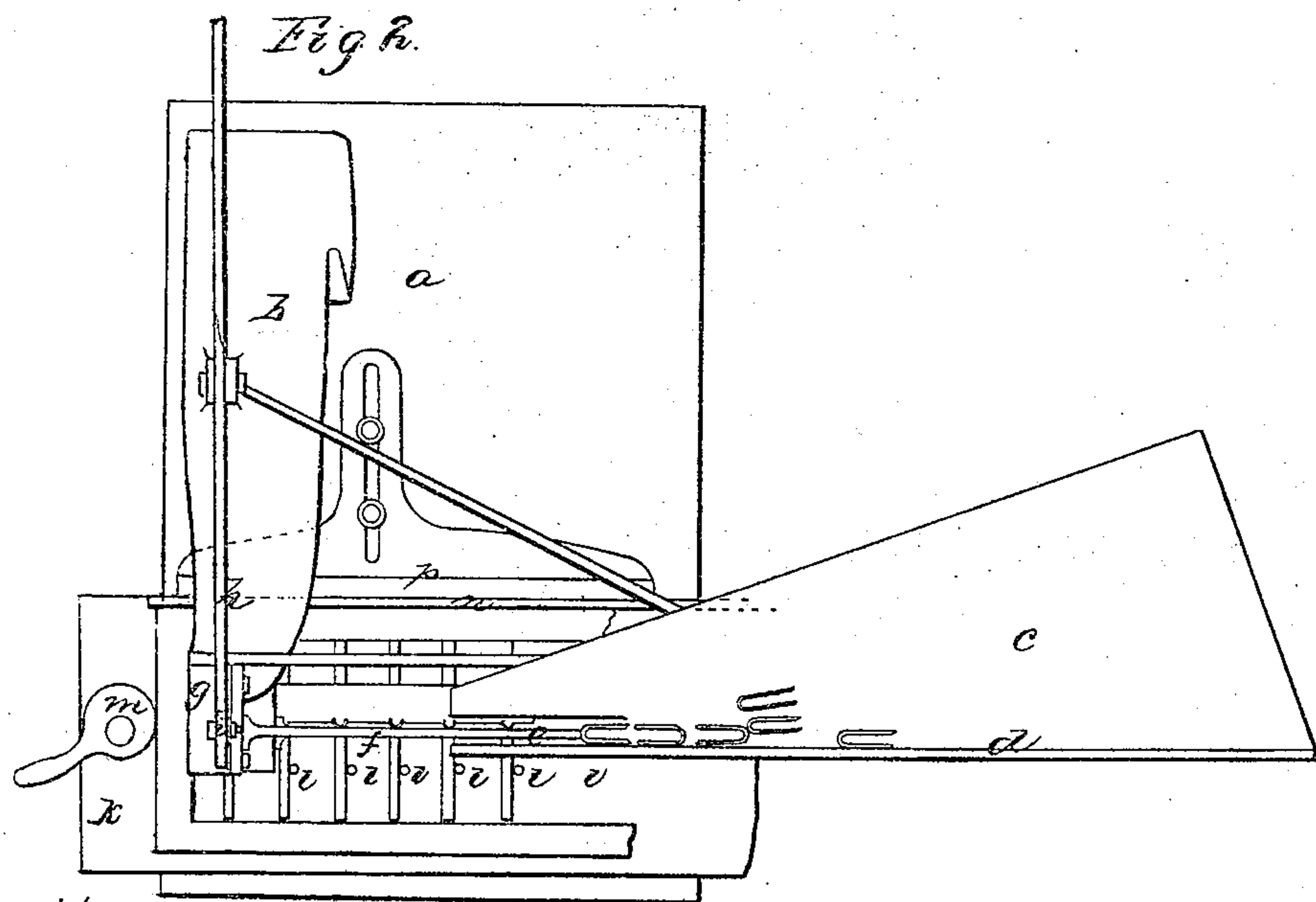
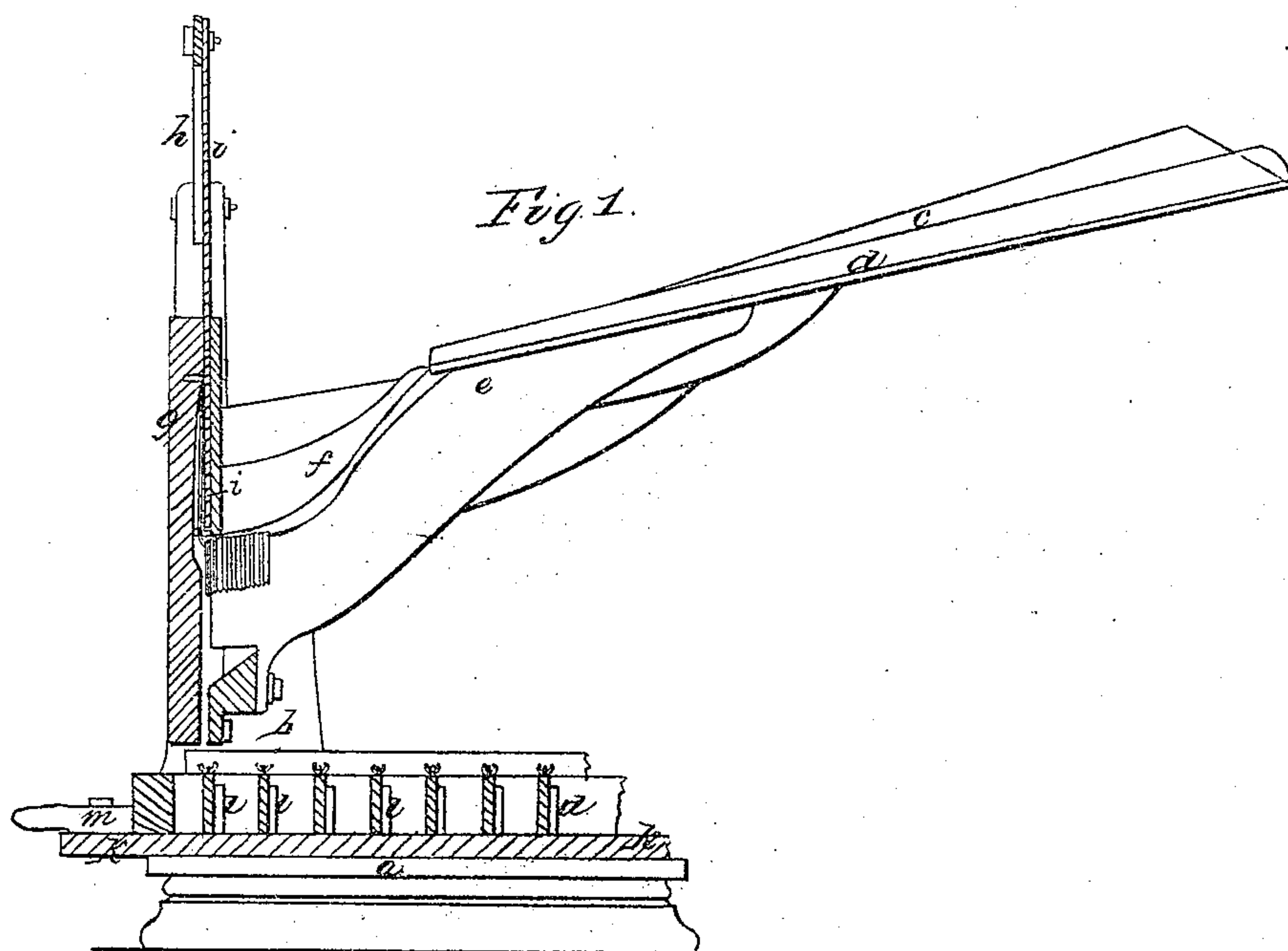


D. M. SMYTH.  
MACHINE FOR INSERTING BLIND STAPLES.

No. 41,180.

Patented Jan. 5, 1864.



Witnesses.

Samuel W. Sewell

Chas. H. Smith

Inventor.

David M. Smyth.



# UNITED STATES PATENT OFFICE.

DAVID M. SMYTH, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND  
S. N. LEWIS, OF SAME PLACE.

## IMPROVEMENT IN MACHINES FOR INSERTING BLIND-STAPLES.

Specification forming part of Letters Patent No. 41,180 dated January 5 1864.

*To all whom it may concern:*

Be it known that I, DAVID M. SMYTH, of the city, county, and State of New York, have invented, made, and applied to use a certain new and Improved Means for Inserting Staples in Blinds; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a vertical section of my machine with part of a blind in place. Fig. 2 is a plan of the same with a part of the blind in position.

Similar marks of reference denote the same parts.

The staples uniting the vertical rods of blinds to the slats have heretofore usually been inserted by hand, which operation is tedious and unreliable, and the slats are often injured by driving the said staples.

The nature of my said invention consists, first, in a self-acting device for assorting or suspending the staples, so that they will all hang over a bar with the points downward and in this position be fed into the machine; second, in a means for taking one staple at a time and inserting it into the blind slat or rod, and, third, in a moving gage to bring the blind-slats correctly to position and present them for the reception of such staple.

In the drawings, *a* is the bed of the machine, from which an arm, *b*, rises that is sufficiently strong to carry the operative parts of the machine, and which arm overhangs the bed the distance required for the introduction of the blind upon such bed. From the arm *b* supports extend that sustain an inclined hopper or raceway, *c*, upon which the staples are placed or dropped from time to time. This incline *c* is at such an angle that the vibration or shaking of the machine incident to its use will cause the staples to slide down and to separate from each other and rest upon the incline *c*, and a fence, *d*, is provided, against which the staples work as they slide down. A slot is provided in the lower end of the incline *c* wide enough for passing through a staple, but in the middle thereof is a bar, *e*; hence as the staples work down the incline the bend of the staple is caught on said bar

and the points drop through said slot and come vertical so that the staples hang upon said bar and slide down the same to the staple-driver. I introduce a curved bar, *f*, over the bar *e*, to keep the staples in place as passing down the steeper part of the incline, which incline is made steep, as shown, to cause the staples to feed into the machine with greater certainty. At the end of the bar *e* is a vertical slide, *g*, the opening in which is of a size adapted to one staple, and in this opening is a driver or punch, *i*, actuated by a lever, *h*, or other convenient mechanism, and said punch is of a size to fill the hole that receives the staple. At the end of the bar *e*, in the slide *g*, is a spring, *o*, the point of which is bent toward said bar *e*. As the punch *i* is raised above the said spring the staples slide down and said spring holds them from running off said bar *e*, and the end one is in such a position as to be pressed down by the punch as said punch is driven down, the spring *o* yielding to the movement of said punch.

The blind itself is prepared to receive the staples as follows: The bar that passes over the slats is first to be stapled by this machine by presenting it on a suitable divided gage to the staple-driver so that the staples will be pressed in at regular distances apart. The blind itself with the slats in place is to be laid upon the sliding bed *k*, that is fitted with a row of standing pins, *l*, the distance of which apart is the same as that of the blind-slats. The bed *k* carries a cam, *m*, which can be turned to press and hold the slats against the pins, and thereby said slats will be kept in a vertical position by taking against one side of each pin. The blind itself is laid with one edge against the fence *n* of the bed *k*, and the bed is guided against the stationary adjustable fence *p* fixed to the bed *a* so that the center of the slats will come under the staple-feeder and punch. The operator takes the stapled bar and attaches it at each end to the slats, the bar lying partly on its side, so that the staples can be inserted. He then proceeds to insert the staples successively by sliding the bed *k* and blind beneath the staple-feeder and punch, driving the staples successively through the staple on the bar and into the edge of the slat. A screw may be substituted

for the cam *m*, and the lever *h* may be worked by a treadle. The bed *k* and pins *l* are to be adapted to the size of blind, and, if desired, the bed and blind might be moved along by automatic mechanism to bring the successive slats in position to receive the staples.

What I claim, and desire to secure by Letters Patent, is—

1. Separating the staples and suspending them by means of the bar *e* and slot in the incline *c*, for the purposes and as specified.

2. The bar *f*, in combination with the bar *e*, for retaining the staples in place as supplied to the machine, as set forth.

3. The spring *o* and punch *i*, conveying the staples successively from the bar *e* and driving them, as specified.

4. The sliding bed *k* and pins *l*, for receiving the blind and holding the slats in position while the staples are being inserted, as specified.

In witness whereof I have hereunto set my signature this 11th day of November, A. D. 1863.

DAVID M. SMYTH.

Witnesses:

LEMUEL W. SERRELL,  
CHAS. H. SMITH.