

## BACKUS WATER MOTOR Co. v. TUERK and others.

(Circuit Court, N. D. Illinois. July 10, 1883.)

## 1. PATENTS FOR INVENTIONS—INFRINGEMENT—NOVELTY.

The pocket device shown in the sixth claim of reissued patent No. 5,590, dated October 7, 1873, granted to Isaac Hyde, assignor of O. J. Backus, for an "improvement in combined water-wheels and sewing-machines," (original patent having been issued September 24, 1872, No. 131,616,) is void for want of novelty, having been clearly shown in the provisional specifications of James Pilbrow for English letters patent in 1857.

## 2. SAME—WATER MOTORS.

The first claim in letters patent No. 146,120, dated January 6, 1874, issued to O. J. Backus for an "improvement in water motors," is void for want of novelty, and the second therein made is not infringed by the Tuerk water motors, claimed to be an infringement of the Backus patents.

In Equity.

*Munson & Phillip*, for complainant.

*P. C. Dryenforth*, for defendants.

BLODGETT, J. This is a bill to restrain the alleged infringement of reissued letters patent No. 5,590, dated October 7, 1873, to Isaac Hyde, assignor of O. J. Backus, for an "improvement in combined water-wheels and sewing-machines," the original patent having been issued September 24, 1872, No. 131,616, and of patent No. 146,120, dated January 6, 1874, issued to O. J. Backus, for an "improvement in water motors." The defendants are charged with the infringement of the sixth claim of the reissued Hyde patent, and of the first and second claims of the Backus patent. The defenses set up are—*First*, that the patents in question are void for want of novelty; *second*, that the reissued Hyde patent is void, by reason of its describing a different invention from that contained in the original patent; and, *third*, that the defendants do not infringe.

The sixth claim of the Hyde patent is as follows: "A vertically revolving water-wheel, in combination with an inclosing case, which has a projecting spent-water pocket, D, to prevent the spent water from acting on the wheels, substantially as described." The drawings and model of the Hyde patent show an elongation downward of the wheel-casing, so as to give room for the escape of the spent water, without its huddling or otherwise retarding the motion of the wheel; and this feature of the Hyde device is specifically covered by the sixth claim of the reissued patent, it not having been claimed in any form in the original patent. The defendants manufacture a water motor, the wheel of which is inclosed in a metal case, in one form of which there is an elongation of the case downward, so as to give room for the free escape of the spent water. Their other form of wheel-case is nearly circular. The wheel, however, in the circular case is set eccentrically to the center of the case, so that a larger space is left below the wheel than above it, and from this larger space the

spent water escapes freely through an opening in the bottom of the case.

It is obvious that any person entering upon the construction of a water-wheel inclosed in a case like either of these devices must make some ample provision for the escape of the spent water in such a way that it will not clog or impede the motion of the wheel; and the most natural way would be to provide a space for the escape of the spent water at the bottom of the wheel, after the water had performed its function as an impelling power. It would hardly seem to require invention to leave space enough in this case below the wheel to allow the water to escape freely, so as not to interfere with the action of the wheel; and this was what Hyde did, and what he assumed to cover by what he calls his spent-water pocket in the sixth claim of the re-issued patent. It is not necessary, perhaps, to say, in disposing of this case, whether a claim of this character, if Hyde had been the first to use such a device as a spent-water pocket, would be valid as coming within the field of invention or not, because I find in the proof sufficient evidence to satisfy me that the pocket device shown in the Hyde patent is old.

It is clearly shown in the provisional specifications of James Pilbrow, in evidence in this case, for English letters patent, produced from the files of the United States patent-office, dated in 1857. Pilbrow's patent was for a water motor in principle the same as the Hyde patent, which he described in his own language, as follows: "This wheel is inclosed in a metal case, having an outlet at F. This case may be supported in any way found most convenient for its practicable application by supports or bearers of wood. Into this case will project the nozzle of a pipe having a cock upon it. This nozzle being pointed tangentially to the wheel, as shown, and being connected with a water-main or pipe, when the water is under high pressure, and the cock being open, the jet of water issues into the cavities of the wheel, urging it around in the direction of the arrows, and the waste or expended water escapes by F," which is the escape-pipe located in the corner of the case opposite the inlet-pipe.

The drawings attached to this specification show a wheel-casing with a wheel revolving therein, with an induction-pipe located so that the jet of water strikes the buckets at the lower side of the wheel, and the water-pocket or escape at the corner of the case opposite the injection-pipe. This wheel is located eccentrically in the case, so that the upper part of the wheel revolves near the top of the case, leaving a much larger space below the bottom of the wheel, and in form of construction is very similar in principle to that adopted by the defendant's second form of wheel. With this device known to the art, to say nothing of the various other devices which are shown by the proof in regard to the construction of water-meters and casings for water-wheels, where the same principle is to some extent shown, it seems to me there was, and could be, no invention in mak-

ing the Hyde water-pocket as an almost necessary adjunct to the successful operation of any water motor, operated upon the principle involved in his device. The pocket was old, and hence unpatentable.

The defendants are charged with infringing the first and second claims of the Backus patent of January 6, 1874. These claims read as follows:

"(1) The single casing-plate, A, having an induction nozzle and waste-water pocket and a discharge nozzle formed thereon, substantially as and for the purpose described. (2) The annular chamber, M, between the plates, A and K, surrounding the elongated bearings for the wheel-shaft, C, substantially as described."

In other words, Backus, in his first claim, seeks to cover the idea of making a casing for his wheel of two plates, in one of which plates was cast the opening for the induction and escape pipes.

It seems to me that if any mechanic had been directed to make a wheel-case of two plates, which should contain water-tight openings for the induction and escape pipes, he would have found it almost a necessity to cast the openings upon one of the plates; and I think there is no invention whatever involved in the idea of casting these openings upon one plate, instead of casting half, or a portion, in one, and the other part in the other. As to the second claim in the Backus patent, it is sufficient to say that I do not find in the defendant's wheel-case the part covered by this claim. It is true, the Tuerk casing contains an elongated bearing for the support of the wheel-shaft, but it does not contain the annular chamber, M, which is specifically covered by this claim; that is, a chamber or space overhung by the eyebrows, D, for the purpose of preventing the water, which dripped or followed along the inner surface of the plates, from running out along the journals. The defendant's axle-bearing is elongated from the surface of the casing both inwardly and outwardly, projecting into the annular space, and there is no equivalent for the eyebrows, D, in connection with this annular chamber. The original Hyde wheel showed the inlet-pipe upon the top of the casing, so that the jet of water would enter at the top of the wheel, and acted, or was expected to act, partly by impact and partly, perhaps, by the gravity of the water, as it was carried in the buckets around from the point where it was received by the wheel. The water passing in at the top of the wheel, there was, perhaps, some occasion for making provision to prevent the drip of the water through the opening for the journals. In practical application, however, of the principles of the Hyde motor, as shown in the drawings of the Backus patent, the jet of water was introduced near the bottom of the wheel, and it is undoubtedly, from the construction of the wheel, expected that the wheel will be substantially clear of the water by the time the buckets have passed the lowest point in the periphery of the wheel. It may be, however, that it was still deemed best to make some provision for preventing the

water, which might drip down the sides of the casing, from flowing out through the journals of the wheel. Whatever may have been the purpose of the inventor, it is clear that Backus made a specific provision for this annular chamber, which he supposed would perform a certain function in his machine. The defendant may be said to have an annular chamber, but I do not find it to be the same annular chamber that is described in the Backus patent, and I therefore find that there is no infringement of the second claim of this patent.

I am, therefore, satisfied that this bill should be dismissed for want of equity: *First*, because the water-pocket of the Hyde patent is old, and even if it were not old, I should doubt its patentability; and, *secondly*, because the first claim of the Backus patent does not involve invention, and is not worthy of being the subject-matter of a patent; and, *thirdly*, because the defendant does not infringe the second claim of the Backus patent.

---

THE MARY E. DANA.

(District Court, E. D. Virginia. March 22, 1882.)

SALVAGE SERVICE—MEASURE OF AWARD.

A brig loaded with lumber is water-logged off Ocracoke inlet, in January, 1882, and telegraphs for a public vessel of the United States revenue service. The libellant hears in Norfolk of her flying signals of distress, and sends a strong wrecking steamer, with pump and all wrecking material on board, 157 miles, to her relief. This tug and the revenue cutter both arrive, and the brig engages the tug, chiefly because she needs such a pump and engine as one on board the tug, which can be got nowhere else between Norfolk and Charleston, and which is necessary to her reaching port. The brig is taken in tow by the tug on a Saturday, and is towed to Norfolk in rough sea and weather, though there were no dangerous storms; but, owing to a deficiency of coal on the tug, they have to lie by during head winds for 50 hours out of 96, and do not reach Norfolk until Wednesday night,—the brig all the while having had the libellant's pump and engine on board, and in necessary use. The value of all property saved was \$4,300. A libel being filed for salvage, and \$1,000 deposited by way of tender by the respondent,—

*Held*, that that amount must be allowed, but the court stated that a less amount would have been granted if there had been no deposit.

*Held, further*, that as every salvage award consists (1) of the *compensation* due for the labor and material actually expended by the salvor, and (2) of the *bounty* allowed for enterprise, risk, and success in the service, this latter ingredient should be larger for salvage services on the long and dangerous sea-board stretching from the Delaware capes to Key West, than on other coasts; especially in cases like the present, where the salvor went 157 miles along a dangerous coast, in rough winter weather, to the rescue of a vessel in distress.

In Admiralty.

The brig Mary E. Dana, from St. Simon's Mills, Georgia, bound for New York, loaded with 100,000 feet of lumber, when about 50 miles E. N. E. off Cape Lookout, sprang a leak in a gale of wind,

and at 9 p. m. of Tuesday night, the seventeenth of January, 1887 was leaking so badly that her master, Capt. Benson, found it necessary to make for land. The gale abated on Wednesday morning, and on Thursday morning, the 19th, the brig had anchored off Ocracoke inlet. She lay easy all that day and night, and the captain having, with his crew, gone ashore, telegraphed to Washington, North Carolina, at the life-saving station at Ocracoke inlet, asking that the United States revenue cutter Colfax might come to his assistance. Capt. Benson and his crew, on going ashore, took with them their most valuable personal effects. The brig was water-logged, and drew 12 feet forward and 13 feet aft. Her deck was out of water, and, being filled with lumber tightly stored, there was no danger, or very little danger, of her being foundered or broken up. There was also a telegram sent by some one to the Baker Wrecking Company, in Norfolk, to the effect that a brig was anchored off that inlet, showing signals of distress. This telegram arrived in Norfolk between 9 and 10 p. m., Thursday night, the 19th; and the Victoria J. Peed, a very strong wrecking steamer and tug-boat, of 132 tons, worth \$25,000, having on board wrecking material worth \$6,000, set out for the place where the Dana lay, at about 11 p. m. that night, under command of Capt. Orrin S. Baker, with five or six other seamen on board.

The Peed reached the brig at about 7:30 p. m., Friday night, the 20th, having gone a distance of 158 miles from Norfolk. Having found by inquiry on board that the brig needed and desired assistance, the Peed anchored at a short distance until the morning. At 4:30 next morning the Colfax arrived. Early on this morning (Saturday, the 21st) Capt. Benson, of the brig, was in conference with the master of the Colfax, the master of the Peed, and Capt. Sol Dickson, a pilot on that coast. The question for him was whether he should put his vessel in charge of the Colfax to be towed to New Berne or Beaufort, or into the sound through Ocracoke inlet, piloted by Capt. Dickson; or whether he should put himself in charge of the Peed. The brig needed to be pumped out, and the Colfax had no sufficient engine and pump. There was no such pumping engine on the coast, south of Norfolk, except those of the Baker Wrecking Company, one of which was on the Peed ready for use. There were 12 feet of water on Ocracoke bar, and Capt. Dickson thought the brig could be taken in on high tide without much risk. The brig was not in the danger in which water-logged vessels generally are, from the fact of being loaded with lumber tightly stowed in the hold. If kept pumped out, she could proceed under sail. The fact that her captain did not get himself towed inside the bar, through Ocracoke inlet, by the Colfax, would seem to argue that he was not in a desperate or very dangerous condition. It would seem that two considerations moved Capt. Benson to engage with Capt. Baker and the Peed: (1) That he thereby secured at once the use of a pump; (2) that in going with Baker into Norfolk he would be proceeding towards his port of destination.

He accordingly put himself in charge of Capt. Baker, and the engine and pump were put upon the brig on the morning of Saturday, the twenty-first of January, and the pump was got to working after some delay produced by the difficulty of getting the suction hose through the deck and down through the lumber to the keelson of the vessel; say at 2 p. m. The pump was found to be very efficient, and was able, during the trip to Norfolk, to keep the water down by pumping one-fourth the time. By 3 p. m. the water was reduced some two feet in the hold, and the vessel's draught in the water lightened about one foot. At that hour she was taken in tow by the Peed.

A breeze had sprung up from the southward, which increased as the two vessels proceeded towards Hatteras; growing squally, and rain coming on about 5 p. m., and the wind increasing into a gale by 12 p. m. The wind, however, was favorable, and the brig had some of her sails set. They were moving very rapidly in a trough of the sea, and by 10 p. m. were heading easterly. This strong wind from the southward would have obstructed and endangered the brig if she had gone in tow of the Colfax in the direction of Beaufort. The vessels made considerable headway until 8 a. m. on the morning of Sunday, the 22d, and got past Cape Hatteras; but by 9 a. m. the wind had changed and was ahead, blowing very hard until 6 p. m. of the same day; the distance gained in the last nine hours being only 10 miles. At dark, on Sunday evening, they were north of Hatteras and about 8 miles south of Body island, off Chicamicomico. Here they anchored, having in this first movement consumed 25 hours. Here both vessels anchored, each with one anchor; the Peed taking in her hawser, and laying off about a mile from the brig. Owing to the head-winds, the two vessels lay off Chicamicomico all Sunday night, and on Monday till 3 p. m.; at which hour the Peed again took the brig in tow and proceeded up the beach. During this anchoring the wind had not been strong enough to cause the brig to drag her anchor, but had been strong enough to cause the Peed to draw hers, which was a light one, until she put down her heavy anchor. It was during this interval, say about 10 a. m. on Monday, that Capt. Baker went along-side the brig and informed her that he would have to be careful of his coal, as he was short of it. The two vessels having got under way the second time, on Monday, at 3 p. m., proceeded up the beach with the wind blowing from north and west. The wind increased during the night, and after midnight blew hard. About 4 a. m. Tuesday, the 24th, it had got so strong that the vessels were making no headway, and the brig was directed to let go her hawser and to anchor. Capt. Benson objected strongly, but complied with the order and came to anchor; putting down but one anchor.

The Peed moved off under steam until she got in the hawser, and then, without putting out her anchor, stood off under a staysail and a slow action of her engine and screw for about four hours, when she returned to the vicinity of the brig, which was between 7 a. m. and 8

A. M., Tuesday, the 24th. In this second movement, which lasted about 13 hours, the vessels had gone from off Chicamicomico to a point off Oregon inlet and Wash Woods, or False cape. Capt. Baker had no intention of abandoning the brig on the morning of Tuesday, the 24th, when she anchored at this latter point. The wind blew heavy, and the two vessels lay at anchor all day Tuesday, and all the following night, during which time the wind was too much ahead and too heavy to afford the hope that any progress could be made with a limited supply of coal. The wind became favorable early on Wednesday morning, the 25th, and the vessels proceeded to take in their anchors; but the brig was delayed in getting hers up, and lost it by the parting of her anchor chain. They got away from False cape about 9 A. M. on Wednesday, passed Cape Henry about 12 M., and arrived in the port at Norfolk about 5 P. M. that day,—four days and four nights from Ocracoke.

The trip seems to have been prolonged by a deficiency of coal. The capacity of the coal-bunkers of the Peed is 35 tons. The daily consumption is six tons. She left Norfolk without filling her bunkers. Capt. Baker says she had four and one-half days' supply when she left; that is to say, about 25 tons. The engineer, Sutton, says she had enough coal for the trip; within three or four tons of her full supply, which would be about 30 tons. The first mate, Johnson, says she took no coal on before leaving Norfolk, and had within four or five tons of her full supply. The second engineer, Corprew, says she had 21 or 22 tons. Capt. Benson, of the brig, says that at Ocracoke, on the morning of the 21st, the mate and the master, Johnson and Capt. Baker, both asked him about coal, and told him that they did not have enough. The Peed consumed some six tons on the way to Ocracoke, and her officers say they put two to two and a half tons on the brig at Ocracoke, to be used in the donkey engine. It is not probable, therefore, that the Peed had much more than 15 to 17 tons when she set out from Ocracoke on Saturday in charge of the brig. Much economy was used on the trip to Norfolk; and on arrival there the coal on board was only about three-quarters of a ton. While under way the first time they were in motion 25 hours; during the next time they were under way they were moving 13 hours; and on Wednesday, the last day of the trip, they were in motion eight hours. All this made 46 hours; and so there could not have been consumed more than two days' supply; say 12 or 15 tons of coal. It would seem pretty clear, therefore, as before suggested, that when the Peed first took the brig in tow she had not more than some 16 tons of coal, and that she would have been short of coal if she had not stopped on several occasions, and laid by, when the wind was ahead and heavy. This deficiency of coal, however, does not signify much in this case, especially as Capt. Benson admits in his testimony that both Capt. Baker and Mate Johnson informed him at Ocracoke that the Peed was short of coal. He engaged her with knowledge of the

fact. As to the weather, there was no storm to endanger either vessel, though both wind and sea were in general rough. Capt. Benson says that the fire in the donkey engine, the door of which was 14 inches above the deck of the brig, was at no time put out by the sea coming over his deck. The brig lay at anchor during the roughest weather, and at no time had down more than one anchor, and at no time dragged that anchor. Capt. Benson says his vessel could have carried his topgallant-sails at any period of the trip. Towing off that coast by such a tug as the Peed is worth \$200 a day. Such a pump as hers is worth \$25 a day. The value of the brig was \$3,000, and that of her cargo \$1,300; the whole value saved, therefore, being \$4,300. The value of the property risked by the wreckers was, as before stated, \$31,000. The claim of libelants is for one-half the value of the property saved. Respondents have deposited in court as a tender \$1,000, together with costs up to the date of tender, to-wit, \$36.87.

*Ellis & Thom*, for libelant.

*Sharp & Hughes*, for respondent.

HUGHES, J. In this case the questions are, was this a meritorious salvage service? and, if so, what ought to be awarded to the salvors by the court? The amount of salvage to be accorded in any case depends upon the following considerations:

(1) The degree of danger from which the lives or property are rescued; (2) the value of the property saved; (3) the risk incurred by the salvors; (4) the value of the property employed by the salvors in the wrecking enterprise, and the danger to which it was exposed; (5) the skill shown in rendering the service; (6) the time and labor occupied.

Estimated by these considerations the case at bar does not, in its facts, present a claim of high grade. The reported decisions of the admiralty courts do not justify a large award in the way of *bounty* for such a service as was rendered here. See *The Albion*, Lush. 282; *The Coromandel*, Swab. 205; *The Cleopatra*, 3 Prob. Div. 145; *The Senator*, Brown, Adm. 372; *The Rebecca Clyde*, 5 Ben. 98; 2 *Parsons*, Shipp. & Adm. 293, and cases cited in them.

The vessel saved, though in much danger, was not in extreme peril. True, she had been water-logged; but, being loaded tightly with lumber, she was simply reduced to the condition of a *raft*; but of a raft having a keel, a rudder, masts, and sails, and capable of moving without help, especially if relieved by a pump; and of saving itself, if there should be no violent storm. No such storm did, in fact, come on for four or more days; and so her escape from wreck would have been secured if only she could have got the use of a pump, and of a donkey engine with which to operate it. This is enough to say as to the condition of the brig.

As to the salvage service, I will premise that I feel at liberty to give a larger award in the present case than the admiralty courts usually allow in suits of like character, for several reasons, which I



will state: Salvage services rendered on the long and dangerous coast which stretches from the Delaware capes to Florida ought to be more liberally rewarded than on other coasts. It is not a sea-board studded with harbors and prosperous commercial cities and towns, from which salvors may run out short distances along shore and render successful services in a few hours. It is a long coast, dangerous and barren, constantly swept by strong winds and currents, where the ordinary tide varies only three feet, and on which wrecking enterprises cannot be successfully accomplished by individual exertion and capital. Wrecking service here can only be successfully performed by organized capital, enterprise, and skill,—by capital, skill, and enterprise so organized as to be capable of maintaining a constant provision of experienced mariners, powerful wrecking vessels, and ample wrecking implements and material, ready at all hours for immediate service. The business cannot sustain itself in the hands of reputable men and companies unless the admiralty courts shall give exceptionally liberal rewards in all cases of meritorious and successful service on this seaboard. And surely it is in the interest of commerce to sustain the wrecking business in these waters and latitudes.

For these reasons, I repeat, salvors on this coast must be more liberally dealt with by the admiralty courts than on other coasts. The salvage service which was rendered in the present case, though not of any unusual difficulty and risk, was yet highly meritorious.

1. The promptitude with which the *Peed* was sent out 150 miles along a dangerous coast to the succor of a vessel in distress, deserves marked recognition.

2. The disproportionate excess in value of the property placed at risk by the salvors, compared with that of the property saved, deserves consideration.

3. The excellence of the vessel sent out; and of the wrecking material, including the engine and pump on board of her; and the skill and worth of the officer in command, and of the men under him,—are to be recognized by the court.

4. That the *Peed* had not on a full supply of coal, does not affect the merit of the service; the fact that she went out without staying long enough to complete her already good supply of coal is rather an element of merit than otherwise; for delay in such a case might be fatal. The deficiency of coal, therefore, only affects the *quantum meruit*, by diminishing the time to be computed for the towage service.

For the several reasons which have been thus stated, I feel justified in granting a more liberal reward in the present case than would seem to be warranted by the general current of decisions in salvage suits. But, obviously, I am not at liberty to disregard too far the average teaching of the precedents. I must at least keep in sight of land.

5. I am the more emboldened to such a course in this particular

case because of the fact that the respondent has made a deposit in the nature of a tender in the suit, of an amount as great as I could, on the most liberal principles, allow.

The award in salvage causes consists generally of two ingredients, viz.: *First*, the *quantum meruit*, which is a certain quantity to be paid in any event if the saved property will yield it; and, *second*, the *bounty*, which is a variable element, depending upon the accidental circumstances of each case.

In the present case I think I ought to give in payment of services according to their actual worth, viz.:

For 48 hours, or two days of actual towing, at \$200 a day,	\$400 00
For 4 days' hire of pump and engine, at \$25,	100 00
For 1 day of the Peed in going out from Norfolk to Ocracoke,	100 00

And I think that I ought to give—

For <i>bounty</i> , - - - - -	400 00
Total, - - - - -	\$1,000 00

I would not give so large a *bounty* as is allowed in the last item, but for the fact that the respondent has presumedly conceded it was due by his tender. In the *Sandringham Case*, where the vessel saved was in extreme peril; where the property of the salvors was in considerable risk for a week; and where there was a week of service—hard service—during two storms, I awarded a *fourth*. Here, where all the conditions were such as to make a case of far inferior merit, I award nearly a fourth. I excuse the apparent discrepancy almost exclusively on the ground that in this case there was a tender, which, in some degree, operates as an estoppel. Else I would not have allowed more than \$200 or \$250 for *bounty*.

The amount of \$1,000 having been deposited by way of tender by the respondent, and also the sum of \$36.87 as the costs of the suit accrued up to the time of the deposit, the respondent must let the latter amount remain, and the rest of the costs must be paid by the libellant out of the fund in court.

See *The Egypt, infra*.

## THE EGYPT.

(District Court, E. D. Virginia. July 2, 1883.)

### 1. SALVAGE—INCORPORATED SALVAGE COMPANY.

An incorporated company, organized for the purpose of engaging in the meritorious work of saving ships in distress, and devoting themselves diligently to that pursuit, may be granted salvage award as liberally as natural persons so engaged.