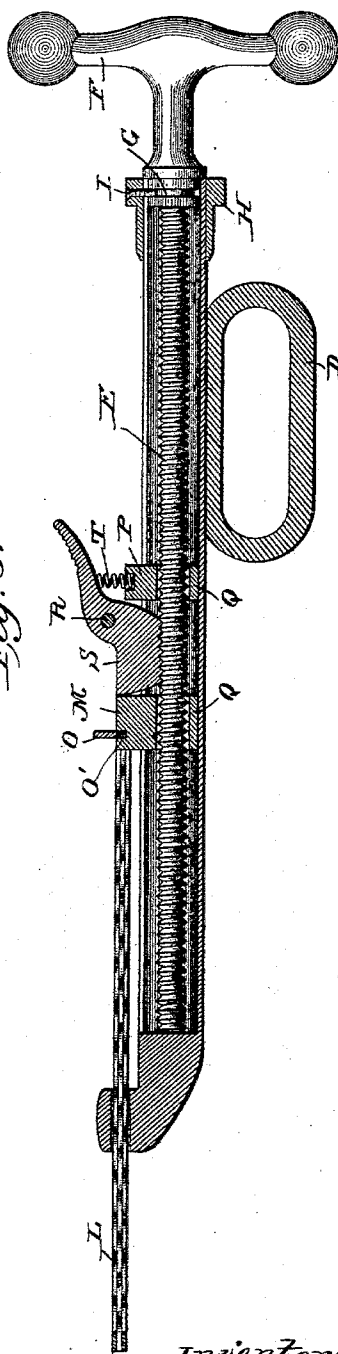
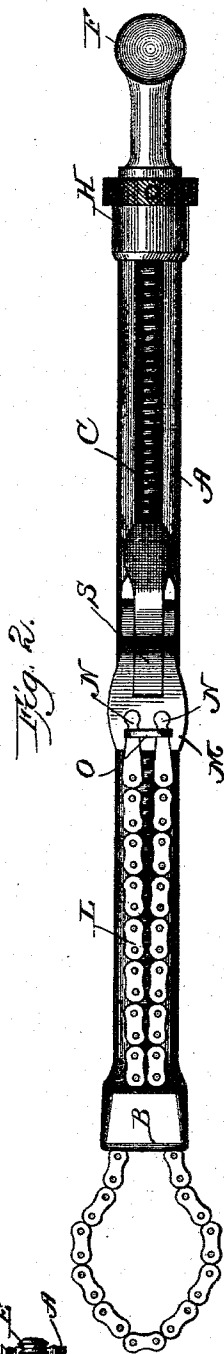
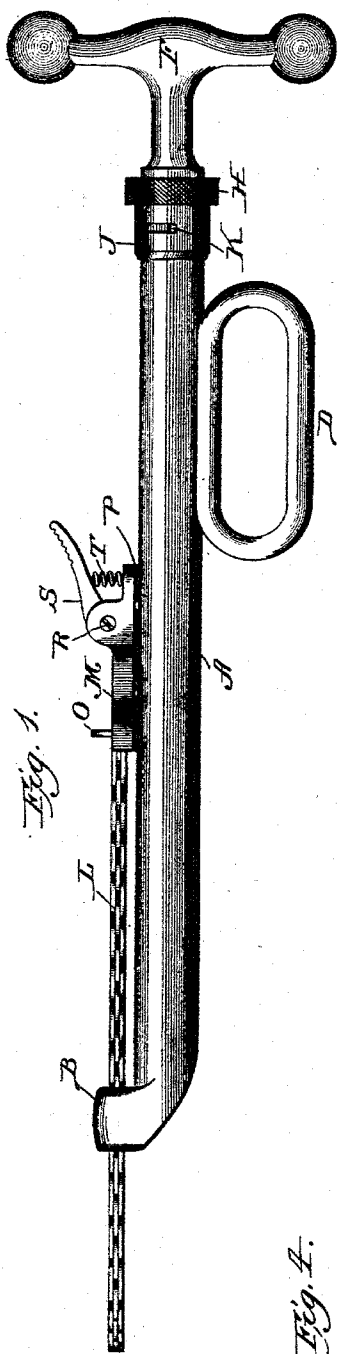


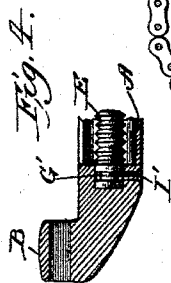
H. HAUSSMANN & S. B. DUNN.
ECRASEUR.

Patented Dec. 19, 1893.



Witnesses:

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UNITED STATES PATENT OFFICE.

HERMANN HAUSSMANN AND SOLA B. DUNN, OF CHICAGO, ILLINOIS.

ECRASEUR.

SPECIFICATION forming part of Letters Patent No. 511,202, dated December 19, 1893.

Application filed December 24, 1892. Serial No. 456,225. (No model.)

To all whom it may concern:

Be it known that we, HERMANN HAUSSMANN and SOLA B. DUNN, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Ecraseurs, of which the following is a full, clear, and exact specification.

Our invention relates to that class of ecraseurs which employ a looped chain or noose adapted to be actuated by a screw arranged in the stock or tube of the instrument.

The primary object of our invention therefore is to provide improved and simple means for readily taking up the slack of the chain or noose independently of the screw.

With these ends in view, our invention consists in certain features of novelty in the construction, combination and arrangement of parts hereinafter described in connection with the accompanying drawings and more particularly pointed out in the claims.

In the said drawings, Figure 1, is a side elevation of our improved instrument. Fig. 2, is a plan view thereof. Fig. 3, is a vertical longitudinal section, the handle and screw being shown in full lines, and Fig. 4, is a detail view illustrating a modification hereinafter described.

Like signs of reference indicate like parts throughout the several views.

A, is the ecraseur stock or tube which may be of the ordinary or any suitable construction having the keeper or loop B, at one end and being provided throughout the greater portion of its length at its upper side with a slot C, and opposite such slot on the under side with a suitable handle or finger ring D. The screw E having a suitable operating handle F, is arranged within the stock or tube A, as heretofore, but instead of being longitudinally movable therein, it is so secured as to be capable of rotary movement only. This is preferably accomplished by providing the stem of the handle F with an annular groove G, over which fits a milled collar H, having a removable screw or pin I engaging in the groove G, so as to permit the handle F and the screw E to rotate independently of the collar H. The collar H has an angular slot J, while the tube or stock A is provided with a pin K, which slot and pin constitute a bayo-

net joint for removably securing the collar H to the stock A. Instead of this arrangement for holding the screw against longitudinal movement, the same object may be accomplished by providing the end of the screw with an annular groove G', and driving a short screw or pin I' through the side of the stock or tube into such groove, as shown in Fig. 4, whereby the screw will be held against slipping out of the stock, but will be permitted to rotate freely therein. It is desirable however that the screw should be so held as to be capable of being readily removed for cleaning the device, and therefore the bayonet joint above described is the preferred form.

The chain or noose L which passes through the keeper B, as usual, is secured to a slide M. This attachment may be effected in any suitable manner, but we prefer to accomplish it by providing the ends of the chain with enlarged heads N, which are fitted into complementary sockets or slots having enlarged inner ends formed in the face of the slide M, so that when the heads N are in place in their respective sockets they will be held against longitudinal displacement, while the perpendicular or outward movement of the heads may be prevented by a flat button O having a stem O' threaded in the slide M between the heads N, so that when it is turned across such heads, as shown in Fig. 2, it will serve to hold the latter in place.

The slide M is provided on its under side with a narrowed portion P which projects into the slot C in the stock, and carries on its under side two sleeves or collars Q which fit the contour of the inner side of the tube or stock and thus serve to guide the slide, two collars being employed for the sake of greater rigidity. The inner surfaces of these collars Q are plain, and the screw E projects freely through them, and pivoted to the slide at R between these collars is a dog S which projects through the slot C, and is provided at its under side with a series of teeth complementary to and engaging with the thread of the screw E, the dog being held normally in engagement with the screw by means of a suitable spring T interposed between the slide and the thumb piece of the dog. The pivot R of this dog is so arranged, that is to say at its rear end, that the slide may be drawn back-

ward or away from the keeper B to take up the slack in the chain, without previously lifting the dog from engagement with the screw. It will be seen however, that the reverse movement of the slide must be effected by the rotation of the screw, or else by first raising the dog out of contact therewith.

With an instrument thus constructed it will be seen that the same may be conveniently held by one hand of the surgeon. The dog S being arranged opposite the handle D it is convenient to the thumb and may be readily slipped back and forth for taking up the slack of the chain or noose independently of the screw.

Having thus described our invention, what we claim as new therein, and desire to secure by Letters Patent, is—

1. In an ecraseur, the combination with a slotted stock, a revoluble screw secured against longitudinal movement therein, and the noose or chain, of a pivoted dog secured to said noose

or chain and having a thumb piece arranged on the exterior of said stock and a toothed portion projecting through said slot and engaging said screw, and means for holding said dog up to its work when in engagement with said screw, substantially as set forth. 25

2. In an ecraseur, the combination of a slotted stock or tube, a slide having a sleeve or collar arranged in and fitting against the inside of said stock or tube and constituting a guide for said slide, a screw held against longitudinal movement, passing loosely through said sleeve or collar, a dog carried by said slide and engaging said screw, a spring for holding said dog normally in engagement with said screw, and the chain or noose secured to said slide, substantially as set forth. 30 35

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