

E. S. LAGARDE & P. A. ANGENEND, JR.

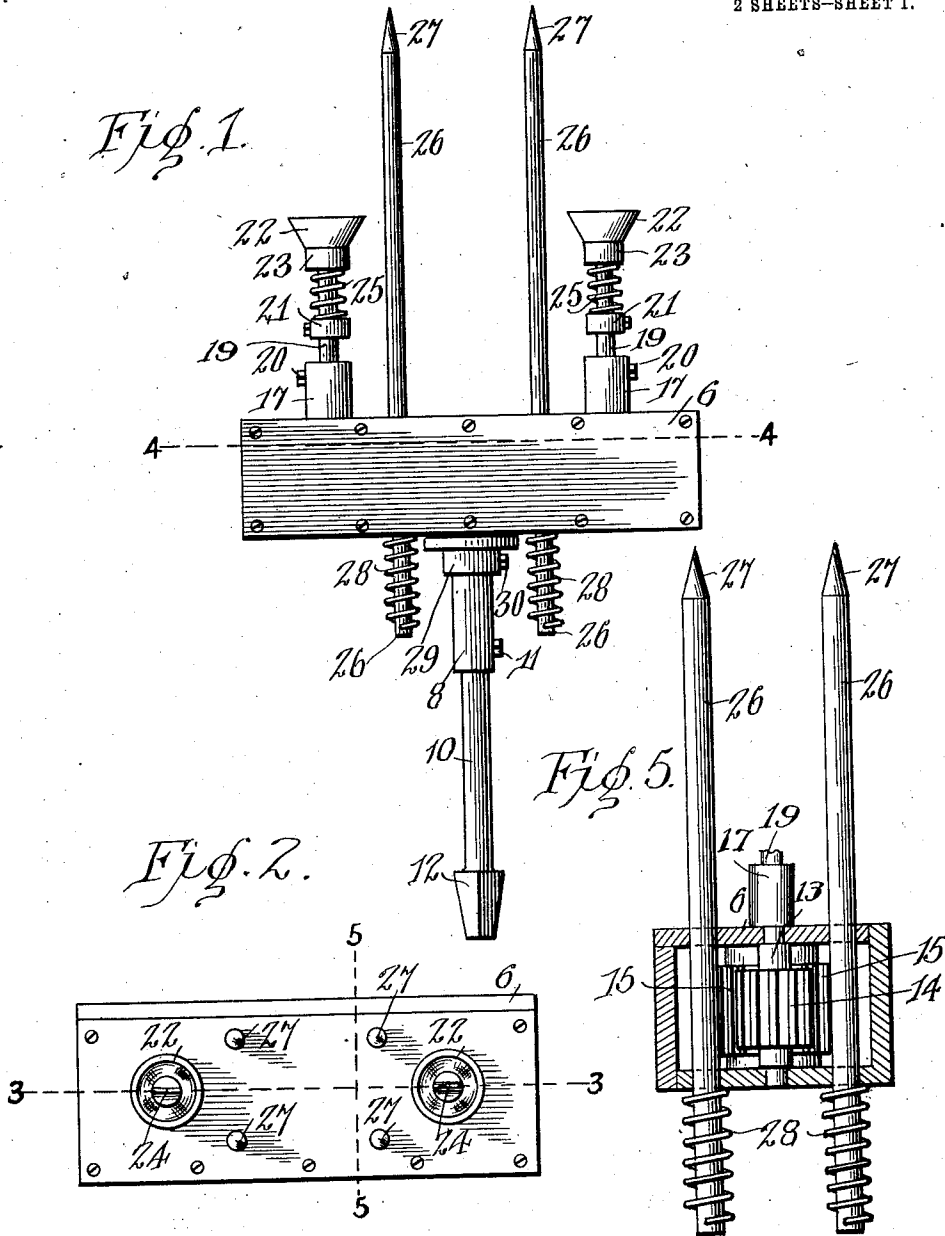
BIT FRAME.

APPLICATION FILED APR. 13, 1911.

1,023,021.

Patented Apr. 9, 1912.

2 SHEETS—SHEET 1.



Everette S. Lagarde Inventors

Peter A. Angenend Jr.

Witnesses

H. J. Woodruff

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By E. C. Vrooman
Their Attorney,

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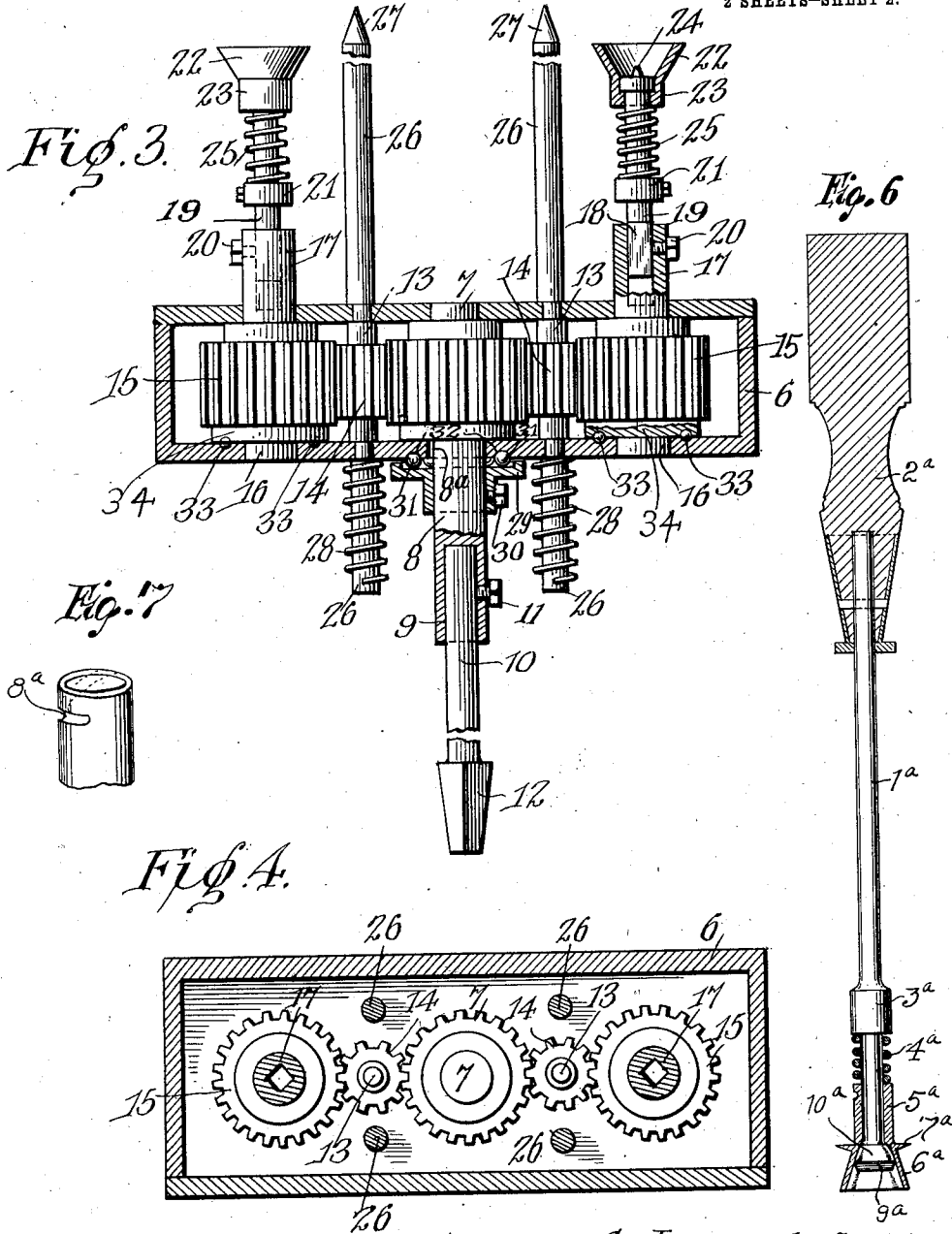
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Their Attorney

UNITED STATES PATENT OFFICE.

EVERETTE S. LAGARDE AND PETER A. ANGENEND, JR., OF HOUSTON, TEXAS.

BIT-FRAME.

1,023,021.

Specification of Letters Patent.

Patented Apr. 9, 1912.

Application filed April 13, 1911. Serial No. 620,869.

To all whom it may concern:

Be it known that we, EVERETTE S. LAGARDE and PETER A. ANGENEND, JR., citizens of the United States, residing at Houston, in the county of Harris and State of Texas, have invented certain new and useful Improvements in Bit-Frames, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to tools for driving screws and the principal object of the device is to provide an improved structure especially adapted to hold ceiling cleats in place while the screws are simultaneously driven at each end thereof.

As is well-known the usual ceiling cleat is provided with a hole at each end for the reception of the securing screws and it is difficult under ordinary circumstances to hold the cleat and drive the screws. The present invention provides a double bitted screw driver having yieldable means between the screw driver bits for engaging the cleat and holding it firmly in position while the screws are being driven.

A preferred and practical embodiment of the invention is shown in the accompanying drawings, wherein:—

Figure 1 is a view in elevation of the improved screw driving tool. Fig. 2 is a top plan view. Fig. 3 is a vertical longitudinal sectional view taken on the line 3—3, Fig. 2. Fig. 4 is a horizontal sectional view taken on the line 4—4, Fig. 1. Fig. 5 is a transverse vertical sectional view taken on the line 5—5, Fig. 2. Fig. 6 is a fragmentary sectional view of a single screw-driver having the retaining cup shown thereon. Fig. 7 is a detail perspective view of the upper portion of the sleeve carrying the retaining cup.

The improved screw driving tool comprises a casing 6 that is preferably rectangular and in the center of which a master gear 7 is journaled. A shaft 8 projects from one end of gear 7 and extends through an opening 8^a in casing 6. The outer end of shaft 8 is provided with a longitudinally extending socket 9 in which a shank 10 is fastened by the set screw 11. Shank 10 has a head 12 for communicating rotary power to said shank. Shafts 13 are journaled in casing 6 and are disposed on opposite sides of gear 7. Pinions 14 are carried by shafts 13 and

are in mesh with opposite portions of gear 7. Gears 15 are disposed in the ends of casing 6 and have stub shafts 16 that are journaled in said casing. Gears 15 are in mesh with the pinions 14.

Sockets 17 are carried by gears 15 and project through and beyond the upper surface of casing 8. The shanks 18 of screw drivers 19 are fastened in sockets 17 by the set screw 20. The screw drivers have collars 21 adjustable thereon, and the free ends of said drivers are inclosed by the flaring screw guiding cups 22 that have flanged necks 23 which engage over the heads 24 of the screw drivers. Springs 25 are coiled about the screw drivers and interposed between the collars 21 and the necks 23 of cups 22, said springs tending to hold the cups in close engagement with the heads of the drivers.

Supporting bars 26 are slidable through the casing 6 with their pointed work engaging ends 27 projecting well beyond the forward surface of said casing and their rear ends projecting beyond the rear surface of the casing. The projecting rear ends of bars 26 have springs 28 coiled about them, said springs being fastened to said bars and the casing 6 to oppose rearward longitudinal movements of said bars.

Shaft 8 has a bearing cup 29 fastened thereon by the set screw 30, and anti-friction rollers 31 are carried by said cup and engage a bearing groove 32 in the rear wall of casing 6. Anti-friction rollers 33 are interposed between the rear ends of the hubs 34 of gears 15 and the inner surface of the rear wall of casing 6.

The bars 26 are arranged in pairs, that are relatively spaced so that they will afford firm supports for the tool. In use the bars 26 engage the cleats or other work, and hold the same in position, and the screws are placed in the cups 22 and drop to position whereby the heads 24 of the drivers engage the same. By rotating shank 10, master gear 7 drives pinions 14, and said pinions, in turn, drive gears 15 and thereby rotate the screw drivers, so that both drivers are simultaneously operated. The springs 25, in addition to normally holding the cups 22 projected outward, also permit said cups to move inwardly when brought in contact with the work so that they will not prevent the screws being entirely driven into the

work, and the springs 28 of bars 26 permit said bars to yield as the tool approaches the work.

In Fig. 6 there is shown a single screw-driver provided with our improved retaining cup wherein 1^a indicates the shank provided with a handle 2^a, the shank 1^a is provided with an enlarged portion 3^a which acts as an abutment for one end of the coil spring 4^a. A sleeve 5^a is mounted upon the outer end of the shank and is provided with a cup-shaped outer portion 6^a and with a beveled finger gripping flange 7^a which is formed at the junction of the sleeve and cup. The coil spring 4^a surrounds the inner end of the sleeve 5^a and has its end seated in a groove 8^a formed in the sleeve where it is rigidly secured in place by any suitable means. A bit 9^a is formed at the outer end of the shank and a shoulder 10^a is formed

just above said bit for preventing the cup from coming off the shank.

What we claim as our invention is:—

In a device of the kind described, a frame, a pair of bit holders one adjacent each end of said frame, gearing to simultaneously operate said bit holders, and three or more yieldable spring supported bars spaced widthwise and lengthwise of the frame and provided with prong ends whereby to engage and support a ceiling cleat and hold the same in place.

In testimony whereof we hereunto affix our signatures in presence of two witnesses.

EVERETTE S. LAGARDE.
PETER A. ANGENEND, JR.

Witnesses:

JOHN H. LAGARDE,
ROBT. L. BERRYMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."