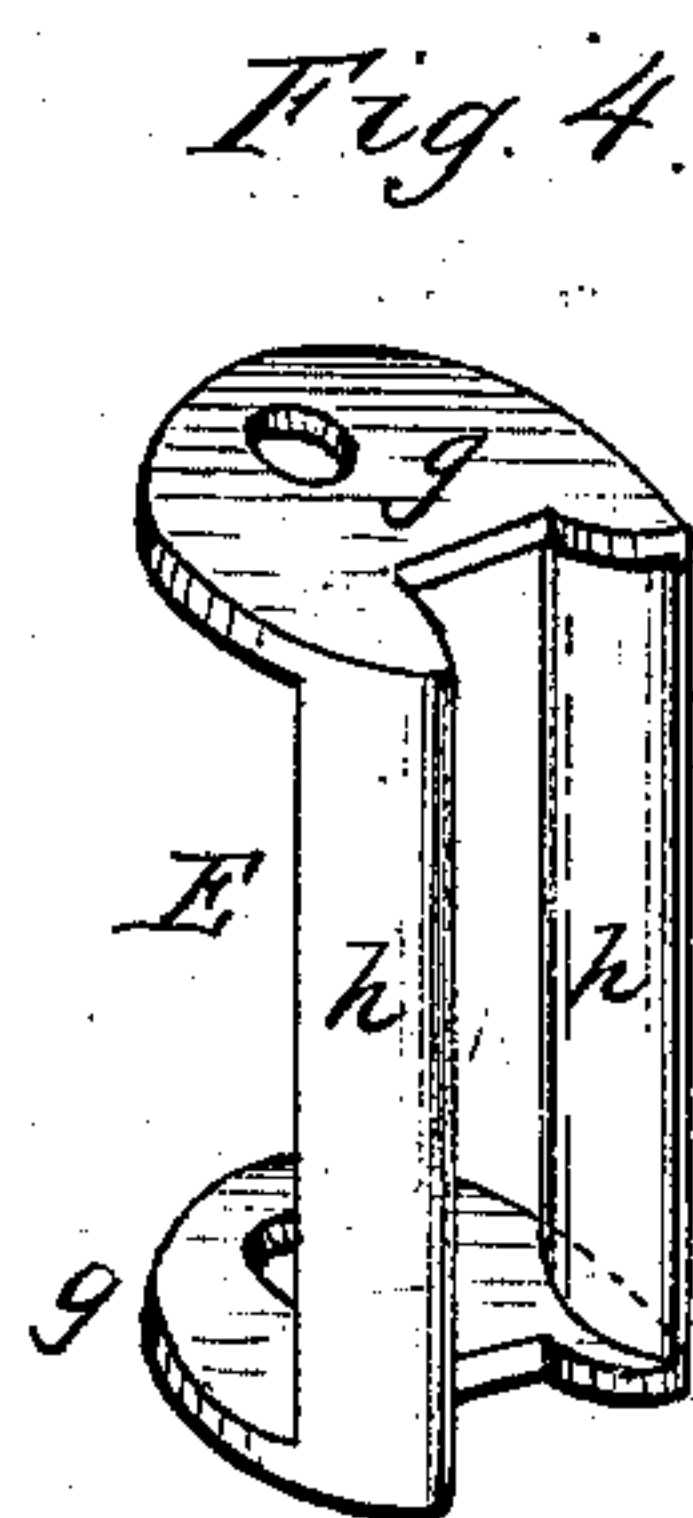
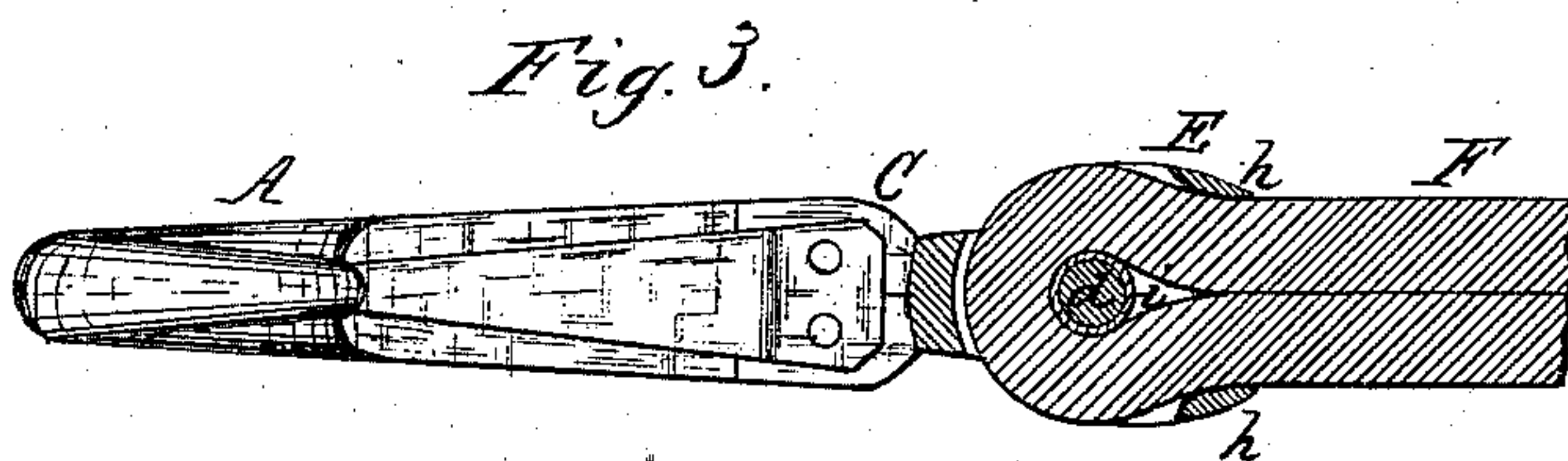
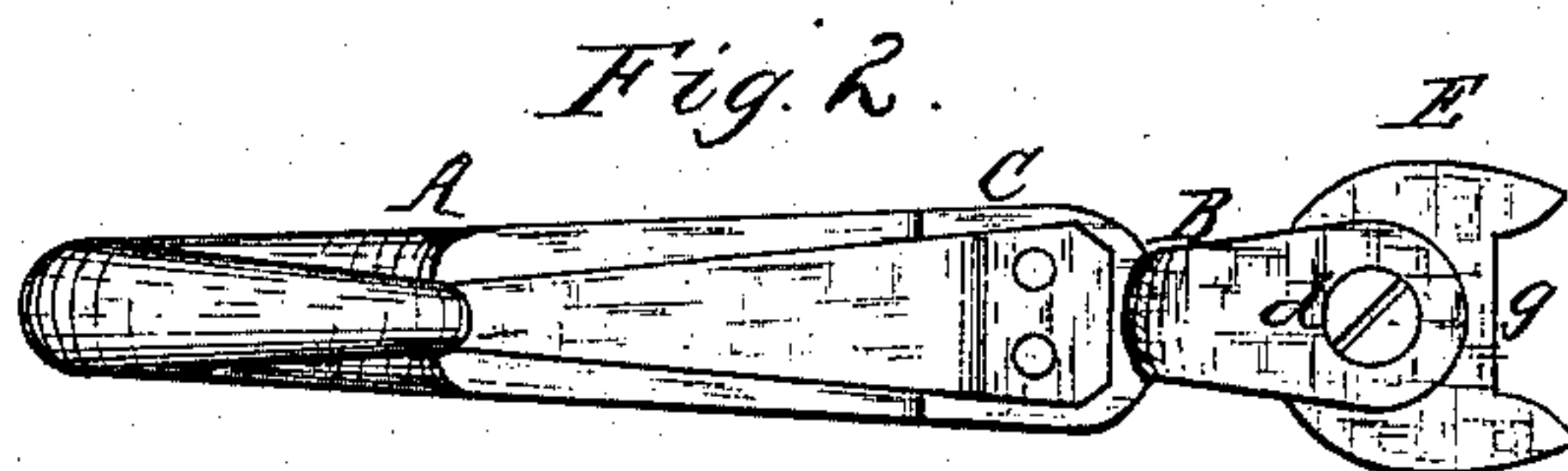
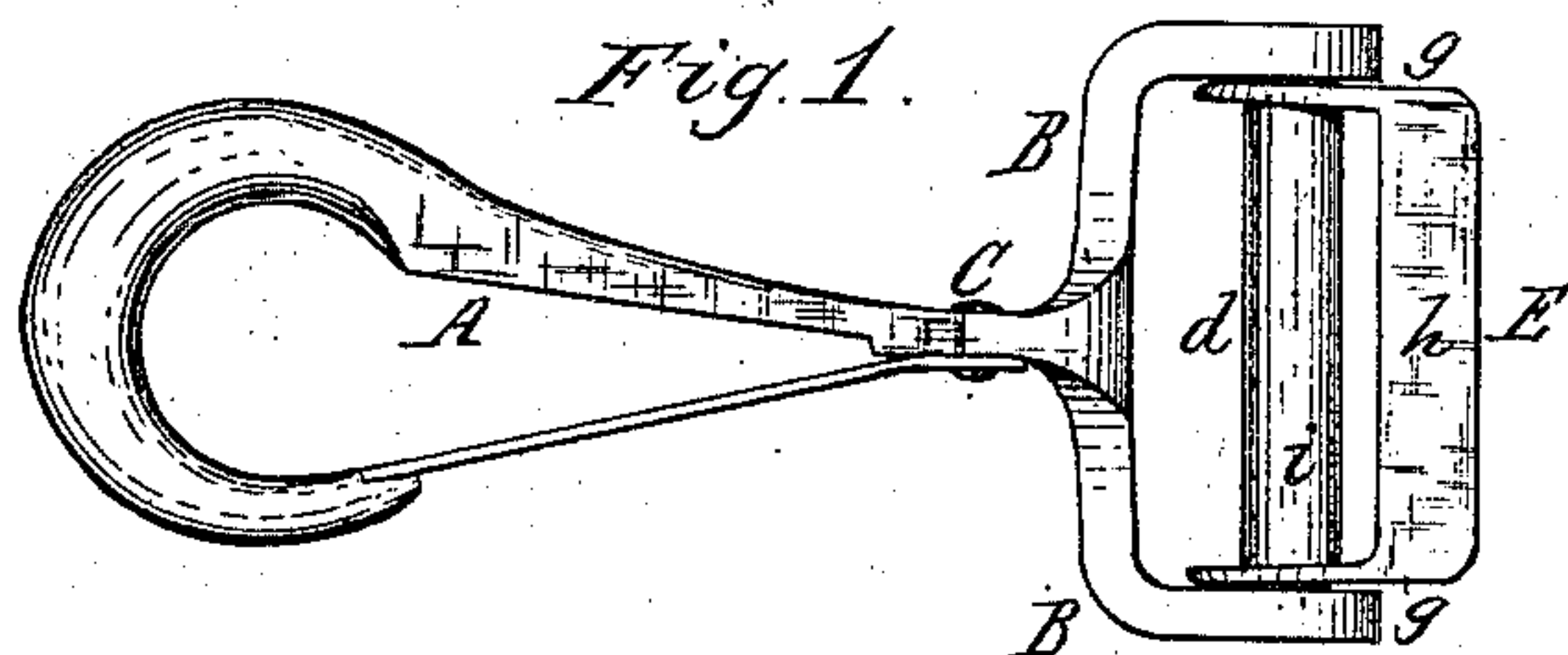


(No Model.)

J. B. & M. J. WITTER.
Harness-Hook.

No. 229,348.

Patented June 29, 1880.



Witnesses:

Chas. J. Buchheit
Edw. J. Brady } Witnesses.

Joshua B. Witter
Myron J. Witter Inventors.
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Attorneys.

UNITED STATES PATENT OFFICE.

JOSHUA B. WITTER AND MYRON J. WITTER, OF FRIENDSHIP, NEW YORK

HARNESS-HOOK.

SPECIFICATION forming part of Letters Patent No. 229,348, dated June 29, 1880.

Application filed May 8, 1880. (No model.)

To all whom it may concern:

Be it known that we, JOSHUA B. WITTER and MYRON J. WITTER, both of Friendship, in the county of Allegany and State of New York, have invented new and useful Improvements in Harness-Hooks, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates more particularly to the construction of a snap-hook which is designed to connect the martingale of a team-harness to the ring or loop at the end of the neck-yoke.

The object of our invention is to construct the snap-hook in such manner that it can be readily attached to the neck-yoke ring or loop and the martingale; and our invention consists, to that end, of the particular construction of the shield, as will be hereinafter set forth; also, in providing the loop of the snap-hook with a shield, which surrounds and confines the bent portion of the martingale, which is drawn through the loop of the snap-hook and retains the latter at the end of the martingale without any stitching.

In the accompanying drawings, Figure 1 is a plan view of our improved hook. Fig. 2 is a side elevation thereof. Fig. 3 is a longitudinal section through the hook and martingale. Fig. 4 is a detached perspective view of the shield.

Like letters of reference refer to similar parts in the several figures.

A represents the snap-hook proper, and B two arms connecting with the shank C of the hook, and bent over at their ends to form two rearwardly-extending jaws. *d* is a screw-bolt secured in the jaws in the usual manner, so as to form in connection therewith a flat or elongated loop. The arms B B and bolt *d* are arranged in the same plane with the hook A, so that the latter opens toward one of the arms B, as clearly shown in the drawings.

E represents the shield, which confines the bent end of the martingale F. The shield E consists of two side plates, *g*, which are provided with perforations, through which the bolt *d* passes, and which fit snugly against the inner sides of the jaws B, and two cross-bars, *h*, which connect the side plates, *g*, respect-

ively, at their upper and lower sides in rear of the bolt *d*. The cross-bars *h* are placed so closely together that they firmly clamp the two thicknesses of the martingale between them, thereby preventing the hook from slipping back on the martingale. *i* is a ferrule or thimble placed upon the bolt *d* between the side plates, *g*, of the shield, to facilitate the turning of the hook in the end of the martingale.

In applying the hook to the martingale the end of the latter is drawn through the shield E, then around the bolt *d*, and back through the shield E, as shown in Fig. 3, and the two thicknesses of the martingale are secured together near the collar by suitable metallic clamps or other suitable means. The hook is free to turn on the bolt *d*, but is held at the end of the martingale and prevented from slipping back on the same by the shield E, which clamps the two thicknesses of the martingale together and prevents the bolt from working back.

The shield E dispenses with the sewing together of the two thicknesses of the martingale, and permits the hook to be readily connected with or to be disconnected from the martingale, as may be desired.

The peculiar arrangement of the hook and loop in the same plane permits the martingale to be connected with the ring or loop at the end of the neck-yoke without twisting the martingale.

We claim as our invention—

1. The combination, with a snap-hook provided with the arms B and bolt *d*, of a shield E, applied to the bolt *d*, whereby the two thicknesses of the martingale are compressed and the hook retained in position on the same, substantially as set forth.

2. The combination, with a snap-hook provided with the arms B and bolt *d*, of a shield composed of two side plates, *g*, hung on the bolt *d*, and two cross-bars, *h*, connecting the upper and lower sides of the shield in rear of the bolt *d*, substantially as set forth.

JOSHUA B. WITTER.
MYRON J. WITTER.

Witnesses:

S. M. NORTON,
F. B. CHURCH.