

(No Model.)

2 Sheets—Sheet 1.

R. B. DULA.
APPARATUS FOR HANDLING TOBACCO.

No. 460,001.

Patented Sept. 22, 1891.

Fig. I.

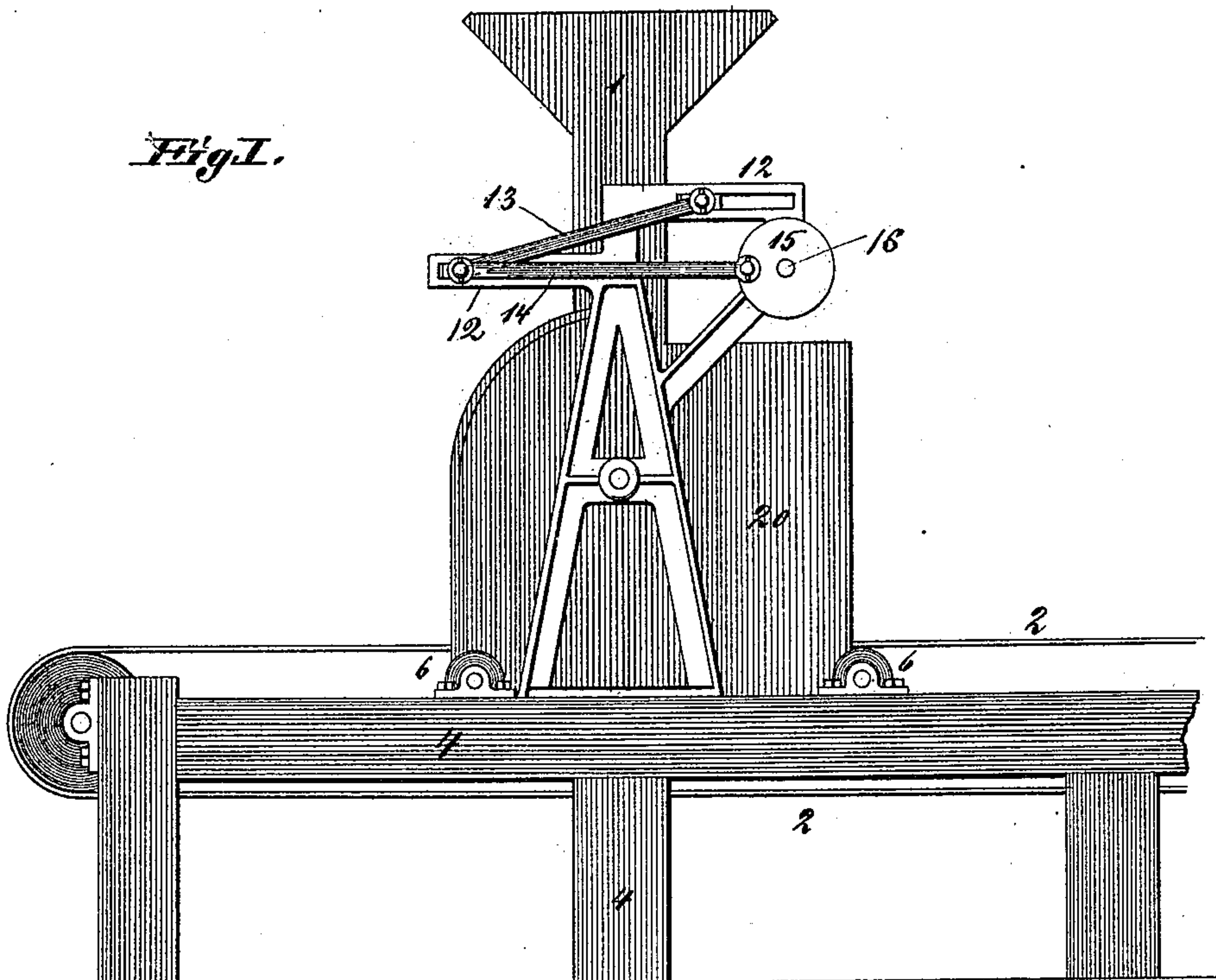
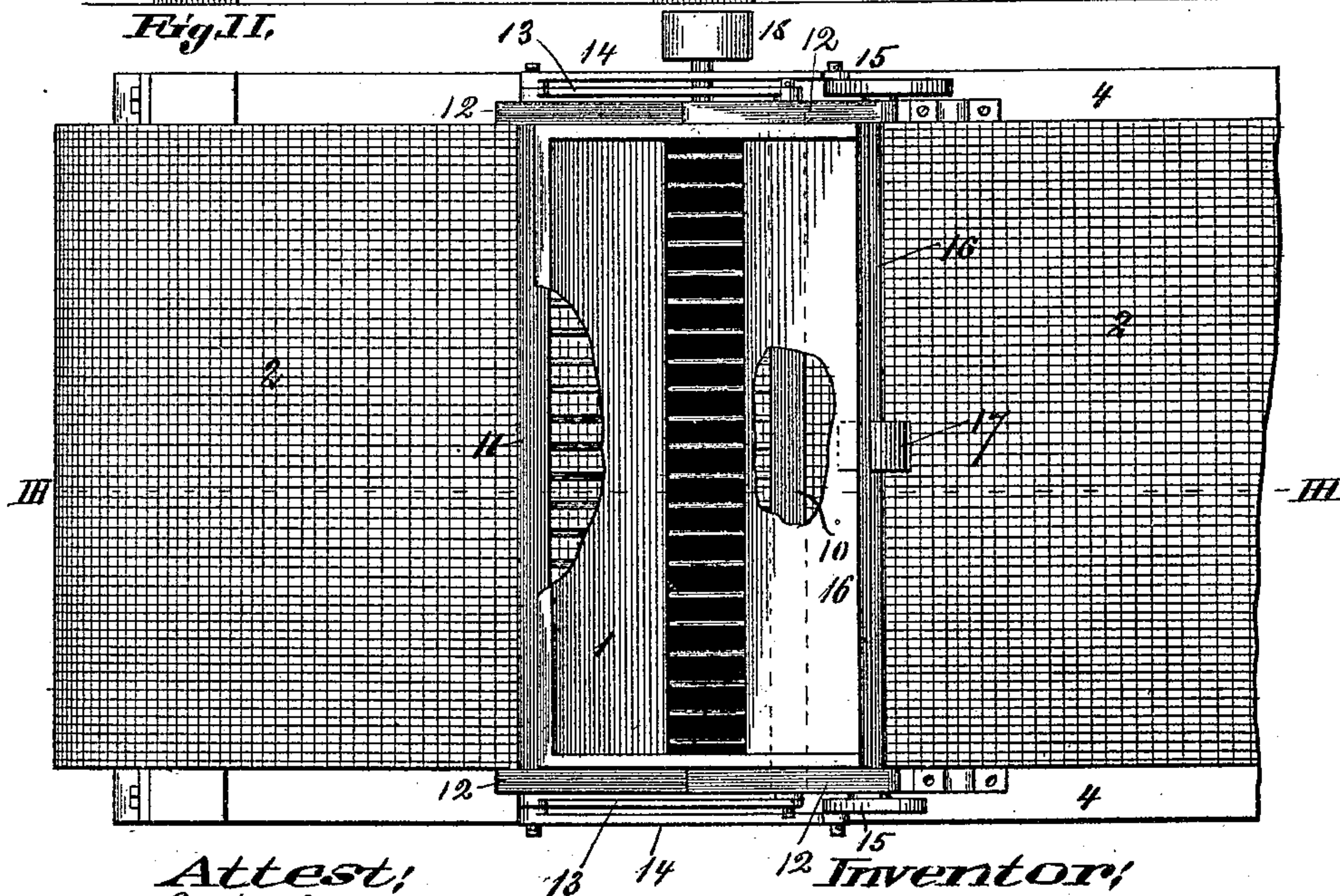


Fig. II.



Attest:
E. Arthur
George E. Luse

Inventor,
Robt. B. Dula.
By Knights Bros
Atty's.

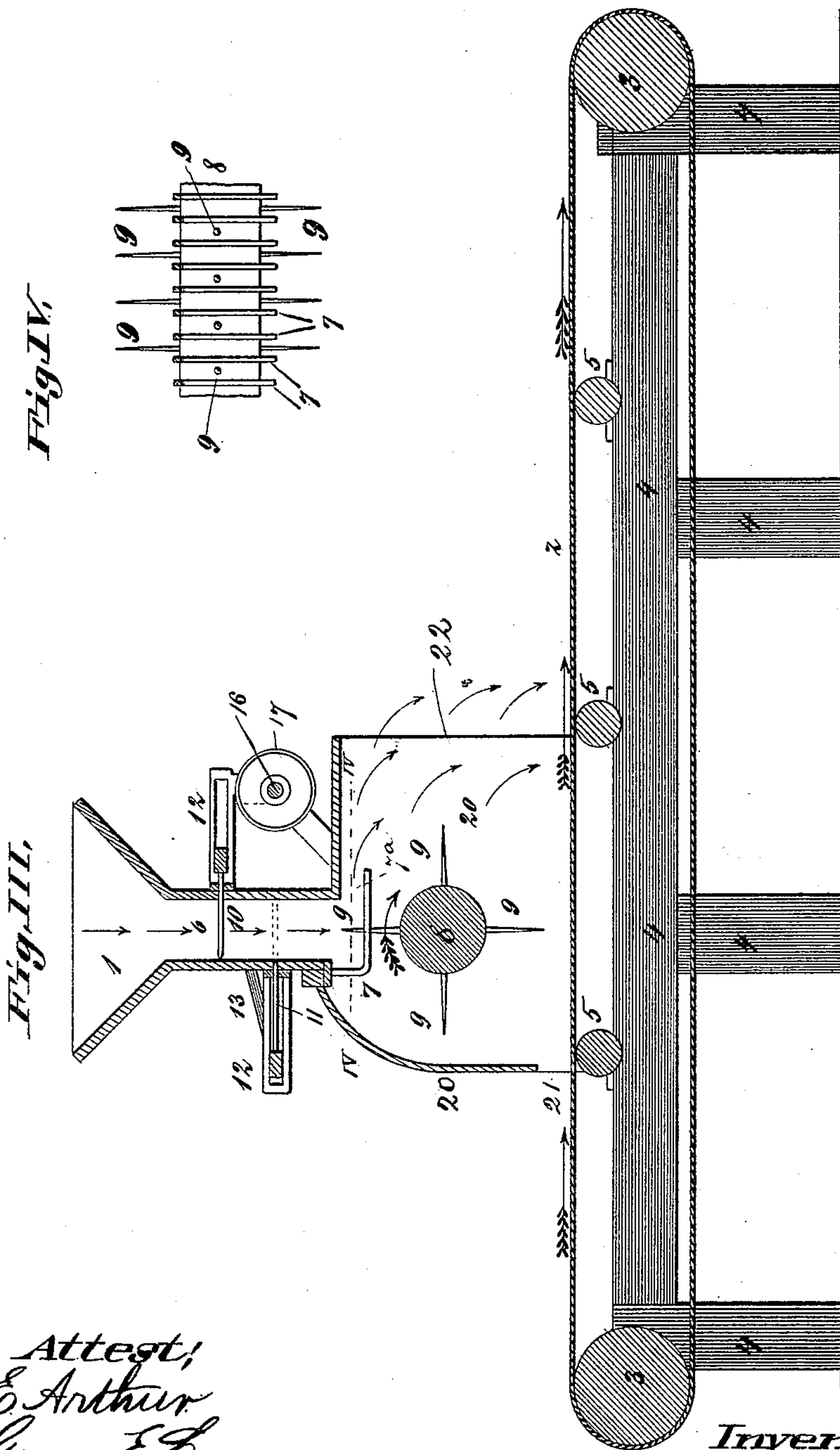
(No Model.)

2 Sheets—Sheet 2.

R. B. DULA.
APPARATUS FOR HANDLING TOBACCO.

No. 460,001.

Patented Sept. 22, 1891.



Attest:
E. Arthur
George E. Case

Inventor:
Robt. B. Dula
By Knight Bros
Atty's

UNITED STATES PATENT OFFICE.

ROBERT B. DULA, OF ST. LOUIS, MISSOURI.

APPARATUS FOR HANDLING TOBACCO.

SPECIFICATION forming part of Letters Patent No. 460,001, dated September 22, 1891.

Application filed August 24, 1889. Serial No. 321,888. (No model.)

To all whom it may concern:

Be it known that I, ROBERT B. DULA, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Apparatuses for Handling Tobacco, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Figure I is a side elevation of my improved device. Fig. II is a top view. Fig. III is a vertical longitudinal section taken on line III III, Fig. II. Fig. IV is a section taken on line IV IV, Fig. III.

1 represents a vertical hopper into which the tobacco is placed, having a vertical neck 6, down which the tobacco falls.

2 represents a carrying apron or belt supported on rollers 3, journaled in a suitable support 4. This apron provides a surface or table onto which the material may be discharged.

5 represents idle-rollers placed beneath the upper part of the apron or belt.

Instead of discharging the material onto the apron, I may provide racks (not shown) for this purpose. Secured at one side of the neck and arranged horizontally beneath the latter is a comb 7, the teeth of which are illustrated in Fig. IV. The free ends of the teeth extend beyond the other side of the neck, leaving a free horizontal passage 7^a thereover, through which the material is driven. Beneath this comb is a cylinder 8, provided with prongs 9. These prongs pass between the teeth of the comb and remove the material from the latter through the free horizontal passage over the free ends of the teeth of the comb, and thus discharge it onto the receiving-surface.

In order to get a uniform deposit of tobacco, and also in order to prevent the too rapid movement of the tobacco down the neck of the hopper while yet the latter is of sufficient size so that the tobacco will not clog therein, it is necessary to provide some means for giving a substantially continuous flow of tobacco and yet check its too rapid feed. I accomplish this by means of comb-valves 10 and 11, one arranged over the other and adapted to extend across the neck of the hopper. They are moved intermittently—that is, when the valve 10 is in its inner position the valve 11

is in its outer position, and vice versa. The valves are held and guided by slotted brackets 12, and my preferred way of operating them is to connect them by means of links 13 and to connect one of them by means of links 14 to operating-cranks or eccentrics 15 on a driving-shaft 16, having a pulley 17, through which the movement is imparted.

The cylinder 8 is provided with a driving-pulley 18. It will thus be seen that when the tobacco is placed in the hopper and the valves and cylinders set in motion there will be a constant regular feed of tobacco and that this feed will be regulated to the desired speed. The hopper terminates at the bottom in an enlargement 20, in which the comb 7 and cylinder 8 are located. The enlargement is formed with a rack-opening 21 and an open side 22. Through the latter the tobacco is spread or scattered.

It is evident that the carrying belt or apron might be dispensed with and the racks placed beneath the cylinder by other means or by hand. It is also possible that the valves could be dispensed with, though I prefer to use them.

Instead of using a broad carrying-apron like that shown, it is evident that narrow chains or belts could be used, one at each side of the machine.

I claim as my invention—

1. The combination of a vertical hopper 1, having a vertical neck 6, down which the material falls, an enlargement 20 beneath the neck, having an open side 22, the horizontal comb 7, onto which the material falls, located beneath the neck and secured at one side of the latter, having the free ends of its teeth extending beyond the other side of the neck, so as to leave a free horizontal passage 7^a, the cylinder 8 within the enlargement extending beneath the comb and having prongs 9, working between the teeth of the latter, for driving the material through the free horizontal passage and through the open side, and a surface onto which the material is discharged, substantially as described.

2. The combination of the hopper 1, having vertical neck 6, down which the tobacco falls, an enlargement 20 beneath the neck, having rack-opening 21 and open side 22, the comb 7, arranged horizontally beneath the neck, onto which the tobacco falls, the cylinder 8 with-

in the enlargement and extending beneath the comb, having prongs 9, working between the teeth of the comb, for throwing the tobacco from the latter through the open side, 5 and a moving surface upon which the tobacco is deposited, substantially as described and shown.

3. The combination of a vertical hopper constructed with a neck and an enlargement at 10 the bottom of the neck, the comb arranged horizontally beneath the neck, the cylinder beneath the comb having prongs working between the teeth of the comb, the comb-valves located in the neck, and means for moving 15 the comb-valves alternately to the inner position, so that one may be first inserted and

the other withdrawn, and vice versa, substantially as described and shown.

4. The combination of a hopper, a comb located at the bottom of the hopper, a cylinder 20 provided with teeth passing through the comb, valves located in the neck of the hopper, slotted brackets supporting the valves, links connecting the valves, and links connecting one of the valves to the cranks of an operating- 25 shaft, substantially as and for the purpose set forth.

ROBT. B. DULA.

In presence of—

E. S. KNIGHT,
THOS. KNIGHT.