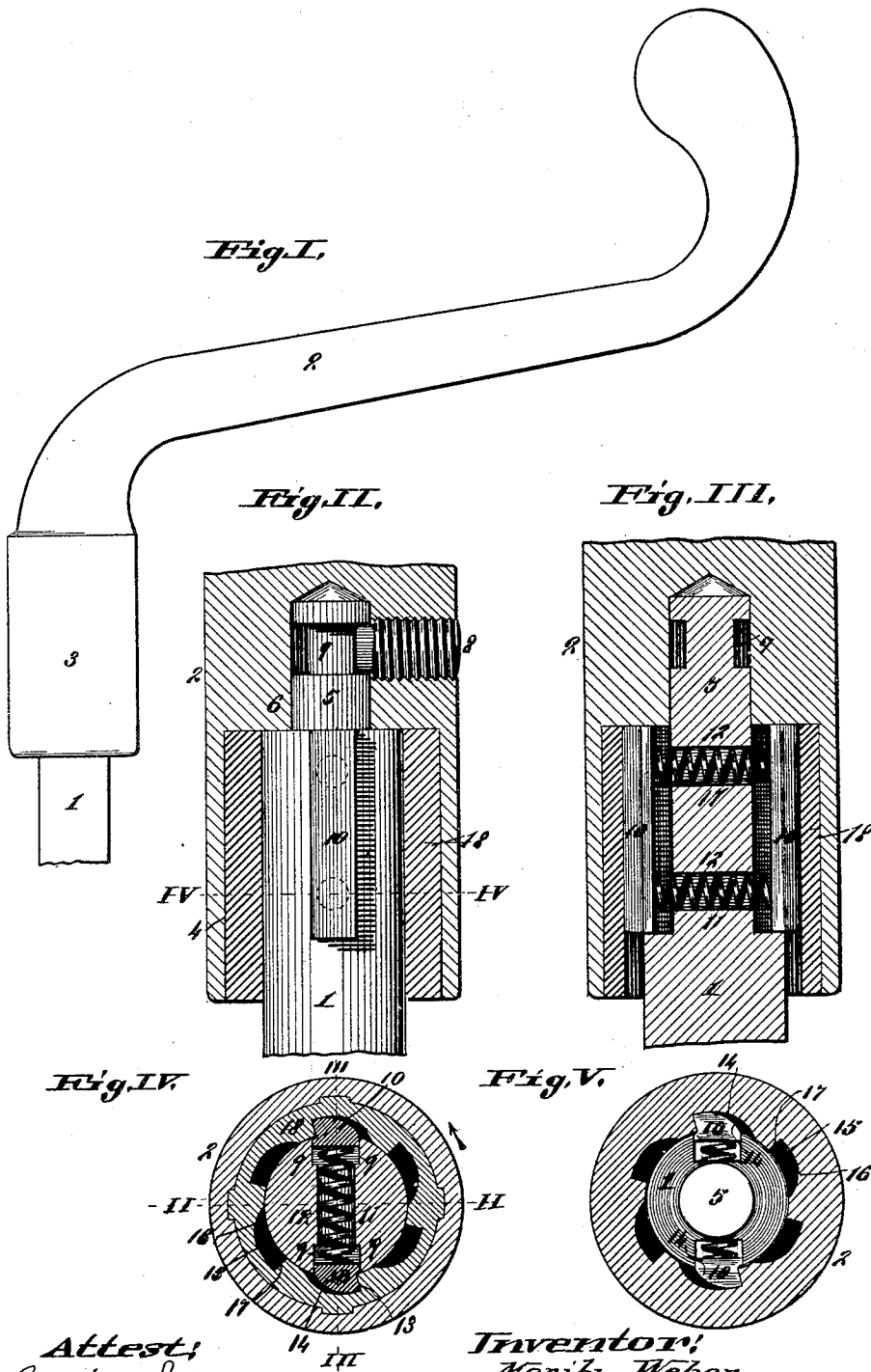


(No Model.)

M. WEBER.
RATCHET HANDLE FOR CAR BRAKES.

No. 459,101.

Patented Sept. 8, 1891.



Attest:
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UNITED STATES PATENT OFFICE.

MORITZ WEBER, OF ST. LOUIS, MISSOURI, ASSIGNOR TO GEORGE J. KOBUSCH,
OF SAME PLACE.

RATCHET-HANDLE FOR CAR-BRAKES.

SPECIFICATION forming part of Letters Patent No. 459,101, dated September 8, 1891.

Application filed October 30, 1890. Serial No. 369,817. (No model.)

To all whom it may concern:

Be it known that I, MORITZ WEBER, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Ratchet-Handles for Car-Brakes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improved ratchet-handle for car-brakes, intended more particularly for use on street-cars; and my invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a side elevation of my improved handle. Fig. II is an enlarged detail vertical section taken on line II II, Fig. IV. Fig. III is a similar view taken on line III III, Fig. IV. Fig. IV is a transverse section taken on line IV IV, Fig. II. Fig. V is a transverse section of the socket part of the handle and a top view of the brake-rod and the pawls or dogs. This figure is a modification of the form shown in Figs. II, III, and IV.

Referring to the drawings, 1 represents the upper end of the brake-rod, and 2 the handle, having a lower end 3, formed with a recess or socket 4, to receive the upper end of the brake-rod. The extreme upper end of the rod is formed with a reduced portion or neck 5, fitting in an extension 6 of the socket or opening 4. The neck 5 has an annular groove 7, in which fits the inner end of a plug 8, which passes through the handle and serves to connect the handle to the brake-rod, while not interfering with the turning of the handle upon the rod. Beneath the neck the rod is provided with one or more vertical grooves 9, in each of which is placed a dog or pawl 10, made preferably of steel. I have shown two grooves, but one or more may be used. The dogs or pawls are forced outward by means of suitable springs 11. Coil-springs are preferably used and are fitted or placed in openings 12, formed in the rod, as shown clearly in Figs. III and IV. Each pawl or dog has on its outer surface an acute angle or corner 13 and a rounded corner 14. The interior of the part 3 of the handle is formed with grooves 15, having rounded corners 16

and acute shoulders 17, constituting a ratchet. These grooves may be formed in the metal of which the handle is composed, as shown in Fig. V, or they may be formed in a separate bushing or collar 18, placed within the part 3 of the handle, as shown in Figs. II, III, and IV. I prefer to form them in a separate bushing, for the reason that they can be readily renewed when they become worn.

When the brakes are to be applied, the handle is turned in the direction of the arrow, Fig. IV, and the turning of the handle will cause the brake-rod to be turned, because the acute corners 13 of the dogs or pawls are held by the springs 11 into engagement with the shoulders 17. When the handle is turned in the opposite direction, the rod is not turned, because the dogs or pawls are thrust inward against the pressure of the springs 11 by the rounded corners 16 of the grooves 15 bearing against the rounded corners 14 of the dogs or pawls, and thus the brake-rod can be turned forward by the handle without making a complete revolution of the latter, the advantages of which are well understood.

A construction of this kind is strong, cheap, and durable, and is not liable to get out of order.

I claim as my invention—

1. In a ratchet-handle for car-brakes, the combination of the brake-rod having longitudinal grooves, spring-actuated pawls or dogs fitting in said grooves, and a handle having a socket provided with longitudinal grooves adapted to receive said pawls or dogs, substantially as and for the purpose set forth.

2. In a ratchet-handle for car-brakes, the combination of the brake-rod having longitudinal grooves, spring-actuated pawls or dogs fitting in said grooves and having, respectively, acute corners 13 and rounded corners 14, and a handle having grooves formed with acute shoulders 17 and rounded corners 16, substantially as and for the purpose set forth.

3. In a ratchet-handle for car-brakes, the combination of the brake-rod having longitudinal grooves and transverse openings, dogs or pawls fitting in said grooves and coil-springs fitting in said openings, a handle, and a bushing fitting in a socket of the handle

and having grooves to receive said pawls or dogs, substantially as and for the purpose set forth.

5 4. A brake-handle having its base recessed or socketed and formed with ratchet teeth or grooves, in combination with the upper end of the brake-shaft, adapted to enter said socket in the base of the handle and provided

with pawl lugs or dogs capable of operation in conjunction with the ratchet teeth or grooves, all substantially as described.

MORITZ WEBER.

In presence of—

THOS. KNIGHT,
A. M. EBERSOLE.