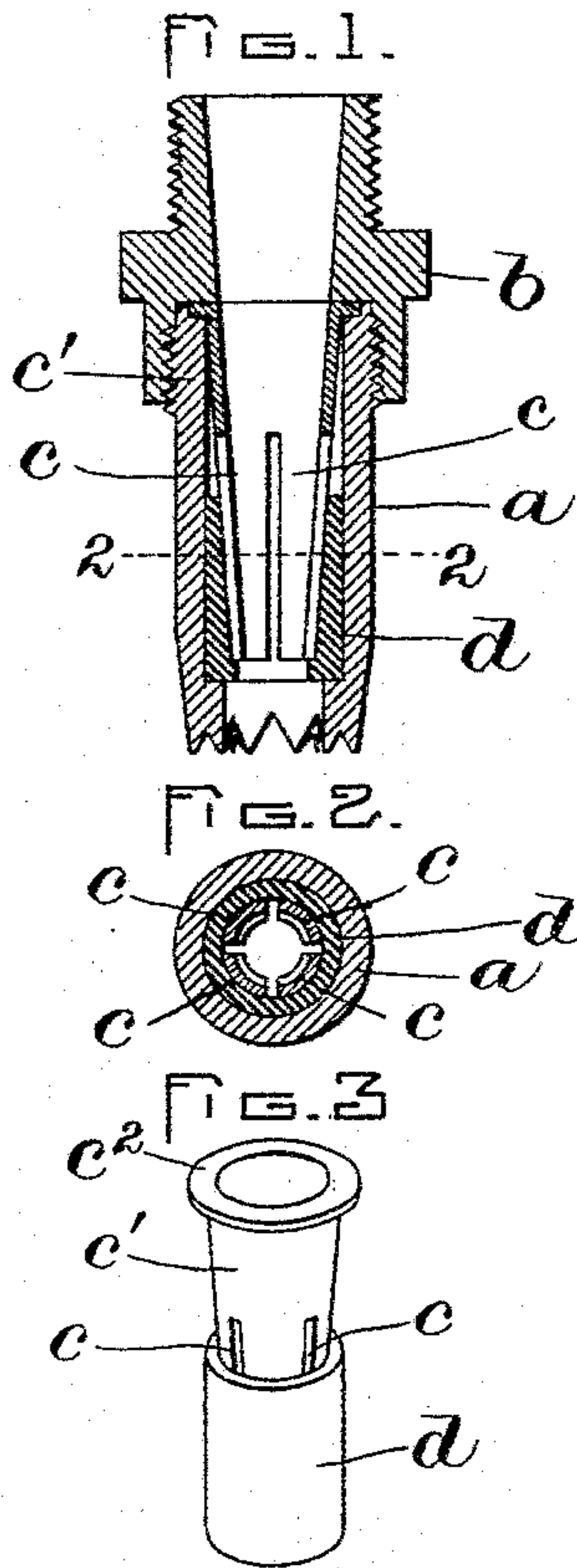


(No Model.)

D. B. NYE.  
TACK DRIVING MACHINE.

No. 533,733.

Patented Feb. 5, 1895.



WITNESSES:

A. D. Hanson  
Rollin Abell

INVENTOR:

D. B. Nye  
by Knight & Brown, Attorneys



# UNITED STATES PATENT OFFICE.

DAVID B. NYE, OF CAMBRIDGE, ASSIGNOR TO THE BOSTON LASTING MACHINE COMPANY, OF BOSTON, MASSACHUSETTS.

## TACK-DRIVING MACHINE.

SPECIFICATION forming part of Letters Patent No. 533,733, dated February 5, 1895.

Application filed July 16, 1894. Serial No. 617,632. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID B. NYE, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Tack-Driving Machines, of which the following is a specification.

This invention relates to the delivery nozzles for tack-driving machines, and particularly to the type of delivery nozzle shown in Letters Patent of the United States No. 464,200, dated December 1, 1891, said patent showing a tack-delivering nozzle composed of a rigid external shield or tube and an internal split or elastic guide-tube contained in the external tube and made shorter than the latter, the said elastic tube being adapted to yieldingly grasp the heads of the tacks driven through the nozzle and cause the tacks to assume a vertical position when being driven.

The present invention has for its object to increase the durability and efficiency of the internal guide-tube; and to this end it consists in a delivery nozzle composed of an external tube or shield, a sectional expansible guide-tube within said shield composed of a series of independently movable fingers or sections, and a spring surrounding the sectional guide-tube and interposed between the latter and the external tube or shield, said spring being adapted to normally contract the sections of the guide-tube and insure their operative relation to each other and to the tack which is being driven, regardless of the conditions of the said sections or fingers as to their inherent resilience or as to their connection with each other at the upper end of the guide-tube.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a vertical section of a delivery nozzle provided with my present improvements. Fig. 2 represents a section on line 2—2 of Fig. 1. Fig. 3 represents a perspective view of the guide-tube with its inclosing spring detached from the external tube or shield, the said figures being made on an enlarged scale.

In the drawings—*a* represents the external tube or shield which is, or may be, of substantially the form represented in the Patent

No. 464,200 above mentioned, and is screwed into a collar or holder *b*, substantially as shown in said patent.

The internal guide-tube is composed of a series of sections or fingers *c c*, which are preferably made of sheet metal and are here shown as formed integral with a flanged tubular neck *c'*, the flange *c'* of which rests on a seat at the upper end of the external tube or shield *a*, this construction being substantially as set forth in Letters Patent No. 513,820, dated January 30, 1894. I do not limit myself, however, to the manner of connecting the sections with each other and to the tube or shield *a* here shown, as said sections may be constructed and arranged in any suitable manner which will permit them to move independently and to be closed or pressed inwardly by the inclosing spring hereinafter described.

*d* represents a spring, which is preferably a rubber tube formed to surround the fingers or sections *c* and to be interposed between the outer surfaces of said sections and the inner surface of the tube or shield *a*. Said spring is preferably formed as shown in Figs. 1 and 2, so that its outer surface bears on the inner surface of the tube or shield *a*, the spring acting, therefore, as an annular cushion which is compressed by the outward movement of the sections *c* caused by the passage of a tack through the guide-tube, and in its effort to expand exerts inward pressure on said sections, which presses them closely against the head of a tack passing through the guide-tube, causing the centering action described in Patent No. 464,200 above mentioned.

It will be seen that the annular spring inclosing the sectional guide-tube insures the contraction of said tube around the tack-head without regard to the condition of said sections as to their connection with each other and with the external tube or shield *a*; so that if said sections when connected by the tubular neck *c* in the manner shown should become set, and thus lose their elasticity; or if said neck should be cracked or broken, so that the sections are left independent of each other, the action of the guide tube will not



be impaired. I find, therefore, that the annular spring tends to greatly increase the durability and efficiency of the guide-tube.

I claim—

- 5 A delivery nozzle for tack-driving machines, comprising a rigid external tube or shield open at both ends, an elastic tube or annular spring cushion bearing upon the inner surface of the external tube, and a series of independently movable metal fingers located in  
10 said external tube and bearing on the inner surface of the elastic tube, the latter consti-

tuting a resilient backing or support for the fingers and holding them yieldingly against a tack-head in the tube.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 13th day of July, A. D. 1894.

DAVID B. NYE.

Witnesses:

C. F. BROWN,  
A. D. HARRISON.