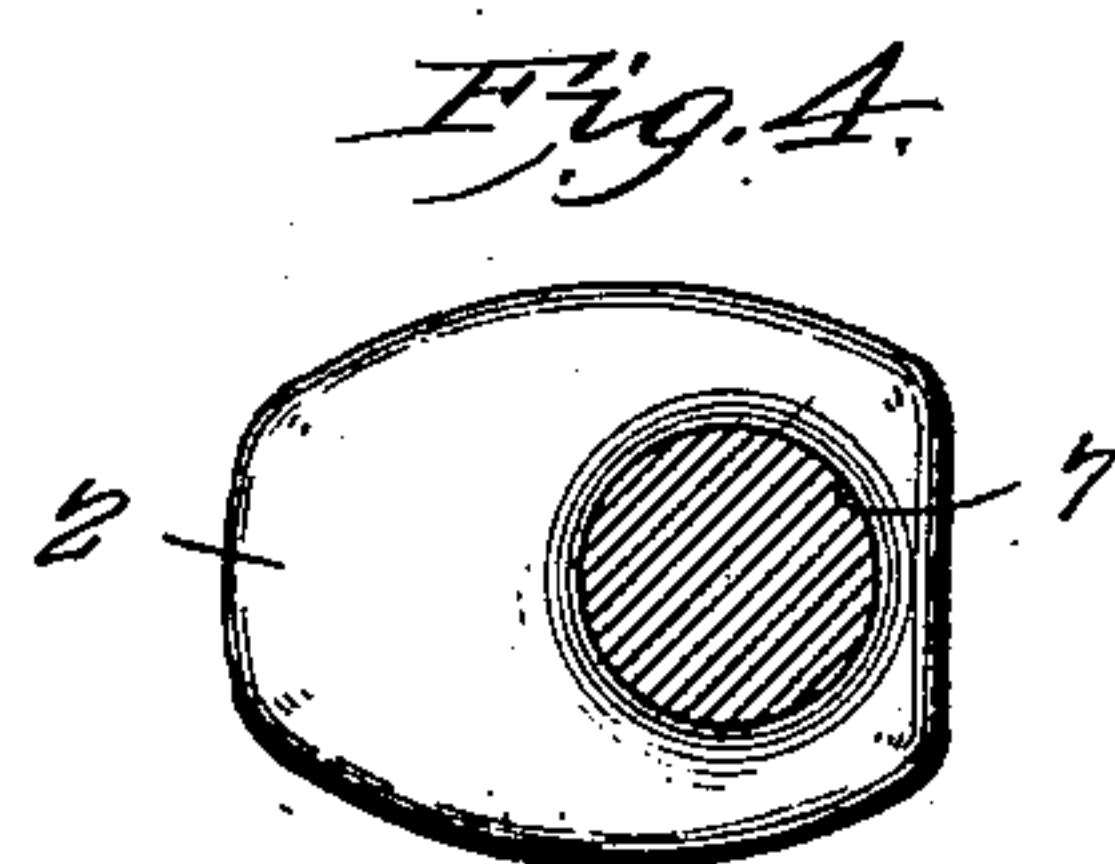
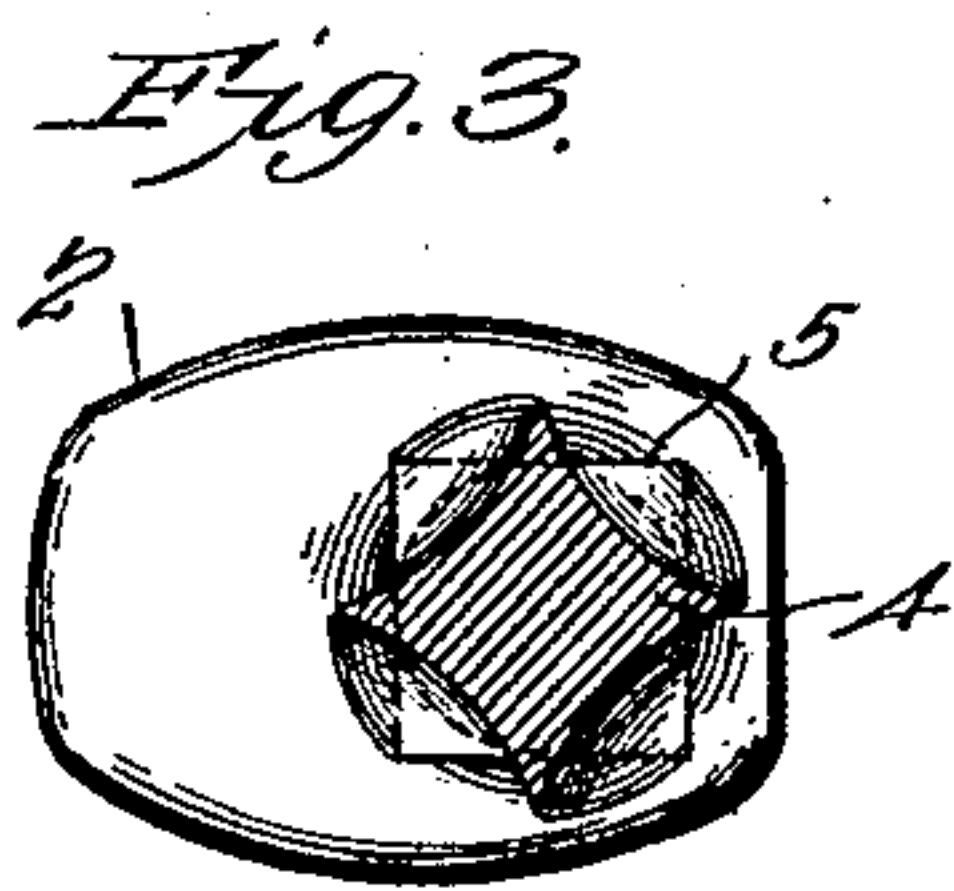
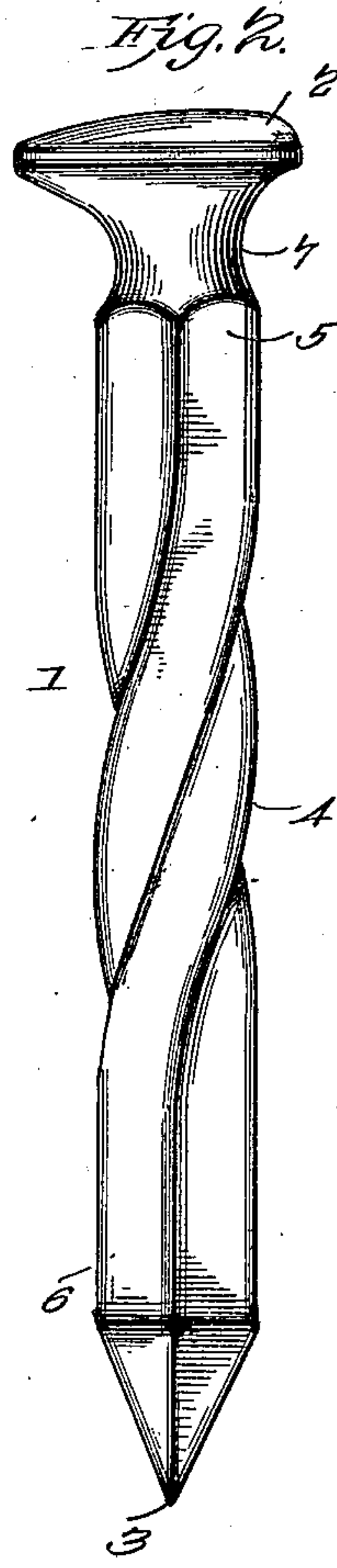
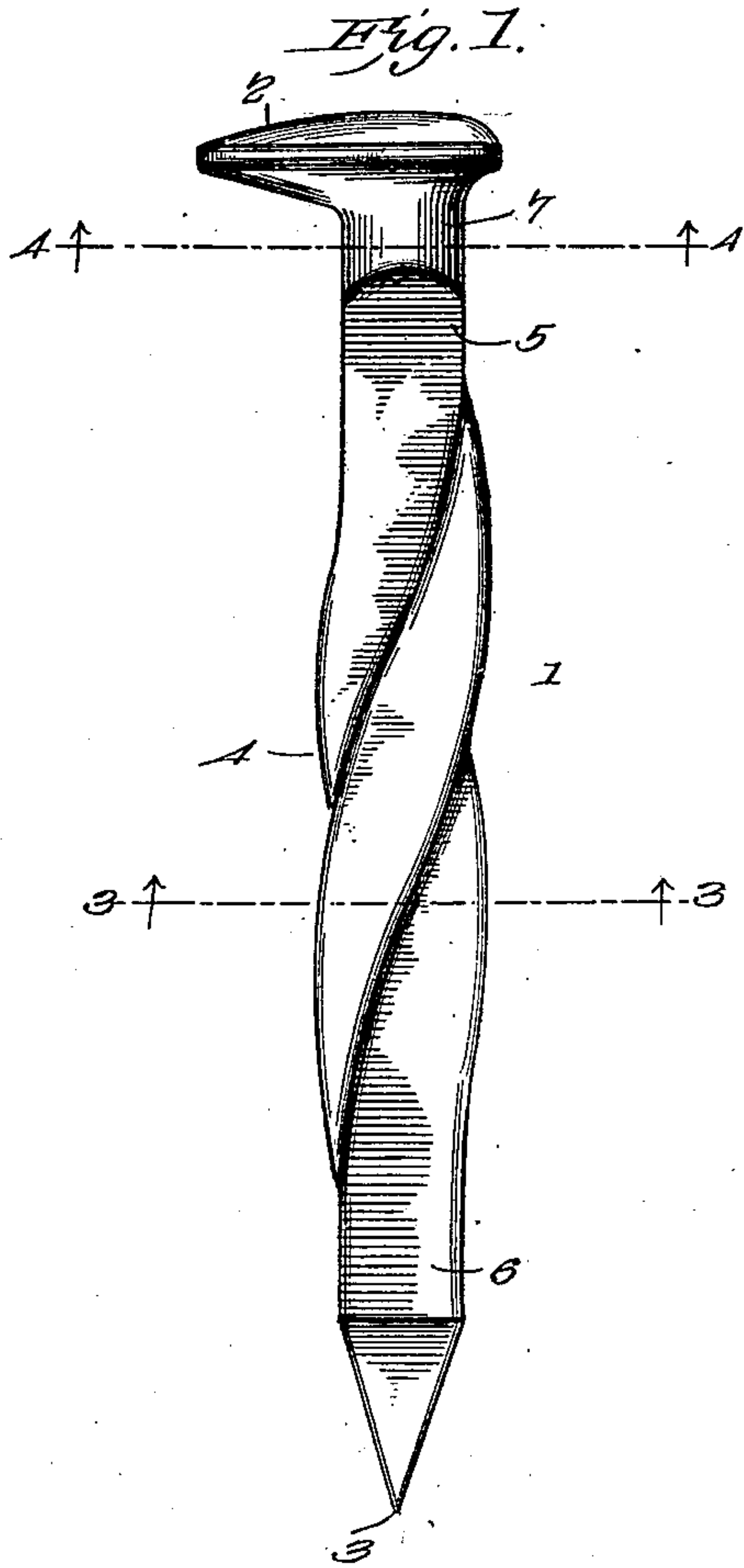


No. 698,843.

Patented Apr. 29, 1902.

W. C. MINER.
RAILROAD SPIKE.
(Application filed July 29, 1901.)

(No Model.)



Witnesses
E. C. Howard
J. F. Riley

William C. Miner, Inventor
by *C. A. Howard*
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM C. MINER, OF STANTON, MICHIGAN, ASSIGNOR OF ONE-THIRD TO
JACOB W. TOKLAS, OF ABERDEEN, WASHINGTON.

RAILROAD-SPIKE.

SPECIFICATION forming part of Letters Patent No. 698,843, dated April 29, 1902.

Application filed July 29, 1901. Serial No. 70,131. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. MINER, a citizen of the United States, residing at Stanton, in the county of Montcalm and State of Michigan, have invented a new and useful Railroad-Spike, of which the following is a specification.

The invention relates to improvements in railroad-spikes.

10 The object of the present invention is to improve the construction of railroad-spikes and to provide a simple, inexpensive, and efficient one of great strength and durability adapted to be readily driven into a wooden cross-tie without liability of splitting the same and capable of firmly engaging the tie with sufficient force to hold the rail securely in place.

20 A further object of the invention is to provide a railroad-spike of this character which may be readily extracted from the cross-tie when the proper power is applied without injuring the spike.

25 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

30 In the drawings, Figure 1 is a side elevation of a railroad-spike constructed in accordance with this invention. Fig. 2 is a similar view taken at one of the corners of the spike. Fig. 3 is a transverse section on the line 3 3 of Fig. 1. Fig. 4 is a similar view on the line 35 4 4 of Fig. 1.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

40 1 designates a railroad-spike provided with a head 2 of the ordinary construction and having a point 3 at its other end rectangular in cross-section and adapted to be readily driven into a wooden cross-tie without splitting the same. The spike consists of a shank or body portion which is square in cross-section, and the shank or body portion is provided with an intermediate twisted portion 4, the twist extending approximately half-way around the spike, so that when the latter is driven into a cross-tie the spike will make one-half a revolution. The spike when started

is arranged with the engaging portion of its head turned outward, and by driving the spike home it is rotated one-half a revolution, and the engaging portion of the head is gradually brought around into position for properly engaging the bottom flange of a rail. The twisted portion 4 is of the same area in cross-section as the rectangular portions 5 and 6, which are located above and below the twisted portion, and the spike is not weakened by such twisting and is enabled to engage the cross-tie more securely than a straight spike, and it will require more force to extract it from a cross-tie.

65 In order to prevent the spike from being strained or twisted, and thereby injured when extracting it, it is provided directly beneath the head with a cylindrical portion 7, adapted to fit in the claw of a spike-extractor or crow-bar and capable of partially rotating therein as the spike is extracted. This cylindrical bearing portion by permitting the spike to rotate freely prevents the injury which results when the head of the spike is firmly gripped by a spike-extractor, and the spike has a twist which produces a rotary movement of the spike when the latter is extracted. The cylindrical portion of the shank is arranged in rear of the center of the head of the spike, as clearly shown in Fig. 4, and the said head has rounded side and front edges and is provided with a straight rear edge.

85 It will be seen that the spike is exceedingly simple and inexpensive in construction, that it is not weakened by the twist, and that it is adapted to be readily driven into a cross-tie without splitting the same; also, it will be apparent that the cylindrical bearing portion which is located beneath and merges into the head permits the spike when engaged by an extractor to rotate freely in the same, whereby the spike is prevented from being strained, twisted, or otherwise injured by such extracting operation.

95 The twist of the spike may be either right or left hand, and in order to prevent the spike from rusting it may be galvanized or otherwise coated or treated, and I desire it to be understood that these and similar changes within the scope of the appended claim may be resorted to without departing from the

spirit or sacrificing any of the advantages of this invention.

What I claim is—

5 A railway-spike having a laterally-projecting head, a pyramidal point, a shank rectangular in cross-section and twisted in a half-turn, and a neck circular in cross-section and flaring into the head.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM C. MINER.

Witnesses:

GEORGE MOORE,
BENJAMIN P. MOUNT.