

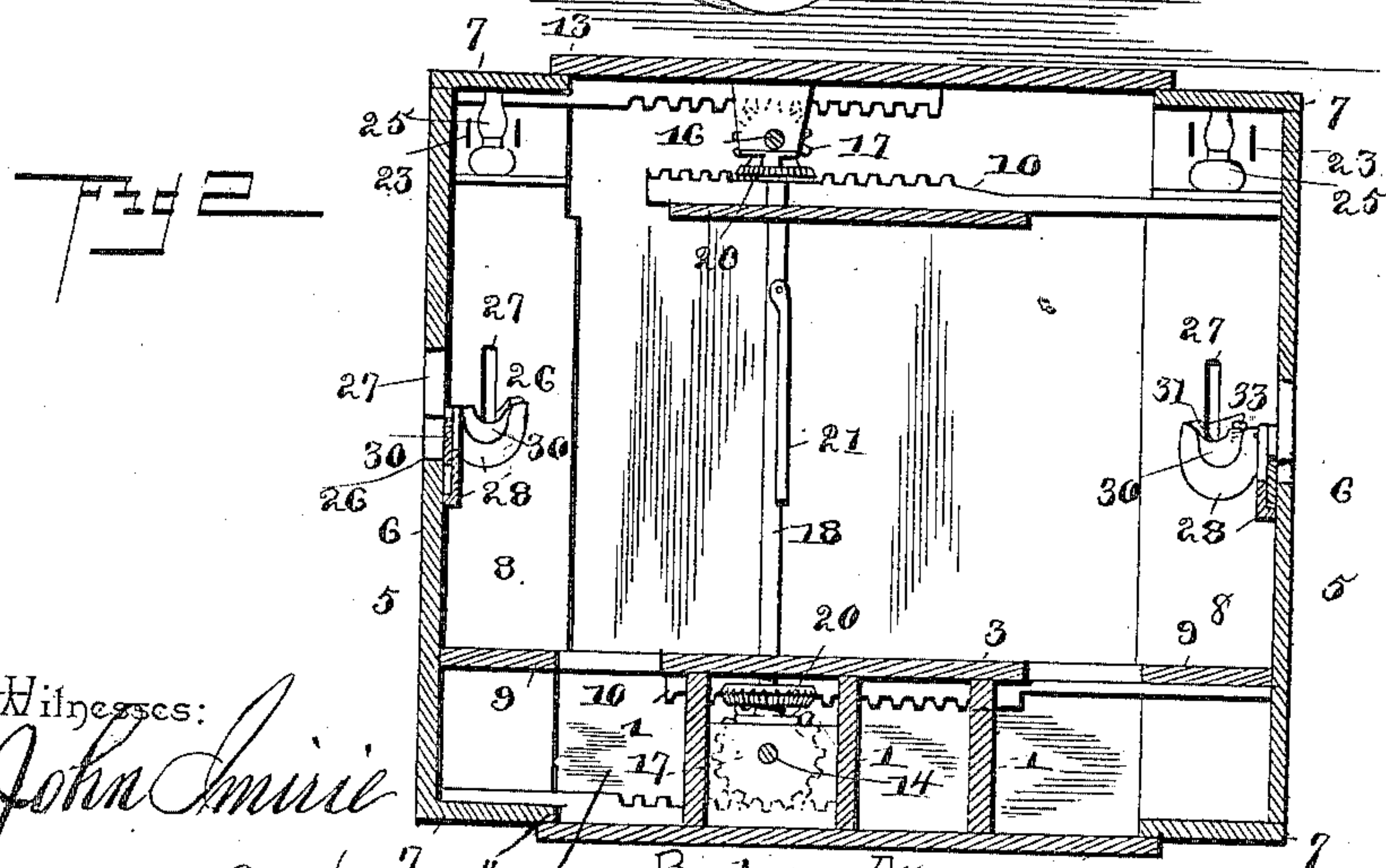
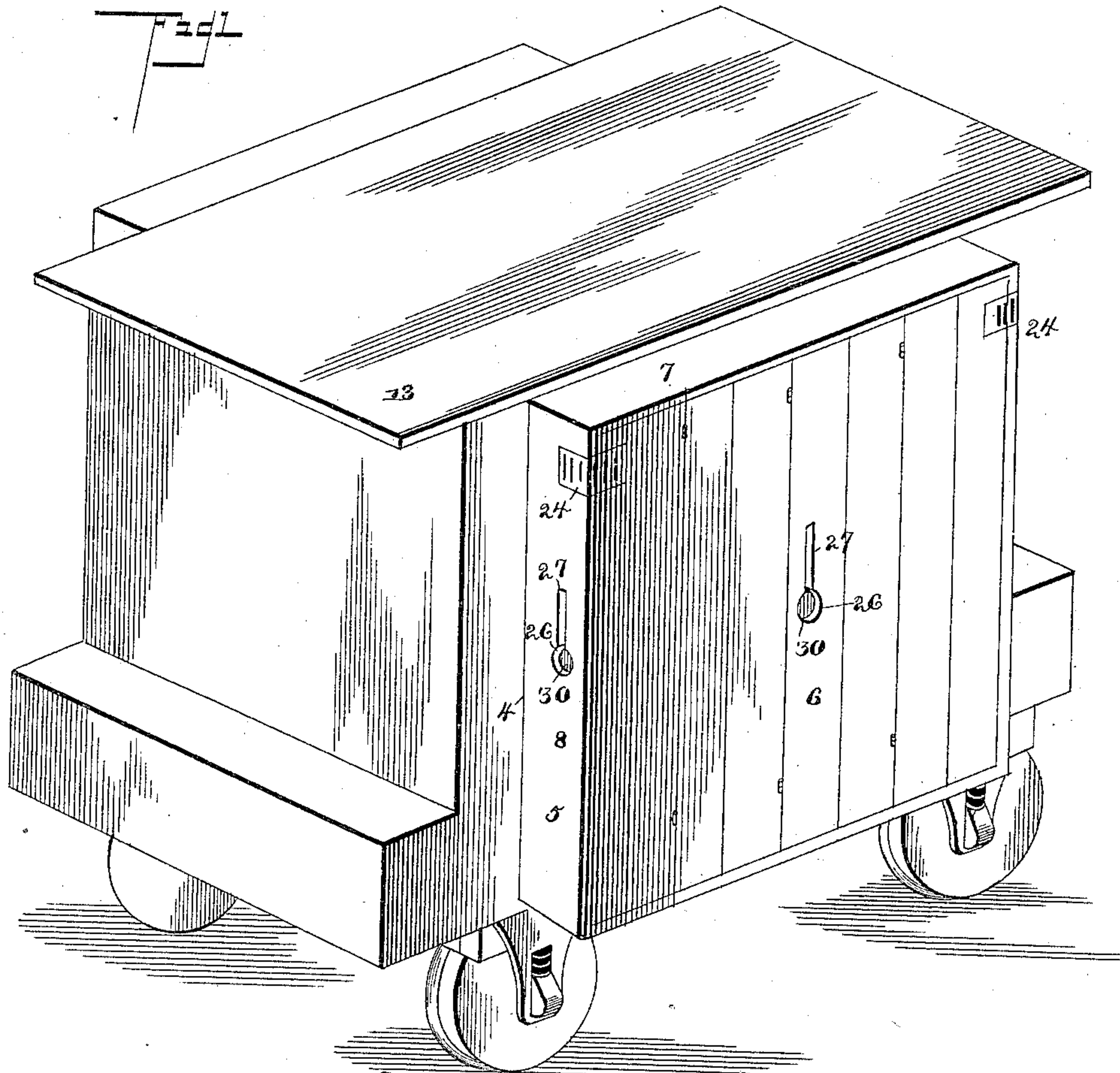
(No Model.)

2 Sheets—Sheet 1.

J. BEERMAKER.
BURGLAR PROOF CAR.

No. 422,047.

Patented Feb. 25, 1890.



Witnesses:

John Muir
W. S. L. Swag.

By his Attorneys,

John Beermaker

C. A. Snow & Co.

Inventor

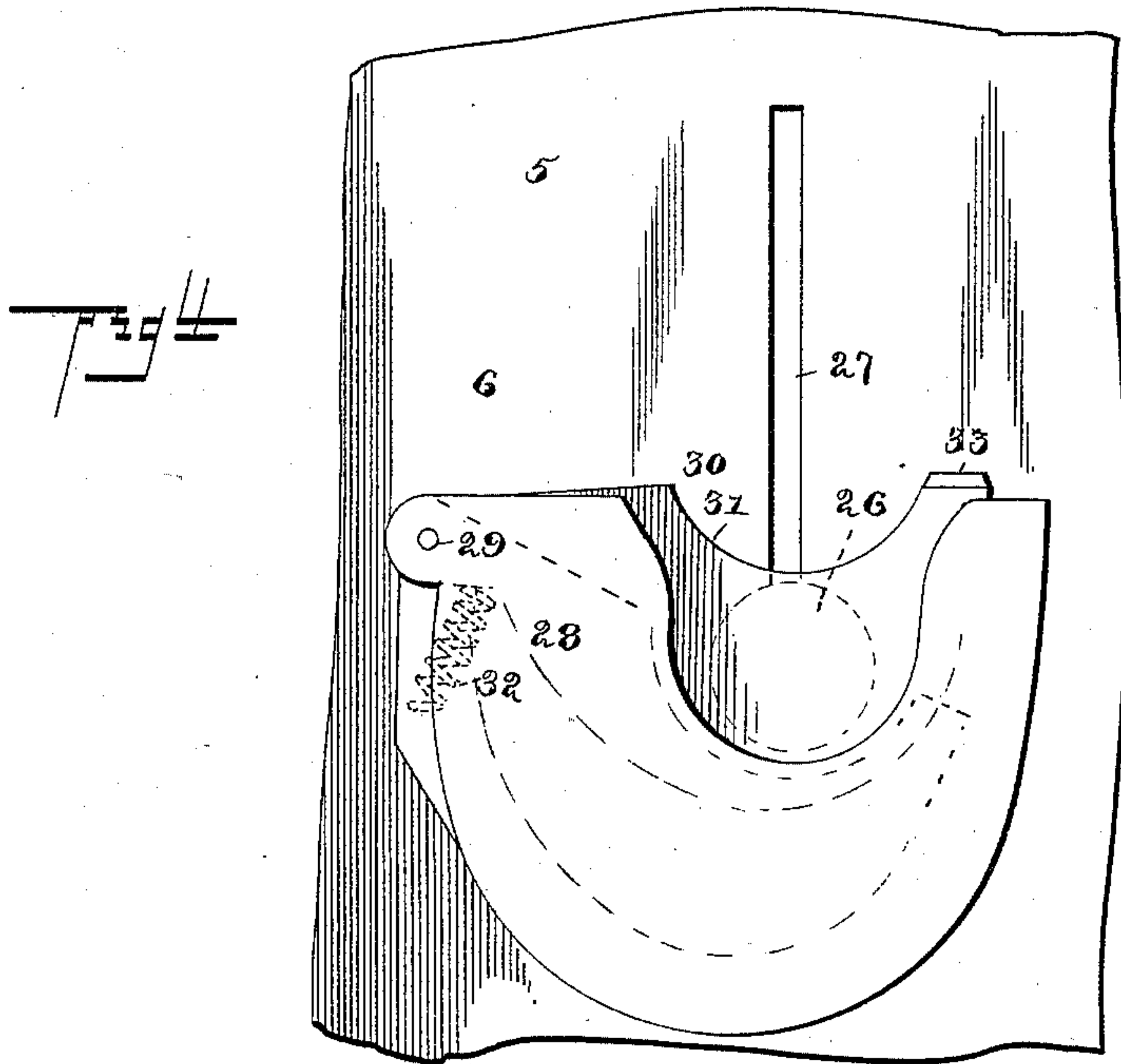
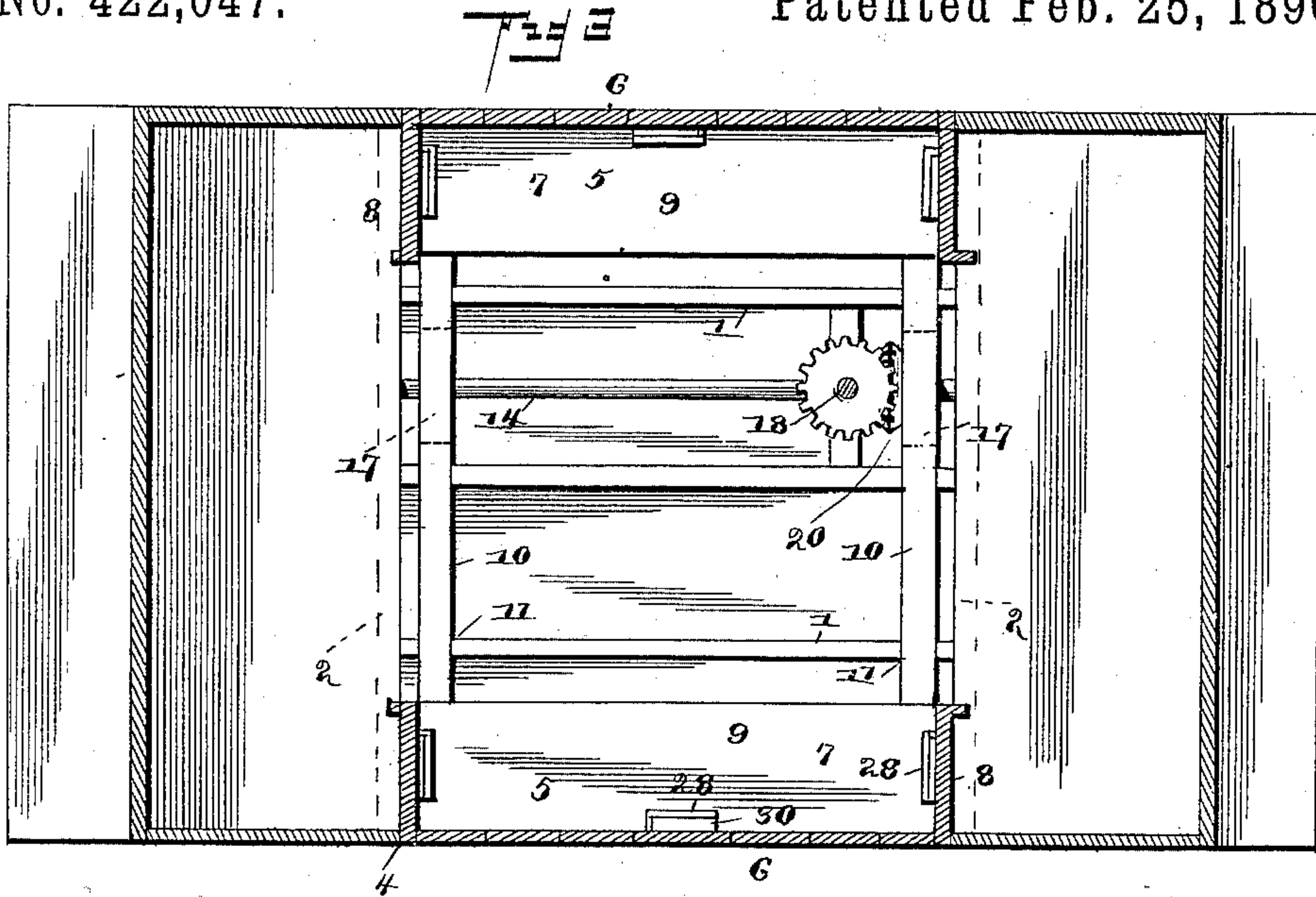
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2 Sheets—Sheet 2.

J. BEERMAKER.
BURGLAR PROOF CAR.

No. 422,047.

Patented Feb. 25, 1890.



Witnesses:

John Smirle
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UNITED STATES PATENT OFFICE.

JOHN BEERMAKER, OF SANTA BARBARA, CALIFORNIA.

BURGLAR-PROOF CAR.

SPECIFICATION forming part of Letters Patent No. 422,047, dated February 25, 1890.

Application filed September 24, 1889. Serial No. 324,872. (No model.)

To all whom it may concern:

Be it known that I, JOHN BEERMAKER, a citizen of the United States, residing at Santa Barbara, in the county of Santa Barbara and State of California, have invented a new and useful Burglar-Proof Car, of which the following is a specification.

This invention has relation to express-cars for the transportation of valuables, and among the objects in view are to provide a car so constructed that a person or persons therein can obtain a vision along the entire train, and to provide the sides of the car with a series of port-holes, through which the vision may be obtained and through which rifles or other fire-arms may be discharged at robbers attempting to enter either the express-car or any of the coaches in front or rear of the train.

A further object of the invention is to provide the port-holes with automatically-closing guards or shutters, so that after firing and withdrawing the muzzle of the piece from the port-hole a return fire will be prevented from doing damage by shots entering the port-holes.

Other objects and advantages of the invention will hereinafter appear, and the novel features consist in a coach or car of suitable material, the walls being faced or lined with metal to prevent penetration by bullets, and in opposite expansible sides and means for expanding and contracting the sides from the interior of the car, whereby port-holes formed in the sides are brought in range with the sides of the train, and a guard placed in the express-car can most effectually guard the train without subjecting himself to any danger whatever.

Referring to the drawings, Figure 1 is a perspective of an express-car constructed in accordance with my invention, the sides being expanded. Fig. 2 is a transverse vertical section of the same; Fig. 3, a plan view, the floor removed and the sides and walls of the car shown in section. Fig. 4 is a detail of one of the port-holes and guard-shutters.

Like numerals of reference indicate like parts in all the figures of the drawings.

In practicing my invention I construct the truck and bottom of the car in the usual manner, and the same consists of longitudi-

nal beams 1, connected by joists 2, over which is superimposed the floor 3.

The sides of the car are provided with an opening 4, and in each of the openings there is mounted a rectangular frame 5, having side walls 6, top and bottom walls 7, and end walls 8, the whole constituting what I shall herein term a "swell." The swells are provided with floor-strips 9, agreeing with the floor 3 of the car, and one swell is provided at its floor-line with a pair of inwardly-projecting rack-bars 10, mounted for reciprocation under the floor 3 and in guides 11, formed in the upper edges of the beams 1. A similar pair of rack-bars project from the upper ends of the swells, the teeth of the rack-bars being upwardly disposed and riding on the ceiling 13 of the car. The opposite swell is provided at its upper end with a similar pair of rack-bars and at its lower end with a similar pair corresponding with but oppositely disposed to those of the opposite swell. A longitudinal shaft 14 is located between the beams 1 and has its ends journaled in the joists 2, and is provided with opposite gears 17, meshing with the oppositely-disposed rack-bars. A similar shaft 16 is journaled in the end walls of the car above the ceiling, and is provided with opposite end gears 17, meshing with and operating the upper pairs of rack-bars.

18 represents a vertical shaft journaled in the top and bottom of the car and provided with opposite bevel-gears located near the upper end and the other near the lower end, said gears meshing with similar gears 20, mounted on the longitudinal shafts. An operating-lever 21 is pivoted at its upper end to the vertical shaft and is concaved and adapted to fold down and embrace the shaft when not in use.

Each of the four upper corners of the swells are provided with openings 23, and over the same are secured perforated plates or screens 24 and behind the screens suitable search-lights 25.

The sides 6 and the end walls 8 of each of the swells are provided with circular port-holes 26, which communicate with sight-slots 27 above the same. Each of the port-holes is partially surrounded by a U-shaped housing 28, and in each housing is pivoted, as at 29, a shutter 30, having a circular recess 31 in its

upper edge adapted to be depressed to register with the port which it is designed to cover. A spring 32, located in the housing, normally maintains the shutter in a closed or elevated position and against a stop 33.

The operation of my invention is as follows: By grasping the lever that operates the vertical shaft and bringing the same to a horizontal position and thus rotating the shaft the rotatable motion will be imparted to the longitudinal shafts through the medium of the bevel-gears. This rotates the end gears and operates the opposite pairs of rack-bars in contrary direction, thus squarely forcing the swells outwardly, as shown in Fig. 1. It will now be apparent that the sides of this car project considerably out of the plane of the train, so that every entrance or platform of all the coaches are in plain view, and at night will be lighted by means of the search-lights.

By the term "squarely" forcing the swells I mean advancing all sides of the swells to the same extent or distance from the car.

A guard in the express-car by looking through the slots above the port-holes can carefully watch each portion of the train without being seen, and should occasion require can thrust the muzzle of a fire-arm against one of the beveled recessed edges of the guard-plate or shutter, and the port-holes covered thereby will be opened and through the same the piece may be discharged. When not in use, or when otherwise desired, the swells may be contracted by a reversal of the operation described.

In practice I prefer to construct the sides of the swell of a series of hinged panels, preferably formed of suitable metal, so that the panels may be folded one upon the other and form a doorway for the taking in and discharging of the cargo.

Numerous changes may be made in regard to the details of my invention without departing from the spirit of the same; and I would herein state that I do not limit myself to the means shown for operating the swells, but hold that I may vary the same to any ex-

tent and manner within the skill of persons conversant therewith.

Having described my invention, what I claim is—

1. A car the sides of which are provided with openings intermediate its ends, in combination with swells mounted in the openings, and means for squarely reciprocating or advancing the swells beyond the frame of the car, substantially as specified.

2. A car the sides of which are projected beyond the general plane of the train and provided at the ends of its extensions with port-holes, in combination with shutters adapted to normally close said port-holes, substantially as specified.

3. The combination, with a car having opposite openings, of closed swells fitting the openings, rack-bars extending from the swells at their opposite upper and opposite lower ends, the teeth of the rack-bar of one swell being oppositely disposed to the corresponding bar of the opposite swell, gears arranged intermediate and meshing with the teeth of each pair of rack-bars, longitudinal shafts for supporting the gears, a beveled gear mounted on each of said shafts, and a vertical shaft journaled in the top and bottom of the car and having opposite beveled gears meshing with those of the longitudinal shafts and provided with a hand-lever for rotating the same, substantially as specified.

4. The combination, with the sides of the car having port-holes, of U-shaped housings surrounding the port-holes, a pivoted shutter or guard mounted in each of the housings and over the port-holes, springs for normally closing the shutters, and a recess formed in the upper edges of the shutters and adapted to be thrown into line with the port-holes, substantially as specified.

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

JOHN BEERMAKER.

Witnesses:

C. M. STUART,
W. W. WEST.