

(No Model.)

2 Sheets—Sheet 1.

A. H. HALL.

MACHINE FOR CUTTING PLATES FROM WOOD.

No. 598,085.

Patented Feb. 1, 1898.

Fig. 1.

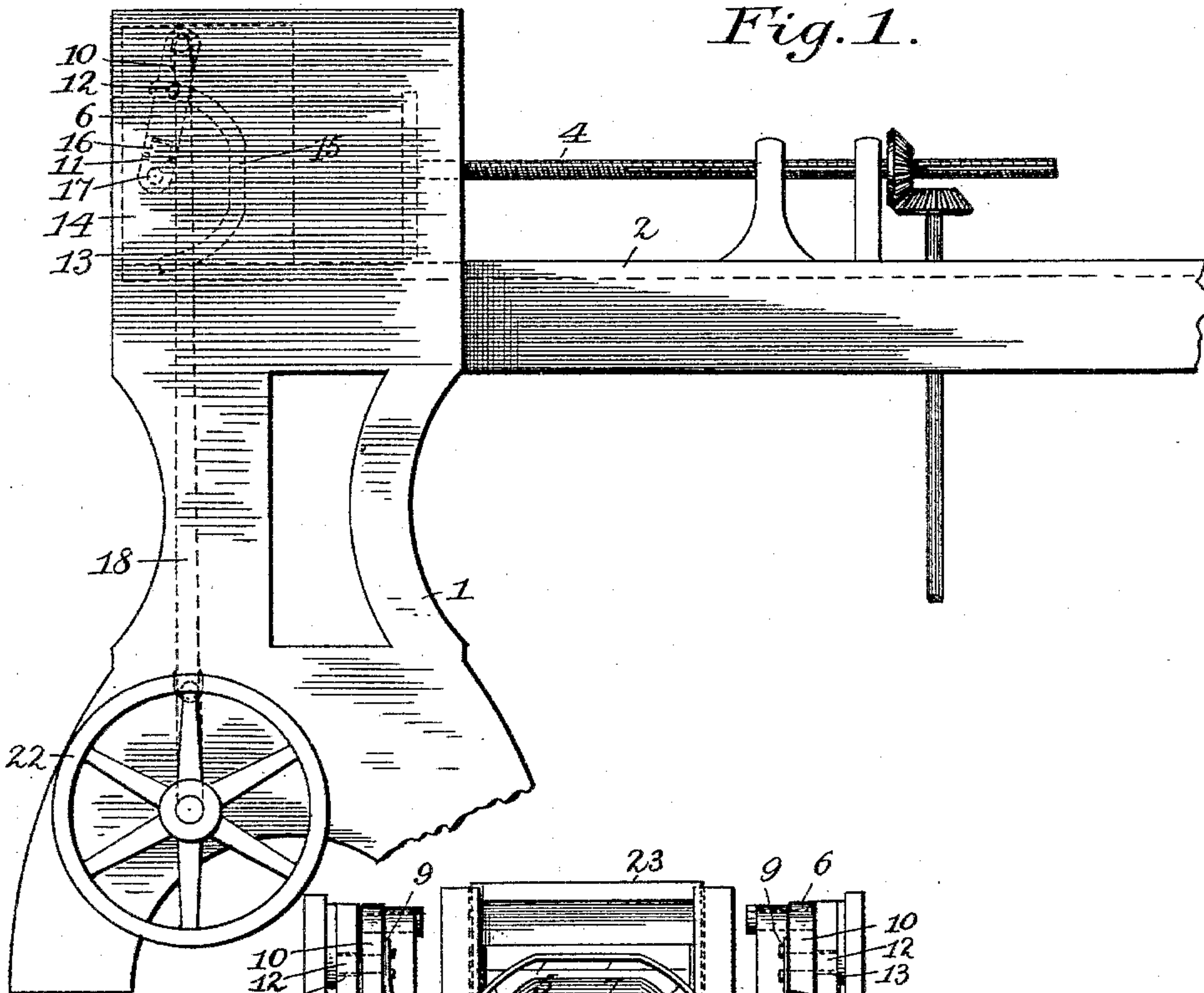
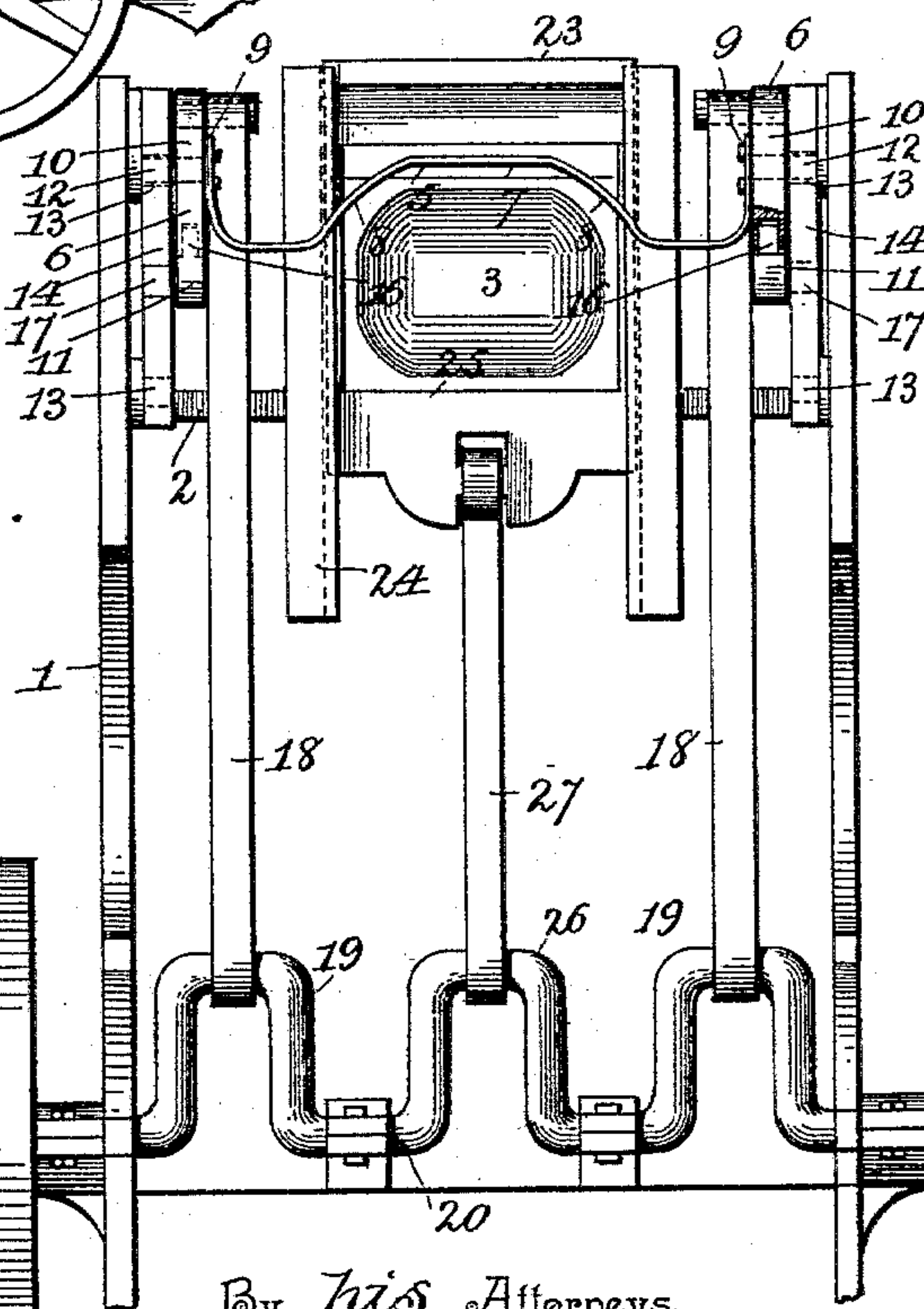


Fig. 2.



Witnesses

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Inventor

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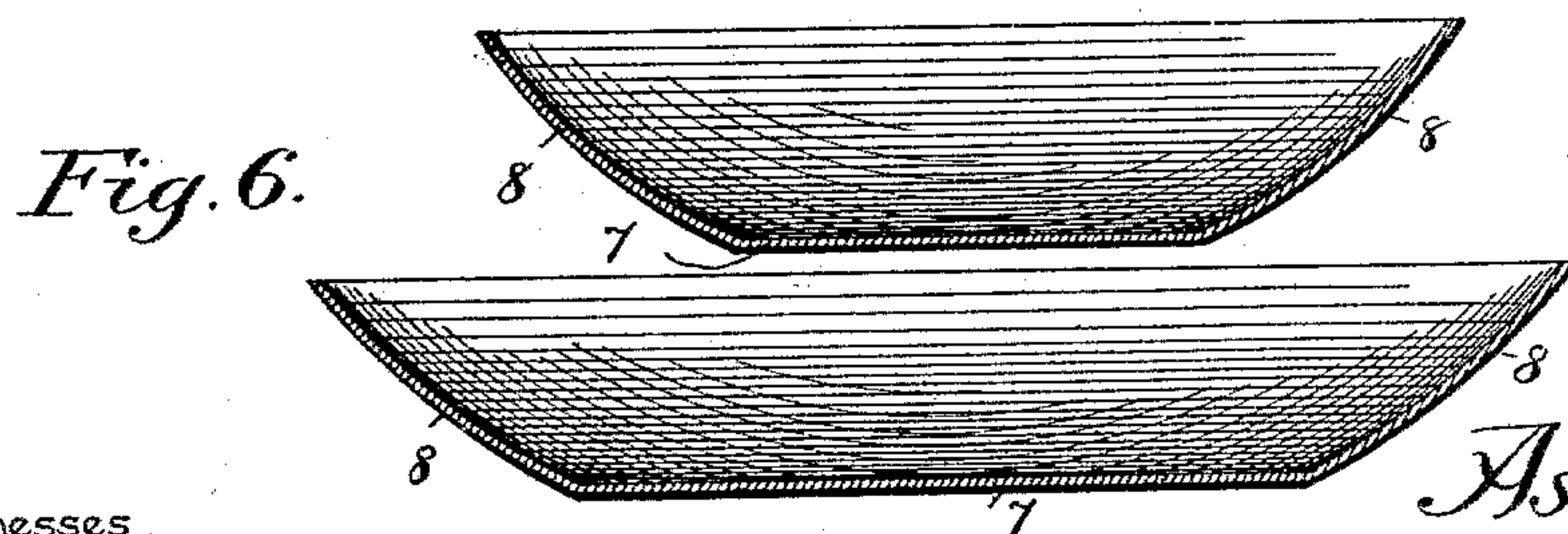
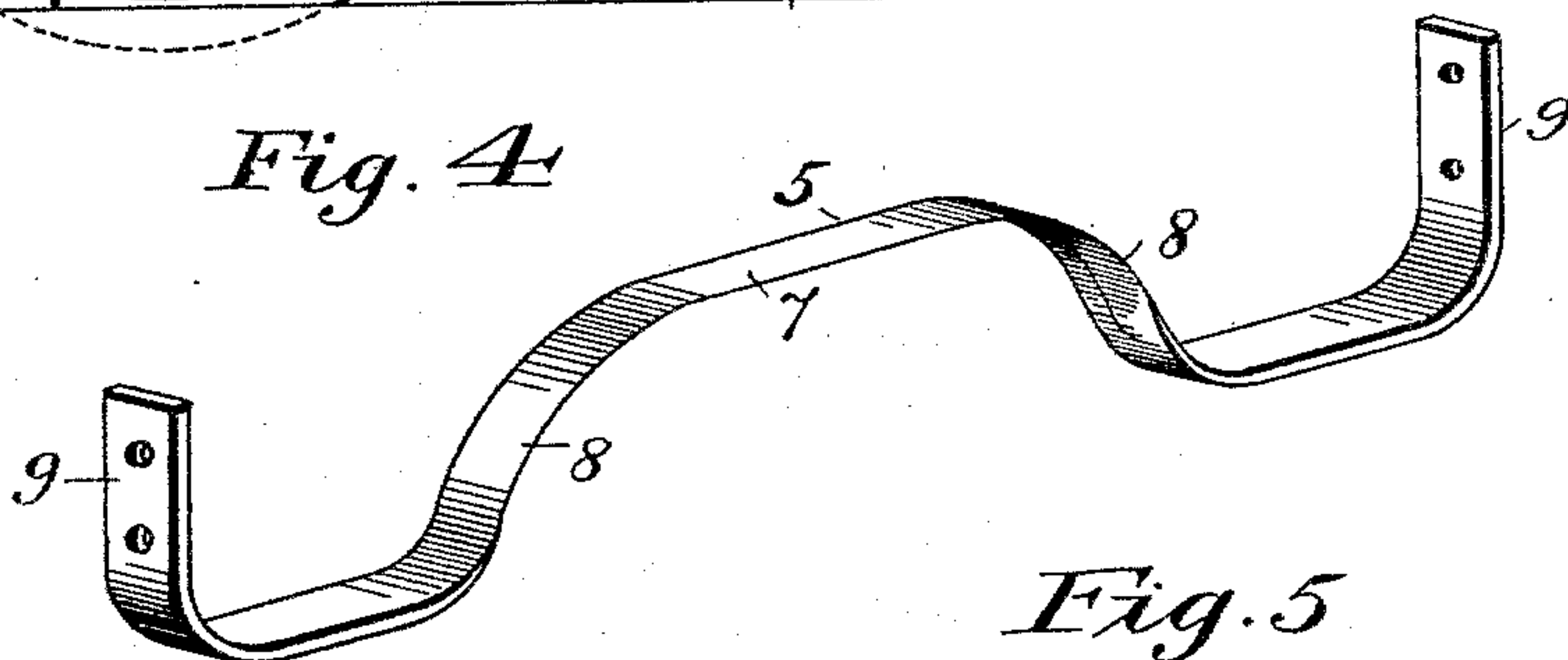
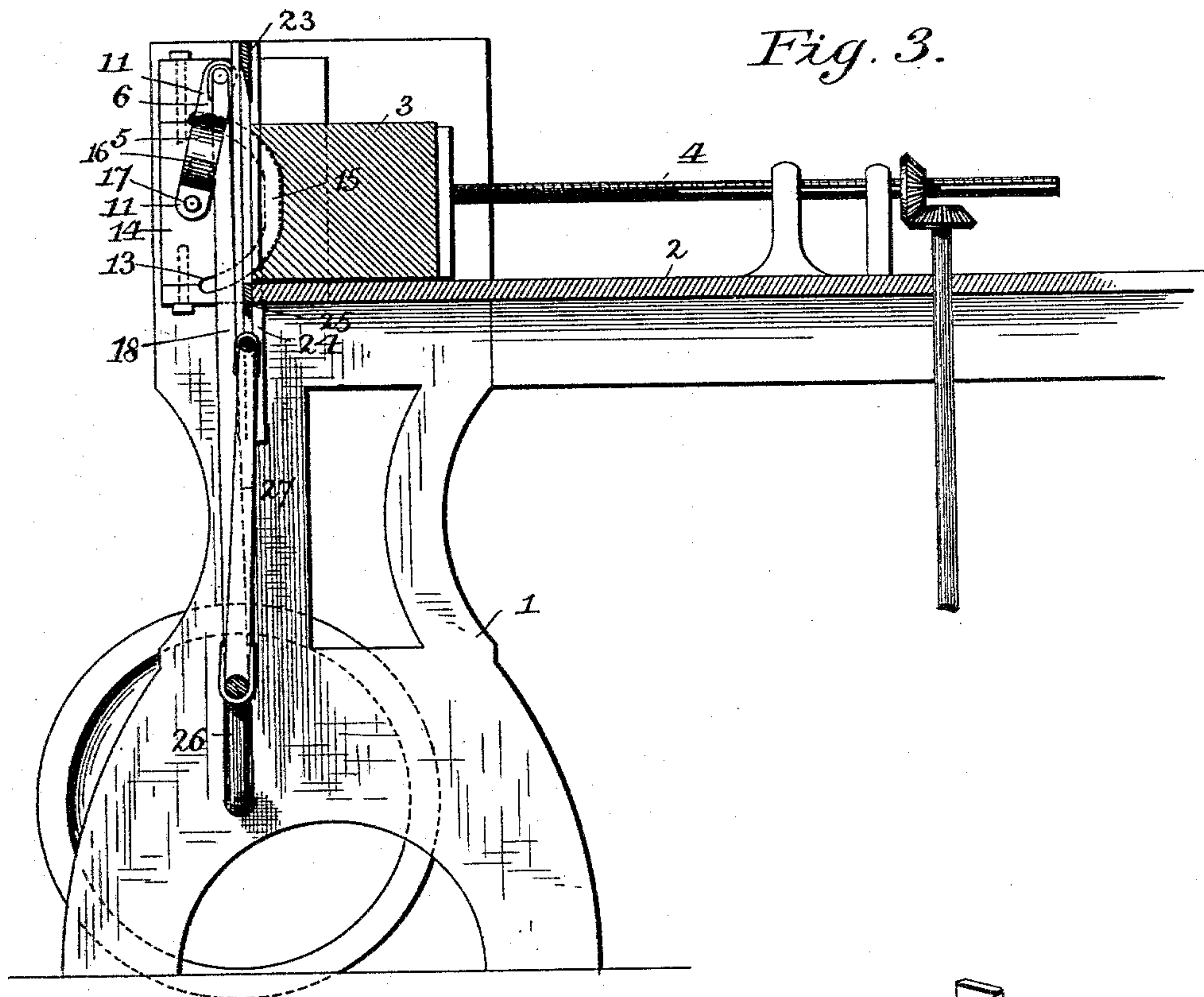
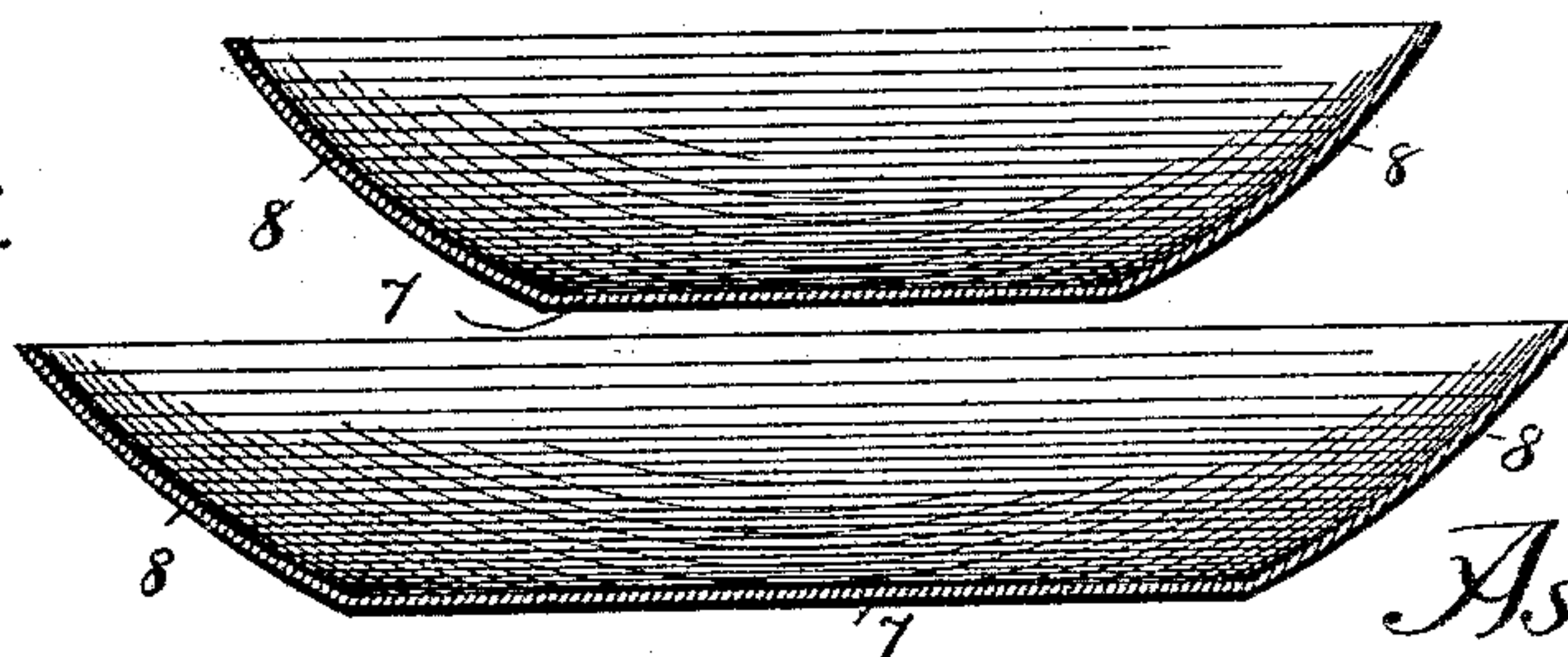


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

ASA H. HALL, OF TRAVERSE CITY, MICHIGAN.

MACHINE FOR CUTTING PLATES FROM WOOD.

SPECIFICATION forming part of Letters Patent No. 598,085, dated February 1, 1898.

Application filed April 15, 1897. Serial No. 632,309. (No model.)

To all whom it may concern:

Be it known that I, ASA H. HALL, a citizen of the United States, residing at Traverse City, in the county of Grand Traverse and State of Michigan, have invented a new and useful Machine for Cutting Plates from Wood, of which the following is a specification.

The invention relates to machines for cutting plates from wood.

The objects of the present invention are to improve the construction of machines for cutting wooden plates from a block of wood and to provide a simple and comparatively inexpensive one which will be capable of cutting a concavo-convex plate or dish with a flat central portion or bottom.

The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a side elevation of a machine constructed in accordance with this invention. Fig. 2 is a front elevation of the same. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is a detail view of the cutting-off knife. Figs. 5 and 6 are detail views of the plate or dish.

Like numerals of reference designate corresponding parts in the several figures of the drawings.

1 designates a supporting-frame having a table 2, adapted to support a block of wood 3, from which dishes are cut, and the block of wood is fed forward by a horizontal screw 4 to an oscillating cutting-off knife 5, which severs a dish from the block of wood on the downward stroke. The knife 5, which is carried by automatically-adjustable oscillating arms 6, is composed of a straight central cutting portion 7 and curved end portions 8, the terminals 9 of the knife being secured to the said oscillating arms 6. The oscillating arms 6, which are composed of sections 10 and 11, are provided with laterally-extending projections or pins 12, arranged in ways 13, consisting of slots of guide-plates 14. The slots 13 are provided with curved end portions and have straight vertical central portions 15, and when the oscillating arms 6 swing downward the knife 5 is carried in a curved path to hollow out the upper end of a dish

and then descends in a vertical direction in a straight line to form the flat central portion or bottom of the dish and completes its cutting movement in a curved line to shape the other end of the plate. The line of movement of the knife produced by the ways shapes the dish lengthwise and the particular form of the knife imparts the transverse shape of the dish to the same. The inner section 11 of each oscillating arm is provided with a socket to receive a reduced extension 16 of the adjacent end of the outer section 10, which is slidably connected with the inner section, whereby the arms are adapted to yield to the configuration of the ways 13. The outer ends of the sections 11 of the oscillating arms are pivoted by means of suitable pins 17 to the innerfaces of the guide-plates 14, and the opposite ends of the arms 6 are pivotally connected to the upper terminals of pitmen 18, which have their lower ends connected to bends 19 of a shaft 20, journaled on the supporting-frame at the bottom thereof. The crank-shaft 20 carries a balance or fly wheel at one end and has a pulley 22 fixed to its other end, and it is adapted to receive motion from any suitable source. The downward movement of the knife 5 cuts off one dish and hollows out the next one, and after each cut of the knife 5 the block of wood is operated on by a vertically-reciprocating facing-knife 23, mounted in suitable guides 24 and connected with a cross head or plate 25. The cross head or plate 25 is connected with a crank-bend 26 of the shaft 20 by a pitman 27. The screw or feed shaft 4 may be operated to advance the block of wood by any suitable mechanism.

It will be seen that the machine is exceedingly simple in its construction, and that it is capable of cutting from a block of wood substantially concavo-convex dishes with flat central portions or bottoms and curved or rounded ends and sides.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention; and I desire it to be particularly understood that I do not limit myself to the specific construction of the extensible arms 6, as I am aware that other means may be provided for

permitting the arms to travel in and conform to the configuration of the ways; but the construction illustrated in the drawings I consider the preferred form of my invention.

5 What I claim is—

1. In a machine of the class described, the combination of a frame adapted to support a block of wood, an oscillating cutting-off knife arranged to engage such block of wood, means
10 for oscillating the knife, and a substantially semicircular stationary guide receiving the knife and provided with a straight central portion, whereby the dishes severed from the block will be formed with flat central portions
15 or bottoms, substantially as described.

2. In a machine of the class described, the combination of a frame provided with ways having curved end portions and a straight
20 central portion, the extensible oscillating arms mounted on the frame and engaging said ways, and a knife carried by said arms and provided with a straight central portion and curved end portions, substantially as described.

25 3. In a machine of the class described, the combination of a frame provided with guide-slots, oscillating arms mounted on the frame and composed of two sections slidingly connected with each other, projections carried
30 by the outer sections of the arms and engaging the guide-slots, and a knife carried by the oscillating arm, substantially as described.

4. In a machine of the class described, the

combination of a frame provided with guide-slots, extensible oscillating arms engaging
35 the slots, an oscillating knife carried by the arms, a vertically-reciprocating facing-knife, a shaft journaled on the frame and provided with crank-bends, and pitmen connected with the crank-bends and with the oscillating arms
40 and the facing-knife, substantially as described.

5. In a machine of the class described, the combination of a frame having ways with curved end portions and straight central portions, a knife having a straight central portion and curved end portions, and arms carrying the knife and provided with adjustable means, whereby they are permitted to conform to the configuration of and travel in the
50 said ways, substantially as described.

6. In a machine of the class described, the combination of a frame provided with stationary ways having curved end portions and a straight central portion, the oscillating arms
55 engaging said ways, and a knife carried by said arms and provided with a straight central portion and curved end portions, substantially as described.

In testimony that I claim the foregoing as
60 my own I have hereto affixed my signature in the presence of two witnesses.

ASA H. HALL.

Witnesses:

F. E. WALKER,

GEORGE E. LACKEY.