

(No Model.)

T. H. WALSH.  
MACHINE FOR MAKING PIPE.

No. 264,424.

Patented Sept. 12, 1882.

Figure 2.

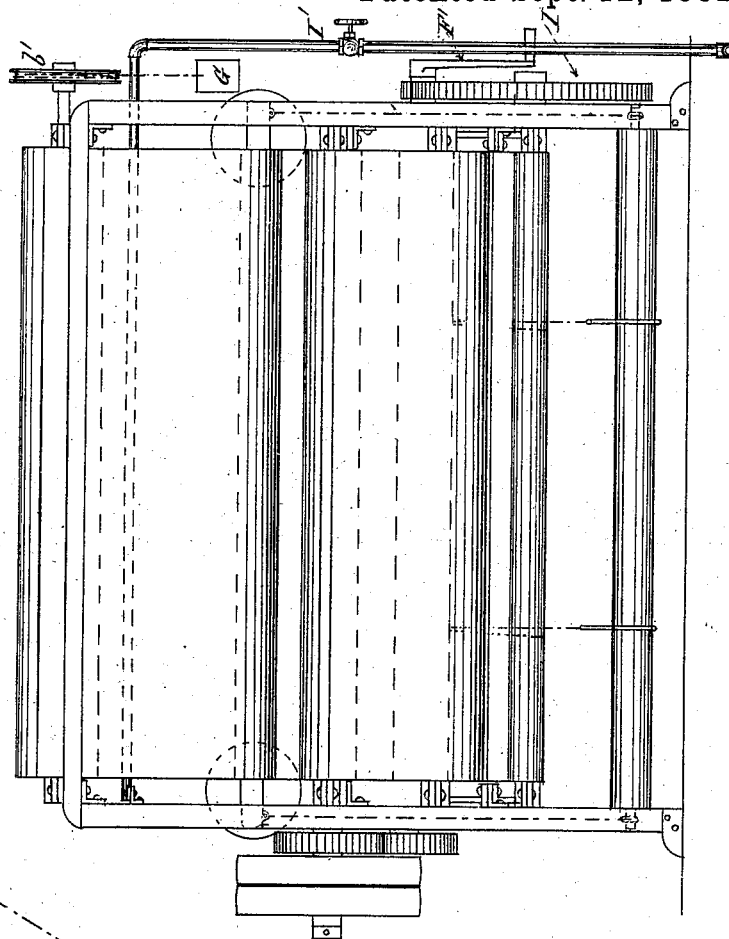
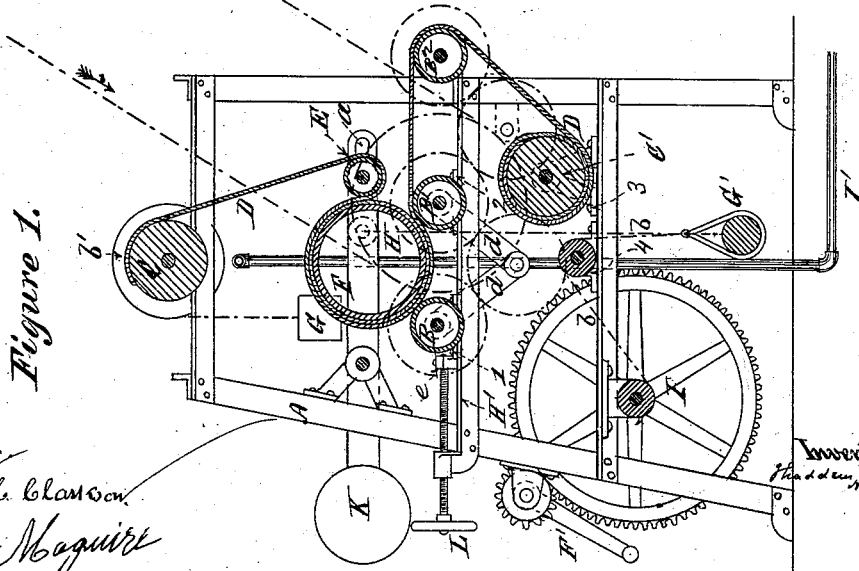


Figure 1.



Witnesses:  
William H. Clanson  
James Maguire

Inventor:  
T. H. Walsh

# UNITED STATES PATENT OFFICE.

THADDEUS H. WALSH, OF NEW YORK, N. Y., ASSIGNOR OF ONE-THIRD TO  
WILLIAM H. CLARKSON, OF SAME PLACE.

## MACHINE FOR MAKING PIPE.

SPECIFICATION forming part of Letters Patent No. 264,424, dated September 12, 1882.

Application filed June 5, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, THADDEUS H. WALSH, a citizen of the United States, residing at the city of New York, in the county and State of New York, have invented a new and useful Machine for Making Pipe, of which the following is a specification.

This invention relates to certain improvements in machines for forming pipes from sheet material, such as paper, iron, and the like; and it has for its objects to provide certain means for carrying and guiding the sheets in the process of formation, for forming the same into tubes or pipes, and for applying the cementing material necessary to hold the parts together, as more fully hereinafter specified. These objects I attain by the means illustrated in the accompanying drawings, in which—

Figure 1 represents a longitudinal vertical section of my machine, and Fig. 2 a rear view of the same.

The letter A indicates the frame of my machine, which is preferably constructed of angle-iron.

The letters B and B' indicate two rollers, suitably journaled in the frame, having cogged wheels at each end intergearing with other wheels, by which said rollers are driven. The roller B' is the power-roller, by means of which motion is applied from a suitable source to the machine.

The letter B<sup>2</sup> indicates a guide-roller, which serves to guide and extend the belt D and keep the belt taut. This roller is provided with cogs at each end, which cogs intergear with suitable cog-wheels, by which the rollers are driven.

The letter D indicates a belt, which is preferably made of canvas, in width a little short of the length of the rollers, the ends being fastened respectively to the rollers C and C'.

The letter E indicates an iron tension-roller journaled in slots in a vibrating guide-arm, F. The said arm is journaled in a brace affixed to the frame A. At its outer end the said arm is provided with a weight or counter-balance, K.

The letter G indicates a weight or counter-balance attached to the vibrating arm or guide F by means of a chain, b, the lower connections of the chain passing over a small journaled roller and attached to a pulley on the large wheel I.

The letter H indicates a cylindrical hollowed former-roller, which is detachable from the machine, and which is tapered slightly from one end to the other.

The letter I represents a large cogged wheel, as before mentioned, which is designed to raise the weight G to relieve the pressure upon the belt and the rollers and allow the weight G' to turn the roller C, which takes up the slack of the belt until it is wound off its fastened end on the roller C'. The weight G is attached to a grooved pulley on the roller C by a chain, and the wheel I is provided with cogs, which intermesh with a cog-pinion having a crank, F', by means of which it may be turned.

The letter L indicates a regulating and adjusting screw, which serves to adjust the bearing-rollers B and B'.

The letters d d indicate iron adjustment-guides, which serve to keep the cogs of the rollers B B' constantly geared into the lower cogged wheel, to which said guides are journaled, to conform to the different degrees of adjustment of the bearing-rollers.

The operation of my invention is as follows:

The former-roller H is first coated with a liquid preparation of ground chalk or soapstone in any convenient manner. The tension-roller E is then relieved of its attached weight, and the wheel I is then chocked by means of a pawl or otherwise. The tension-roller, being thus relieved of its weight, is raised by the balance-weight K on the end of the vibrating arm F. The upper weight, G', then causes the roller C to revolve, which winds up all the slack of the belt, the belt running off the bottom roller, C', to its fastened end. When the tension-roller is raised a sufficient distance the former-roller H, of desired size, is placed between it and the bearing and power roller B, the bearing-rollers being first adjusted to receive it. When the former-roller is in place the wheel I is unchocked, the weight G lowered and its weight again thrown upon the tension-roller E, and the belt runs off the roller C to its fastened end, and the roller C' takes up whatever slack there may be in the belt. The various parts of the machine are then in position for the application of power, which is effected through roller B. A coating of asphalt is then spread upon the belt between the rollers B' and B<sup>2</sup>, which is

wound around the roller H, forming a lining for the pipe. A sheet of paper or other material is then laid on the surface of the belt and between the rollers B' B<sup>2</sup>, and asphaltum is spread upon its surface. The sheet of paper is then wound round the former-roller. Afterward a sheet of iron is similarly treated and wound around the paper cylinder on the former-roller, and this process of treatment is carried on until the pipe is finished. The asphaltum is heated to from 600° to 800°, which causes the layers to adhere firmly. While the pipe is thus being formed the water-pipe I' is caused to emit a spray of water upon the face of the belt to prevent the asphaltum from sticking to it. The ends of the pipe may be cut smooth by a suitable knife forced against it as it revolves. When the pipe is completed the tension-roller is raised in the manner before described, the former-roller and pipe taken from the machine, the pipe drawn off of the former-roller, when the machine is ready for further use.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, in a machine for the manufacture of rolled pipe, of the weighted carrying-roller C and its weight G, the tension-roller E, and counterbalanced arm F and weight G', the belt D, and rollers B', B<sup>2</sup>, and C', all arranged to operate, in connection with a tapering former-roller, to roll the pipe, substantially as specified.

2. In combination with the tension-roll, the forming-roller, and the belt and carrying and supporting rollers, the bearing-roller B and its adjusting mechanism, substantially as and for the purposes specified.

THADDEUS H. WALSH.

Witnesses:

WILLIAM H. CLARKSON,  
JAMES MAGUIRE.