(No Model.)

F. A. WILMOT.

COP SPRING FOR LOOM SHUTTLES.

No. 459,849. Patented Sept. 22, 1891.

Fig. 1

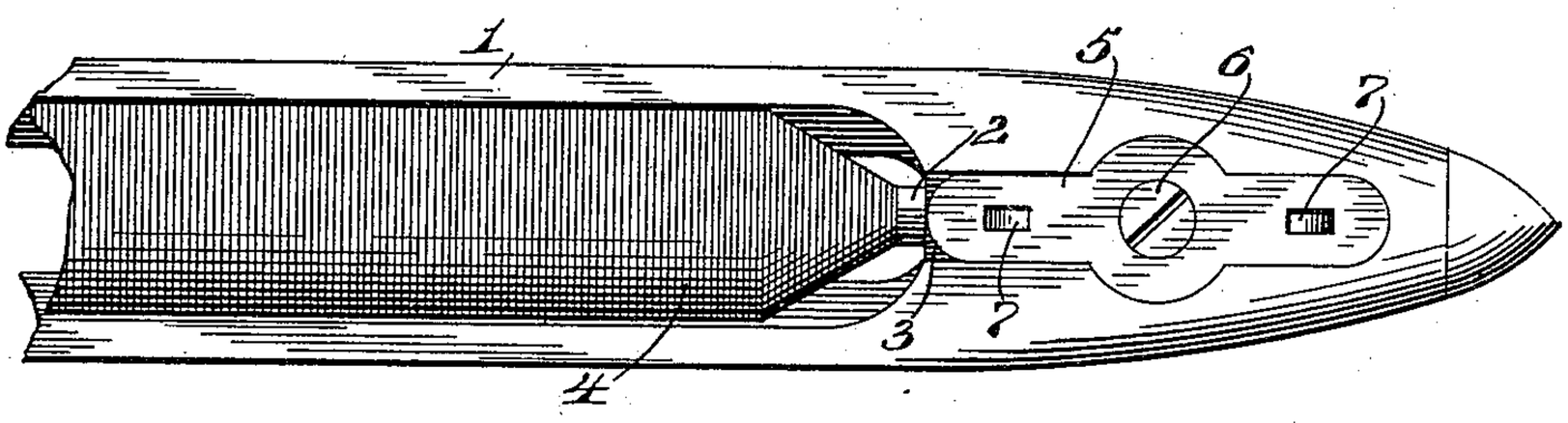


Fig. 2

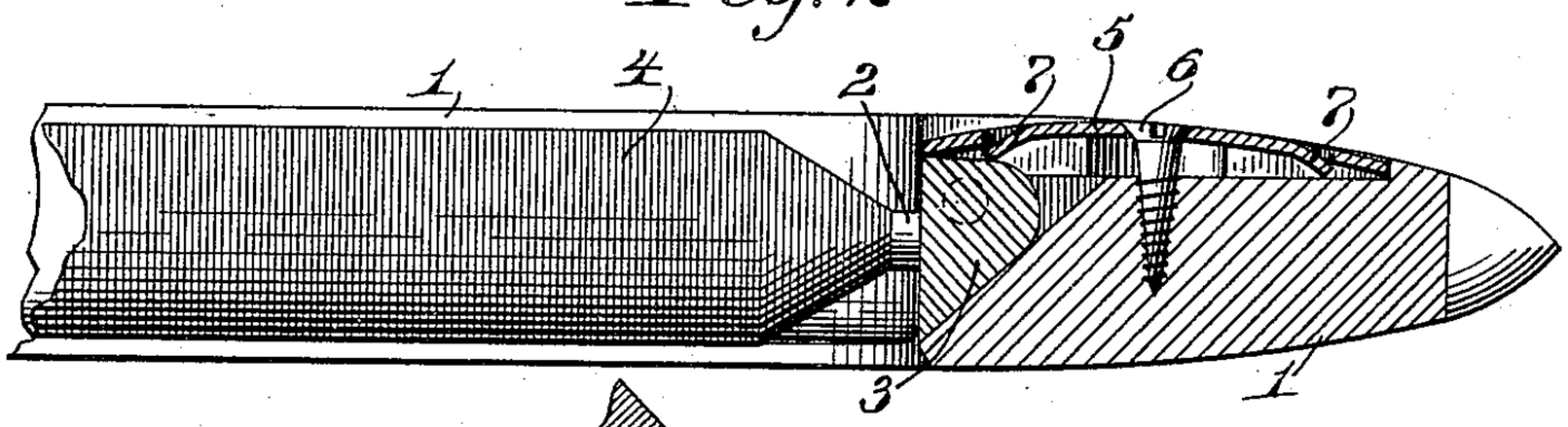
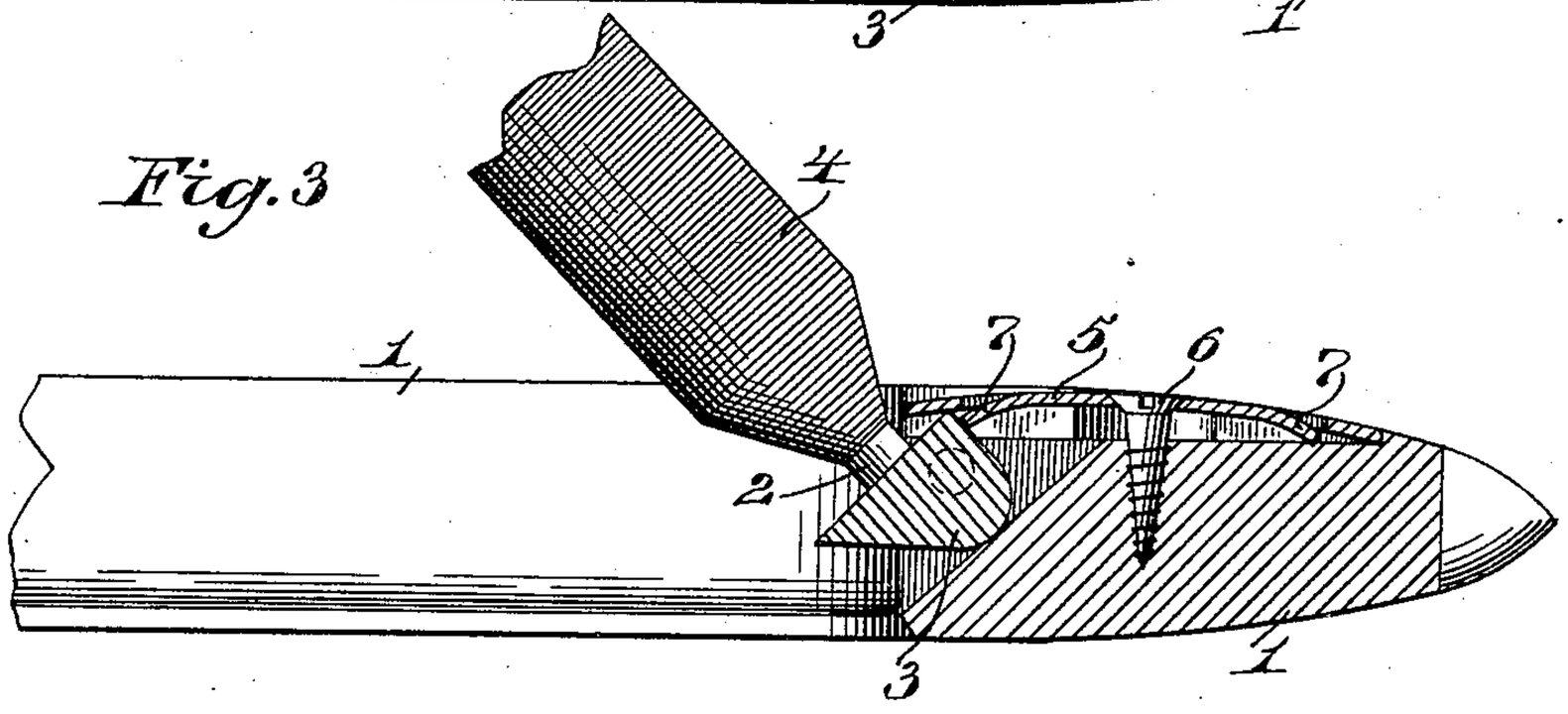


Fig. 3



WITNESSES

E. M. Gallaher

M. A. Huggard.

INVENTOR

Frank A. Wilmot

By A. W. Wooster Atty.

UNITED STATES PATENT OFFICE.

FRANK A. WILMOT, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE WILMOT & HOBBS MANUFACTURING COMPANY, OF SAME PLACE.

COP-SPRING FOR LOOM-SHUTTLES.

SPECIFICATION forming part of Letters Patent No. 459,849, dated September 22, 1891.

Application filed June 16, 1891. Serial No. 396,480. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. WILMOT, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Cop-Springs for Loom-Shuttles; and I 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.

My invention relates to the class of shuttle-springs described and claimed in patent to Sidney S. Edwards, No. 394,915, dated December 18, 1888, under which patent the Wilmot & Hobbs Manufacturing Company, of Bridgeport, Connecticut, are sole licensees. The special object of my present invention is to provide oil-holes at the opposite ends of the spring, which will distribute the oil on the spindle-head at the point of greatest wear and will at the same time prevent the spattering of oil upon the cloth when the shuttle is again first put in rapid motion in the loom. Heretofore in using this class of springs the only way to oil the spindle-head has been to hold the end of the spindle downward and drop oil in from above between the spindle-head and the spring, the result being that serious damage has quite frequently been done to the cop, and more especially to the cloth, by the spattering of oil from under the spring, owing to the rapid motion of the shuttle in the loom. I wholly overcome this objection in the manner which I will now describe, referring by numerals to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of one end of a cop-shuttle provided with my novel shuttle-spring; Fig. 2, a longitudinal section showing the cop in operative position; and Fig. 3 is a similar section showing the spindle-head tilted, as when removing or inserting a new cop.

1 denotes the body of the shuttle; 2, the spindle; 3, the spindle-head; 4, the cop; 5, the spring, and 6 the screw by which the spring is held in place. The spring is provided at each end, in order to make it reversible, with a lug 7, which serves as a stop for the spindle-head to prevent the cop-tube from coming in contact with the end of the spring when the spindle is raised. This lug broadly constitutes the subject-matter of the Edwards patent referred to, the sole assignees of my present invention being the sole licensees under the said Edwards patent.

The essential feature of my invention is that I form the lugs by striking in the metal of the spring itself, the outer ends of the lugs being detached from the body of the spring, leaving the inner ends attached thereto, as clearly shown in Figs. 2 and 3. This construction is valuable for the reason that the springs can be made more cheaply and the lugs are found to work more satisfactorily in use. The special advantage of my improved construction is, however, that I provide an oil-hole which permits a drop of oil to be placed upon the bearing portion of the spindle, but back from the outer edge of the spindle-head, so as to avoid the danger of spattering oil when the spindle is in rapid motion in the loom. My improved construction has been thoroughly tested in practice and is found to accomplish perfectly the result had in view.

Having thus described my invention, I claim—

A cop-shuttle spring having a lug adapted to serve as a stop for the spindle-head, said lug being formed by striking in the metal, leaving one end attached, thereby forming an oil-hole through the spring, so that the bearing of the spindle-head may be oiled without danger of spattering oil when the shuttle is in motion.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK A. WILMOT.

Witnesses:
A. M. WOOSTER,
M. A. HUGGARD.