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C. LA DOW.

MEANS FOR CONCENTRATING MULTIMISSILE PROJECTILES.

APPLICATION FILED AUG. 8, 1904.

NO MODEL.

Fig. 1.

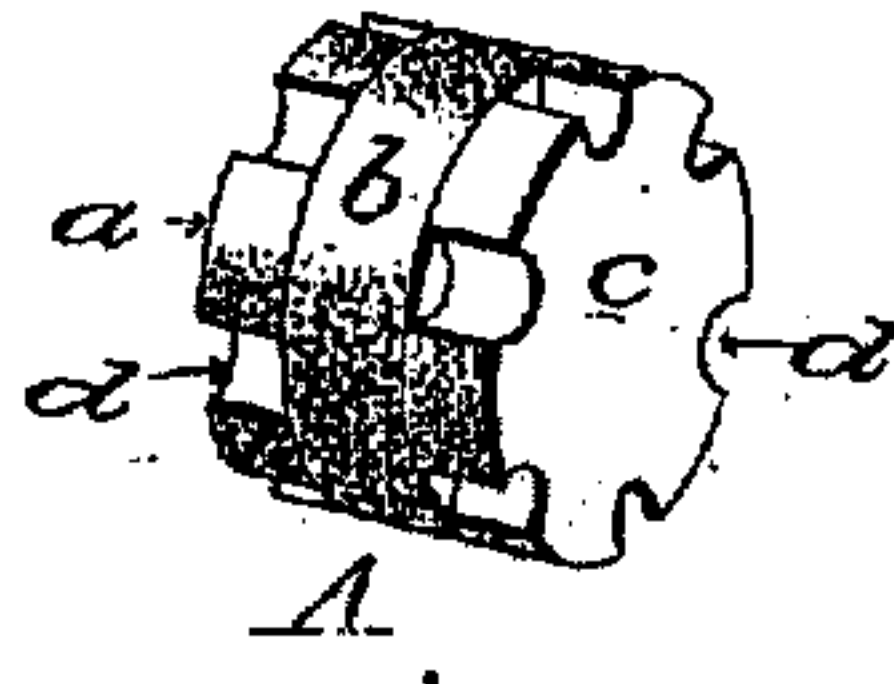


Fig. 2.

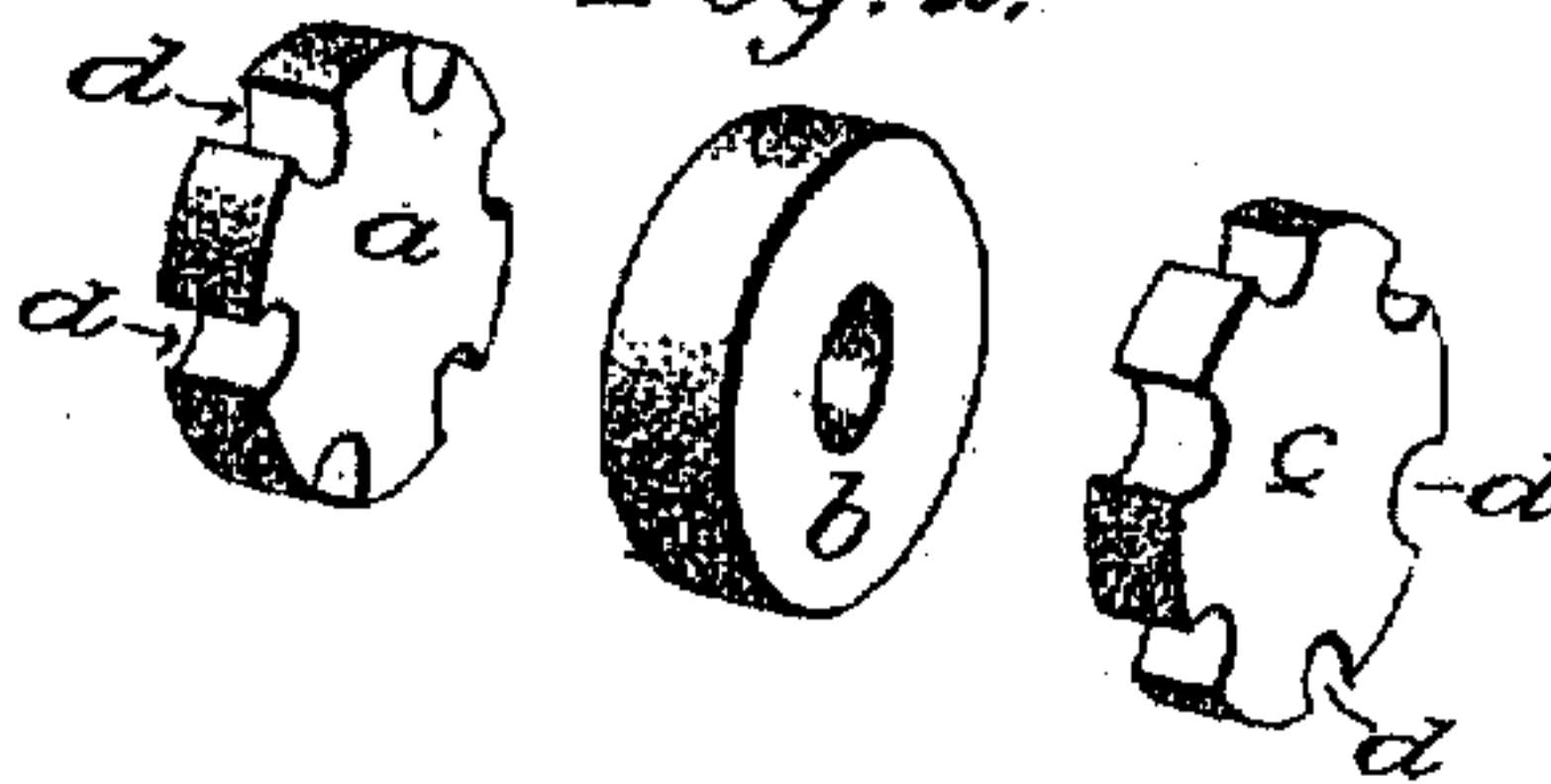
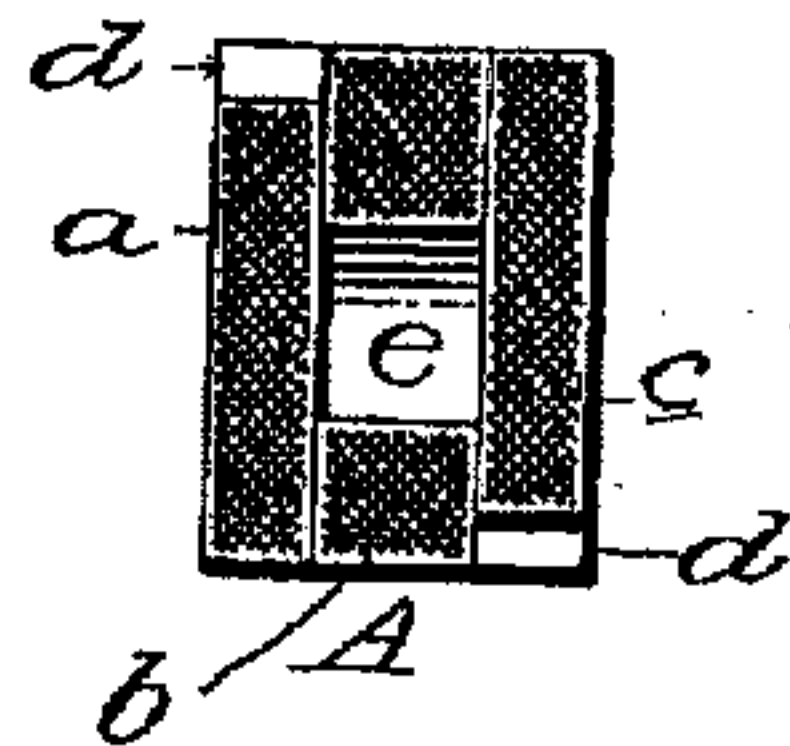


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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MEANS FOR CONCENTRATING MULTIMISSION PROJECTILES.

SPECIFICATION forming part of Letters Patent No. 776,920, dated December 6, 1904.

Application filed August 8, 1904. Serial No. 219,973. (No model.)

To all whom it may concern:

Be it known that I, CHARLES LA DOW, a citizen of the United States, residing at Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Wads or Separators for Producing Concentration or Close Shooting of Multimissile Projectiles, of which the following is a specification.

10 This invention consists in a specific form of structure designed to insure concentration or "close shooting" of multimissile charges of projectiles, such as grape-shot, canister, and the like.

15 The present device is more especially intended for sale to the trade generally and for use by sportsmen who load their own cartridges or use loose ammunition.

20 The principle upon which the present construction is based is that by permitting a portion of the gases generated by the combustion or explosion of a propelling or powder charge to pass to the circumferential portion of a multimissile charge said charge is thereby
25 enveloped and held together by the gases and caused to move in a more compact mass than under the ordinary mode of loading, in which a solid and close-fitting wad is interposed between the propelling and projectile charges.

30 In the accompanying drawings, Figure 1 is a perspective view of the wad or separator complete; Fig. 2, a perspective view showing the three members of which the wad or separator is composed separated one from the
35 other, and Fig. 3 a longitudinal sectional view of the same.

In the drawings, A designates the wad or separator as a whole. It is composed of three members *a*, *b*, and *c*, of which members *a* and
40 *c* have solid central portions and notched peripheries, the notches *d* being variable in form, but here represented as semicircular. The function or purpose of the notches *d* is to permit under certain circumstances a passage of
45 the gases incident to combustion or explosion of the propelling charge from one to the other side or face of the wad so cut away, and it is therefore obvious that whether these take the form of notches or indentations, on the one

hand, or mere removal of the periphery in segments or as a continuous ring or annulus is relatively unimportant. The notched form is, however, deemed advantageous in that the retained portions of the periphery fit and fill the shell and the bore of the gun, and thus
55 maintain the wad in its proper relation thereto, giving to each passage formed by the notches *d* its proper capacity and relative value.

It will be observed by reference to Figs. 1 and 3 that the notches *d* of the wad *a* are in
60 alinement with or in opposition to the intervening solid circumferential portions of wad *c*, and vice versa, while said notches of both wads *a* and *c* are closed at their proximate
65 ends by the interposed wad *b*. It will be seen by reference to Figs. 2 and 3 that wad *b* has a central perforation or opening *e*. So long as the several wads or any two of them are in contact face to face the passages formed by the notches *d* are closed; but owing to the great
70 pressure produced by the gases some portion thereof will before the charge leaves the muzzle of the gun pass by way of notches *d* of wad *a* between the proximate faces of said
75 wad *a* and wad *b* to the central opening *e* of the latter and thence between the faces of wads *b* and *c* and through notches *d* of the latter to the circumference or circumferential portion of the multimissile projectile charge (shot or other) placed in front of it.
80

The wads *a b c*, making up the separator A, are lightly cemented together in order that they may maintain when handling and in making up the load or charge their proper relation to each other and also to avoid the necessity of assembling at time of use. This cementing, however, will not preclude the travel of the gases in the manner described, a fact abundantly demonstrated by actual experiment and practical use of this separator.
85 90

In practice it is found advisable to make the wads *a* and *c* of relatively firm or compact material, such as heavy cardboard, while the intervening wad or member *b* is advantageously made of elastic material, such as felt,
95 and this felt is advisably faced with paper, as is usual with felt wads generally.

The wad or separator thus constructed may

be used in loading cartridges or making up fixed ammunition, or it may be introduced directly into the barrel of the gun when employing loose ammunition.

5 In speaking of "cartridges" I mean to embrace fixed ammunition generally and to include canister and grape-shot or any other multimissile projectile charge combined with a propelling charge. In other words, the device here set forth is to be used with any multimissile projectile charge, large or small and whether the charge be made up in the form of fixed or loose ammunition.

15 The above description sets forth the preferred form of my separator; but measurably good results may be attained without placing the notches *d* in the members *a* and *c* out of alinement. Better results are, however, produced by staggering or offsetting these notches. While, therefore, I shall specifically claim this offsetting, my invention includes also this three-part separator, whether the notches be in or out of alinement. I have also observed that if the intermediate wad be combined with notched wads such as shown, but be not perforated, the gases directed by the notches of the rear wad to the periphery of the intermediate wad will force or cut channels or passages through the periphery of the intermediate wad from face to face and also cause closer or more concentrated shooting of

the charge than the ordinary solid wad alone.

Having thus described my invention, I claim is--

1. The herein-described wad or separator comprising the members *a*, *b*, *c*, members *a* and *c* having peripheral notches, the notch of one being out of alinement with the notch of the other; and an interposed wad or member having a central perforation or opening.

2. A wad or separator comprising two or more members cut away at their peripheries, and an interposed wad provided with a central perforation or opening.

3. The herein-described wad or separator comprising wads or members *a* and *c* provided with peripheral notches *d*, and an interposed wad *b* provided with a central opening *e*.

4. A wad or separator comprising two peripherally-notched wads and an interposed wad covering the notches of the other.

5. A wad or separator, comprising a plurality of wads cemented together, one having its periphery notched or cut away.

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

CHARLES LA DOW

Witnesses:

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FANNIE WISE.