(No Model.)

H. H. & J. S. BARNES.

TACK DRIVER.

No. 444,685. Patented Jan. 13, 1891.

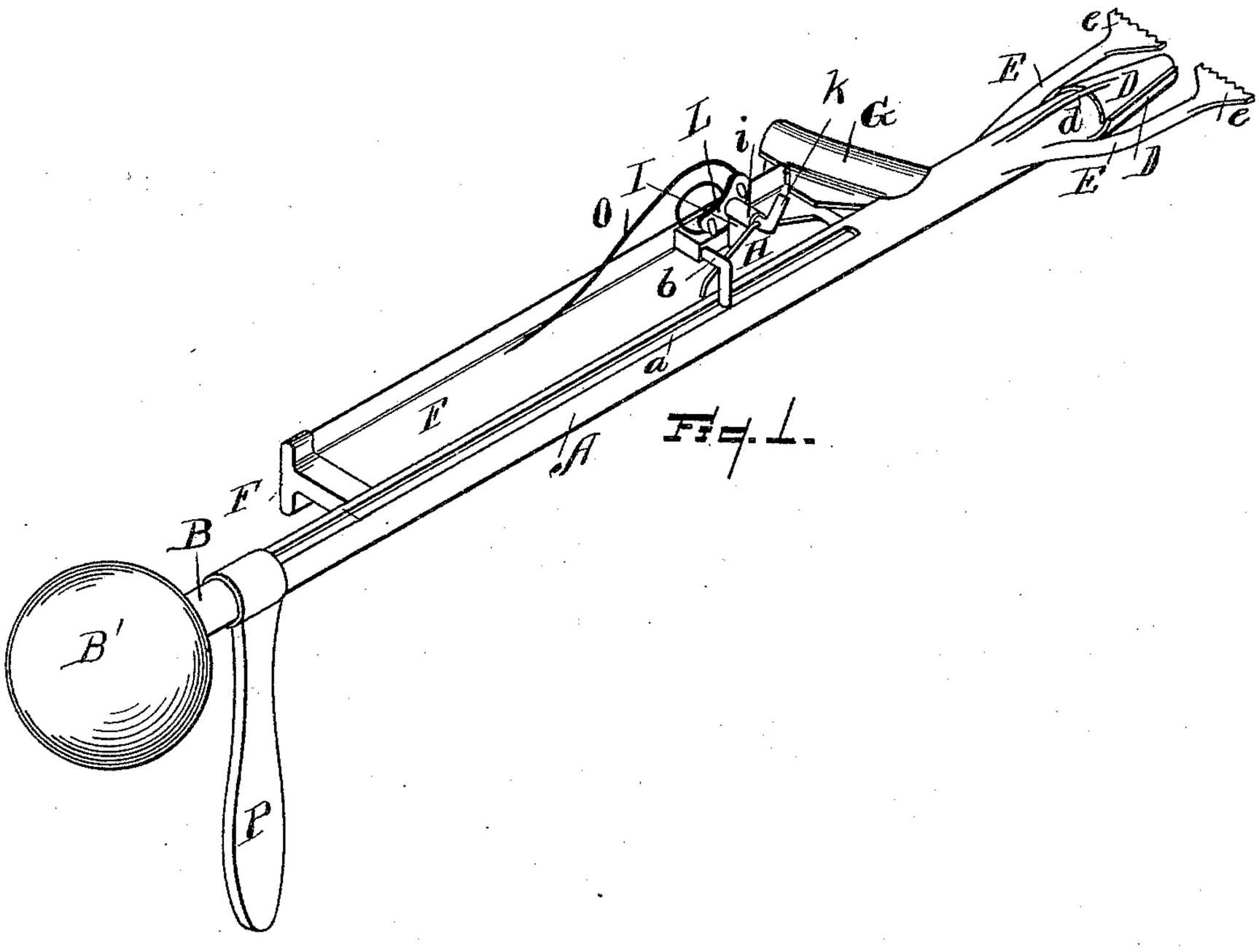

Fig. 1.

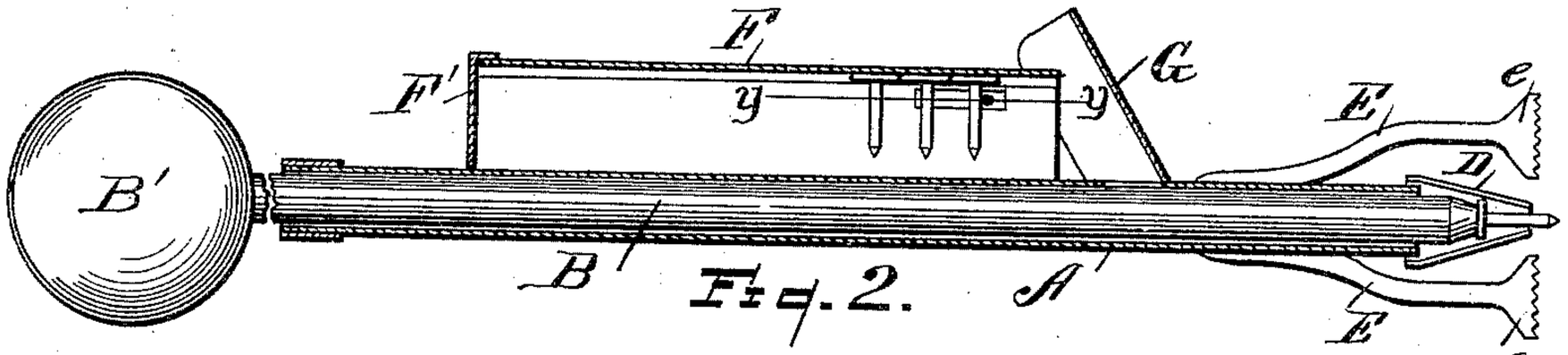

Fig. 2.

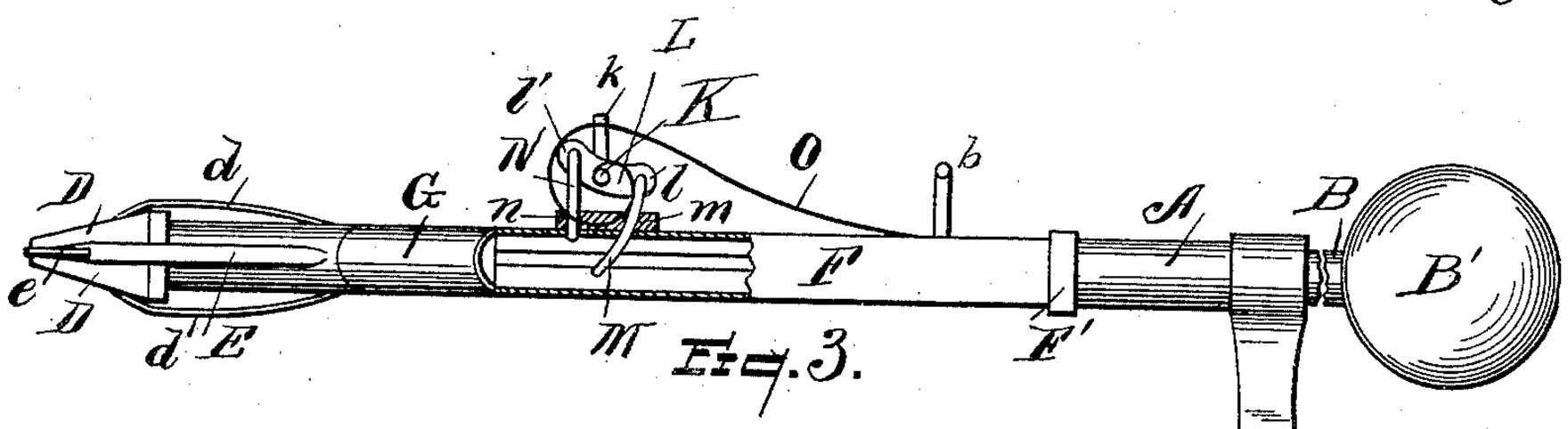

Fig. 3.

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UNITED STATES PATENT OFFICE.

HORACE H. BARNES AND JOHN S. BARNES, OF DETROIT, MICHIGAN.

TACK-DRIVER.

SPECIFICATION forming part of Letters Patent No. 444,685, dated January 13, 1891.

Application filed April 4, 1890. Serial No. 346,583. (No model.)

To all whom it may concern:

Be it known that we, HORACE H. BARNES and JOHN S. BARNES, citizens of the United States, and residents of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Tack-Drivers; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

Our invention relates to that class of tack-drivers in which the tacks are delivered to the hammer from a magazine.

The object of our invention is to provide a magazine for holding the tacks, the means to separate each tack as wanted from the others in the magazine, and to place it in a proper position to be driven by the hammer, and a hammer to drive the tack; and it consists in the magazine to contain the tacks, the means for separating and taking one tack from the magazine actuated by the movement of the hammer in driving a tack, the means of transmitting the tack from the magazine to the place where it is held in position to be driven, the means for holding it in position, and the means for driving it, and in the peculiar combination and arrangement of the several parts, as hereinafter more particularly described and claimed.

Figure 1 is a perspective view of our invention. Fig. 2 is a longitudinal sectional view of Fig. 1. Fig. 3 is a sectional view through the line *y y* in Fig. 2.

In the drawings, A represents a hollow cylinder, in which the rod or hammer B reciprocates, and B′ is the hammer-handle by which the hammer or driver is drawn back and driven forward.

a is a slot in the cylinder A, in which the curved arm *b* on the hammer slides.

D D are two lips at the lower end of the cylinder A for holding the tack in position to be driven. These lips are attached to the cylinder by the springs *d d* and are of the same diameter as the cylinder at the line of junction, but contract at the outer end to the size of the tack.

E E are two arms attached to the lower end of the cylinder and provided at their outer ends with the notched or toothed arms *e e* to engage with and stretch the carpet to place before the tack is driven.

F is the magazine containing the tacks and closed by the cap F′. This magazine in the interior cross-section corresponds with the shape of the tack, the point being downward or next to the cylinder containing the hammer. This magazine opens at its lower end into the feeding-tube G, which conducts the tack into the cylinder A below the hammer B. The tube G is open at its upper or outer end.

H is an inclined plane attached to the side of the magazine near the tube G and just above the cylinder A to guide the arm *b* on the hammer to the arm *k* on the rock-shaft K.

I is an arm projecting from the side of the magazine, carrying at its outer end the journal *i* of the rock-shaft K. The rock-shaft extends beyond the inclined plane H and is bent outward, forming the arm *k*.

L is a rocking plate firmly attached to the rock-shaft K near its upper or inner end.

M is a curved finger pivoted to the arm *l* of the plate L and projects through the orifice *m* into the magazine.

N is a straight finger pivoted to the arm *l′* of the plate L and projects through the orifice *n* into the magazine.

O is a spiral spring attached at its outer end to the side of the magazine and coiled around and attached at its inner end to the rock-shaft K.

P is the handle by which the tack-driver is held while in use.

The operation of our device is as follows: The magazine is filled with tacks, the lower tack resting on the curved finger M. The toothed arms *e e* are caught in the carpet and that is stretched to place. The tack-driver is then turned up until it is perpendicular, or nearly so. The downward motion of the hammer carries the arm *b* against the arm *k* and turns that a quarter of a turn of the rock-shaft K. The turning of the rock-shaft vibrates the plate L and withdraws the curved finger M from the magazine and inserts the finger N. As the curved finger is withdrawn a tack drops down on the finger N. The upward movement of the hammer releases the arm *k*, and the spiral spring brings the rock-

shaft back to its normal position, and with it the plate L. The finger M is again in place, supporting the column of tacks in the magazine. The finger N is withdrawn, allowing the tack it held to fall out of the magazine through the feeding-tube G into the cylinder A with its point downward. The tack is arrested by the lips D D and held until the next downward movement of the hammer drives it into the floor. This second downward movement of the hammer releases another tack, and so on until the magazine is exhausted.

What we claim as our invention is—

1. In a tack-driver, the combination of the magazine F, to hold the tacks, with the curved finger M, separating the tacks, the rocking plate L on the rock-shaft K, the finger N, pivoted in the rocking plate L, the rock-shaft K, the spring to rotate the rock-shaft, the arm *k*, projecting from the rock-shaft, the arm *b* on the reciprocating bar B, and the reciprocating bar B, as and for the purposes set forth.

2. In a tack-driver, the combination of the magazine F, to hold the tacks, with the finger M, sliding into the magazine and pivoted to the rocking plate L, the rocking plate L on the rock-shaft K, the finger N, pivoted to the plate L and sliding into the magazine, the rock-shaft K, the arm *k*, projecting from the rock-shaft, the spring actuating the rock-shaft, the reciprocating hammer B, the arm *b* on the reciprocating hammer, the tube A, containing the reciprocating hammer, and the feeding-tube G, connecting the magazine F with the tube A, all substantially as described.

3. In a tack-driver, the combination of the magazine F, to hold the tacks, with the finger M, inserted in the magazine and pivoted to the plate L, the rocking plate L on the rock-shaft K, the finger N, pivoted on the rocking plate L and inserted in the magazine, the rock-shaft K, carrying the plate L, the arm *k* on the rock-shaft, the tube A, containing the reciprocating hammer B, the reciprocating hammer B, the feeding-tube G, through which the tacks pass from the magazine to the tube A, the springs *d d* on the tube A, and the lips D D on the springs *d d*, holding the tack for the hammer, all substantially as described.

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Witnesses:
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