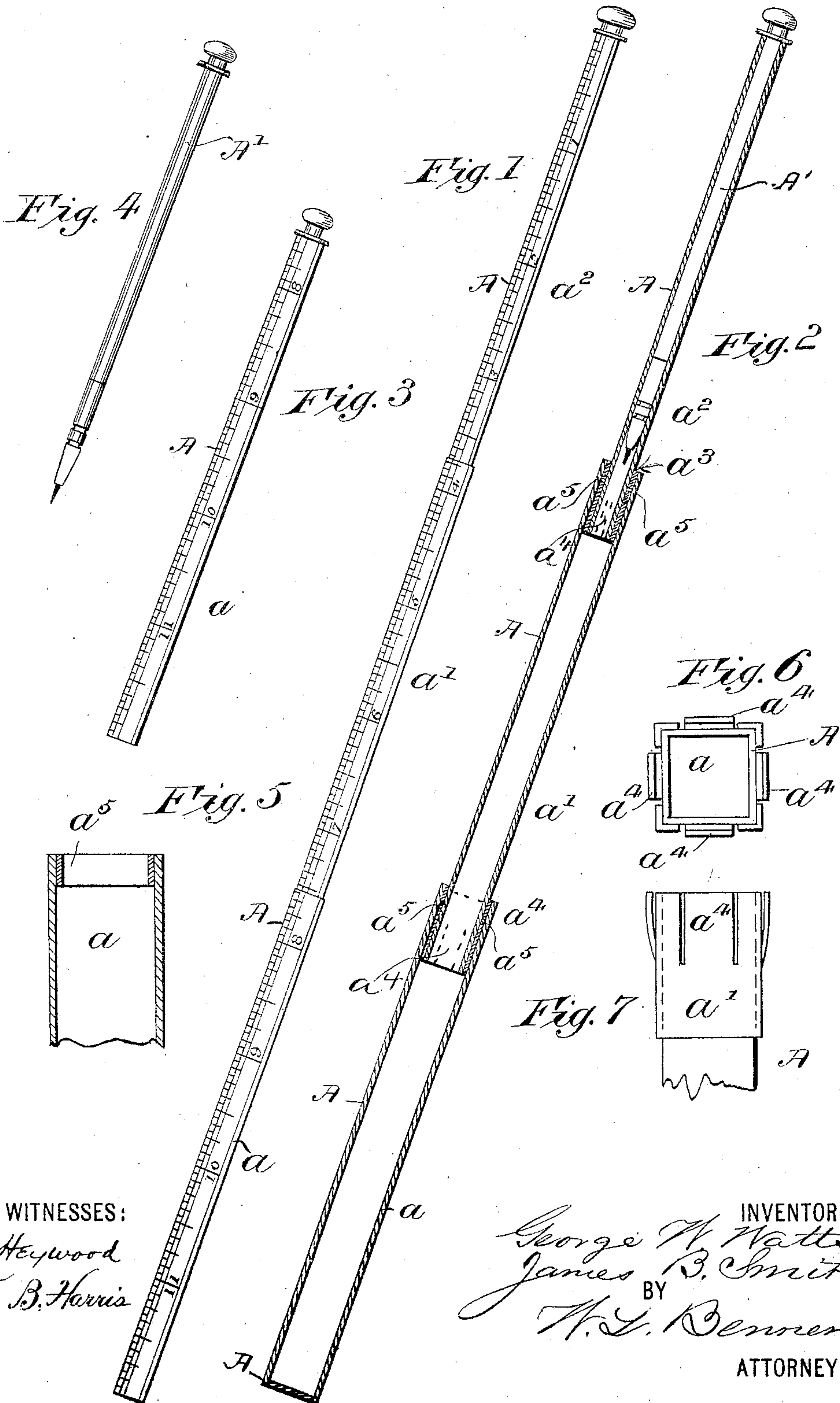


(No Model.)

G. W. WATTS & J. B. SMITH.
TELESCOPIC MEASURING RULE.

No. 575,671.

Patented Jan. 19, 1897.



WITNESSES:

Wm. Heywood
M. B. Harris

INVENTORS

George W. Watts
James B. Smith
BY
H. L. Benner

ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE W. WATTS AND JAMES B. SMITH, OF BROOKLYN, NEW YORK.

TELESCOPIC MEASURING-RULE.

SPECIFICATION forming part of Letters Patent No. 575,671, dated January 19, 1897.

Application filed May 23, 1895. Serial No. 550,315. (No model.)

To all whom it may concern:

Be it known that we, GEORGE W. WATTS and JAMES B. SMITH, citizens of the United States of America, and residents of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Telescopic Measuring-Rules, of which the following is a specification.

This invention relates to measuring-rules; and the object is to provide such a rule that may be closed into a very small space or compass to be carried in the pocket.

With this end in view the invention consists in a measuring-rule comprising telescopic sections or members, and, further, in having means for supporting a pencil.

In the accompanying drawings, Figure 1 represents a side view of our telescopic measuring-rule. Fig. 2 represents a longitudinal central section thereof. Fig. 3 represents the rule closed. Fig. 4 represents the pencil detached from the rule. Fig. 5 represents a fragmentary portion of an enlarged sectional view of one of the sections, and Figs. 6 and 7 represent enlarged views of a broken part of the section having the spring-fingers shown thereon.

Referring by letter to the drawings, A designates the rule, here shown as comprising three telescopic sections $a a' a^2$, but we do not wish to be limited as to the number of sections. The sections are shown as rectangular in cross-section and having measuring-units marked therein. The sections are tubular, the sections $a a'$ having their tubular portion corresponding to the outer shape. The section a' is designed to slide into the section a , and the section a^2 is designed to slide into the section a' . The section a^2 is provided with a longitudinal opening a^3 , round in cross-section, in which a pencil A' is designed to snugly, yet removably, fit. The pencil is friction-tight in the part a^2 , and it is provided on its outer end with a head or finger-piece, so that the telescopic parts may be drawn out by pulling on the pencil.

Spring-fingers a^4 are secured upon the ends of the sections $a' a^2$, as shown, to provide a friction-tight joint between adjacent parts. These spring-fingers extend from collars of the sections, and the ends of these collars by contacting with stop-collars a^5 in the ends of the sections $a a'$ prevent the separation of the parts.

It is obvious that the rule may be made round or otherwise shaped in cross-section without departing from the spirit of our invention.

Having described our invention, what we claim is—

1. A measuring-rule comprising telescopic sections, spring-fingers extended from a collar on one of the sections, the edges of which are flush with the edges of the collar, said spring-fingers being adapted to engage against the inner surface of the outer section, and stop-collars secured within the end of the outer section and against which the collar on the inner section may make contact to prevent the separation of the sections, substantially as described.

2. A measuring-rule comprising sections and a pencil friction-tight in the inner section, whereby the sections may be drawn out longitudinally with relation to each other by pulling on the pencil, said pencil having its outer end shaped to form a handle and a shield, that projects beyond the end of the inner section, the shield being adapted to shoulder against the ends of the closed sections to serve as a protecting-cover, substantially as described.

In testimony that we claim the foregoing as our invention we have signed our names, in presence of two witnesses, this 16th day of May, 1895.

GEORGE W. WATTS.
JAMES B. SMITH.

Witnesses:

HENRY G. PONS,
WM. A. HEYWOOD.