No. 672,258.

Patented Apr. 16, 1901.

B. CARNELIUS.

STONE SCABBLING MACHINE.

(No Model.)

(Application filed Jan. 25, 1901.

2 Sheets—Sheet 1.

Fig. 1

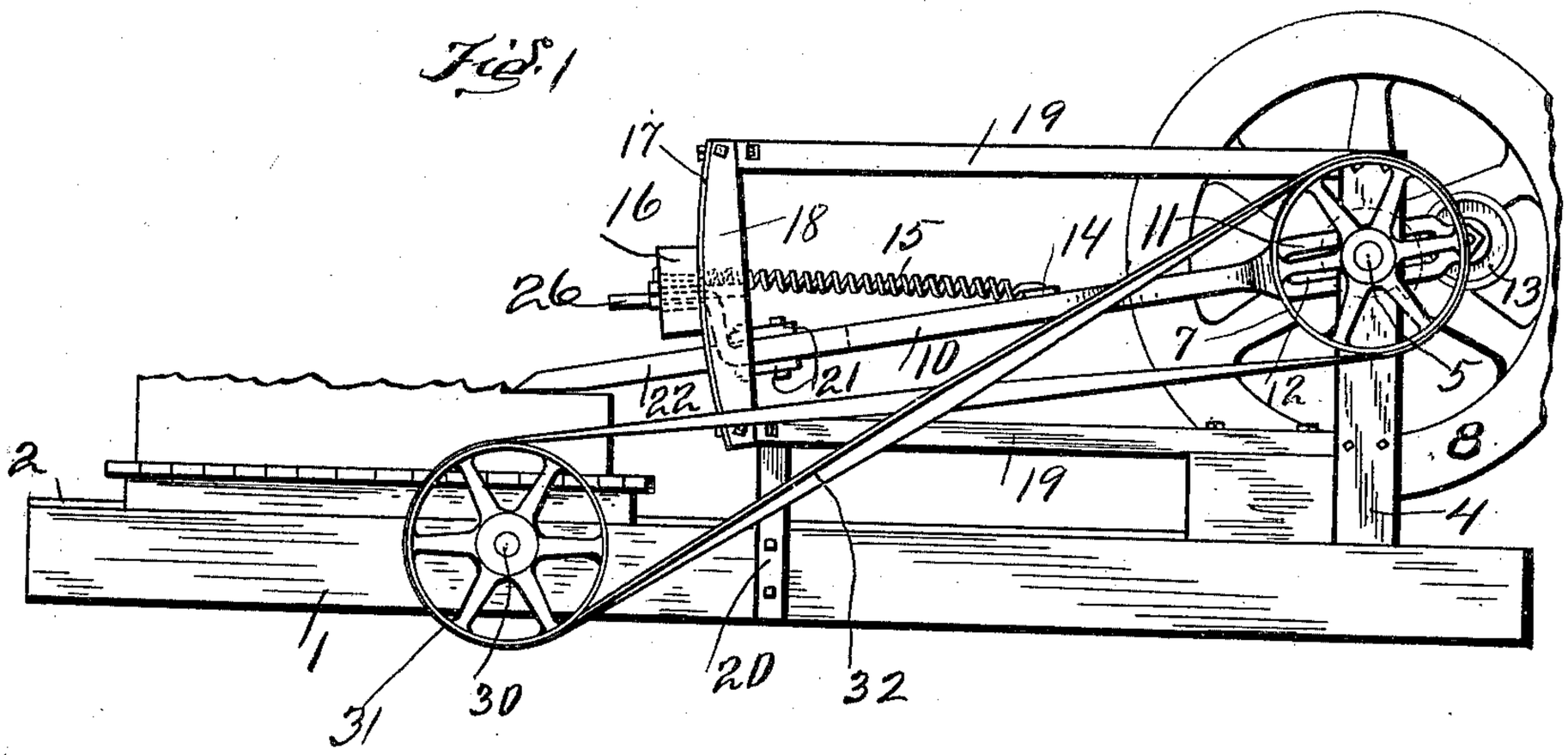

Fig. 2

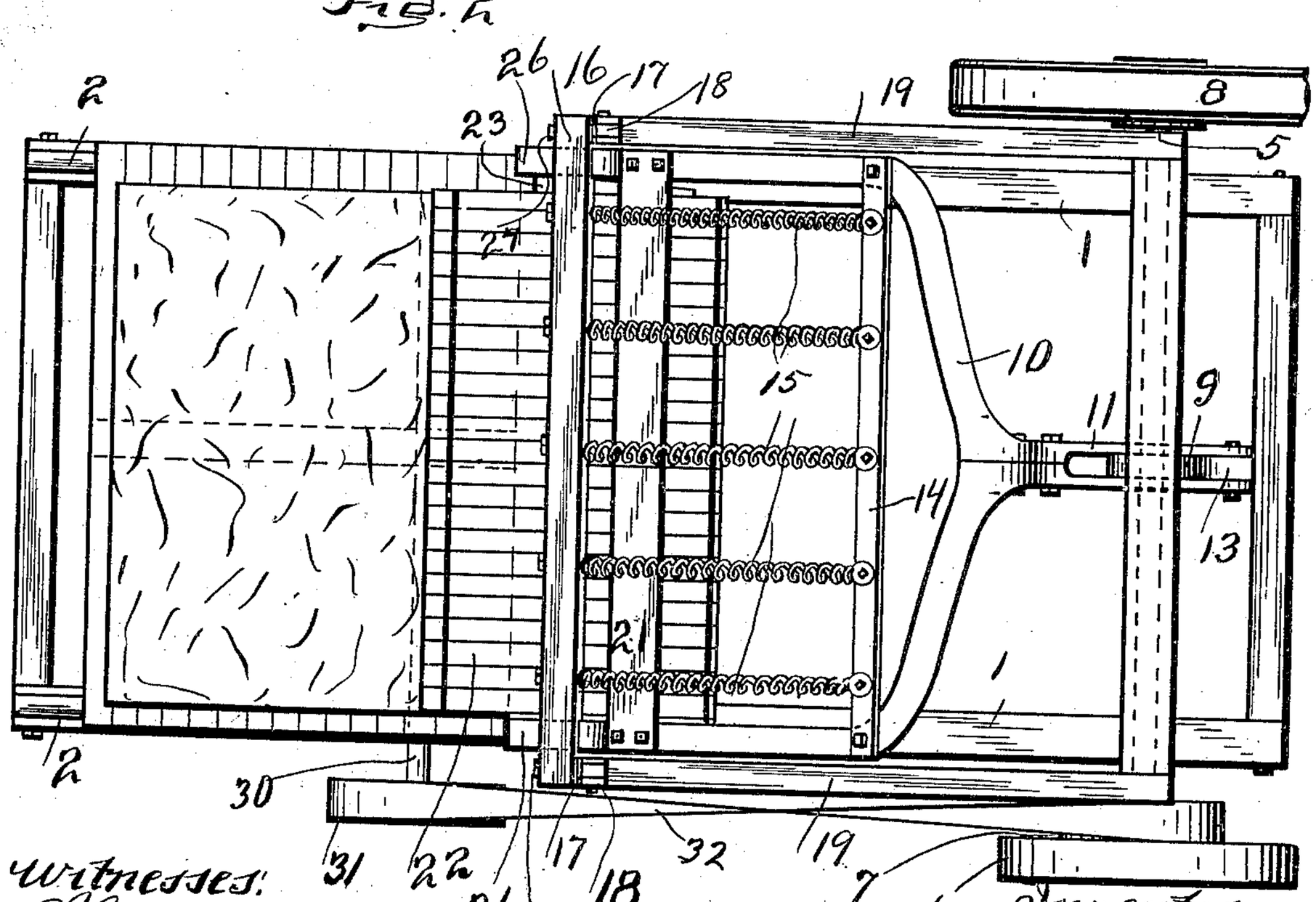

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Fig 3.

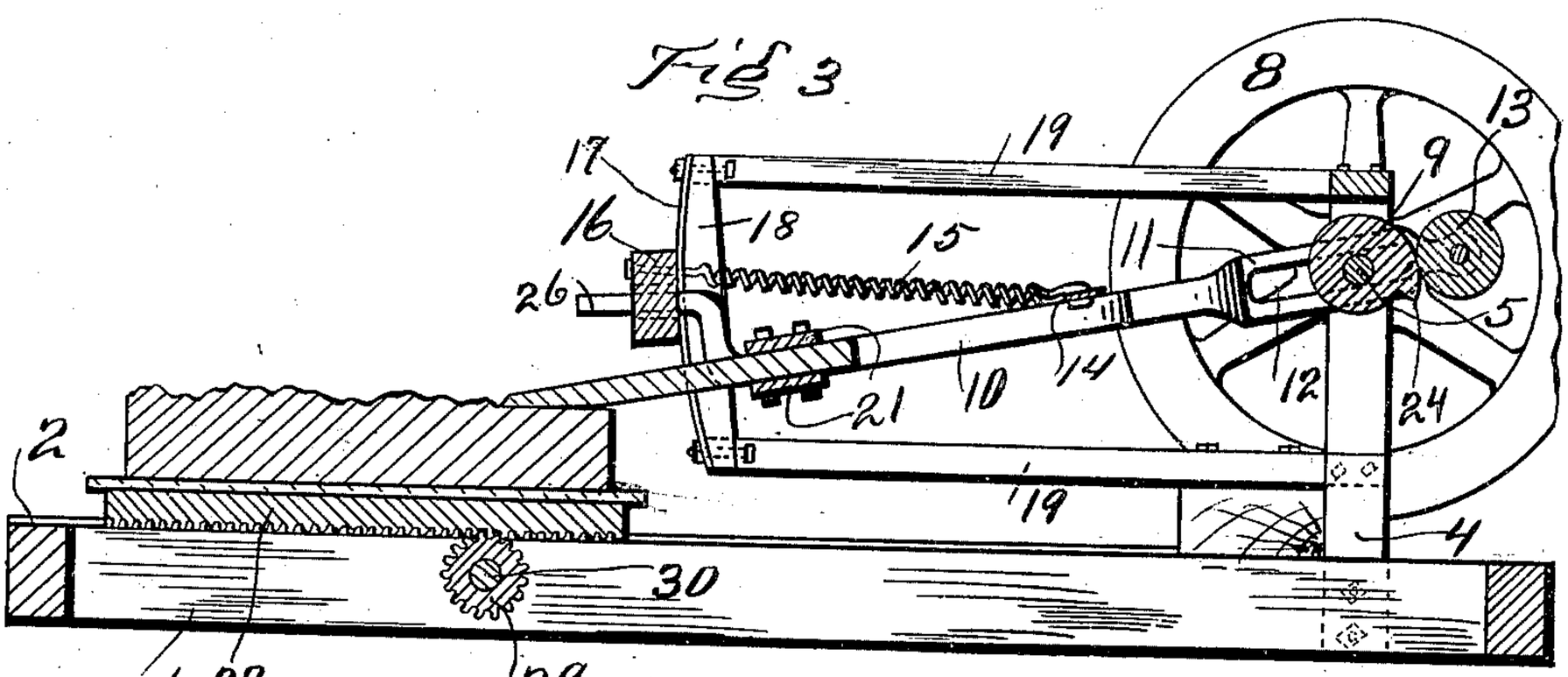


Fig 4.

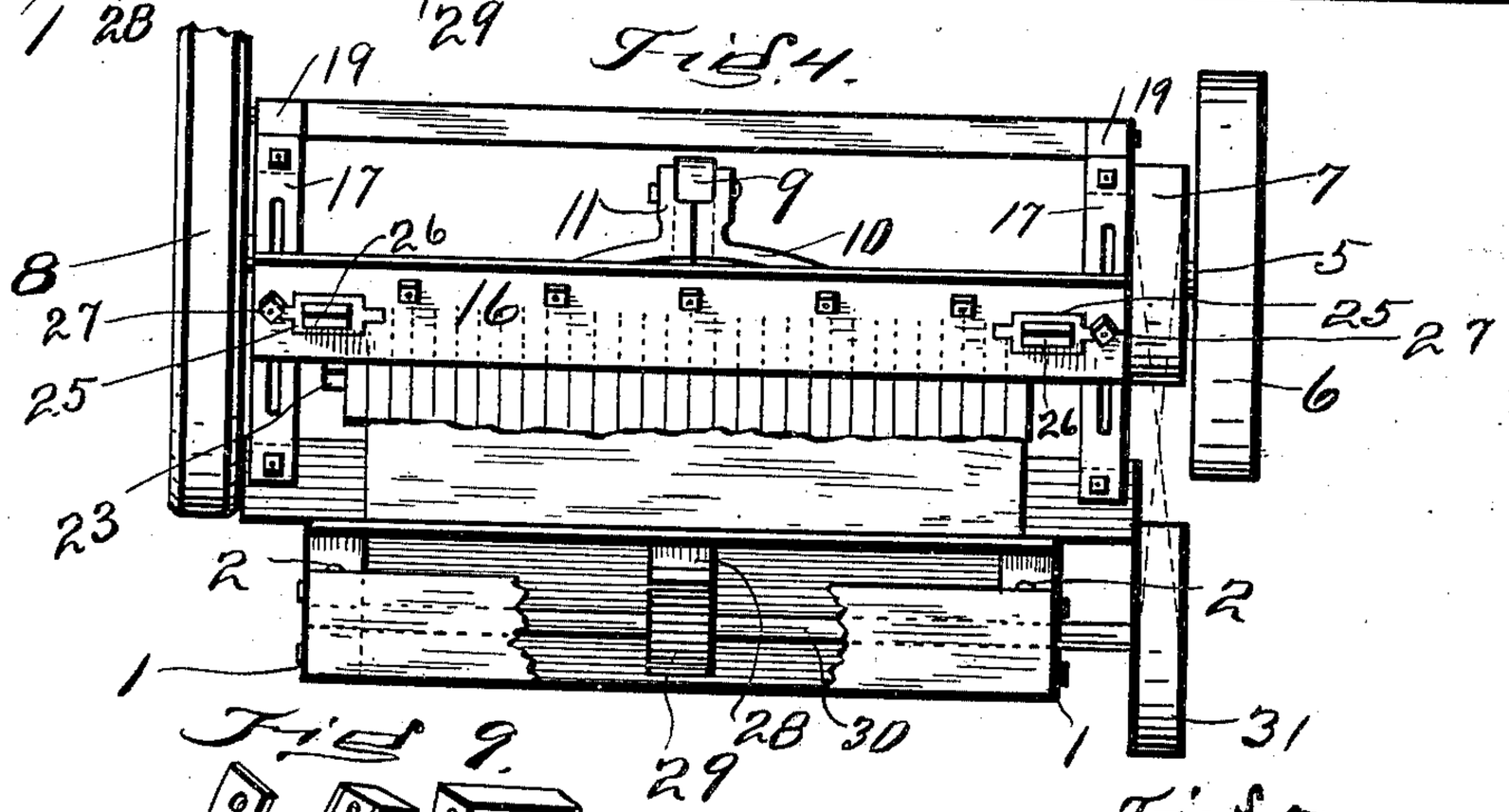


Fig 9.

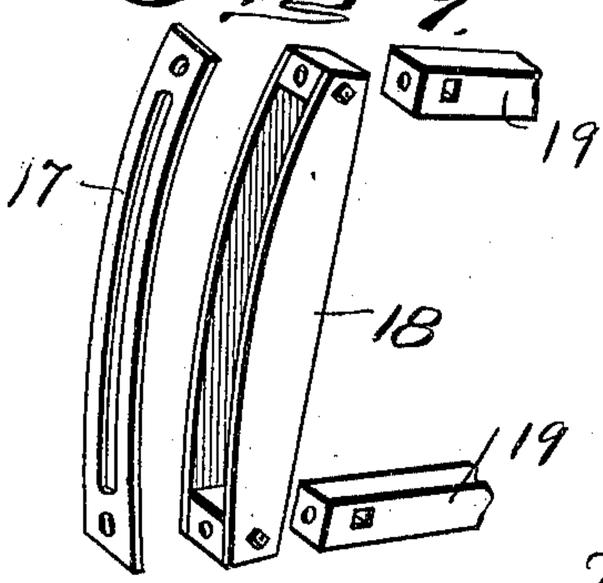


Fig. 5.

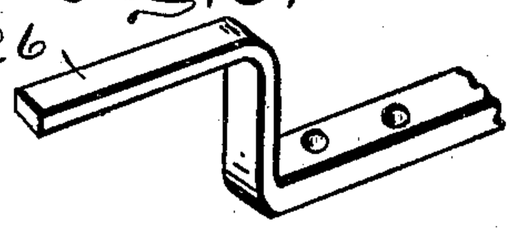


Fig. 6.

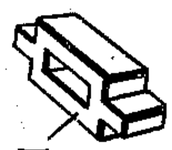


Fig. 7.

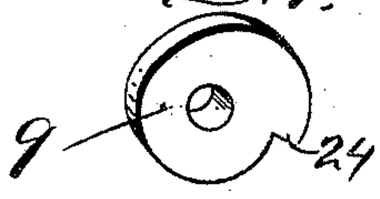
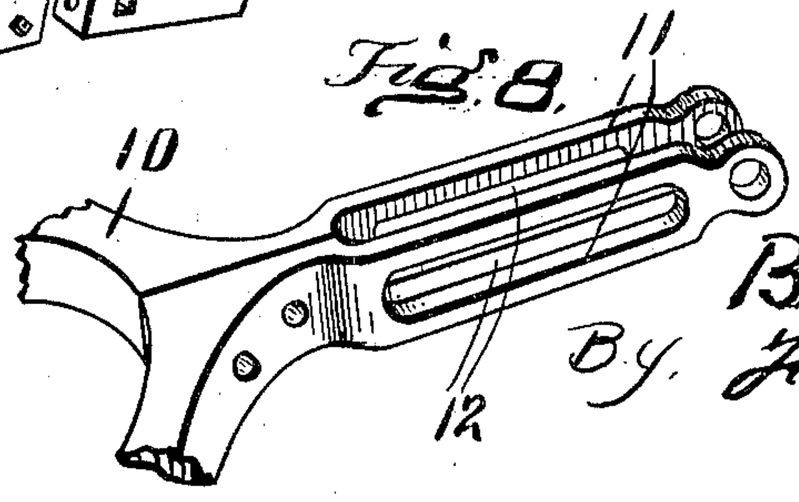


Fig. 8.



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UNITED STATES PATENT OFFICE.

BERT CARNELIUS, OF ORRVILLE, OHIO.

STONE-SCABBLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 672,258, dated April 16, 1901.

Application filed January 25, 1901. Serial No. 44,661. (No model.)

To all whom it may concern:

Be it known that I, BERT CARNELIUS, a citizen of the United States, residing at Orrville, in the county of Wayne and State of Ohio, have invented certain new and useful Improvements in Stone-Scabbling Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the figures of reference marked thereon, in which—

Figure 1 is a side elevation. Fig. 2 is a top view. Fig. 3 is a longitudinal section. Fig. 4 is a front end view. Fig. 5 is a view showing the front or forward end of one member of the reciprocating tool-frame. Fig. 6 is a detached view of one of the reciprocating-tool-frame boxes. Fig. 7 is a detached view of the tool-frame-driving cam. Fig. 8 is a view showing the rear end of the tool-frame showing the cam removed. Fig. 9 is a view showing the different parts of one of the adjusting-posts and illustrating the front or forward ends of the tie-bars.

The present invention has relation to stone-scabbling machines; and it consists in the combination of parts hereinafter described, and particularly pointed out in the claims.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, 1 represents the base or support, which may consist of a suitable frame of any desired kind or style, upon which frame tracks or ways 2 are provided and upon which tracks or ways the carriage 3 is mounted, which carriage is for the purpose of holding the stone designed to be operated upon.

To the frame or base 1 are connected in any convenient and well-known manner the posts 4, to which posts the power-shaft 5 is properly journaled, and to which shaft is attached in any convenient and well-known manner the power-wheel 6, which is driven from any source. To the power-shaft 5 is also attached the pulley 7, said pulley being for the purpose hereinafter described. If desired, a balance-wheel 8 for the purpose of giving momentum to the machine proper may be provided. To the shaft 5 is also attached the cam 9, said cam revolving with the power-shaft 5.

The reciprocating frame 10 is substantially of the form shown, and, as shown, it is provided with the parallel bars or arms 11, which parallel bars or arms are provided with the elongated slots 12, through which elongated slots the power-shaft 5 passes. To the ends of the parallel bars or arms 11 is journaled the antifriction-roller 13, which antifriction-roller is so arranged that it will come in contact with the periphery of the cam 9, said cam and pulley being located so that their peripheries will press or bear against each other, and they are so located and arranged as hereinafter described.

To the tool-frame 10 is attached in any convenient and well-known manner the cross-bar 14, to which cross-bar are attached the springs 15, said springs being extended forward and their forward ends attached to the cross-bar 16 or its equivalent, which cross-bar is attached to the plates 17, said plates 17 being fixed to the posts 18, said posts 18 being held in proper position by means of the tie-bars 19, said tie-bars being connected to the tops and bottoms of the posts 18 in any convenient and well-known manner.

It will be understood that the posts 18 should be supported upon the base 1 by means of the posts of standards 20 or their equivalents.

To the tool-frame 10 are attached the bars 21, said bars being located one above the other, thereby forming a space between said bars for the introduction of cutting-tools, such as 22, it being understood that the kind of tools is to be varied from time to time, reference being had to the kind of work designed to be performed by the machine. The tools are located substantially as shown and between the side members of the frame 10 and are held in proper position by means of a key or wedge, such as 23.

It will be understood that as the power-shaft is rotated the cam 9 will act upon the friction-roller 13, and when the cam 9 reaches the point 24 the frame 10 will be carried backward to its extreme limit, and when the point 24 has passed the antifriction-roller 13 the frame 10, together with its different parts, will be free to be moved forward by the ac-

tion of the springs 15, thereby causing the tools 22 to act upon the stone, as it will be understood that a sharp quick blow will be given to the frame owing to the fact that the springs are drawn taut by the action of the cam, and the moment they are released a quick blow will be given to the tool-frame and in turn a quick blow will be struck by the cutting-tools upon the stone.

For the purpose of providing guides for the reciprocating frame 10 bearings 25 are provided and are fixed in the cross-head 16 and the forward ends of the reciprocating frame 10, located in said bearings, substantially as shown in the drawings.

For the purpose of bringing the portions of the frame 10 that form the guide therefor out of the way said portions 26 are bent or curved upward, as illustrated in Fig. 3.

It will be understood that by my peculiar arrangement I am enabled to change the angularity of the reciprocating frame 10, together with the cutting-tools 22, by adjusting the cross-head 16 up or down upon the posts 18 or, in other words, upon the plates 17 of the posts 18, said posts and plates being provided with slots to allow suitable clamping-bolts 27 to be employed to hold the reciprocating frame 10, together with its different parts, at any desired point of adjustment.

It will be understood that by passing the power-shaft 5 through the slots 12 a common center is provided upon which the reciprocating frame 10 turns and by providing such common center the angle of said frame can be varied without in any manner disturbing the relative portions of the cam 9 and the antifriction-roller 13.

In the drawings I have illustrated five springs 15; but it will be understood that the number may be varied without departing from the nature of my invention, as the only object to provide the springs is to provide a means for automatically forcing the frame forward and delivering a quick cutting blow upon the stone to be operated upon.

For the purpose of feeding the stone to be operated upon forward during the operation of the machine proper a rack-bar 28 is provided, which rack-bar meshes with the pinion 29, said pinion being driven by means of the shaft 30 and the pulley 31, said pulley being driven by a belt 32, driven by a pulley upon the power-shaft.

It will be understood that I do not desire to be confined to the particular manner of feeding the carriage forward, as it is evident that any kind of gearing may be employed without departing from the nature of my invention. The posts 18, together with their plates 17, should be convexed upon their front faces, so as to compensate for the arc described by the reciprocating frame 10 as it is moved or adjusted up and down to change the angle of the cutting-tools.

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

1. In a stone-scabbling machine, the combination of a frame, a carriage mounted thereon, a power-shaft provided with a cam, a reciprocating frame provided with parallel bars or arms having elongated slots and the power-shaft extended through the elongated slots of the parallel arms, an antifriction-roller journaled to the parallel arms and located adjacent to the periphery of the cam, a tool-frame carried by the reciprocating frame, springs held in fixed position at their forward ends and connected to the reciprocating frame at their opposite ends, and means for adjusting the reciprocating frame and holding it in fixed adjustment, substantially as and for the purpose specified.

2. In a stone-scabbling machine the combination of a base, a carriage mounted thereon, means for moving the carriage upon the base, a reciprocating tool-carrying frame having parallel arms, a cam located between the parallel arms, an antifriction-roller located adjacent to the periphery of the cam, springs connected to the reciprocating frame and to a fixed cross-head, posts provided with plates having convexed faces, to which posts said cross-head is secured and means for securing the reciprocating frame in fixed angular adjustment, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

BERT CARNELIUS.

Witnesses:
J. A. JEFFERS,
F. W. BOND.