(No Model.)

G. W. CHASE.

MACHINE FOR PACKING SHAVINGS.

No. 380,185. Patented Mar. 27, 1888.

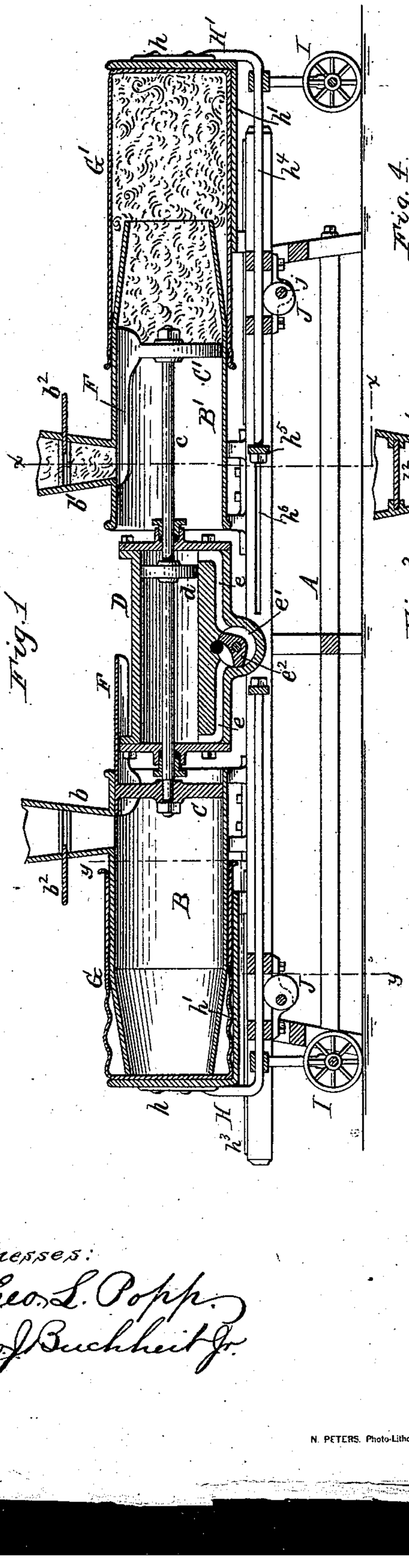

Fig. 1.

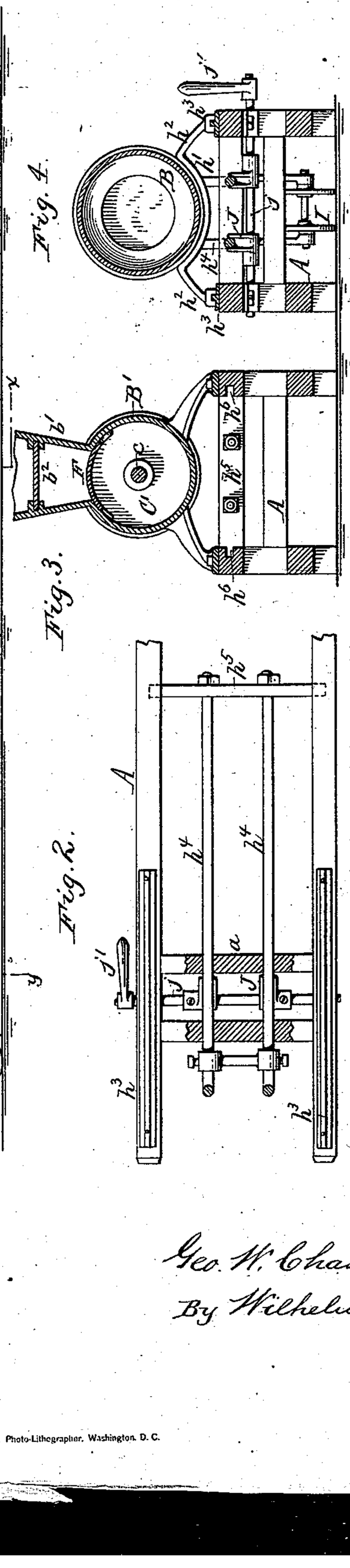

Fig. 3.

Fig. 4.

Fig. 2.

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MACHINE FOR PACKING SHAVINGS.

SPECIFICATION forming part of Letters Patent No. 380,185, dated March 27, 1888.

Application filed July 25, 1887. Serial No. 245,185. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. CHASE, of Tonawanda, in the county of Erie and State of New York, have invented a new and useful Improvement in Machines for Packing Shavings, of which the following is a specification.

This invention relates to a machine for packing shavings, sawdust, hops, &c., into bags, and has for its object to produce a simple machine whereby material of this character can be easily and rapidly packed.

The invention consists of the improvement, which will be hereinafter fully described, and pointed in the claims.

In the accompanying drawings, Figure 1 represents a longitudinal sectional elevation of my improved machine. Fig. 2 is a sectional top plan view of a portion of the machine with the packing-cylinder removed. Fig. 3 is a cross-section in line *x x*, Fig. 1. Fig. 4 is a cross-section in line *y y*, Fig. 1, looking toward the left.

Like letters of reference refer to like parts in the several figures.

A represents the stationary supporting-frame of the machine, upon which are arranged two horizontal packing-tubes, B B′. The packing-tubes B B′ are open at both ends, and their outer ends are made tapering, so that the material is compressed in this tapered portion of the tubes before it is delivered into the bags.

b b′ represent feed-hoppers, arranged in the upper side of the packing-tubes near the inner ends thereof, and whereby the material to be packed is fed into the packing-tubes. The feed-hoppers *b b′* are each provided with a slide, b^2, for regulating the supply of material to the packing-tube.

C C′ represent plungers or followers arranged in the packing-tubes B B′, and connected by a horizontal rod, *c*. The latter passes through opposite ends of a steam-cylinder, D, which is arranged between the two packing-tubes B B′ and in line therewith. The cylinder D is provided with a piston, *d*, to which the piston-rod *c* is secured, and whereby a reciprocating motion is imparted to the followers C C′. Steam is admitted to the cylinder D through the ports *e*, which lead to opposite ends of the cylinder, and which communicate with the valve-chest *e′*.

e^2 represents the valve for controlling the flow of steam to the ports *e*, and which is provided with a suitable handle, whereby it is operated. The valve e^2 may be operated by any other suitable means.

F represents curved plates or shields secured to the upper ends of the followers C C′, for closing the lower ends of the feed-hoppers *b b′* when the followers have passed the feed-hoppers, so as to prevent the material from entering the packing-tubes B B′ in rear of the followers.

G G′ represent the bags into which the material is packed from the tubes B B′. The mouths of the bags G G′ are inserted over the outer tapering end of the tubes B B′, and are supported or held thereon while being filled by the horizontal frames H H′.

The frames H H′ slide lengthwise on the supporting-frame A, so as to permit the bags to move outwardly as they become filled. The frames H H′ are each composed of a vertical plate, *h*, which closes the tapering discharge end of the packing-tube and bears against the outer end or bottom of the bag, and a curved horizontal plate, *h′*, upon which the bag rests. The horizontal plate *h′* is supported by arms h^2, which slide upon tracks or ways h^3, secured to the upper side of the supporting-frame A.

h^4 represents horizontal bars or rods secured with their outer ends to the vertical plate *h*, and sliding in openings formed in the cross-pieces *a* of the supporting-frame A. The horizontal bars h^4 are connected at their inner ends by a cross-piece, h^5, which is guided in grooves or ways h^6, formed in the sides of the supporting-frame A.

I I are trucks which support the outer ends of the frames H H′.

J J are cams which bear against the under side of the horizontal rods h^4. These cams are not clamped so tightly against the rods h^4 as to hold the bag-supporting frames H H′ against movement, but are so adjusted as to retard the outward movement of the bag sufficiently to cause the material to be compressed in the bag as it enters the same. The cams J are mounted upon horizontal shafts *j*, which are journaled in suitable bearings secured to the supporting-frame A, and are provided with handles *j′*, whereby the cams are turned.

In the position of the parts represented in Fig. 1 the bag applied to the packing-tube B

is in position to be filled, and the bag on the tube B′ is shown as partly filled. Upon admitting the material to the packing-tubes and operating the followers C C′ the material in the tubes is forced into the tapering outer ends of the tubes by the forward movement of the followers. When the followers in their backward movement have cleared the lower ends of the feed-hoppers *b b′*, another charge of material is delivered into the packing-tubes in front of the followers, which charge is forced into the tapering outer ends of the tubes by the next forward movement of the followers. The fresh charges of material entering the tapering portion of the tube compress the material in the tube and force the same into the bags. As the bags become filled they are moved outwardly by the material entering the same, the supporting-frames H H′ retarding the outward movement of the bags and causing the material to be tightly compressed therein. When the bags have been filled, they are tied up and removed and new bags are applied to the packing-tubes.

My improved machine is very simple in construction and greatly expedites the operation of packing shavings, sawdust, and other light and bulky material.

I claim as my invention—

1. The combination, with the supporting-frame A, of a packing-tube secured thereto and provided with a tapering discharge end, a feed-hopper whereby the material is fed into the packing-tube, a follower arranged in the packing-tube and provided with a curved plate or shield, whereby the feed-hopper is closed and the material in the feed-hopper is prevented from entering the packing-tube in rear of the follower, and a horizontal movable frame attached to the main frame and closing the discharge end of the packing-tube, and adapted to support a bag placed around the packing-tube as it receives the material from the latter, substantially as set forth.

2. The combination, with the supporting-frame A and the packing-tubes B B′, secured to said frame and having their outer open ends made tapering, of a steam-cylinder, D, arranged between said packing-tubes and provided with a piston, *d*, and a piston-rod, *c*, extending through opposite ends of said cylinder and into the packing-tubes B B′, followers C C′, arranged in said packing-tubes and secured to the ends of the rod *c*, feed-hoppers *b b′*, arranged near the inner ends of the packing-tubes, whereby the material is fed into the packing-tubes, and shields F, secured to the followers C C′ and adapted to close the feed-hoppers by the movement of the followers, substantially as set forth.

3. The combination, with the supporting-frame and a packing-tube provided with a tapering discharge end and a feed-hopper, of a follower arranged in said packing-tube, movable bag-supporting frame H, composed of a horizontal concave plate, *h′*, and an upright plate, *h*, against which the bottom of the bag rests, horizontal rods or bars h^4, sliding on the frame of the machine and attached to the bag-supporting frame, and a cam bearing against said horizontal bars, and whereby the receding movement of the bag-supporting frame is retarded, substantially as set forth.

4. The combination, with the supporting-frame and a packing-tube, of the movable bag-supporting frame H, provided with rods h^4, sliding on the supporting-frame, cams *j*, bearing against the rods h^4, and a truck, I, supporting the outer end of said bag-supporting frame, substantially as set forth.

Witness my hand this 28th day of May, 1887.

GEO. W. CHASE.

Witnesses:
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