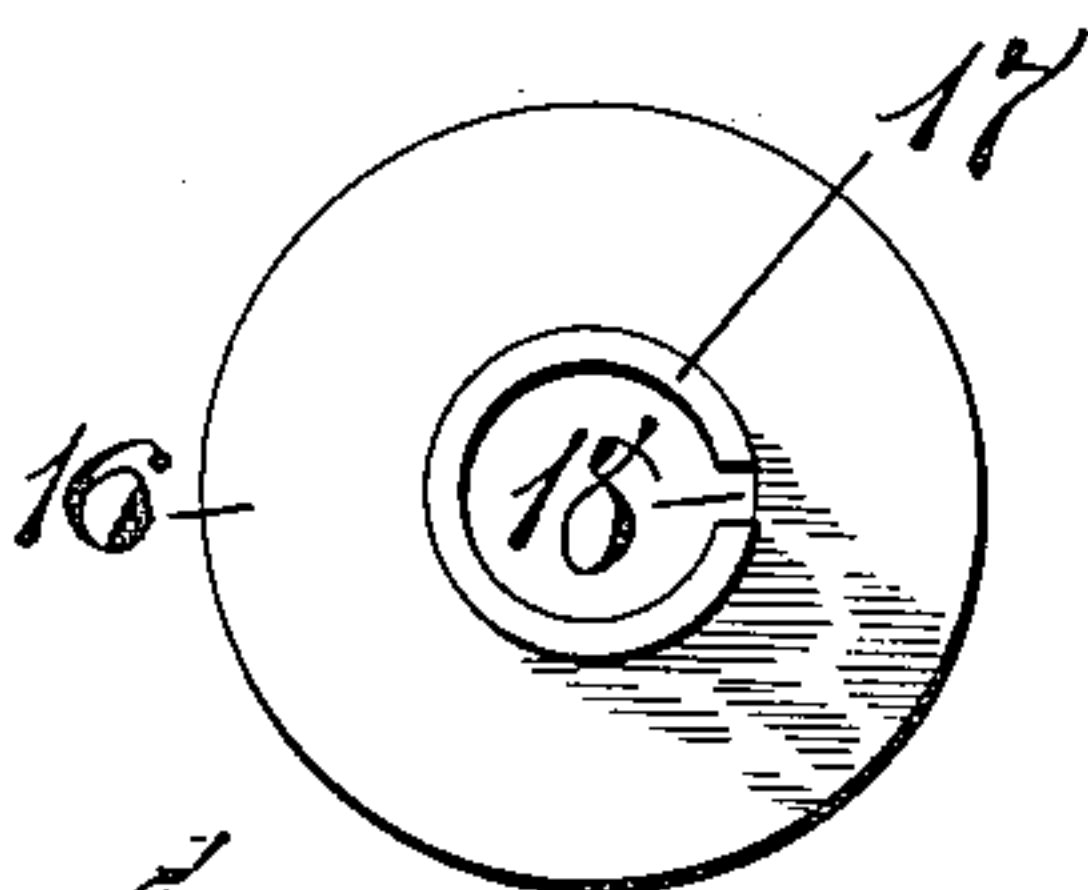


Fig. 5

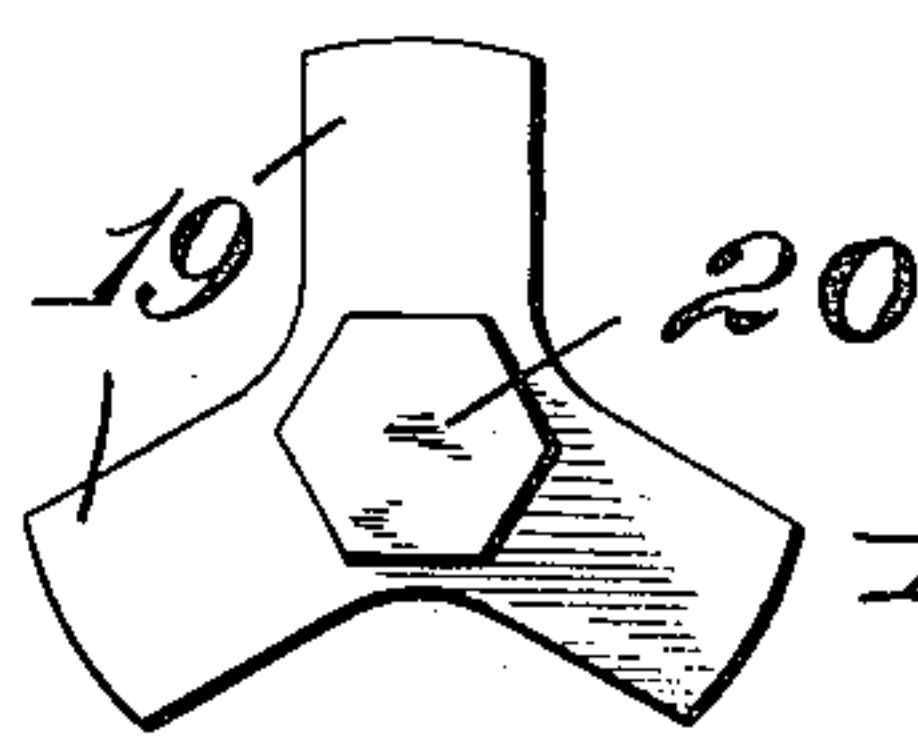


Fig. 6

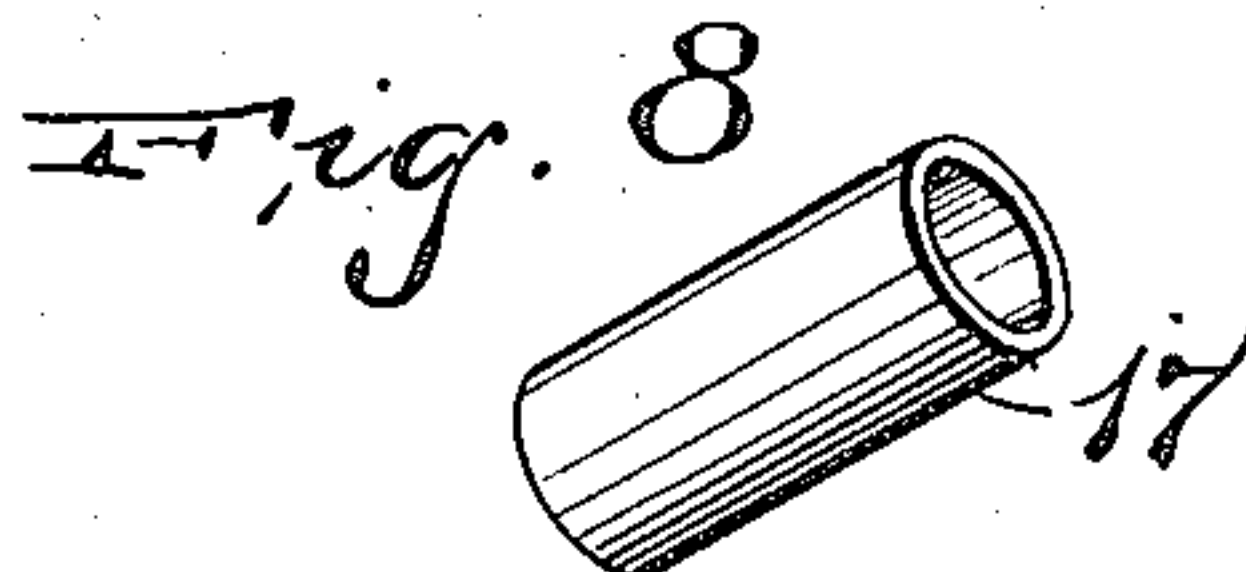


Fig. 7

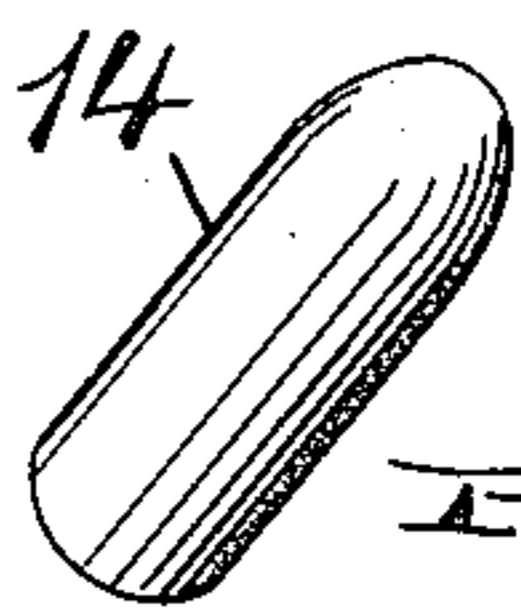


Fig. 8

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SPREADER FOR SHELLS.

No. 875,762.

Specification of Letters Patent.

Patented Jan. 7, 1908.

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To all whom it may concern:

Be it known that we, HENRY E. WINANS and FREDERICK SINNOCK, citizens of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Spreaders for Shells; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

Our improvement relates to a shot-spreader that is of economical manufacture, and one that is designed to be used in conjunction with charges of shot in cartridges, and secure a device that will increase the spread of shot, when used in choke-bore guns without, in any way, decreasing the velocity of the load.

Our invention takes the form of a disk or similar guiding means, and a post projecting therefrom, the device being preferably used with the post projecting in the direction of the flight from the gun.

The spreader is also designed to be used simply in the shape of a post placed in the shot and having its axis pointed in the direction of the flight it is to take, the action of the post in all the constructions acting to form a central element, when passing through the choke-bore of a gun, to prevent the shot from crossing, which crossing is at present caused, in a choke-bore gun, whereby the shot is given a tendency by the choke to be centered or to be moved toward the center, and a continuation of this movement makes the shot, on different sides, cross to the opposite side at a distance from the gun. This tendency is obviated in this construction, and more efficiency is secured for the shot in the cartridge.

The invention is illustrated in the accompanying drawing, in which

Figure 1 is a view showing a cartridge, one end in section, and a shot-spreader in place, the spreader being shown in elevation. Fig. 2 is a plan view of the shot-spreader. Fig. 3 is a view half in elevation and half in section of another form of spreader, and Fig. 4 is a top view of the device shown in Fig. 3. Fig. 5 is a top view of still another modified form, and Fig. 6 is a similar view showing both a modified form of guiding means in

place of a disk, and also a modified post. Fig. 7 and Fig. 8 are perspective views of posts used without the disk, the shot being the guiding means.

The invention is designed to be used in a cartridge 10 and rests on the powder wad 11, and the spreader and the shot are held in place by the shot wad 12. The shot 13 is inserted around the post 14 of the spreader, the post being fastened to a disk 15 that rests against the powder wad 11, and in this construction the post 14 projects in the direction of flight that the spreader and the charge are to take. In this form where the disk and post are made in one solid piece, they are preferably made of soft wood, cork, rubber or papiermâché, a thin metal, however, being adapted for the purpose. In this form the post and disk are made integral and can be cut out, molded, or stamped into shape.

In the construction shown in Fig. 3, the disk 16 is made with a central perforation in which fits a cylindrical post portion 17, the post in this case being hollow, and being of thin metal it permits a radial contraction, allowing the diameter of the post to be decreased by the pressure of the shot, when subjected to passage through the choke-bore of a gun. To make this contraction caused in this way more easy, we may provide the tube 17 with a longitudinal slot 18, shown in Fig. 5, and this construction also allows an easy insertion of the tubular post 17, allowing it to be compressed before it is inserted in the perforation in the disk 16. In these constructions, shown in Figs. 3, 4 and 5, the disk is preferably made of the material of which gun wads are made, and the posts are made of thin metal. We do not, however, limit ourselves to this material.

In Fig. 6 is shown a modification where the disk or guiding means for the spreader is cut away to form only arms 19, thus saving material and weight, and the post instead of being round, can be made rectangular as at 20, the figure illustrating a post that is a hexagon in cross-section.

Fig. 7 and Fig. 8 show a post without a guiding means, the shot acting to guide the post in its flight, the post, however, having the same function of keeping the shot from being forced in a diagonal direction, across the axis of the gun, by the choke-bore thereof.

The office of the arms 19 or the disks in the previous figures, is to guide the spreader

through the barrel of the gun so that it will not turn over, and the post is designed to spread the shot, and being made of the material hereinbefore specified, of a more or less soft nature, the post becomes contracted in going through a choke-bore gun, the charge of the shot forcing the post to assume a slightly smaller diameter, and when the spreader has emerged from the gun, the shot are caused to be thrown out to cover a wider area than they would assume were no spreader in the charge.

This spreader also has the advantage that it is easily loaded into a cartridge, being simply set in on the powder wad, and the shot then poured around it. The spreading of the shot with this device may be increased or diminished by lengthening or shortening the post.

Having thus described our invention, what we claim is:—

1. An improved shot spreader consisting of a disk to guide the device, and a post having substantially parallel sides and adapted to permit the movement of shot around it, the post projecting from the disk in the direction of its flight.

2. An improved shot-spreader comprising a disk to guide the device through the bore of a gun, and a central straight-sided post secured to and projecting from the disk in the direction of its flight.

3. An improved shot-spreader comprising a post having a smooth exterior, and means on the rear end of the post for guiding the device through the barrel of a gun.

4. An improved shot-spreader comprising

a post having transversely arranged guiding means secured to its rear end, and adapted to guide the spreader in a gun barrel.

5. An improved shot spreader comprising a cylindrical post secured to a disk and adapted to project from the disk in the direction of its flight.

6. An improved shot spreader comprising a cylindrical open-ended post adapted to be placed centrally and longitudinally in the shot chamber of a cartridge.

7. An improved shot spreader comprising a disk having a perforation therein, and a cylindrical open-ended post, secured in the perforation.

8. An improved shot spreader comprising a disk having a perforation therein, and a cylindrical open-ended post having a longitudinal slot and being arranged in the perforation of the disk.

9. An improved shot spreader comprising a post adapted to be placed in the shot chamber of a cartridge with its axis in line with the direction of its flight, the post having a smooth exterior permitting the movement of shot around it, the post also being slightly compressible transversely the shot guiding the spreader in its passage through the gun barrel.

In testimony, that we claim the foregoing, we have hereunto set our hands this thirty first day of May 1907.

HENRY E. WINANS.
FREDERICK SINNOCK.

Witnesses:

E. A. PELL,
JOHN OTTO.