

No. 679,207.

Patented July 23, 1901.

H. BARSALOU.

COMBINED ELEVATOR AND DUMP FOR WAGON BEDS.

(Application filed Apr. 4, 1901.)

(No Model.)

3 Sheets—Sheet 1.

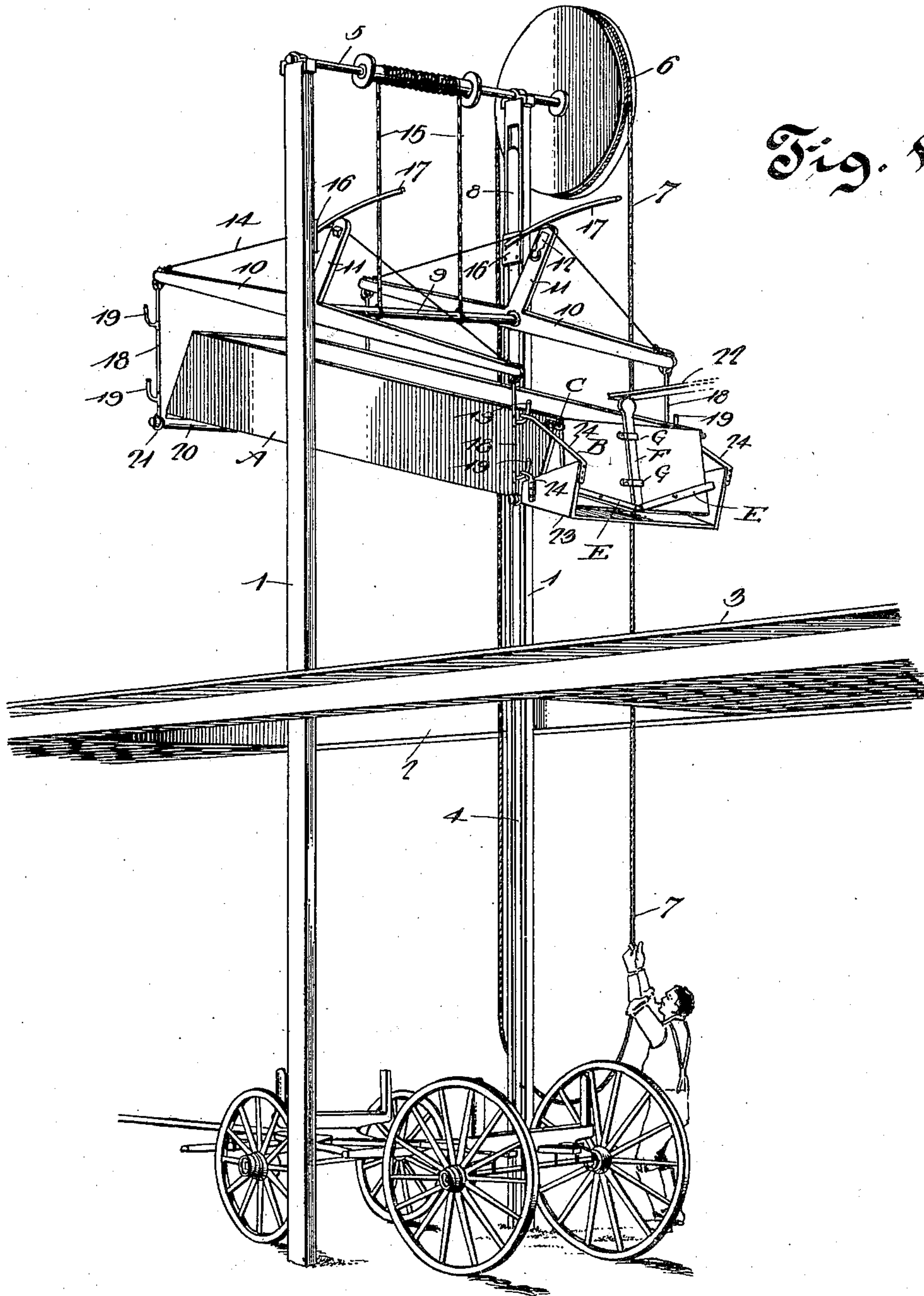


Fig. 1.

Witnesses
J. Frank Leberwell.
J. Warner

Henry Barsalou,

Inventor.

BY

C. A. Snow & Co.

Attorneys

No. 679,207.

Patented July 23, 1901.

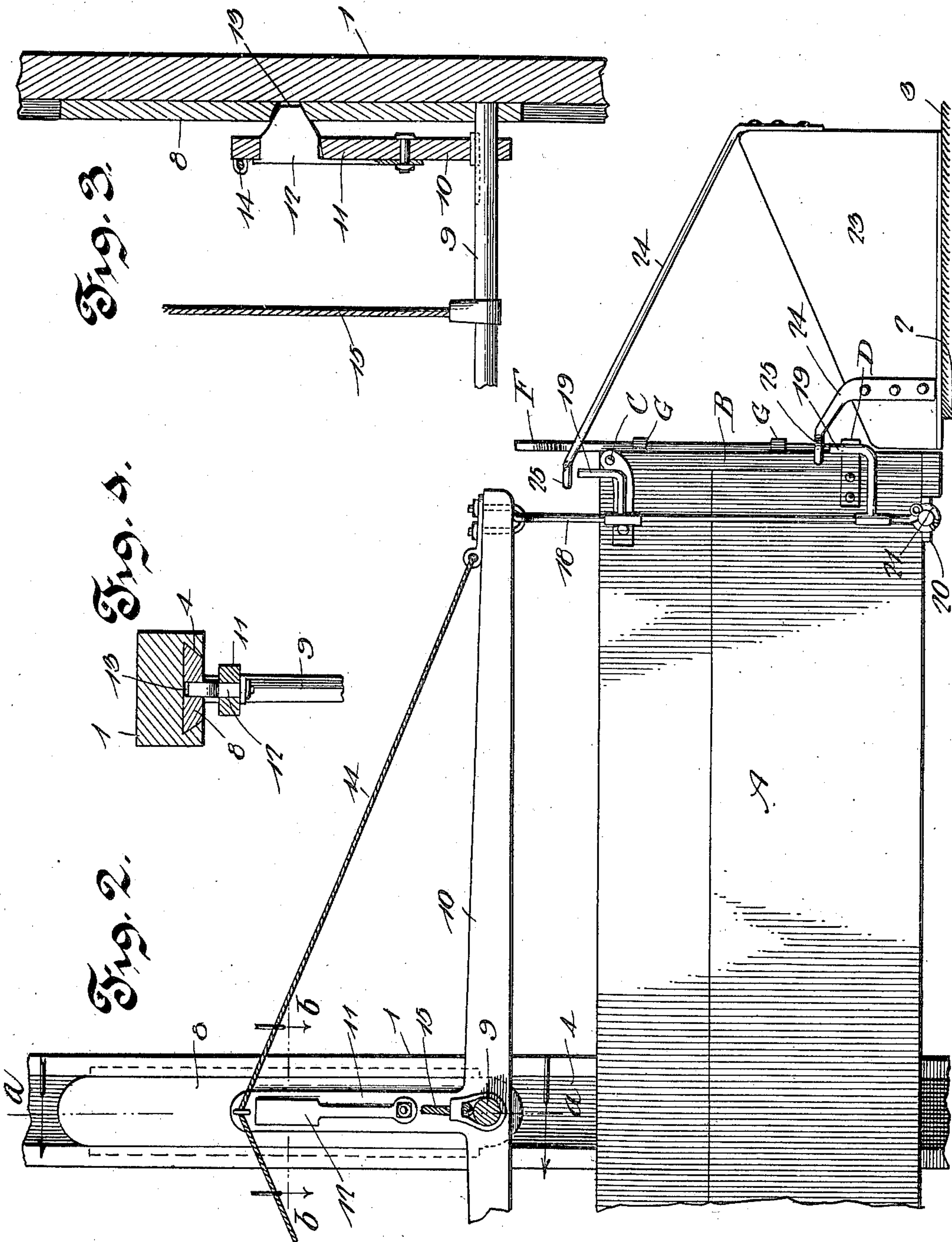
H. BARSALOU.

COMBINED ELEVATOR AND DUMP FOR WAGON BEDS.

(Application filed Apr. 4, 1901.)

(No Model.)

3 Sheets—Sheet 2.



Witnesses

J. Frank Carverwell.
J. W. Garner

Henry Barsalou

Inventor.

BY *C. A. Snow & Co.*
Attorneys

No. 679,207.

Patented July 23, 1901.

H. BARSALOU.

COMBINED ELEVATOR AND DUMP FOR WAGON BEDS.

(Application filed Apr. 4, 1901.)

(No Model.)

3 Sheets—Sheet 3.

Fig. 6.

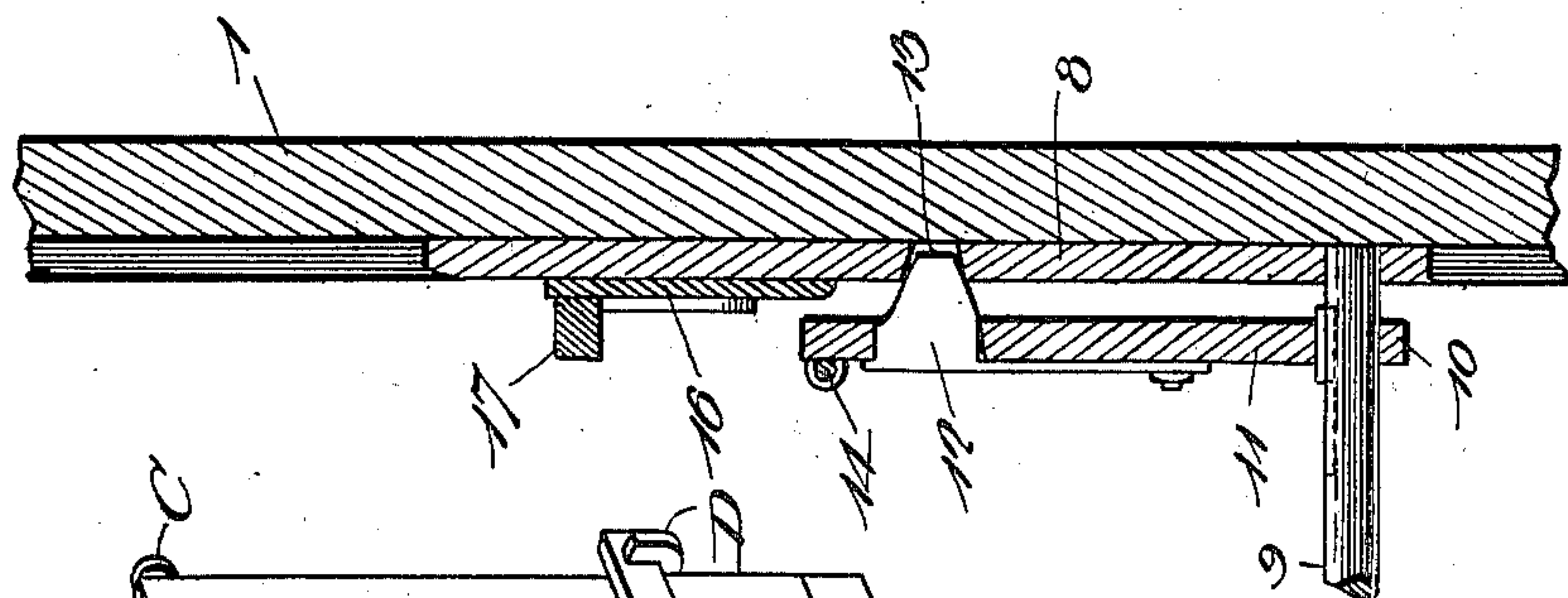


Fig. 7.

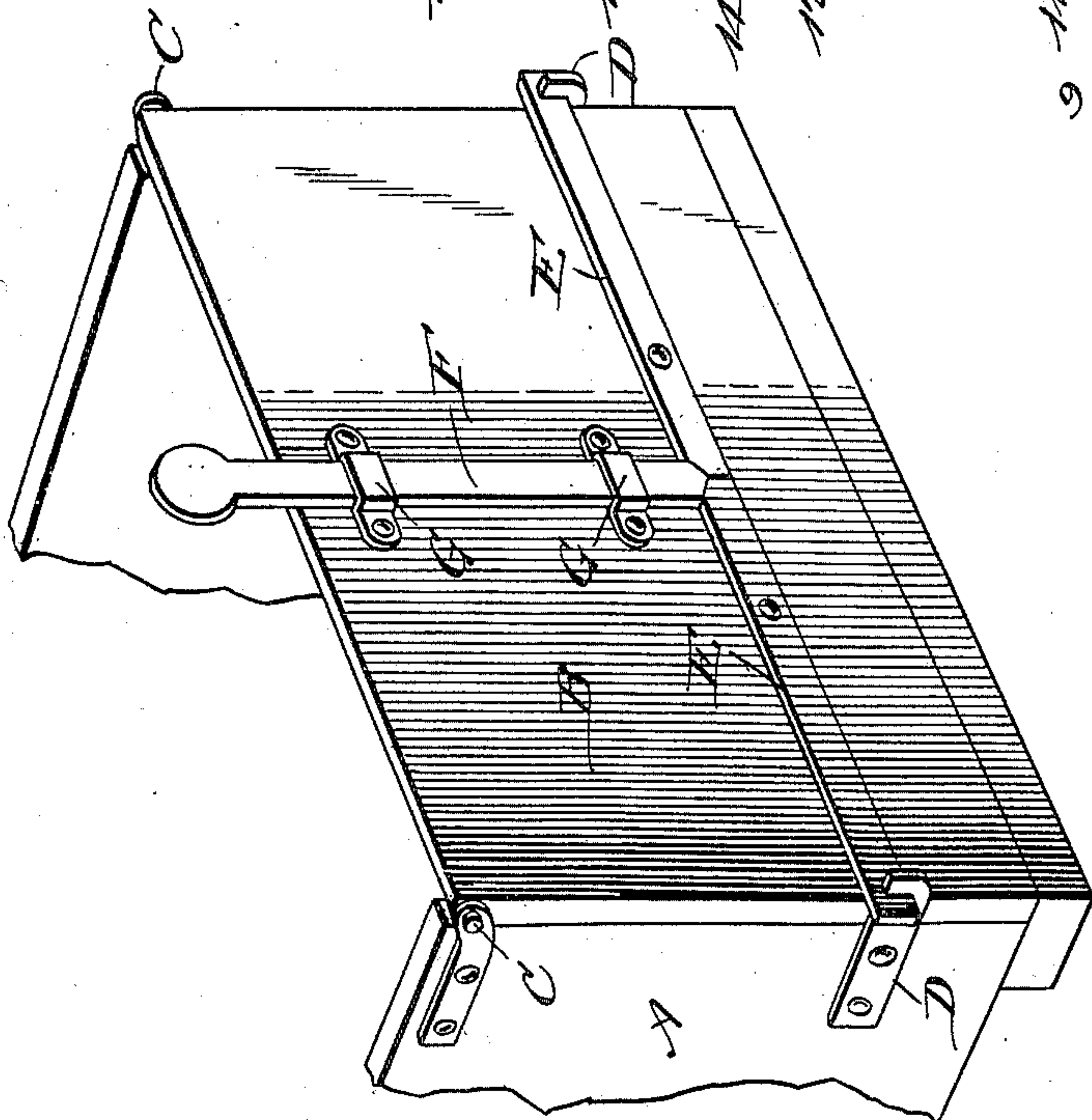
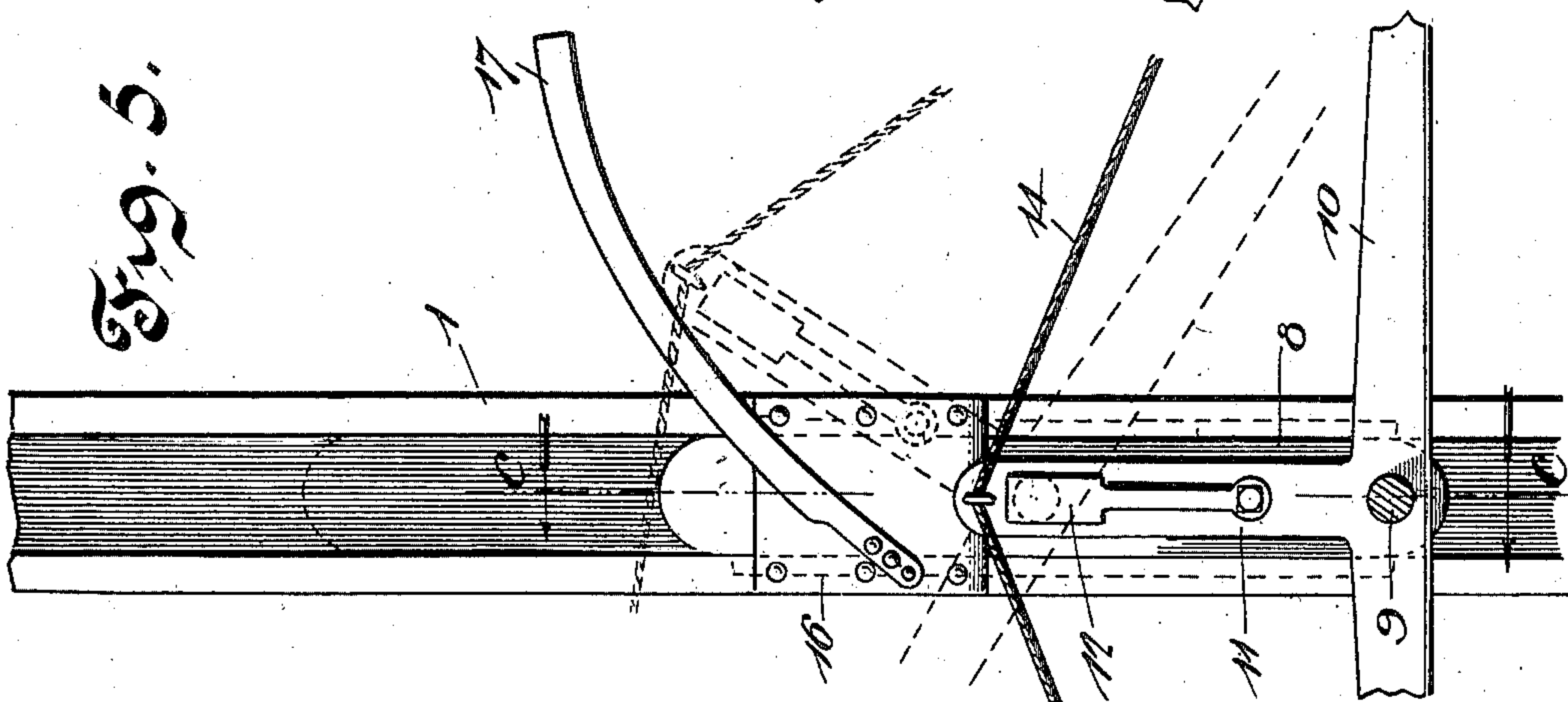


Fig. 8.



Witnesses

J. Fraulhaberwell.
J. Warner

Henry Barsalou, Inventor.
BY *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

HENRY BARSALOU, OF MOMENCE, ILLINOIS.

COMBINED ELEVATOR AND DUMP FOR WAGON-BEDS.

SPECIFICATION forming part of Letters Patent No. 679,207, dated July 23, 1901.

Application filed April 4, 1901. Serial No. 54,350. (No model.)

To all whom it may concern:

Be it known that I, HENRY BARSALOU, a citizen of the United States, residing at Momence, in the county of Kankakee and State of Illinois, have invented a new and useful Combined Elevator and Dump for Wagon-Beds, of which the following is a specification.

My invention is an improved combined elevator and dump for wagon-beds, by means of which the box or bed of a loaded wagon may be raised from the running-gear, elevated to an upper floor in a barn or storehouse, and there dumped to discharge its contents; and it consists in the peculiar construction and combination of devices hereinafter fully set forth and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a combined elevator and dump constructed in accordance with my invention, showing the same with the wagon-bed elevated and in the act of being inclined to the position required to dump the same of its contents. Fig. 2 is an elevation, partly in section, showing the wagon-bed elevated to the level of an upper floor and in the act of engaging the discharge-trough. Fig. 3 is a detail sectional view of the same, taken on a plane indicated by the line *a a* of Fig. 2. Fig. 4 is a detail sectional view taken on a plane indicated by the line *b b* of Fig. 2. Fig. 5 is a detail elevation, partly in section. Fig. 6 is a detail sectional view taken on a plane indicated by the line *c c* of Fig. 5. Fig. 7 is a detail perspective view, showing the end-gate of the wagon-bed.

A pair of vertical standards 1 extend through a hatchway 2 in an upper floor 3 of a barn, storehouse, or other building. Said standards are provided on their inner sides with vertical grooves or rabbets 4, which form guideways. At the upper ends of the standards is mounted a winch 5, which is provided with an operating-pulley 6 of suitable size. A hoisting-rope 7 is on the said pulley and depends through the hatchway to the lower floor. A pair of shoes 8 operate in the guideways 4. In the said shoes, near the lower ends thereof, are journaled the ends of a rock-shaft 9. Said rock-shaft is provided near its ends with rock-bars 10, which are keyed thereto and are of suitable length, and from the upper side of each of the said rock-bars, at the

center thereof, extends a rock-arm 11. The said rock-arms carry spring-pressed detents 12, which are normally engaged with openings 13 in the shoes and serve to normally maintain the rock-bars 10 in a horizontal position, as shown in Figs. 2 and 5. In practice I connect the ends of the rock-bars 10 to the upper ends of the rock-arms 11 by truss-rods 14, which strengthen said rock-bars 10. The said shaft 9, rock-bars 10, and rock-arms 11 constitute a hoisting and dumping frame, which may be raised and lowered, together with the shoes 8 in the standards or guides 1. Ropes 15 connect the winch to the shaft 9, as shown in Fig. 1. Hence the hoisting and dumping frame may be readily raised and lowered through the hatchway, as will be understood.

At a suitable height above the upper floor 3 are plates 16, which are bolted on the inner sides of the standards 1 across the guideways or grooves 4 therein and in the paths of the detents 12. The said plates are provided with inclined cams 17, which are in the paths of the rock-arms 11.

From the ends of the rock-bars 10 depend rods 18, which are provided with hooks 19, that extend upwardly, as shown. Each pair of the said rods 18 is connected together by a bar 20. The ends of said bars are inserted in eyes 21, with which said rods 18 are provided at their lower ends. Said rods 18 and said bars 20 constitute slings which hang from the ends of the elevating and dumping frame. The said slings when the elevating and dumping frame is lowered may be placed under the ends of a wagon-bed which has been driven between the standards 1 and engaged with the wagon-bed, so that when the elevating and dumping frame is raised it will be caused to lift the wagon-bed from the running-gear and raise the wagon-bed through the hatchway and to a suitable height above the upper floor.

The wagon-bed A is provided with an end-gate B, which is hinged at its upper corners, as at C, whereby its lower side is adapted to swing outward from the rear end of the wagon-bed. Catches D on the sides of the wagon-bed project beyond the rear end thereof and are engaged by pivoted latch-bars E, with which the end-gate is provided. A vertically-

disposed bolt F operates in keepers G on the rear side of the end-gate, and a suitable trip bar or block 22 (indicated in Fig. 1) is secured in any suitable manner and by any suitable means in the path of the said bolt F at a suitable height above the upper floor, so that when the wagon-bed has been elevated to the required height and has been inclined in a position to dump the same of its contents the said bolt F will engage the said trip 22, be by the latter depressed, and thereby caused to disengage the latch-bars E from the catches D, with the result that the end-gate will swing outward and permit the discharge of the load from the wagon-bed. When the elevating and dumping frame has been raised, together with the loaded wagon-bed, to the required height, the detents 12, which are carried by said frame, engage the lower edges of the fixed plates 16 and are by the latter drawn inward out of the openings 13, and are hence disengaged from the shoes 8, the detents riding on the outer faces of the plates. It will be observed by reference to the drawings, Figs. 3 and 6, that the plates 16 and detents 12 have cooperating inclined or beveled faces. Immediately after the detents are thus disengaged from the shoes the upper ends of the rock-arms 11 engage the cams 17 and are caused thereby to incline the dumping-frame, and hence the wagon-bed also, to the position shown in Fig. 1 to dump the wagon-bed of its contents.

It is desirable to provide a trough for carrying the load as the same is discharged from the wagon-bed to a suitable point on the upper floor. I will now describe a trough which is automatically caught and carried up by the wagon-bed as the latter ascends through the hatchway and is by the wagon-bed released as the latter descends and left in position on the upper floor for reengagement automatically by the wagon-bed on the subsequent ascent of the latter with another load. The trough 23 may be of any suitable construction and of any desired length. The same is provided with arms or brackets 24, that have eyes 25 at their outer ends which extend beyond one side of the trough and over one side of the hatchway when the trough is disposed on the upper floor by the side of the hatchway, as shown in Fig. 2, with the said eyes in the paths of the hooks 19 of the sling which is connected to the rear end of

the wagon-bed. Hence as the wagon-bed is elevated through the hatchway the eyes 25 are engaged by the upturned hooks 19 and the trough carried upward by the wagon-bed, so that when the latter is inclined and the end-gate opened the load discharged by the wagon-bed is delivered by the trough to the desired point.

Having thus described my invention, I claim—

1. The combination of a vertical guideway, a fixed trip having a cam, a shoe, movable in said guideway, an elevating and dumping frame carried by said shoe, and having a rock-arm, a detent carried by said rock-arm, and adapted to engage said shoe, to lock the dumping-frame in a horizontal position, and to be disengaged from said shoe by said fixed trip, said cam being in the path of said rock-arm, to engage the latter and thereby incline said dumping-frame when said detent is tripped, and means to raise and lower said dumping-frame, substantially as described.

2. The combination of an elevating and dumping frame, means to raise, incline and lower the same, rods suspended from said frame and adapted to suspend a wagon-bed therefrom; and a trough, the latter and said suspending-rods having cooperating elements adapted on the ascent of the frame, to connect said trough to said rods, and thereby dispose said trough at the discharge end of said wagon-bed, for the purpose set forth, and on the ensuing descent of the frame with the wagon-bed, release said trough from said suspending-rods, substantially as described.

3. The combination of an elevating and dumping frame, means to raise, incline and lower the same, a bed carried by said frame and having a discharge-gate, pivoted at its upper side, means to lock said gate when closed, a trip-bolt carried by said gate, for said locking means, and a fixed trip in the path of said bolt, to engage the latter when the bed is raised, and thereby unlock said gate, substantially as described.

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

HENRY BARSALOU.

Witnesses:

JACOB RUGER,
R. R. SMITH.