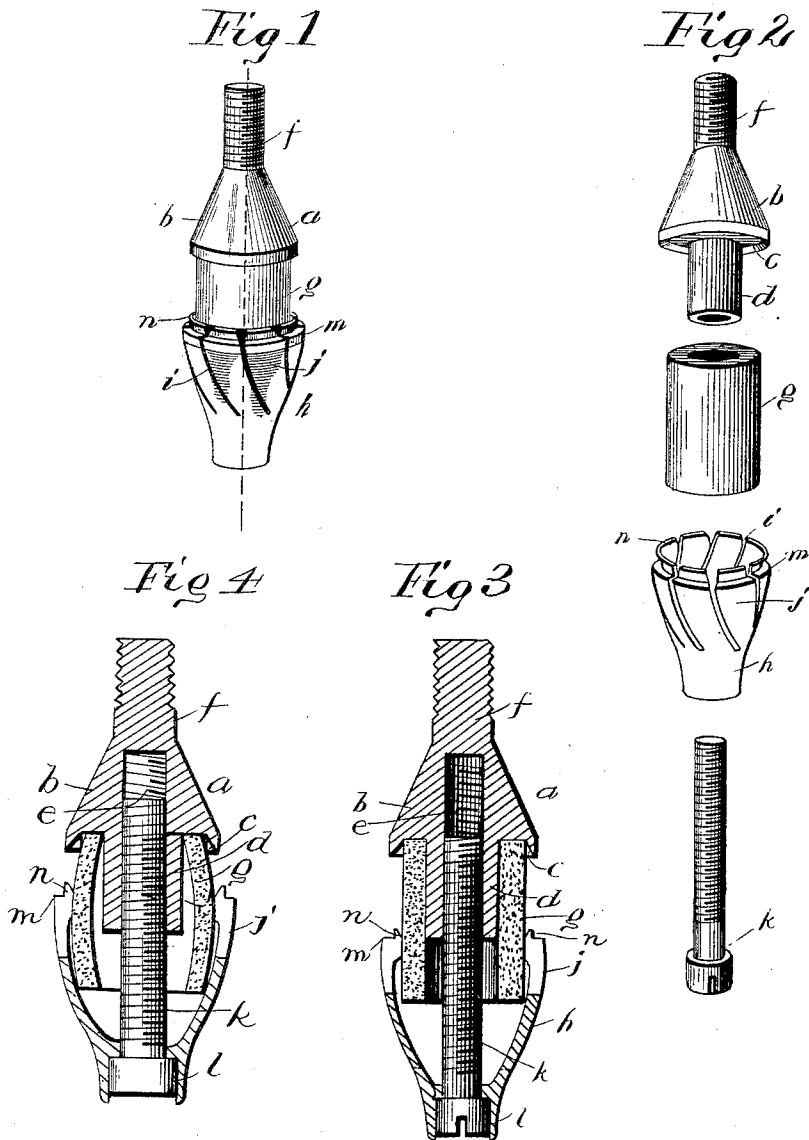


(No Model.)

A. P. ODELL & W. H. FERRIS.  
GUN CLEANER.

No. 460,986.

Patented Oct. 13, 1891.



Witness  
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# UNITED STATES PATENT OFFICE.

ALBERT P. ODELL, OF BRADFORD, PENNSYLVANIA, AND WILL H. FERRIS,  
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## GUN-CLEANER.

SPECIFICATION forming part of Letters Patent No. 460,986, dated October 13, 1891.

Application filed January 16, 1891. Serial No. 377,936. (No model.)

*To all whom it may concern:*

Be it known that we, ALBERT P. ODELL, residing at Bradford, in the county of McKean and State of Pennsylvania, and WILL H. FERRIS, residing at Franklinville, in the county of Cattaraugus, State of New York, both citizens of the United States, have invented certain new and useful Improvements in Gun-Cleaners; 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.

Our invention relates to a gun-cleaner, and particularly to a rifle and shotgun cleaner, its objects being to provide a simple, neat, and effective gun-cleaner, which will do its work in an efficient and thorough manner.

To these ends our invention consists in certain features of novelty to be hereinafter described, and then particularized in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the cleaner. Fig. 2 is a perspective view showing the parts separated in position for assembling. Fig. 3 is a longitudinal section of the device. Fig. 4 is a longitudinal section similar to Fig. 3, showing the elastic cushion bulged out or compressed and the scraper expanded.

The cleaner consists of four separate parts, preferably; but the characteristic parts may be made in several pieces, if desired.

*a* is the head, having a recessed conical enlargement *b*, *c* being the recess at the base of the enlargement surrounding an axial tubular neck *d*, provided with internal screw-threads *e*. The apex of the conical enlargement is extended into an externally-screw-threaded stem *f* in line with the neck *d* for screwing into any suitable rod or handle. (Not shown.)

Placed upon the neck *d*, with its inner end seating in the recess *c*, is an elastic or spring sleeve *g*, its length being greater than that of the neck *d*, so as to project beyond its end.

Placed over the elastic sleeve is a hollow conical cap or scraper *h*, which is provided with diagonal or other slits *i*, extending from near the apex through the base, forming spring or equivalent fingers *j*. It is evident that when the headed screw *k* is passed

through the smooth bore or opening *l* at the end of the cap or scraper and into the screw-threaded neck *d* the head and cap are drawn toward each other, compressing the elastic cushion or sleeve *g*, causing it to swell or bulge, and expanding or spreading the slotted or finger portion of the cap. A continuous in-turning of the screw will, it is evident, spread the fingers apart, so that the cleaner will fit any bore.

The outer edges of the ends of the fingers are formed into square cutting-edges *m*, and the inner edges are formed with outwardly-curved lips *n*, permitting the movement of the cap when it is being screwed up and preventing the catching of the fingers in the sleeve.

It is evident that slight changes may be made in our invention without departing from the spirit thereof.

What we claim as new is—

1. In a gun-cleaner, the combination of a head at one end provided with a neck, a scraper at the other end, and a fastening extending through the scraper into the neck, substantially as set forth.

2. In a gun-cleaner, the combination of a head at one end of the cleaner, provided with a neck at one end and a screw-threaded stem at the other end of the head, for the purpose explained, a scraper at the other end of the cleaner, and a fastening extending through the scraper into the neck, substantially as set forth.

3. In a gun-cleaner, the combination of a head at one end, provided with an internally-screw-threaded tubular neck, a scraper at the other end, provided with an opening, and a screw passing through the latter and screwing into the neck, substantially as set forth.

4. In a gun-cleaner, the combination of a head provided with a neck, an elastic sleeve placed on the neck, an expansible scraper placed over the sleeve, and an adjustable fastening extending through the scraper into the neck, substantially as set forth.

5. In a gun-cleaner, the combination of a head provided with a neck, an elastic sleeve placed on the neck and of a length greater than the latter, an expansible scraper placed on the sleeve, and an adjustable fastening ex-

tending through the scraper into the neck, substantially as set forth.

6. In a gun-cleaner, the combination of a head provided with an internally-screw-threaded neck, an elastic sleeve placed over the neck, an expansible scraper placed over the sleeve, and a screw passing through an opening in the scraper and engaging the screw-threads of the neck, substantially as set forth.

7. In a gun-cleaner, the combination of a head provided with a neck, an elastic sleeve placed on the neck, an expansible conical cap or scraper placed over the sleeve, and an adjustable fastening extending through the scraper into the neck, substantially as set forth.

8. In a gun-cleaner, an expansible scraper provided with outer cutting-edges and internal parts, outside of which the scraper is fit-

ted, in combination with means for expanding the scraper, substantially as set forth.

9. In a gun-cleaner, an expansible scraper provided with outer cutting-edges and inner outwardly projecting or extending lips, in combination with the parts on which the scraper is placed and means for expanding the scraper, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

ALBERT P. ODELL.  
WILL H. FERRIS.

Witnesses as to Albert P. Odell's signature:

N. E. SMITH,  
C. E. JUDD.

Witnesses as to Will H. Ferris's signature:

WILLIAM W. WARING,  
LEWIS S. ELY.