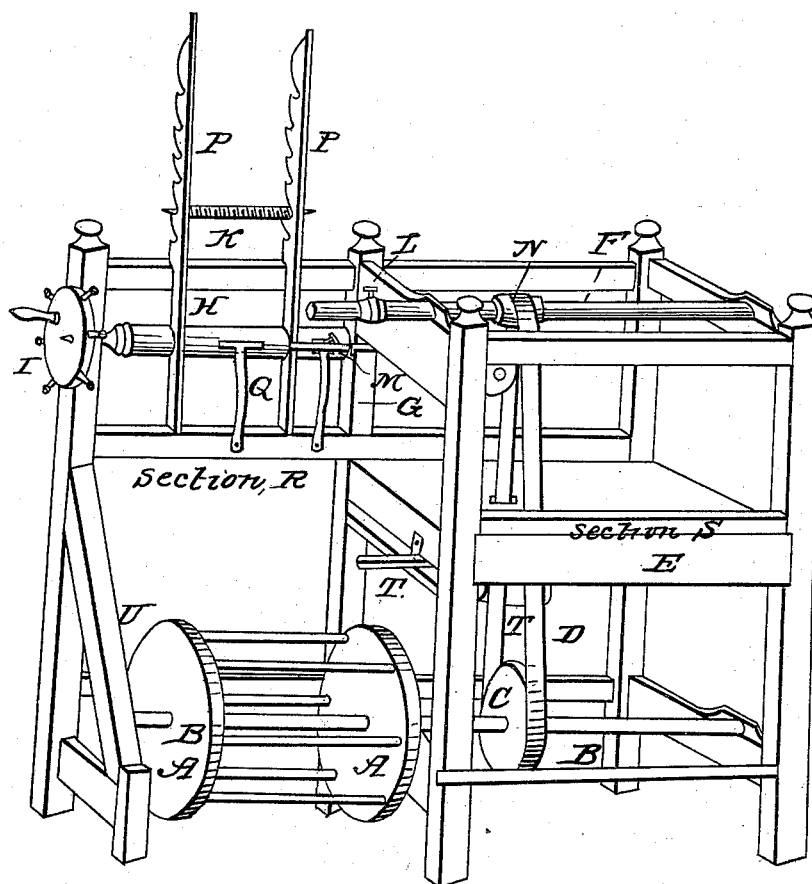


W. BEAMAN.  
Broom Machine.

No. 3,219.

Patented Aug. 17, 1843.



# UNITED STATES PATENT OFFICE.

WM. BEAMAN, OF SALEM, NEW JERSEY.

## MACHINE FOR WINDING WIRE OR TWINE ON BROOMS.

Specification of Letters Patent No. 3,219, dated August 17, 1843.

*To all whom it may concern:*

Be it known that I, WILLIAM BEAMAN, of Salem, in the county of Salem and State of New Jersey, have invented a new and Improved Machine for Winding Wire or Twine on Brooms; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of the specification.

The power which I employ in working said machine is that of a single individual operation. The machine is portable and may be easily transported from one place to another. It receives its motion or original power from the pressure of the foot of the operator upon a tread wheel. (See tread wheel A in drawing (1) of said machine.)

Although I do not intend to confine myself to any precise size in the various parts, I will, for sake of description, give the proportions which I have found to answer well in practice.

I make a frame work about 4 feet long 3 ft. 10 in. in height. This frame is divided into two sections or divisions (see in drawing (1) sections R and S.) Section (S) is a rectangular frame work, two feet long, two feet wide and three feet ten inches high. The end piece or posts of about 3 inch plank, connected at the top and bottom and near the center by plank of about the same dimensions as the posts. This section contains a hollow horizontal shaft situated upon the top of the frame work, extending throughout the whole length of the section, and about six inches over, made of wood or iron of sufficient bore to admit an ordinary sized broom handle (see shaft F,) which shaft operates to turn the broom by means of a pulley (see pulley N) which is connected with the lower pulley (C) by means of a strap, (strap D) the shaft of the lower pulley (C) is regulated and moved by the tread wheel (A) to which hollow shaft is appended screw (L) to fasten and screw the broom handle in the shaft. Section (S) contains also the drawer (E) for convenience. In section (S) (T) represents a pressure pulley upon a lever which is upon a swivel at one end at the other it works in a ratchet, in order that it may be loosened at pleasure—that is, the strap (D), it is often necessary that strap (D) should be loosened in order that the operator may more con-

veniently finish the braiding on the handle or apply the power of his hand to the hollow shaft F to turn it.

The framework of section (R) is similar to that of section (S) in height and length, it is open in front and is supported by a brad (U) of about 3 inch plank which extends out in the same distance as the width of section (S). This section contains the tread wheel (A), the diameter of which is about 16 inches, and the length 13 in. containing seven rounds. The shaft (B) forming the axle of the tread wheel extends throughout the whole length of the machine, being the axle of pulley (C) in section (S). This tread wheel revolves within a few inches from the ground. This section contains also a horizontal wire roller (H) which extends the whole length of the section, for the purpose of winding wire or twine. This roller is situated near the top of the machine—and about 4 in. in diameter. The same section contains also a horizontal screw (K) of about 8 inches in length, made of iron or wood, with grooves sufficiently large to admit broom wire or twine, for the purpose of governing the wire or twine as it is braided on the broom. The wire or twine passes from the wire roller over screw (K) thence passes to the handle in the hollow shaft (F).

In section (R) connected with the wire roller (H) is a wire spring (2) resembling the letter (T) the lower end is fastened into the frame work and the other end resting on the wire roller, in order to keep the wire or thread compact in case it breaks.

In section (R) connected with the wire roller (H) and about 8 inches to the right of the wire spring, and similarly situated, and resembling it in size and shape, is pressure spring (G) regulated by the screw (M) by which means the pressure may be increased or diminished as the strength of the wire will bear—by pressure we mean the degree of tightness of the wire around the broom.

The object of hand wheel (I) is to wind the wire on the wire roller and to tighten it as occasion requires. Upright (P) is about 12 inches in height, it is to support screw (K) with notches to raise or lower the screw, at pleasure.

The great advantages of this useful machine, are the expedition and capacity of winding the wire or twine on the brooms,

and the ease of the operator, he can work at it with perfect ease and convenience, without exhausting his strength, and impairing his health, caused by continued stooping, he may sit or stand in an upright and free position, without the pressure or straining of any part of his body.

The operator while manufacturing the broom stands or sits in front of the tread wheel (A) he applies his foot to the rounds of the tread wheel—the broom handle on the hollow shaft (F) commences being turned, he applies with his hand the broom corn or brush to the handle of the broom the wire is wound around it securely, by means

of the power applied to the tread wheel. In the mean time the operator by applying his hand to screw (M) of pressure spring (G) may loosen or tighten the wire according to its strength.

What I claim as my invention and desire to secure by Letters Patent is—

The combination of the hollow shaft to receive the broom handle, with the screw guide and wire roller or reel governed by springs for retaining the wire as described.

WILLIAM BEAMAN.

Witnesses:

ANDW. SINNICKSON,  
THOMAS SINNICKSON.